

FLORA OF BIHAR
ANALYSIS

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Front Jacket : **Shorea robusta** Roxb. ex Gaertn. f.

Back Jacket : Dry mixed deciduous forest

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PREFACE

Erstwhile Bihar, lying close to the foot hills of Nepal and covering an area of 1,73,877 sq km, harbours a very rich and diverse flora. Its unique phytogeographical position, topography and good precipitation are some of the important factors which are mainly responsible for high degree of plant diversity. The occurrence of different types of forests, ranging from subtropical to tropical and consequently the establishment of three National Parks and twenty Wildlife sanctuaries in the state, which constitute an important source of germplasm, are of considerable interest. Although the state has been botanically surveyed since 1848 and the Flora was published during 1921-1925 which included Bihar, Orissa and parts of West Bengal, but the complete Flora of Bihar itself is not in hand. Simultaneously, the natural vegetation since Haines' publication has been continuously and increasingly under pressure owing to developmental projects including mining activities and non-judicious exploitation of plant resources. These reasons coupled with the publication of a number of new plant records for the state warrant the need of fresh estimation of current status of floristic account in the state. The present work is an attempt in this direction to provide the status of the Flora of the state. It is hoped that this publication will be highly helpful to the botanists, especially taxonomists, environmentalists, foresters, agriculturists, horticulturists, pharmacologists and planners in their research and management programmes. Further, this will also fulfill our commitment to the Convention on Biological Diversity (CBD).

August 21, 2001

Authors

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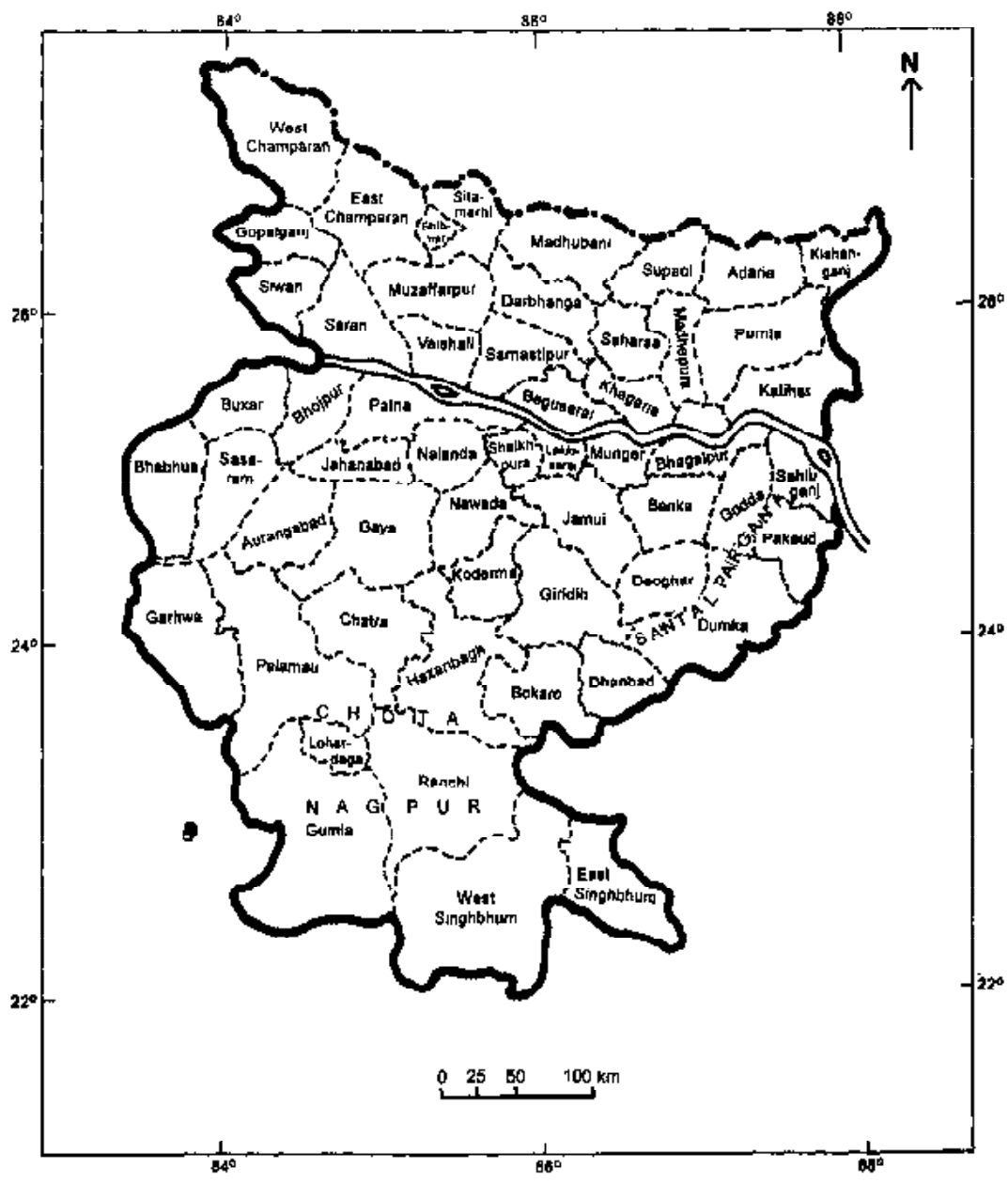
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INTRODUCTION

Bihar*, the 10th largest state of India lies between 21°55'10"-27°31'15" N latitude and 83°19'50" - 88°17'40" E longitude. It is bounded in the north by the international boundary of Nepal, in the south by the state of Orissa, in the east by the state of West Bengal and in the west by the states of Uttar Pradesh and Madhya Pradesh. Till 1912, the state was a part of Bengal and then the province called 'Bihar and Orissa' was separated from Bengal. It was in 1936 when Bihar and Orissa were declared as independent provinces. During 1948 and 1956 certain areas were transferred from Orissa to Bihar and from Bihar to West Bengal. At present* the state covers a total geographical area of 1,73,877 sq km and is divided into 54 districts.

The mighty river Ganga flowing from west to east broadly divides the state into two physiographic units, the Gangetic plain in the north and the Chota Nagpur plateau in the south. The northern Gangetic plain, created by the Ganga and its tributaries like Kosi, Sone, Gandak, etc., forms almost a flat alluvial plain except for the Himalayan foot-hills and terai region in the extreme north-west. On the other hand, series of hills, valleys and plateaus cover the Chota Nagpur plateau. Some of the important rivers that originate from this region are Damodar, Barakar, Koel, Subarnarekha, etc. The altitude ranging from 103-1365 m also enhances the physiographic versatility of the state. Further, the state is of high significance because of the occurrence of a number of mines of coal and minerals particularly iron, manganese, bauxite, copper, graphite, silver, chromite, etc. It is interesting to note that about 30 tribes live in the state who exploit the plant resources of the forests in various ways. Some of them are Baiga, Santal, Asur, Chero, Gond, Karmali, Kondh, Kurmi, Tharu, etc.

Climate

Three distinct seasons prevail in the state which are summer running from March to mid June, monsoon from mid June to October and winter from November to February. May is used to be the hottest month with temperature ranging from 25° to 40°C (mean temperature 32°C) except

*Although the state has been recently divided into two separate states the Bihar proper and the Jharkhand, but in the present work it has been dealt in a broader sense and treated as undivided.

in the extreme north and plateaus of Ranchi and Hazaribagh districts. During May and June the plain region also experiences hot winds known as *loo*. On the other hand, January is used to be the coldest month with temperature ranging from 6° to 22°C (mean temperature 14°C). The average annual rainfall varies between 100 cm in the west-central to more than 150 cm in the extreme north and in the south-west. Likewise, the relative humidity varies from 38% (April-May) to 94% (August-September). On the basis of the ratio of total monthly precipitation and total monthly evaporation, Thronthwaite (1933) has placed the state under dry sub-humid category.

Soil

The soil near the foot-hills in the northern portion of Bihar lying close to Nepal is known as terai soil. This soil is fertile, clayey in composition, rich in humus content and has high water retaining capacity.

The major portion of the state has alluvial soil. The main features of the soils are derived from the silt laid down by the Ganges and Gandak. These river systems originating in the Himalayas bring with them the products of weathering of the rocks in various degrees of fineness and deposit with them as they traverse through the plains. The alluvial soil of Bihar has been divided into (a) the alluvium north of the Ganges and (b) the alluvium south of the Ganges.

The southern portion of Bihar particularly Ranchi, Hazaribagh, Santal Pargana and Singhbhum districts has red soil. These soils exhibit high percentage of acid soluble Ferric oxide and lower pH ranging from 5-6.8.

In some parts of Bihar particularly the higher plateaus and valleys, lateritic soil is found. Besides, in some pockets alkali and saline soils also exhibit their presence.

Floristic Surveys and Publications

The rich vegetation and floristic diversity of the state have attracted the attention of a number of explorers and botanists in the past. A perusal of the literature reveals that J.D. Hooker (1848) was the first botanist to study the flora of Bihar who made collections in the Parasnath hills. Anderson (1863) published an account of the flora of Bihar based on the

collections of his own, Hooker, Edgeworth and Thomson. Subsequently, Ball (1866, 1867, 1869) made a study of the flora of Manbhum and Hazaribagh areas with particular reference to the food plants of the natives. He was followed by other workers like Clarke (1884), Wood (1903), Haines (1910, 1919), Burkill (1910), Carter (1917) and Thomson (1917). It was in 1921-1925 when Haines did a pioneering work by publishing a monumental work entitled, "The Botany of Bihar and Orissa". Later, a number of other botanists like Bodding (1927), Biswas (1934, 1935), Mooney (1937, 1941, 1944, 1947, 1950), Mukherjee (1947, 1956), Bressers (1951), Ara (1954, 1960, 1966), Srivastava (1954, 1955a, 1955b, 1956a, 1956b, 1958a, 1958b, 1958c, 1959, 1961), Sanyal (1957), Bharadwaja (1958), Jha (1965), Thothathri (1965a, 1965b), Thothathri *et al.* (1966), Kanodia and Malick (1966), Srivastava *et al.* (1966), Panigrahi (1966), Banerjee and Banerjee (1967, 1968, 1969a, 1969b), Misra (1969, 1970, 1971), Majumdar and Biswas (1971), Paul (1966, 1967, 1973, 1976, 1978, 1984, 1990), Jain *et al.* (1975), Paul and Prasad (1978), Raizada (1978), Biswas and Maheshwari (1980) and others have extensively surveyed various areas of the state and have made significant contributions on the flora and vegetation of Bihar. Besides, a few workers have also brought out the flora of some districts like Ranchi (Bressers, 1951), Bhagalpur (Verma, 1981), Patna (Singh, 1986) and Hazaribagh (Paria and Chattopadhyay, 2000).

Forest Cover

The available data (Dwivedi, 1993; Das *et al.*, 1999) indicate that Bihar has 29,226 sq km of total forest cover which is 16.81% of the total geographical area. Out of total forest cover, 13,172 sq km is under dense forest while the remaining one is under open forest. Legislatively, the total forest area has been classified as reserve forest (5,051.43 sq km), protected forest (24,167.51 sq km) and unclassed forest (7.09 sq km). Besides, a newly notified afforested area of road and land-sides, etc. covers an area of about 846 sq km. Further, it is interesting to note that coniferous forest is totally absent in the state. Some of the districts having dense forest cover are Hazaribagh, Giridih, Palamau, East and West Champaran, Ranchi, East and West Singhbhum, Godda, Sahibganj, Munger, Nawada, etc. However, 3 areas have been declared as National Parks while 20 areas of the state as Wildlife sanctuaries.

Vegetation

The vegetation of the state is mainly tropophilous. A few pockets, however, exhibit vegetation of xerophilous nature. The southern plateaus and extreme north-western region are covered with natural vegetation. While the Gangetic plain hardly possess any remnants of natural flora but harbours scattered grasslands and some occasional plantations. Besides, a considerable extent of hydrophytic flora and swampy vegetation occur here and there. However, the vegetation of the state may be grouped into following categories.

Forests

Champion and Seth (1968) have broadly placed the forests of Bihar under (a) Moist tropical forests, (b) Dry tropical forests, and (c) Montane subtropical forests. They have further subdivided the three major groups into various subtypes.

(A) *Moist tropical forests*

North Indian tropical moist deciduous forests 3C

- (i) Moist plains sal forests 3C/C2d
- (ii) Moist peninsular valley sal 3C/C2e (iii)
- (iii) West Gangetic moist mixed deciduous forests 3C/C3a
- (iv) *Terminalia tomentosa* forests 3C/3/E1

(B) *Dry tropical forests*

Northern tropical dry deciduous forests 5B

- (i) Dry peninsular sal forests 5B/C1c
- (ii) Northern dry mixed deciduous forests 5B/C2
- (iii) Dry deciduous scrub 5B/DS1
- (iv) Dry savannah forests 5B/DS2

(C) *Montane subtropical forests*

Southern subtropical broad leaved hill forests 8A

(i) Central Indian subtropical hill forests 8A/C3

I. *Moist tropical forests :*

These forests account about 10% of the total forest cover of the state and highly dominated by sal (*Shorea robusta*). Of this, a major part (85%) occurs in the damp valleys of southern Bihar, a minor part (11%) found in the Himalayan foot-hills towards extreme north-western boundary and only a very little (4%) of such forest in Gangetic plain where they exhibit greater admixture of species. However, the principal associates of sal are *Pterocarpus marsupium*, *Terminalia alata*, *T. arjuna*, *T. bellirica*, *Madhuca longifolia* var. *latifolia*, *Haldinia cordifolia*, *Mitragyna parvifolia*, *Dillenia pentagyna*, *Garuga pinnata*, *Protium serratum*, *Schleichera oleosa*, *Spondias pinnata*, *Gmelina arborea*, *Toona ciliata*, etc.

The second storey formed by medium-sized evergreen trees is dominated by *Diospyros melanoxylon*, *Syzygium cumini*, *Alstonia scholaris*, *Artocarpus lakoocha*, *Symplocos cochinchinensis*, *Ardisia solanacea*, *Kydia calycina*, *Saraca asoca*, *Pongamia pinnata*, *Aphanamixis polystachya*, *Polyalthia suberosa*, *Antidesma acuminatum*, *A. acidum*, *Bridelia pubescens*, *Buchanania lanzan*, *Meliosma simplicifolia*, *Cipadessa baccifera*, etc.

Some important climbers of the forest are *Ampelocissus latifolia*, *A. tomentosa*, *Abrus precatorius*, *Naravelia zeylanica*, *Bauhinia vahlii*, *Tiliacora acuminata*, *Millettia extensa*, *Acacia pennata*, *Combretum roxburghii*, *Uvaria hamiltonii*, *Entada rheedei*, *Bridelia stipularis*, *Mucuna pruriens*, *M. imbricata*, *Cajanus crassus*, etc.

The common shrubs in these forests are *Colebrookea oppositifolia*, *Petalidium barlerioides*, *Urena lobata*, *Uraria rufescens*, *Croton roxburghii*, *Desmodium gyroides*, *D. motorium*, *D. pulchellum*, *Flemingia chappar*, *F. semialata*, *Clerodendrum viscosum*, *Leea compactiflora*, *Jasminum multiflorum*, *Indigofera cassioides*, etc.

The dominant herbs occurring on the forest floor are *Biophytum sensitivum*, *Costus speciosus*, *Phyllanthus airy-shawii*, *P. maderaspatensis*, *P. amarus*, *P. virgatus*, *Dipteracanthus beddomei*, *D. prostratus*, *Justicia simplex*, *Barleria strigosa*, *Zingiber capitatum*, *Alpinia nigra*, *Imperata cylindrica*, *Eranthemum nervosum*, *E. purpurascens*, *Themeda triandra*, etc.

Some orchids like *Vanda tessellata*, *V. testacea*, *Aerides multiflorum*, *Oberonia falconeri*, *Dendrobium crepidatum*, *Habenaria longicorniculata*, *H. plantaginea* are also common in these forests.

II. *Dry tropical forests* :

These forests cover about 88% of the total forest area and occur scatteredly. Often, they embrace a number of edaphic or pure formations of *Boswellia*, *Acacia*, *Butea*, bamboos, etc. in different localities. In addition to plains, plateaus and hills with shallow soil are the suitable habitats for these forests. Most of the forest are open type and remain leafless during dry season. Woody climbers and epiphytes are rare but bulbous and rhizomatous species are frequent. Subfruticose or herbaceous climbers are abundant during monsoon. Unlike the moist tropical forest, sal (*Shorea robusta*) is stunted here. It constitutes major percentage except in the pure formations.

The dominant trees in these forests are *Shorea robusta*, *Anogeissus latifolia*, *Buchanania lanzan*, *Terminalia alata*, *T. bellirica*, *Boswellia serrata*, *Mitragyna parvifolia*, *Lannea coromandelica*, *Sterculia urens*, *Lagerstroemia parviflora*, *Acacia catechu*, *Butea monosperma*, *Soymida febrifuga*, *Ailanthus excelsa*, *Cochlospermum religiosum*, *Gmelina arborea*, *Aegle marmelos*, *Gardenia gummifera*, *Phyllanthus emblica*, *Bauhinia purpurea*, *B. racemosa*, *Semecarpus anacardium*, *Diospyros melanoxylon*, *Stereospermum chelonoides*, *Ficus* spp., etc.

The common shrubs include *Murraya paniculata*, *Nyctanthes arbor-tristis*, *Helicteres isora*, *Ziziphus mauritiana*, *Flemingia chappar*, *F. macrophylla*, *F. strobilifera*, *Flacourtia indica*, *Petalidium barlerioides*, *Indigofera cassioides*, *Woodfordia fruticosa*, *Grewia helicterifolia*, *G. hirsuta*, *G. rothii*, *Desmodium benthamii*, *Glycosmis pentaphylla*, *Carissa opaca*, etc.

Some of the common herbs are *Crotalaria* spp., *Blumea* spp., *Justicia simplex*, *Rungia pectinata*, *Cymbopogon martinii*, *Chrysopogon lancearius*, *Eulaliopsis binata*, *Pseudopogonatherum contortum*, *Vicoa indica*, *Cassia tora*, *C. occidentalis*, *Echinops echinatus*, *Vernonia cinerea*, *Ageratum conyzoides*, *Achyranthes aspera*, *Tribulus terrestris*, *Indigofera* spp., *Sida* spp., *Amaranthus spinosus*, *A. viridis*, *Acalypha indica*, *Oxalis corniculata*, *Launea procumbens*, *Nicotiana plumbaginifolia*, *Digera muricata*, *Celosia* spp., *Leucas* spp., *Boerhavia diffusa*, *Malvastrum coromandelianum*, *Tridax procumbens*, *Desmostachya bipinnata*, *Dactyloctenium aegyptium*, *Eclipta prostrata*, *Datura* spp., etc.

The common parasitic angiosperms are *Cuscuta* spp., *Dendrophthoe falcata*, *Viscum* spp., *Cassytha filiformis* and *Orobanche cernua*.

III. *Montane subtropical forests :*

This type of forest is found in small patches in Parasnath hilly areas. Above 1,220 m *Pittosporum wightii*, *Grewia* spp., *Meyna spinosa*, *Berberis asiatica*, *Reinwardtia indica*, *Thalictrum foliolosum*, *Polygala* spp., *Lobelia alsinoides*, *L. heyneana*, *Clematis gouriana*, etc. are common elements. While between 650 and 1,220 m *Litsea monopetala*, *Ficus microcarpa*, *F. mollis*, *Symplocos racemosa*, *Alangium salvifolium*, *Indigofera pulchella*, *Vitis* spp., *Bauhinia vahlii*, *B. sericea* var. *anguina*, *Persea bombycina*, *Chionanthus ramiflorus*, *Caesalpinia bonduc*, etc. are common species.

Grasslands

The grasslands are mainly induced Savanas with rare exceptions of natural climaxes. The grasses of the Gangetic plain occupy more area than that of plateaus on the south. Of this, a larger part constitutes low level grasslands and sometimes extend into swamps where grasses are tall perennials. Some dominant elements of low level type are *Saccharum procerum*, *S. bengalense*, *Ophiuros megaphyllus*, *O. exaltatus*, *Arundinella bengalensis*, *Phragmites karka*, *Vetiveria zizanioides*, *Themeda arundinacea*, *T. quadrivalvis*, *Coix aquatica*, *C. gigantea*, etc.

The grasses on high level plains are relatively dwarf. The important constituents of this type are *Saccharum narenga*, *Eulalia fastigiata*, *Cymbopogon nardus*, *Chionachne koenigii*, *Chrysopogon aciculatus*, *C. fulvus*, *Paspalidium flavidum*, *Themeda caudata*, *Bothriochloa bladhii*, *Andropogon ascinodis*, etc. Some other plants associated with grasses and scattered here and there are *Careya herbacea*, *Olax nana*, *Grewia sapida*, *Ochna obtusata* var. *pumila*, *Murdannia edulis*, etc.

Grasslands of southern plateaus are mainly induced. The predominant species are *Heteropogon contortus*, *Pennisetum pedicellatum*, *Chrysopogon lancearius*, *C. fulvus*, *Iseilema laxum*, *Eulaliopsis binata*, *Capillipedium assimile*, *Axonopus compressus*, *Arundinella setosa*, *Themeda caudata*, *T. quadrivalvis*, *T. laxa*, *Cymbopogon martinii* and a few others.

Aquatic and Swamp Vegetation

A large number of rivers, rivulets, canals, ponds and ditches form an extensive network of wetlands of Bihar and support about 90 aquatic angiospermous species. Some widely distributed dominant species are mentioned here under their respective habitation category.

1. Non-Anchored Hydrophytes

(a) Free-floating Hydrophytes

Pistia stratiotes, *Lemna gibba*, *L. perpusilla*, *L. trisulca*, *Spirodela polyrhiza*, *S. punctata*, *Wolffia arrhiza*, *Trapa bispinosa*, *Nymphoides indica*, *N. hydrophyllum*, *Eichhornia crassipes*, etc.

(b) Submerged Hydrophytes

Ceratophyllum demersum, *Najas graminea*, *N. marina*, *N. minor*, *Potamogeton pectinatus*, etc.

2. Anchored Hydrophytes

(a) Floating Hydrophytes

Nymphaea nouchali, *N. pubescens*, *Euryale ferox*, *Nelumbo nucifera*, *Aponogeton crispus*, *A. natans*, etc.

(b) *Submerged Hydrophytes*

Hydrilla verticillata, *Ottelia alisnoides*, *Vallisneria spiralis*, *Potamogeton nodosus*, *Blyxa aubertii*, *B. echinosperma*, *B. octandra*, *Lagarosiphon alternifolia*, *Hydrocharis dubia*, *Utricularia aurea*, *U. exoleta*, *U. stellaris*, *Zannichellia palustris*, etc.

(c) *Emergent Hydrophytes*

Aeschynomene indica, *A. aspera*, *A. americana*, *Alisma plantago-aquatica*, *Caldesia oligococca*, *C. parnassifolia*, *C. reniformis*, *Limnophyton obtusifolium*, *Sagittaria guayanensis* subsp. *lappula*, *S. trifolia*, *Butomopsis latifolia*, *Eriocaulon setaceum*, *Monochoria vaginalis*, *M. hastata*, *Typha angustifolia*, *Neptunia triquetra*, *Limnophila aquatica*, *L. heterophylla*, *L. indica*, *Coix aquatica*, *Paspalidium geminatum*, *Cyperus corymbosus*, *Oryza rufipogon*, etc.

(d) ✓ *Marshy-Amphibious Hydrophytes*

Ipomoea aquatica, *Polygonum barbatum*, *P. glabrum*, *P. hydropiper*, *Ludwigia adscendens*, *L. octovalvis*, *L. perennis*, *L. prostrata*, *Bacopa monnieri*, *Limnophila aromatica*, *L. chinensis*, *Hygrophila auriculata*, *Alternanthera philoxeroides*, *Enhydra fluctuans*, *Commelina benghalensis*, *Dopatrium junceum*, *Melochia corchorifolia*, *Corchorus aestuans*, etc.

Endemic Plants

There are only 15 taxa which are known to be endemic to the state of Bihar. They are *Clematis roylei* var. *patens*, *Carum villosum*, *Sophora bakeri*, *Tetrastigma alcorni*, *Swertia angustifolia* var. *pyramidalis*, *Zingiber purpureum* var. *palamaunsis*, *Ligusticum alboalatum*, *Leucas helicterifolia*, *Agrostis brachiata*, *Leucas lanata* var. *nagpurensis*, *Chrysopogon hamiltonii*, *Dendrocalamus strictus* var. *sericeus*, *Dimeria ornithopoda* var. *gracillima*, *Iseilema holei* and *Lophopogon kingii*.

Besides, there are some other taxa which have been found to be endemic in Bihar and also its adjoining states. They are *Euclasta clarkei*, *Crotalaria pusilla*, *C. quinquefolia*, *C. globosa*, *C. topouensis*,

Desmodium benthamii, *Alysicarpus roxburghianus*, *Erythrina resupinata*, *Pterocarpus marsupium* var. *acuminata*, *Acacia pseudo-eburnea*, *Albizia thompsonii* var. *galbana*, *Hardwickia binata*, *Apocypis vaginata*, *Chrysopogon lancearius*, *Cymbopogon gidarba*, *Dimeria connivens*, *Eragrostiella brachyphylla*, *E. nardoides*, *Ischaemum duthiei*, *I. hirtum*, *Mnesithea clarkei*, *Pseudoraphis minuta*, *Themeda strigosa* and *Tripogon capillatus*.

Rare Plants

There are about 250 species which are rare in the state. Some of them are *Abrus pulchellus*, *Alysicarpus pubescens*, *A. hamosus*, *Crotalaria acicularis*, *C. angulata*, *Derris cuneifolia*, *Galactia tenuiflora*, *Meizotropis buteiformis*, *Paracalyx scariosus*, *Rhynchosia cana*, *R. bracteata*, *Salix tetrasperma*, *Berberis asiatica*, *Clematis gouriana*, *Ranunculus pensylvanicus*, *Thalictrum foliolosum*, *Aglaiia elaeagnoidea*, *Pycnocycla glauca*, *Tacca leontopetaloides*, *Turnera ulmifolia*, *Viola macroceros*, *Drosera indica*, *Orobanche cernua*, *Maytenus senegalensis*, *Diploknema butyracea*, *Epilobium angustifolium*, *Chionanthus ramiflorus*, *Caryopteris bicolor*, *Cotula hemisphaerica*, *Leea alata*, *Rubus rugosus*, *Symphorema involucreatum*, *Dendrobium crepidatum*, *D. formosum*, *Kingidium deliciosum*, *Hedychium thyrsiforme*, *Murdannia blumei*, *Agrostis brachiata*, *Aristida funiculata*, *Brachiaria kurzii*, *Chloris montana*, *Chrysopogon lancearius*, *Coelachne simpliciuscula*, *Coix aquatica*, *Cynodon arcuatus*, *C. barberi*, *Eremopogon foveolatus*, *Dimeria ornithopoda*, *Garnotia tenella*, *Euclasta clarkei*, *Iselema laxum*, *Melanocenchris jacquemontii*, *Microstegium ciliatum*, *Mnesithea laevis*, *Oropetium thomaeum*, *Saccharum narenga*, *Panicum antidotale*, *Pseudopogonatherum contortum*, *Pseudoraphis brunoniana*, *Sehima nervosum*, *Schoenefeldia gracilis*, *Tragus roxburghii* and *Tripogon capillatus*.

Economic Plants

1. Edible plants :

(a) Wild :

(i) *Roots/Tubers* *Curculigo orchioides*, *Dioscorea alata*, *D. bulbifera*, *D. esculenta*, *D. oppositifolia*, *D. pentaphylla*, *Manihot*

esculenta, *Nelumbo nucifera*, *Pueraria tuberosa*, *Sauromatum venosum*.

(ii) *Young leaves and tender twigs* *Amaranthus viridis*, *Basella alba*, *Bauhinia purpurea*, *Cassia tora*, *Cocculus hirsutus*, *Dendrocalamus strictus*, *Gnaphalium indicum*, *Hibiscus radiatus*, *H. sabdariffa*, *Ipomoea aquatica*, *I. quamoclit*, *Nymphoides indica*, *Oxalis corniculata*, *Phyllanthus nodiflora*, *Polygonum barbatum*, *Portulaca oleracea*, *Rivea hypocrateriformis*, *Rotala rotundifolia*, *Sonchus* spp., *Tribulus terrestris*.

(iii) *Flowers and inflorescence* *Artocarpus lakoocha*, *Bauhinia purpurea*, *B. racemosa*, *Indigofera cassioides*, *Madhuca longifolia* var. *latifolia*, *Moringa concanensis*, *M. oleifera*, *Nelumbo nucifera*, *Oxystelma esculentum*, *Pergularia daemia*, *Sesbania grandiflora*, *Woodfordia fruticosa*.

(iv) *Fruits* *Aegle marmelos*, *Alangium salvifolium*, *Annona reticulata*, *A. squamosa*, *Anthocephalus chinensis*, *Antidesma acidum*, *Artocarpus lakoocha*, *Borassus flabellifer*, *Buchanania lanzan*, *Carissa* spp., *Cassia occidentalis*, *C. tora*, *Coccinia grandis*, *Diospyros malabarica*, *D. melanoxylon*, *Erycibe paniculata*, *Ficus racemosa*, *F. semicordata*, *F. virens*, *Flacourtia indica*, *Gardenia gummifera*, *Gmelina arborea*, *Grewia* spp., *Phoenix acaulis*, *P. sylvestris*, *Phyllanthus emblica*, *Solanum torvum*, *Syzygium cumini*, *S. heyneanum*, *Tamarindus indica*, *Catunaregam uliginosa*, *Ziziphus mauritiana*, *Z. rugosa*.

(v) *Oil seeds* *Borassus flabellifer*, *Madhuca longifolia* var. *latifolia*.

(b) Cultivated :

(i) *Cereals and pseudocereals* *Echinochloa crus-galli*, *E. frumentacea*, *Oryza sativa*, *Pennisetum americanum*, *Sorghum vulgare*, *Zea mays*, *Triticum aestivum*.

(ii) *Pulses* *Cajanus cajan*, *Cicer arietinum*, *Lathyrus sativus*, *Vigna mungo*, *V. radiata*, *V. unguiculata*.

(iii) *Vegetables* *Abelmoschus esculentus*, *Allium cepa*, *A. sativum*, *Anethum graveolens*, *Artocarpus heterophyllus*, *Beta vulgaris*, *Brassica oleracea* var. *botrytis* and var. *capitata*, *Chenopodium album*, *Cucurbita maxima*, *C. moschata*, *C. pepo*, *Daucus carota*, *Ipomoea batatas*, *Lagenaria siceraria*, *Luffa acutangula*, *L. cylindrica*, *Lycopersicon esculentum*, *Momordica charantia*, *M. dioica*, *Moringa oleifera*, *Pisum sativum*, *Raphanus sativus*, *Solanum melongena*, *S. tuberosum*, *Spinacia oleracea*, *Trichosanthes* spp., *Trigonella foenum-graecum*.

(iv) *Fruits* *Annona squamosa*, *Carica papaya*, *Cucumis melo*, *C. sativus*, *Litchi chinensis*, *Mangifera indica*, *Manilkara hexandra*, *Musa sapientum*, *Psidium guajava*, *Punica granatum*, *Syzygium cumini*, *Ziziphus mauritiana*.

(v) *Condiments* *Allium cepa*, *A. sativum*, *Capsicum annuum*, *Coriandrum sativum*.

(vi) *Oil seeds* *Linum usitatissimum*, *Ricinus communis*.

2. Timber wood and agricultural implements :

Anogeissus latifolia, *Anthocephalus chinensis*, *Azadirachta indica*, *Bombax ceiba*, *Bridelia squamosa*, *Dalbergia sissoo*, *Gmelina arborea*, *Haldinia cordifolia*, *Hardwickia binata*, *Mangifera indica*, *Mitragyna parvifolia*, *Murraya paniculata*, *Ougeinia oojeinensis*, *Drypetes roxburghii*, *Schleichera oleosa*, *Shorea robusta*, *Syzygium cumini*, *Tectona grandis*, *Terminalia alata*, *Wrightia* spp.

3. Rough cordage, hats, mats and baskets :

Agave americana, *Arundo donax*, *Bauhinia purpurea*, *B. vahlii*, *Calamus tenuis*, *Butea monosperma*, *Dendrocalamus strictus*, *Eulaliopsis binata*, *Hibiscus sabdariffa*, *Ichnocarpus frutescens*, *Marsdenia tenacissima*, *Phoenix acaulis*, *P. sylvestris*, *Porana paniculata*, *Sida cordata*, *S. rhombifolia*, *Smilax macrophylla*, *Thespesia lampas*, *Typha angustifolia*, *Urena lobata*, *Vallaris solanacea*, *Ventilago denticulata*.

4. Hut making and thatching :

Bauhinia purpurea, Borassus flabellifer, Dendrocalamus strictus, Ehretia laevis, Lagerstroemia parviflora, Oryza sativa, Phoenix acaulis, P. sylvestris, Saccharum spontaneum, Shorea robusta, Themeda quadrivalvis, Typha angustifolia.

5. Fodder :

Bridelia squamosa, Butea monosperma, Coix lacryma-jobi, Crotalaria alata, Diplocyclos palmatus, Merremia hederacea, Millettia extensa, Moringa oleifera, Tinospora cordifolia, Wendlandia tinctoria and a number of grasses.

6. Musical instruments :

Mangifera indica, Gmelina arborea, Shorea robusta, Tectona grandis, Terminalia alata.

7. Dyes :

Acacia catechu, Butea monosperma, Lagerstroemia parviflora, Lawsonia inermis, Mallotus philippensis, Morinda pubescens, Nyctanthes arbor-tristis, Pterocarpus marsupium, Wendlandia tinctoria, Woodfordia fruticosa.

8. Drinks and country liquors :

Asparagus racemosus, Borassus flabellifer, Clerodendrum serratum, Croton roxburghii, Madhuca longifolia var. latifolia, Oryza sativa, Phoenix sylvestris, Piper longum, Pogostemon benghalense.

9. Gums and resins :

Acacia nilotica subsp. indica, Anogeissus latifolia, Boswellia serrata, Gardenia gummifera, Lannea coromandelica, Shorea robusta, Sterculia urens, Terminalia arjuna, Woodfordia fruticosa.

10. Brooms and containers :

Arundo donax, Cucurbita maxima, C. pepo, Dendrocalamus strictus, Lageneria siceraria, Phoenix acaulis, Sida acuta, Thysanolaena maxima.

11. For making umbrella :

Borassus flabellifer, Butea monosperma, Dendrocalamus strictus, Tectona grandis.

12. Detergents :

Sapindus emarginatus, Terminalia alata.

13. Cigarette making (including biris) :

Diospyros malabarica, D. melanoxylon, Nicotiana tabacum, Shorea robusta.

14. Floss :

Bombax ceiba, Calotropis gigantea, C. procera, Cochlospermum religiosum, Gossypium spp.

15. Insecticides :

Azadirachta indica, Cassia hirsuta, Cymbopogon martinii, Ocimum basilicum, O. canum, O. tenuiflorum.

16. Fish poison :

Casearia tomentosa, Gardenia turgida, Polygonum glabrum, P. hydropiper, Strychnos nux-vomica.

17. Religious ceremonies and superstition :

Artocarpus lakoocha, Asparagus racemosus, Canscora diffusa, Cynodon dactylon, Dioscorea esculenta, Evolvulus alsinoides, Ficus benghalensis, F. racemosa, F. religiosa, Mangifera indica, Ocimum tenuiflorum, Opuntia elatior, Semecarpus anacardium.

18. Medicinal plants :**Abortion and menstrual disorders -**

Alangium salvifolium, Annona squamosa, Desmodium microphyllum, Elephantopus scaber, Gardenia turgida, Ludwigia hyssopifolia, Smilax ovalifolia.

Antidote (snake bite and scorpion sting)

Achyranthes aspera, Amaranthus spinosus, Indoneesiella echioides, Aristolochia indica, Bauhinia acuminata, Spermacoce articularis, Croton roxburghii, Curculigo orchioides, Desmodium gangeticum, Eclipta prostrata, Euphorbia hirta, Gmelina arborea, Plectranthus mollis.

Antifertility -

Alysicarpus vaginalis, Annona squamosa, Cassia fistula, Croton roxburghii, Dendrophthoe falcata, Indigofera linnaei, Pentanema indica, Plumbago zeylanica.

Antiseptic, for sores and as blood purifier -

Abrus precatorius, Andrographis paniculata, Combretum roxburghii.

Boils, blisters and ulcers -

Argemone mexicana, Capparis zeylanica, Ficus racemosa, Mallotus philippensis, Mucuna pruriens, Premna latifolia.

Baldness -

Moringa oleifera.

Bone fractures -

Euphorbia tirucalli, Gardenia gummifera, Hoppea dichotoma, Tinospora cordifolia, Vanda tessellata, Viscum articulatum.

Cough, cold, asthma and bronchitis -

Abrus precatorius, Achyranthes aspera, Adhatoda zeylanica, Chrozophora prostrata.

Cuts, wounds and burns -

Aerva lanata, Agave americana, Ageratum conyzoides, Argemone mexicana, Blumea lacera, Buchanania lanzan, Chrozophora prostrata, Eupatorium odoratum, Clerodendrum viscosum, Colebrookea

oppositifolia, *Cuscuta reflexa*, *Evolvulus nummularius*, *Hygrophila salicifolia*, *Leonotis nepetifolia*.

Deafness -

Rotala densiflora, *Catunaregam spinosa*.

Cooling effect -

Cassia fistula, *Woodfordia fruticosa*

For easy delivery and to promote conception -

Achyranthes aspera, *Indigofera cassioides*.

Elephantiasis -

Stephania glabra.

Epilepsy and hysteria -

Acorus calamus, *Borassus flabellifer*, *Cassine glauca*, *Colebrookea oppositifolia*, *Flemingia strobilifera*, *Mimosa himalayana*, *Ocimum canum*.

Goitre -

Caesulia axillaris.

Gonorrhoea -

Soymida febrifuga

Headache -

Achyranthes aspera, *Asparagus racemosus*, *Canscora diffusa*, *Clerodendrum multiflorum*, *C. viscosum*, *Desmodium pulchellum*, *Hygrophila polysperma*, *Telosma pallida*.

Hydrophobia -

Calotropis gigantea.

Hydrocele -

Holoptelea integrifolia.

Impotency and other sexual disorders -

Asparagus racemosus, Cassia hirsuta, Chlorophytum tuberosum, Curculigo orchoides, Hemidesmus indicus, Malvastrum coromandelianum, Pueraria tuberosa, Withania somnifera.

Jaundice -

Aegle marmelos, Cochlospermum religiosum, Gardenia turgida.

Malaria and fevers -

Alstonia scholaris, Andrographis paniculata, Canscora diffusa, Croton roxburghii, Cissampelos pareira, Eclipta prostrata, Gmelina arborea, Sphaeranthus indicus, Tinospora cordifolia, Catunaregam spinosa.

Mother and child health care -

Acorus calamus, Calotropis gigantea, Cocculus hirsutus, Flemingia macrophylla, Gnaphalium luteo-album, Moringa oleifera.

Ophthalmic infections -

Haldinia cordifolia, Alstonia scholaris, Argemone mexicana, Desmodium gangeticum, Diplocyclos palmatus, Tridax procumbens.

Pains, swellings and bodyaches -

Spermacoce articularis, Clerodendrum viscosum, Desmodium triflorum, Dioscorea oppositifolia, Staurogyne glutinosa, Eranthemum purpurascens, Vitex negundo.

Rheumatism and gout -

Cajanus scarabaeoides, Baliospermum montanum, Celastrus paniculatus, Cocculus hirsutus, Launaea sarmentosa, Micromeria capitellata, Nicotiana tabacum, Pygmaeopremna herbacea.

Skin diseases -

Ageratum conyzoides, *Ammannia baccifera*, *Cassia occidentalis*, *Cuscuta reflexa*, *Dendrophthoe falcata*, *Hemidesmus indicus*, *Hyptis suaveolens*, *Pterocarpus marsupium*.

Stomach disorders -

Aegle marmelos, *Aerva sanguinolenta*, *Andrographis paniculata*, *Cajanus scarabaeoides*, *Baliospermum montanum*, *Buddleja asiatica*, *Cassia fistula*, *C. occidentalis*, *Cassine glauca*, *Celastrus paniculatus*, *Eupatorium odoratum*, *Cissampelos pareira* var. *hirsuta*, *Clausena excavata*, *Clerodendrum viscosum*, *Croton roxburghii*, *Cyperus rotundus*, *Desmodium motorium*, *Flemingia strobilifera*, *Gnaphalium polycaulon*, *Holarrhena pubescens*, *Limnophila sessiliflora*, *Nelsonia canescens*, *Polygonum plebeium*, *Toona ciliata*.

Toothaches and gums -

Blumea fistulosa, *Ichnocarpus frutescens*, *Leucas cephalotes*, *Madhuca longifolia* var. *latifolia*, *Rivea hypocrateriformis*, *Pentanema indica*.

Tuberculosis -

Bridelia squamosa, *Butea monosperma*, *Celastrus paniculatus*.

Veneral diseases -

Adhatoda zeylanica, *Cajanus scarabaeoides*, *Cocculus hirsutus*, *Eranthemum purpurascens*, *Ochna obtusata*, *Paracalyx scariosus*, *Pedilanthus tithymaloides*, *Pygmaeopremna herbacea*.

Veterinary medicine -

Argemone mexicana, *Bridelia squamosa*, *Clerodendrum multiflorum*, *Haldinia cordifolia*, *Indigofera linnaei*, *Litsea monopetala*, *Millettia extensa*, *Thysanolaena maxima*.

Present Work

A perusal of the literature reveals that although Bihar has been botanically well explored but still there is no complete Flora of the state

itself. Haines (1921-1925) publication "The Botany of Bihar and Orissa" is quite old and included Bihar, Orissa and parts of West Bengal. Further, due to biotic and abiotic interferences, the floristic composition of certain regions has considerably changed. Simultaneously, a number of species have been added after Haines publication and the concept of the nomenclature of some species has been changed. Keeping these points in view, an attempt has been made to prepare an analysis of the plants (first phase) occurring in Bihar which can serve as a precursor to the Flora of the state. In the book, all the species with up to date nomenclature have been dealt under the corresponding families which have been arranged according to Bentham and Hooker's (1862-1883) system of classification with some modification as per recent concept. Whereas, the genera under a family and species under a genus have been arranged alphabetically. The correct botanical name is followed by its citation, basionym wherever applicable and some selected synonyms. In addition, the data on phenology and distribution of the species have been provided. The plants which are in cultivation have also been dealt in the text.

The present analysis includes enumeration of 2963 species under 1151 genera belonging to 186 families (Table 1). Out of these, 857 species in 276 genera and 38 families belong to Monocot and 2106 species in 875 genera and 148 families belong to Dicot. The ratios among Monocot to Dicot with respect to family, genera and species, and families to genera and genera to species with respect to Dicot, Monocot and total have been given in Table 2. Further, the analysis (Table 2) has indicated that Poaceae with 342 species is the largest family in the state, whereas *Cyperus* with 35 species is the largest genus (Table 4).

Table 1: Status of families, genera and species in Bihar

Group	Families	Genera	Species
Dicot	148	875	2106
Monocot	38	276	857
Total	186	1151	2963

Table 2: Ratio among various groups/taxa

	Group/Taxa	Ratio
Monocot to Dicot	Family	1:3.8
	Genera	1:3.1
	Species	1:2.4
Families to genera	Dicot	1:5.9
	Monocot	1:7.2
	Total	1:6.1
Genera to species	Dicot	1:2.4
	Monocot	1:3.1
	Total	1:2.5

Table 3: Ten dominant families of Bihar.

S.No.	Family	Number of species
1.	Poaceae	342
2.	Fabaceae	221
3.	Asteraceae	152
4.	Cyperaceae	140
5.	Euphorbiaceae	105
6.	Orchidaceae	100
7.	Acanthaceae	94
8.	Rubiaceae	87
9.	Lamiaceae	71
10.	Scrophulariaceae	69

Table 4: Dominant genera of Bihar.

Genera	Family	Number of species
Cyperus	Cyperaceae	35
Ficus	Moraceae	31
Crotalaria	Fabaceae	30
Fimbristylis	Cyperaceae	27
Euphorbia	Euphorbiaceae	25
Cassia	Caesalpiaceae	23
Ipomoea	Convolvulaceae	21
Eragrostis	Poaceae	21
Indigofera	Fabaceae	18
Leucas	Lamiaceae	17



Holarrhena pubescens (Buch.-Ham.)
Wallich ex G. Don



Bacopa monnieri (L.) Wettst.



Adhatoda zeylanica Medik.



Plumbago zeylanica L.



***Mucuna pruriens* (L.) DC.**



***Crateva adansonii* DC. subsp. *odora*
(Buch.-Ham.) Jacobs**



Dry mixed deciduous forest



Moist mixed deciduous forest



Shorea robusta Roxb. ex Gaertn. *f.*



Dry mixed deciduous forest



***Drosera burmanni* Vahl**



***Microchloa indica* (L. f.) P. Beauv.**



Saccharum spontaneum L.



Salix tetrasperma Roxb.



Mallotus philippensis (Lam.) Muell. Arg. **Geodorum densiflorum** (Lam.) Schlechter



Holoptelea integrifolia (Roxb.) Planch.



Dendrophthoe falcata (L. f.) Etting.



Cuscuta reflexa Roxb.

A N A L Y S I S

RANUNCULACEAE

CLEMATIS L.

Clematis gouriana Roxb. ex DC., Syst. Nat. 1: 138. 1817; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 4. 1872; Haines, Bot. Bihar Orissa 4. 1921 (Repr. ed., 1: 4. 1961).

Fl. & Fr.: October - January.

Distrib.: Champaran, Giridih, Hazaribagh, Palamau, Patna, Singhbhum.

Clematis graveolens Lindl. in J. Hort. Soc. 1: 307. 1846; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 4. 1872.

Fl. & Fr.: August - December.

Distrib.: Santal Pargana.

Clematis heynei M.A. Rau in Sharma *et al.* (eds.), Fl. India 1: 67. 1993. *C. triloba* Heyne in Roth, Nov. Sp. Pl. 251. 1821, *non* Thunb., 1794; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 3. 1872.

Fl. & Fr.: September - January.

Distrib.: Bhagalpur, Giridih, Hazaribagh.

Clematis montana Buch.-Ham. ex DC., Syst. Nat. 1: 164. 1817; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 2. 1872.

subsp. *montana* var. *montana*

Fl. & Fr.: July - September.

Distrib.: Chota Nagpur.

Clematis roylei Rehder in J. Arnold Arb. 22: 575. 1941. *C. nutans* Royle, Ill. Bot. Himal. 51. 1834; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 5. 1872, *non* Crantz, 1763; Haines, Bot. Bihar Orissa 3. 1921 (Repr. ed., 1: 3. 1961).

var. **patens** (Haines) Kapoor in Bull. Nat. Bot. Gard. Lucknow 124: 64. 1966. *C. nutans* Royle var. *patens* Haines, For. Fl. Chotanagpur 140. 1910.

Fl. & Fr.: November - December.

Distrib.: Singhbhum. Endemic & rare.

var. **roylei**

Fl. & Fr.: October - April.

Distrib.: Champaran, Giridih, Hazaribagh, Lohardaga, Palamau, Ranchi, Singhbhum.

Clematis smilacifolia Wallich in Asiat. Res. 13: 402. 1820; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 3. 1872; Haines, Bot. Bihar Orissa 4. 1921 (Repr. ed., 1: 4. 1961).

Fl. & Fr.: December - March.

Distrib.: Purnia.

NARAVELIA DC., *nom. et orth. cons.*

Naravelia zeylanica (L.) DC., Syst. Nat. 1: 167. 1817; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 7. 1872; Haines, Bot. Bihar Orissa 4. 1921 (Repr. ed., 1: 4. 1961). *Atragene zeylanica* L., Sp. Pl. 542. 1753.

Fl. & Fr.: October - February.

Distrib.: Champaran, Giridih, Hazaribagh, Palamau, Purnia, Singhbhum.

NIGELLA L.

Nigella sativa L. var. **indica** (Roxb.) DC., Syst. Nat. 1: 330. 1817. *N. indica* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 646. 1824. *N. sativa auct. non L.*, 1762; Haines, Bot. Bihar Orissa 5. 1921 (Repr. ed., 1: 5. 1961).

Fl. & Fr.: January - April.

Distrib.: Widely cultivated.

RANUNCULUS L.

Ranunculus cantoniensis DC., Prodr. 1: 43. 1824. *R. pensylvanicus* auct. non L. f., 1782: Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 19. 1872, p. p.

Fl. & Fr.: April - December.

Distrib.: Palamau.

Ranunculus pensylvanicus L. f. subsp. **riparius** (Edgew.) H. Riedl in Kew Bull. 34: 364. 1979. *R. riparius* Edgew. in Trans. Linn. Soc. London 20: 28. 1846. *R. pensylvanicus* auct. non L. f., 1782: Haines, Bot. Bihar Orissa 5. 1921 (Repr. ed., 1: 6. 1961).

Fl. & Fr.: July - December.

Distrib.: Palamau.

Ranunculus sceleratus L., Sp. Pl. 551. 1753; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 19. 1872; Haines, Bot. Bihar Orissa 6. 1921 (Repr. ed., 1: 6. 1961).

Fl. & Fr.: December - March.

Distrib.: Bhagalpur, Champaran, Palamau, Patna, Purnia, Ranchi.

THALICTRUM L.

Thalictrum foliolosum DC., Syst. Nat. 1: 175. 1818; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 14. 1872; Haines, Bot. Bihar Orissa 5. 1921 (Repr. ed., 1: 5. 1961).

Fl. & Fr.: July - October.

Distrib.: Giridih, Hazaribagh, Palamau, Ranchi.

Thalictrum javanicum Blume, Bijdr. 2. 1825; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 13. 1872; Haines, Bot. Bihar Orissa 5. 1921 (Repr. ed., 1: 5. 1961).

Fl. & Fr.: August - October.

Distrib.: Giridih, Hazaribagh, Palamau.

DILLENACEAE**DILLENIA L.**

Dillenia aurea Sm., Exot. Bot. 2: 65. t. 93. 1806; Hook. *f.* & Thomson in Hook. *f.*, Fl. Brit. India 1: 37. 1872; Haines, Bot. Bihar Orissa 7. 1921 (Repr. ed., 1: 7. 1961).

Fl. & Fr.: April - July.

Distrib.: Palamau, Ranchi, Santal Pargana, Singhbhum, West Champaran.

Dillenia indica L., Sp. Pl. 535. 1753; Hook. *f.* & Thomson in Hook. *f.*, Fl. Brit. India 1: 36. 1872; Haines, Bot. Bihar Orissa 6. 1921 (Repr. ed., 1: 7. 1961).

Fl. & Fr.: May - February.

Distrib.: Bhagalpur, Chota Nagpur, Giridih, Hazaribagh, Patna, Purnia, West Champaran.

Dillenia pentagyna Roxb., Pl. Corom. 1: 21. t. 20. 1795; Hook. *f.* & Thomson in Hook. *f.*, Fl. Brit. India 1: 38. 1872; Haines, Bot. Bihar Orissa 7. 1921 (Repr. ed., 1: 7. 1961).

Fl. & Fr.: February - May.

Distrib.: Giridih, Hazaribagh, Palamau, Purnia, West Champaran.

MAGNOLIACEAE**MAGNOLIA L.**

Magnolia grandiflora L., Syst. Nat. ed. 10. 2: 1082. 1759.

Fl. & Fr.: March - May.

Distrib.: Bhagalpur, Palamau, Patna, Purnia, Singhbhum.

MICHELIA L.

Michelia champaca L., Sp. Pl. 536. 1753; Hook. *f.* & Thomson in Hook. *f.*, Fl. Brit. India 1: 42. 1872; Haines, Bot. Bihar Orissa 8. 1921 (Repr. ed., 1: 8. 1961). *Champa*.

Fl. & Fr.: March - July.

Distrib.: Bhagalpur, Palamau, Patna, Purnia, Ranchi, Singhbhum, West Champaran.

ANNONACEAE

ALPHONSEA Hook. f. & Thomson

Alphonsea ventricosa (Roxb.) Hook. f. & Thomson, Fl. Ind. 152. 1855 & in Hook. f., Fl. Brit. India 1: 89. 1872; Haines, Bot. Bihar Orissa 15. 1921 (Repr. ed., 1: 15. 1961). *Uvaria ventricosa* Roxb., Fl. Ind. 2: 658. 1832.

Fl. & Fr.: January - August.

Distrib.: Deoghar, Dumka, Godda, Sahibganj.

ANNONA L.

Annona reticulata L., Sp. Pl. 537. 1753; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 78. 1872; Haines, Bot. Bihar Orissa 10. 1921 (Repr. ed., 1: 10. 1961). - *Ramphal*.

Fl. & Fr.: May - September.

Distrib.: Bhagalpur, Champaran, Patna, Purnia, Ranchi.

Annona squamosa L., Sp. Pl. 537. 1753; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 78. 1872; Haines, Bot. Bihar Orissa 9. 1921 (Repr. ed., 1: 10. 1961). - *Saripha*.

Fl. & Fr.: April - December.

Distrib.: Cultivated throughout the state, almost naturalized.

ARTABOTRYS R. Br.

Artabotrys hexapetalus (L. f.) Bhandari in Bailey 12(4): 147. 1964. *Annona hexapetala* L. f., Suppl. Pl. 270. 1782. *Artabotrys odoratissimus* R. Br. in Bot. Reg. 5: t. 423. 1819, non Blume, 1825; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 54. 1872; Haines, Bot. Bihar Orissa 10. 1921 (Repr. ed., 1: 10. 1961).

Fl. & Fr.: April - October.

Distrib.: Often cultivated in gardens. Bhagalpur, Palamau, Patna, West Champaran.

CANANGA (DC.) Hook. f. & Thomson, *nom. cons.*

Cananga odorata (Lam.) Hook. f. & Thomson, Fl. Ind. 130. 1855 & in Hook. f., Fl. Brit. India 1: 56. 1872. *Uvaria odorata* Lam., Encycl. 1: 595. 1789.

Fl. & Fr.: June - November.

Distrib.: Cultivated (Mitra in Sharma *et al.* (eds.), Fl. India 1: 254. 1993).

MILIUSA Leschen *ex* DC.

Miliusa longiflora (Hook. f. & Thomson) Finet & Gagnep. in Bull. Soc. Bot. France 53(4): 153. 1906. *Saccopetalum longiflorum* Hook. f. & Thomson, Fl. Ind. 151. 1855 & in Hook. f., Fl. Brit. India 1: 88. 1872.

Fl.: March.

Distrib.: Purnia.

Miliusa tomentosa (Roxb.) Finet & Gagnep. in Bull. Soc. Bot. France 53(4): 153. 1906. *Uvaria tomentosa* Roxb., Pl. Corom. 1: t. 35. 1795 & Fl. Ind. 2: 667. 1832. *Saccopetalum tomentosum* (Roxb.) Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 88. 1872; Haines, Bot. Bihar Orissa 14. 1921 (Repr. ed., 1: 14. 1961).

Fl. & Fr.: April - July.

Distrib.: Gaya, Palamau, Purnia, Ranchi.

Miliusa velutina (Dunal) Hook. f. & Thomson, Fl. Ind. 151. 1855 & in Hook. f., Fl. Brit. India 1: 87. 1872; Haines, Bot. Bihar Orissa 13. 1921 (Repr. ed., 1: 14. 1961). *Uvaria velutina* Dunal, Monogr. Anon. 91. 1817.

Fl. & Fr.: April - July.

Distrib.: Throughout the state.

POLYALTHIA Blume

Polyalthia cerasoides (Roxb.) Beddome, Fl. Sylv. t. 1. 1869; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 63. 1872; Haines, Bot. Bihar Orissa 12. 1921 (Repr. ed., 1: 13. 1961). *Uvaria cerasoides* Roxb., Pl. Corom. 1: 30. t. 33. 1795 & Fl. Ind. 2: 666. 1832.

Fl. & Fr.: April - December.

Distrib.: Chota Nagpur, Gaya, Hazaribagh, Santal Pargana, Singhbhum.

Polyalthia longifolia (Sonner.) Thwaites, Enum. Pl. Zeyl. 398. 1864; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 62. 1872; Haines, Bot. Bihar Orissa 12. 1921 (Repr. ed., 1: 12. 1961). *Uvaria longifolia* Sonner., Voy. Indes Orient. 2: 233. t. 131. 1782.

Fl. & Fr.: April - September.

Distrib.: Bhagalpur, East Champaran, Patna, Ranchi, Santal Pargana, West Champaran.

Polyalthia simiarum (Hook. f. & Thomson) Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 63. 1872, *p. p.*; Haines, Bot. Bihar Orissa 12. 1921 (Repr. ed., 1: 12. 1961). *Gualteria simiarum* Hook. f. & Thomson, Fl. Ind. 142. 1855.

Fl. & Fr.: April - November.

Distrib.: Ranchi.

Polyalthia suberosa (Roxb.) Thwaites, Enum. Pl. Zeyl. 398. 1864; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 65. 1872; Haines, Bot. Bihar Orissa 13. 1921 (Repr. ed., 1: 13. 1961). *Uvaria suberosa* Roxb., Pl. Corom. Andel 1: t. 34. 1795.

Fl. & Fr.: April - December.

Distrib.: Bhagalpur, Champaran, Singhbhum.

UVARIA L.

Uvaria hamiltonii Hook. f. & Thomson, Fl. Ind. 96. 1855 & in Hook. f., Fl. Brit. India 1: 48. 1872; Haines, Bot. Bihar Orissa 10. 1921 (Repr. ed., 1: 10. 1961).

var. **hamiltonii**

Fl. & Fr.: May - September.

Distrib.: Champaran, Munger, Santal Pargana, Singhbhum.

Uvaria lurida Hook. f. & Thomson, Fl. Ind. 101. 1855 & in Hook. f., Fl. Brit. India 1: 50. 1872; Haines, Bot. Bihar Orissa 10. 1921 (Repr. ed., 1: 11. 1961).

var. **lurida**

Fl. & Fr.: January - October.

Distrib.: Bihar (Mitra in Sharma *et al.* (eds.), Fl. India 1: 292. 1993).

MENISPERMACEAE

ANAMIRTA Colebr.

Anamirta cocculus (L.) Wight & Arnott, Prodr. 1: 446. 1834; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 98. 1872; Haines, Bot. Bihar Orissa 17. 1921 (Repr. ed., 1: 18. 1961). *Menispermum cocculus* L., Sp. Pl. 340. 1753.

Fl. & Fr.: August - December.

Distrib.: Singhbhum.

CISSAMPELOS L.

Cissampelos pareira L. var. **hirsuta** (Buch.-Ham. ex DC.) Forman in Kew Bull. 22: 356. 1968. *C. hirsuta* Buch.-Ham. ex DC., Syst. Nat. 1: 535. 1817. *C. pareira* L., Sp. Pl. 1031. 1753, *p.p., quoad* B; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 103. 1872; Haines, Bot. Bihar Orissa 16. 1921 (Repr. ed., 1: 17. 1961).

Fl. & Fr.: July - January.

Distrib.: Bhagalpur, Champaran, Giridih, Hazaribagh, Koderma, Palamau, Patna, Purnia, Ranchi.

COCCULUS DC., nom. cons.

Cocculus hirsutus (L.) Diels in Engler, Pflanzenr. IV. 94 (heft 46): 236. 1910; Haines, Bot. Bihar Orissa 19. 1921 (Repr. ed., 1: 20. 1961). *Menispermum hirsutum* L., Sp. Pl. 341. 1753. *Cocculus villosus* (Lam.) DC., Syst. Nat. 1: 525. 1817; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 101. 1872.

Fl. & Fr.: October - May.

Distrib.: Bhagalpur, Giridih, Hazaribagh, Muzaffarpur, Palamau, Patna, Santal Pargana, West Champaran.

STEPHANIA Lour.

Stephania glabra (Roxb.) Miers, Contrib. Bot. 3: 217. 1871. *Cissampelos glabra* Roxb., Fl. Ind. 3: 840. 1832.

Fl. & Fr.: July - December.

Distrib.: Palamau.

Stephania japonica (Thunb.) Miers, Contrib. Bot. 3: 213. 1871, *p.p. excl. Cuming*, 1160. *Menispermum japonicum* Thunb., Fl. Jap. 193. 1784. *Stephania hernandifolia* (Willd.) Walp., Rep. Bot. Syst. 1: 96. 1842; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 103. 1872; Haines, Bot. Bihar Orissa 17. 1921 (Repr. ed., 1: 17. 1961), *p. p.*

var. **discolor** (Blume) Forman in Kew Bull. 11: 56. 1956. *Clypea discolor* Blume, Bijdr. 26. 1825. *Stephania hernandifolia* (Willd.) Walp. var. *discolor* (Blume) Miq., Ann. Mus. Lugd.-Bat. 4: 85. 1868; Haines, Bot. Bihar Orissa 17. 1921 (Repr. ed., 1: 17. 1961), *p. p.*

Fl. & Fr.: March - December.

Distrib.: Ranchi.

var. **japonica**

Fl. & Fr.: March - September.

Distrib.: Champaran, Purnia, Ranchi.

TILIACORA Colebr.

Tiliacora acuminata (Lam.) Hook. f. & Thomson, Fl. Ind. 187. 1855; Haines, Bot. Bihar Orissa 19. 1921 (Repr. ed., 1: 19. 1961). *Menispermum acuminatum* Lam., Encycl. 4: 101. 1797. *Tiliacora racemosa* Colebr. in Trans. Linn. Soc. London 13: 67. 1822; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 99. 1872.

Fl. & Fr.: April - December.

Distrib.: Bhagalpur, Champaran, Purnia, Sahibganj, Santal Pargana.

TINOSPORA Miers

Tinospora cordifolia (Willd.) Hook. f. & Thomson, Fl. Ind. 184. 1855 & in Hook. f., Fl. Brit. India 1: 97. 1872; Haines, Bot. Bihar Orissa 18. 1921 (Repr. ed., 1: 18. 1961). *Menispermum cordifolium* Willd., Sp. Pl. 4: 826. 1806.

Fl. & Fr.: August - March.

Distrib.: Bhagalpur, East Champaran, Patna, Santal Pargana, West Champaran.

Tinospora sinensis (Lour.) Merr. in Sunyatsenia 1: 193. 1934. *Campylus sinensis* Lour., Fl. Cochinch. 1: 113. 1790. *Tinospora malabarica* (Lam.) Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 96. 1872; Haines, Bot. Bihar Orissa 18. 1921 (Repr. ed., 1: 19. 1961).

Fl. & Fr.: February - June.

Distrib.: Santal Pargana.

BERBERIDACEAE**BERBERIS** L.

Berberis asiatica Roxb. ex DC., Syst. Nat. 2: 13. 1821, non Griff., 1847; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 110. 1872; Haines, Bot. Bihar Orissa 20. 1921 (Repr. ed., 1: 20. 1961).

Fl. & Fr.: April - October.

Distrib.: Chota Nagpur, Giridih, Hazaribagh.

NYMPHAEACEAE

EURYALE Salisb.

Euryale ferox Salisb. in Koenig & Sims (eds.), Ann. Bot. 2: 74. 1805; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 115. 1872; Haines, Bot. Bihar Orissa 22. 1921 (Repr. ed., 1: 22. 1961). - *Makhana*.

Fl. & Fr.: May - December.

Distrib.: Araria, Katihar, Kishanganj, Purnia.

NYMPHAEA L., *nom. cons.*

Nymphaea nouchali Burm. f., Fl. Ind. 120. 1768. *N. stellata* Willd., Sp. Pl. 2: 1153. 1799; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 114. 1872, *incl. vars.*; Haines, Bot. Bihar Orissa 21. 1921 (Repr. ed., 1: 22. 1961) *incl. vars.*

Fl. & Fr.: June - January.

Distrib.: Throughout the state.

Nymphaea pubescens Willd., Sp. Pl. 2: 1154. 1798. *N. lotus auct. non L.*, 1753; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 114. 1872, *p.p.*; Haines, Bot. Bihar Orissa 21. 1921 (Repr. ed., 1: 21. 1961), *p.p.*

Fl. & Fr.: May - January.

Distrib.: Bhagalpur, Champaran, Gumla, Palamau, Ranchi.

Nymphaea rubra Roxb. ex Andrews, Bot. Rep. 8 (104): t. 503. 1808. *N. lotus auct. non L.*, 1753; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 114. 1872, *p.p.* *N. lotus* L. var. *rubra* (Roxb.) Haines, Bot. Bihar Orissa 21. 1921 (Repr. ed., 1: 21. 1961).

Fl. & Fr.: July - January.

Distrib.: Throughout the state.

NELUMBONACEAE**NELUMBO** Adans.

Nelumbo nucifera Gaertn., Fruct. Sem. Pl. 1: 73. t. 19. f. 2. 1788.
Nelumbium speciosum Willd., Sp. Pl. 2: 1258. 1799; Hook. *f.* & Thomson
 in Hook. *f.*, Fl. Brit. India 1: 116. 1872; Haines, Bot. Bihar Orissa 22.
 1921 (Repr. ed., 1: 23. 1961).

Fl. & Fr.: March - December.

Distrib.: Throughout the state.

PAPAVERACEAE**ARGEMONE** L.

Argemone mexicana L., Sp. Pl. 508. 1753; Hook. *f.* & Thomson in
 Hook. *f.*, Fl. Brit. India 1: 117. 1872; Haines, Bot. Bihar Orissa 23. 1921
 (Repr. ed., 1: 24. 1961).

Fl. & Fr.: February - December.

Distrib.: Throughout the state.

Argemone ochroleuca Sweet, Brit. Fl. Gard. 3: t. 242. 1829.

Fl. & Fr.: February - June.

Distrib.: Pakaur (Srivastava and Verma in J. Econ. Tax. Bot. 10(2):
 406-410. 1987).

ESCHSCHOLZIA Cham.

Eschscholzia californica Cham. in Nees, Horae Phys. Berol. 74. t.
 15. 1820.

Fl. & Fr.: February - August.

Distrib.: Cultivated in gardens.

PAPAVER L.

Papaver somniferum L., Sp. Pl. 508. 1753; Hook. *f.* & Thomson in
 Hook. *f.*, Fl. Brit. India 1: 117. 1872; Haines, Bot. Bihar Orissa 23. 1921
 (Repr. ed., 1: 23. 1961).

Fl. & Fr.: April - August.

Distrib.: Usually cultivated. East Champaran, Gopalganj, Sitamarhi, West Champaran.

FUMARIACEAE

FUMARIA L.

Fumaria indica (Hausskn.) Pugsley in J. Linn. Soc. London (Bot.) 44: 313. 1919. *F. vaillantii* Loisel. var. *indica* Hausskn. in Flora 56: 443. 1873. *F. parviflora* Lam. subsp. *vaillantii* (Loisel.) Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 128. 1872, p. p.

Fl. & Fr.: December - March.

Distrib.: Bhagalpur, Katihar, Kishanganj, Madhubani, Patna, Purnia, Ranchi, West Champaran.

Fumaria vaillantii Loisel. in Desv. J. Bot. 2: 358. 1809. *F. parviflora* Lam. subsp. *vaillantii* (Loisel.) Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 128. 1872, p. p. *F. parviflora auct. non* Lam., 1788: Haines, Bot. Bihar Orissa 23. 1921 (Repr. ed., 1: 24. 1961).

Fl. & Fr.: January - April.

Distrib.: West Champaran (Haines, l. c.).

BRASSICACEAE

BRASSICA L.

Brassica juncea (L.) Czern., Consp. Fl. Chark. 8. 1859; Hook. f. & T. Anderson in Hook. f., Fl. Brit. India 1: 157. 1872; Haines, Bot. Bihar Orissa 25. 1921 (Repr. ed., 1: 26. 1961). *Sinapis juncea* L., Sp. Pl. 668. 1753.

Fl. & Fr.: October - March.

Distrib.: Champaran, Ranchi.

Brassica napus L., Sp. Pl. 666. 1753. *B. campestris* L. subsp. *napus* (L.) Hook. f. & T. Anderson in Hook. f., Fl. Brit. India 1: 156. 1872.

Fl. & Fr.: November - February.

Distrib.: Palamau.

Brassica nigra (L.) Koch in Roehling, Deuts. Fl. ed. 3, 4: 713. 1833; Hook. f. & T. Anderson in Hook. f., Fl. Brit. India 1: 156. 1872. *Sinapis nigra* L., Sp. Pl. 668. 1753. - *Sarson*.

Fl. & Fr.: December - March.

Distrib.: Cultivated.

Brassica oleracea L., Sp. Pl. 667. 1753.

var. **botrytis** L., Sp. Pl. 667. 1753.

Distrib.: Cultivated.

var. **capitata** L., Sp. Pl. 667. 1753.

Distrib.: Cultivated.

var. **gongylodes** L., Sp. Pl. 667. 1753.

Distrib.: Cultivated.

Brassica rapa L., Sp. Pl. 666. 1753. *B. campestris* subsp. *rapa* Hook. f. & T. Anderson in Hook. f., Fl. Brit. India 1: 156. 1872.

subsp. **campestris** (L.) Clapham in Fl. Brit. Isles, ed. 2: 124. 1962. *B. campestris* L., Sp. Pl. 666. 1753; Hook. f. & T. Anderson in Hook. f., Fl. Brit. India 1: 156. 1872.

Fl. & Fr.: January - March.

Distrib.: Cultivated.

subsp. **rapa**

Fl. & Fr.: October - December.

Distrib.: Cultivated.

CAPSELLA Medik., *nom. cons.*

Capsella bursa-pastoris (L.) Medik., Pflanzengatt. 1: 85. 1792; Hook. f. & T. Anderson in Hook. f., Fl. Brit. India 1: 159. 1872; Haines, Bot. Bihar Orissa 27. 1921 (Repr. ed., 1: 28. 1961). *Thlaspi bursa-pastoris* L., Sp. Pl. 647. 1953.

Fl. & Fr.: January - March.

Distrib.: Bhagalpur, Patna.

CARDAMINE L.

Cardamine flexuosa Withering, Bot. Arr. Brit. Pl. ed.3, 3: 578. 1976. *C. hirsuta* var. *sylvatica* auct. non Link: Hook. f. & T. Anderson in Hook. f., Fl. Brit. India 1: 138. 1872; Haines, Bot. Bihar Orissa 27. 1921 (Repr. ed., 1: 28. 1961).

Fl. & Fr.: January - August.

Distrib.: Ranchi.

COCHLEARIA L.

Cochlearia cochlearioides (Roth) Santapau & Maheshw. in J. Bombay Nat. Hist. Soc. 54: 804. 1957. *Alyssum cochlearioides* Roth, Nov. Pl. Sp. 322. 1821. *Cochlearia flava* Roxb. ex Hook. f. & T. Anderson in Hook. f., Fl. Brit. India 1: 145. 1872; Haines, Bot. Bihar Orissa 27. 1921 (Repr. ed., 1: 28. 1961).

Fl. & Fr.: August - October.

Distrib.: Bhagalpur, Muzaffarpur, Patna, Sasaram.

CORONOPUS Zinn., *nom. cons.*

Coronopus didymus (L.) Sm., Fl. Britain 2: 691. 1800. *Lepidium didymum* L., Mant. Pl. 92. 1767. *Senebiera pinnatifida* DC. in Mem. Soc. Hist. Nat. Paris 144. t. 9. 1799; Haines, Bot. Bihar Orissa 28. 1921 (Repr. ed., 1: 29. 1961).

Fl. & Fr.: November - March.

Distrib.: Bhagalpur, Patna, Ranchi.

ERUCA Mill.

Eruca sativa Mill., Gard. Dict. ed. 8, no. 1. 1768; Hook. *f.* & T. Anderson in Hook. *f.*, Fl. Brit. India 1: 158. 1872; Haines, Bot. Bihar Orissa 26. 1921 (Repr. ed., 1: 27. 1961).

Fl. & Fr.: January - August.

Distrib.: Chota Nagpur, Patna.

IBERIS L.

Iberis amara L., Sp. Pl. 649. 1753.

Fl. & Fr.: June - July.

Distrib.: Cultivated in gardens.

Iberis odorata L., Sp. Pl. 649. 1753.

Fl. & Fr.: June - August.

Distrib.: Cultivated in gardens.

Iberis umbellata L., Sp. Pl. 649. 1753.

Fl. & Fr.: May - July.

Distrib.: Cultivated in gardens.

LEPIDIUM L.

Lepidium sativum L., Sp. Pl. 644. 1753; Hook. *f.* & T. Anderson in Hook. *f.*, Fl. Brit. India 1: 159. 1872; Haines, Bot. Bihar Orissa 28. 1921 (Repr. ed., 1: 29. 1961).

Fl. & Fr.: February - May.

Distrib.: Chota Nagpur, Patna.

Lepidium virginicum L., Sp. Pl. 645. 1753.

Fl. & Fr.: June - October.

Distrib.: Palamau.

NASTURTIUM R. Br., *nom. cons.*

Nasturtium officinale R. Br. in Aiton *f.*, Hortus Kew. ed. 2, 4: 110. 1812; Hook. *f.* & T. Anderson in Hook. *f.*, Fl. Brit. India 1: 133. 1872; Haines, Bot. Bihar Orissa 26. 1921 (Repr. ed., 1: 27. 1961).

Fl. & Fr.: March - July.

Distrib.: Chota Nagpur.

RAPHANUS L.

Raphanus sativus L., Sp. Pl. 669. 1753; Hook. *f.* & T. Anderson in Hook. *f.*, Fl. Brit. India 1: 166. 1872; Haines, Bot. Bihar Orissa 28. 1921 (Repr. ed., 1: 29. 1961).

Fl. & Fr.: January - April.

Distrib.: Cultivated.

RORIPPA Scop.

Rorippa dubia (Pers.) Hara in J. Jap. Bot. 30: 196. 1955. *Sisymbrium dubium* Pers., Syn. Pl. 2: 199. 1806. *Nasturtium indicum auct. non* (L.) DC., 1821; Hook. *f.* & T. Anderson in Hook. *f.*, Fl. Brit. India 1: 134. 1872, *p. p.*

Fl. & Fr.: November - May.

Distrib.: Ranchi.

Rorippa indica (L.) Hiern, Cat. Afr. Pl. Welw. 1: 26. *add. et corr.* 1896 et 2: 481, *errata* 1899. *Sisymbrium indicum* L., Mant. Pl. 93. 1767. *Nasturtium indicum* (L.) DC., Syst. Nat. 2: 199. 1821; Hook. *f.* & T. Anderson in Hook. *f.*, Fl. Brit. India 1: 134. 1872, *p. p.*; Haines, Bot. Bihar Orissa 26. 1921 (Repr. ed., 1: 27. 1961).

Fl. & Fr.: April - June.

Distrib.: Bhagalpur, Palamau, West Champaran.

Rorippa montana (Hook. *f.* & Thomson) Small, Fl. S. E. United States ed. 2. 1336. 1913. *Nasturtium montanum* Hook. *f.* & Thomson in

J. Linn. Soc. London (Bot.) 5: 139. 1861; Hook. *f.* & T. Anderson in Hook. *f.*, Fl. Brit. India 1: 134. 1872.

Fl. & Fr.: December - March.

Distrib.: Palamau.

Rorippa palustris (L.) Besser, Enum. Pl. Volhyn. 27. 1822. *Sisymbrium amphibium* L. var. *palustre* L., Sp. Pl. 657. 1753. *Nasturtium palustre* (L.) DC., Syst. Nat. 2: 191. 1821; Hook. *f.* & T. Anderson in Hook. *f.*, Fl. Brit. India 1: 133. 1872; Haines, Bot. Bihar Orissa 26. 1921 (Repr. ed., 1: 27. 1961).

Fl. & Fr.: April - July.

Distrib.: North Bihar.

SISYMBRIUM L.

Sisymbrium altissimum L., Sp. Pl. 659. 1753. *S. panonicum* Jacq., Icon. Pl. Rar. 1: 12. t. 123. 1786; Hook. *f.* & T. Anderson in Hook. *f.*, Fl. Brit. India 1: 150. 1872.

Fl. & Fr.: April - July.

Distrib.: Palamau, Patna.

Sisymbrium irio L., Sp. Pl. 659. 1753; Hook. *f.* & T. Anderson in Hook. *f.*, Fl. Brit. India 1: 150. 1872.

Fl. & Fr.: November - May.

Distrib.: Palamau.

THLASPI L.

Thlaspi arvense L., Sp. Pl. 646. 1753; Hook. *f.* & T. Anderson in Hook. *f.*, Fl. Brit. India 1: 162. 1872; Haines, Bot. Bihar Orissa 28. 1921 (Repr. ed., 1: 29. 1961).

Fl. & Fr.: April - August.

Distrib.: Champaran.

CAPPARACEAE**CADABA** Forssk.

Cadaba fruticosa (L.) Druce in Bot. Exch. Cl. Soc. Brit. Isles 3: 415. 1914. *Cleome fruticosa* L., Sp. Pl. 671. 1753. *Cadaba indica* Lam., Encycl. 1: 544. 1785; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 172. 1872.

Fl. & Fr.: November - February.

Distrib.: Bihar (Raghavan in Sharma and Balakrishnan (eds.), Fl. India 2: 250. 1993).

CAPPARIS L.

Capparis decidua (Forssk.) Edgew. in J. Linn. Soc. London (Bot.) 6: 184. 1862. *Sodada decidua* Forssk., Fl. Aegypt.-Arab. 81. 1775. *Capparis aphylla* Roth, Nov. Sp. Pl. 238. 1821; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 174. 1872.

Fl. & Fr.: February - August.

Distrib.: Bihar (Raghavan in Sharma and Balakrishnan (eds.), Fl. India 2: 265. 1993).

Capparis seplaria L., Syst. Nat. ed. 10. 2: 1071. 1759; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 177. 1872; Haines, Bot. Bihar Orissa 32. 1921 (Repr. ed., 1: 33. 1961).

Fl. & Fr.: March - November.

Distrib.: Bhagalpur, Palamau, West Champaran.

Capparis spinosa L. var. **himalayensis** (Jafri) Jacobs in Blumea 12: 419. 1965. *C. himalayensis* Jafri in Pakistan J. For. 6: 197. t. 1. f. 1. B, map. 1956. *C. spinosa* L. var. *leucophylla* auct. non DC., 1824; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 173. 1872; Haines, Bot. Bihar Orissa 31. 1921 (Repr. ed., 1: 32. 1961).

Fl. & Fr.: May - August.

Distrib.: West Champaran.

Capparis zeylanica L., Sp. Pl. ed. 2. 720. 1762. *C. horrida* L. f., Suppl. Pl. 264. 1782; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 178. 1872; Haines, Bot. Bihar Orissa 31. 1921 (Repr. ed., 1: 32. 1961).

Fl. & Fr.: February - August.

Distrib.: Throughout the state.

CLEOME L.

Cleome chelidoni L. f., Suppl. Pl. 300. 1782; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 170. 1872; Haines, Bot. Bihar Orissa 30. 1921 (Repr. ed., 1: 31. 1961).

Fl. & Fr.: June - October.

Distrib.: Bhagalpur, Santal Pargana, West Champaran.

Cleome gynandra L., Sp. Pl. 671. 1753. *Gynandropsis pentaphylla* (L.) DC., Prodr. 1: 238. 1824; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 171. 1872; Haines, Bot. Bihar Orissa 30. 1921 (Repr. ed., 1: 31. 1961).

Fl. & Fr.: July - November.

Distrib.: Throughout the state.

Cleome monophylla L., Sp. Pl. 672. 1753; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 168. 1872; Haines, Bot. Bihar Orissa 29. 1921 (Repr. ed., 1: 30. 1961).

Fl. & Fr.: July - November.

Distrib.: Hazaribagh, Palamau, Ranchi.

Cleome rutidosperma DC., Prodr. 1: 241. 1824; Mukherjee in Indian For. 95: 237. 1969.

Fl. & Fr.: May - November.

Distrib.: Bhagalpur (Jha and Varma in Geobios New Reports 8: 152-153. 1989).

Cleome viscosa L., Sp. Pl. 672. 1753; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 170. 1872; Haines, Bot. Bihar Orissa 29. 1921 (Repr. ed., 1: 30. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Throughout the state.

CRATEVA L.

Crateva adansonii DC. subsp. **odora** (Buch.-Ham.) Jacobs in Blumea 12: 198. 1964. *C. odora* Buch.-Ham. in Trans. Linn. Soc. London 15: 118. 1827. *C. religiosa auct. non* Forst. f., 1786: Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 172. 1872, p. p.; Haines, Bot. Bihar Orissa 30. 1921 (Repr. ed., 1: 31. 1961).

Fl. & Fr.: April - June.

Distrib.: Bhagalpur.

Crateva magna (Lour.) DC., Prodr. 1: 243. 1824. *Capparis magna* Lour., Fl. Cochinch. 1: 331. 1790. *Crateva nurvala* Buch.-Ham. in Trans. Linn. Soc. London 15: 121. 1827. *C. religiosa* var. *nurvala* (Buch.-Ham.) Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 172. 1872; Haines, Bot. Bihar Orissa 30. 1921 (Repr. ed., 1: 31. 1961).

Fl. & Fr.: March - July.

Distrib.: Patna, West Champaran.

MAERUA Forssk.

Maerua oblongifolia (Forssk.) A. Rich. in Guill., Perr. & A. Rich., Fl. Seneg. Tent. 1: 32. t. 6. 1847. *Capparis oblongifolia* Forssk., Fl. Aegypt.-Arab. 99. 1775. *Maerua arenaria* (DC.) Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 171. 1872.

Fl. & Fr.: February - June.

Distrib.: Bihar (Raghavan in Sharma and Balakrishnan (eds.), Fl. India 2: 331. 1993).

VIOLACEAE

HYBANTHUS Jacq., *nom. cons.*

Hybanthus enneaspermus (L.) F. v. Muell., Fragm. Phyt. Austr. 10: 81. 1876. *Viola enneasperma* L., Sp. Pl. 937. 1753. *Ionidium*

suffruticosum (L.) Roem. & Schult., Syst. Veg. 5: 394. 1819; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 185. 1872, '*suffruticosum* Ging.'; Haines, Bot. Bihar Orissa 33. 1921 (Repr. ed., 1: 34. 1961), '*suffruticosum* Ging.'

Fl. & Fr.: Throughout the year.

Distrib.: Throughout the state.

RINOREA Aublet

Rinorea heteroclita (Roxb.) Craib, Fl. Siam. Enum. 1: 89. 1925. *Vareca heteroclita* Roxb., Fl. Ind. 2: 446. 1824. *Alsodeia roxburghii* Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 186. 1872.

Fl. & Fr.: March - October.

Distrib.: Bihar (Banerjee and Pramanik in Sharma and Balakrishnan (eds.), Fl. India 2: 348. 1993).

VIOLA L.

Viola betonicifolia Sm. in Rees, Cyclop. 37(1): Viola no.7. 1817.

subsp. *betonicifolia*

Fl. & Fr.: January - June.

Distrib.: Bihar (Banerjee and Pramanik in Sharma and Balakrishnan (eds.), Fl. India 2: 355. 1993).

Viola biflora L., Sp. Pl. 936. 1753; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 182. 1872, *p. p.*

Fl. & Fr.: March - June.

Distrib.: Palamau (Paul in Botanique 7(1): 29-32. 1976).

Viola macroceros Bunge in Ledeb., Fl. Alt. 1: 256. 1829. *V. patrinii* auct. non DC., 1824; Hook. f. & Thomson in Hook. f., Fl. Brit. India 1: 183. 1872, *p. p.*; Haines, Bot. Bihar Orissa 33. 1921 (Repr. ed., 1: 34. 1961).

Fl. & Fr.: April - September.

Distrib.: Gumla, Koderma, Lohardaga, Palamau.

Viola tricolor L., Sp. Pl. 935. 1753; Hook. *f.* & Thomson in Hook. *f.*, Fl. Brit. India 1: 182. 1872, in obs.; Haines, Bot. Bihar Orissa 33. 1921 (Repr. ed., 1: 34. 1961).

Fl. & Fr.: November - June.

Distrib.: West Champaran.

BIXACEAE

BIXA L.

Bixa orellana L., Sp. Pl. 512. 1753; Hook. *f.* & Thomson in Hook. *f.*, Fl. Brit. India 1: 190. 1872; Haines, Bot. Bihar Orissa 34. 1921 (Repr. ed., 1: 35. 1961).

Fl. & Fr.: August - February.

Distrib.: Patna, Santal Pargana.

COCHLOSPERMACEAE

COCHLOSPERMUM Kunth *ex* DC., *nom. cons.*

Cochlospermum religiosum (L.) Alston, Handb. Fl. Ceylon 6: 14. 1931. *Bombax religiosum* L., Sp. Pl. 512. 1753, '*religiosa*' *Cochlospermum gossypium* DC., Prodr. 1: 527. 1824; Hook. *f.* & Thomson in Hook. *f.*, Fl. Brit. India 1: 190. 1872; Haines, Bot. Bihar Orissa 34. 1921 (Repr. ed., 1: 35. 1961).

Fl. & Fr.: February - June.

Distrib.: Gaya, Hazaribagh, Koderma, Palamau, Santal Pargana, Singhbhum.

FLACOURTIACEAE

CASEARIA Jacq.

Casearia graveolens Dalz. in Hook., J. Bot. Kew Gard. Misc. 4: 107. 1852; C. B. Clarke in Hook. *f.*, Fl. Brit. India 2: 592. 1879; Haines, Bot. Bihar Orissa 39. 1921 (Repr. ed., 1: 40. 1961).

Fl. & Fr.: March - July.

Distrib.: East Champaran, Giridih, Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

Casearia tomentosa Roxb., *Fl. Ind.* 2: 421. 1832; C. B. Clarke in *Hook. f.*, *Fl. Brit. India* 2: 593. 1879; Haines, *Bot. Bihar Orissa* 39. 1921 (Repr. ed., 1: 40. 1961).

Fl. & Fr.: February - April.

Distrib.: Bhagalpur, Giridih, Gumla, Hazaribagh, Koderma, Lohardaga, Muzaffarpur, Ranchi, Singhbhum, West Champaran.

FLACOURTIA Comm. ex L'Hérit.

Flacourtia indica (Burm. f.) Merr., *Interpr. Rumph. Herb. Amb.* 377. 1917. *Gmelina indica* Burm. f., *Fl. Ind.* 132. t. 39. f. 5. 1768. *Flacourtia sepiaria* Roxb., *Pl. Corom.* 1: 48. t. 68. 1796; *Hook. f. & Thomson* in *Hook. f.*, *Fl. Brit. India* 1: 194. 1872; Haines, *Bot. Bihar Orissa* 36. 1921 (Repr. ed., 1: 37. 1961). *F. ramontchii* L'Hérit., *Strip. Nov.* 3: 59. t. 30. & 30B. 1786; *Hook. f. & Thomson* in *Hook. f.*, *Fl. Brit. India* 1: 193. 1872, *pro maj. parte excl. var. latifolia*; Haines, *Bot. Bihar Orissa* 37. 1921 (Repr. ed., 1: 38. 1961). *F. latifolia auct. non* (*Hook. f. & Thomson*) *Cooke*, 1901; Haines, *Bot. Bihar Orissa* 37. 1921 (Repr. ed., 1: 38. 1961), *excl. syn. cit.*

Fl. & Fr.: December - August.

Distrib.: Throughout the state.

Flacourtia jangomas (Lour.) Raeusch., *Nom. Bot.* ed. 3: 290. 1797. *Stigmarota jangomas* Lour., *Fl. Cochinch.* 2: 634. 1790. *Flacourtia cataphracta* Roxb. ex Willd., *Sp. Pl.* 4: 830. 1806; *Hook. f. & Thomson* in *Hook. f.*, *Fl. Brit. India* 1: 193. 1872; Haines, *Bot. Bihar Orissa* 38. 1921 (Repr. ed., 1: 39. 1961).

Fl. & Fr.: March - August.

Distrib.: Bhagalpur, Patna, Purnia, West Champaran.

HOMALIUM Jacq.

Homalium napaulense (DC.) Benth. in J. Proc. Linn. Soc. Bot. 4: 34. 1866; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 596. 1879, '*nepalense*'; Haines, Bot. Bihar Orissa 35. 1921 (Repr. ed., 1: 36. 1961), '*nepalense*' *Blackwellia napaulense* DC., Prodr. 2: 54. 1825.

Fl. & Fr.: April - June.

Distrib.: Singhbhum. Rare.

XYLOSMA G. Forster, *nom. cons.*

Xylosma longifolium Clos in Ann. Sci. Nat. 4, 8: 231. 1857; Hook. *f.* & Thomson in Hook. *f.*, Fl. Brit. India 1: 194. 1872; Haines, Bot. Bihar Orissa 38. 1921 (Repr. ed., 1: 39. 1961).

Fl. & Fr.: October - April.

Distrib.: Hazaribagh, Palamau, Purnia, Singhbhum, West Champaran.

PITTOSPORACEAE**PITTOSPORUM** Banks *ex* Gaertn.

Pittosporum napaulense (DC.) Rehder & Wilson in Pl. Wilson. 3: 326. 1916. *Senacia napaulensis* DC., Prodr. 1: 347. 1824. *Pittosporum floribundum* Wight & Arnott, Prodr. 1: 154. 1834; Hook. *f.* & Thomson in Hook. *f.*, Fl. Brit. India 1: 199. 1872; Haines, Bot. Bihar Orissa 39. 1921 (Repr. ed., 1: 41. 1961).

Fl. & Fr.: February - December.

Distrib.: Hazaribagh, Lohardaga, Palamau, Ranchi, Singhbhum.

Pittosporum tetraspermum Wight & Arnott, Prodr. 1: 154. 1834; Hook. *f.* & Thomson in Hook. *f.*, Fl. Brit. India 1: 198. 1872.

Fl. & Fr.: February - December.

Distrib.: Koderma, Lohardaga, Palamau, Ranchi.

POLYGALACEAE

POLYGALA L.

Polygala arvensis Willd., Sp.Pl. 3(2): 876. 1803. *P. chinensis auct. non L.*, 1753; Bennett in Hook. f., Fl. Brit. India 1: 204. 1872, *p. p.*; Haines, Bot. Bihar Orissa 41. 1921 (Repr. ed., 1: 42. 1961).

Fl. & Fr.: July - December.

Distrib.: Bhagalpur, Darbhanga, East Champaran, Koderma, Palamau, Patna, Ranchi, Singhbhum, West Champaran.

Polygala chinensis L., Sp. Pl. 704. 1753; Bennett in Hook. f., Fl. Brit. India 1: 204. 1872, *p. p.* *P. glomerata* Lour., Fl. Cochinch. 426. 1790; Bennett in Hook. f., Fl. Brit. India 1: 206. 1872; Haines, Bot. Bihar Orissa 41. 1921 (Repr. ed., 1: 42. 1961).

Fl. & Fr.: April - November.

Distrib.: Palamau, Ranchi, Singhbhum, West Champaran.

Polygala crotalarioides Buch.-Ham. ex DC., Prodr. 1: 327. 1824; Bennett in Hook. f., Fl. Brit. India 1: 201. 1872; Haines, Bot. Bihar Orissa 42. 1921 (Repr. ed., 1: 43. 1961).

Fl. & Fr.: May - November.

Distrib.: Hazaribagh, Palamau, Ranchi, West Champaran.

Polygala elongata Klein in Willd., Sp. Pl. 3: 879. 1802; Bennett in Hook. f., Fl. Brit. India 1: 203. 1872, *p. p.*; Haines, Bot. Bihar Orissa 41. 1921 (Repr. ed., 1: 43. 1961).

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Koderma, Palamau, Patna.

Polygala erioptera DC., Prodr. 1: 326. 1824; Bennett in Hook. f., Fl. Brit. India 1: 203. 1872; Haines, Bot. Bihar Orissa 42. 1921 (Repr. ed., 1: 43. 1961).

Fl. & Fr.: February - November.

Distrib.: Darbhanga, Hazaribagh, Koderma, Palamau, Patna, Ranchi, West Champaran.

Polygala furcata Royle, Ill. Bot. Himal. 3: 78. t. 19B. 1834. *P. triphylla* Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 200. 1825.

Fl. & Fr.: July - December.

Distrib.: Giridih, Hazaribagh, Palamau.

Polygala linarifolia Willd., Sp. Pl. 3: 877. 1803. *P. chinensis* L. var. *linarifolia* (Willd.) Chodat in Mem. Soc. Phys. Nat. Hist. 31(2): 386. 1893.

Fl. & Fr.: April - November.

Distrib.: Throughout (Banerjee in Sharma and Balakrishnan (eds.), Fl. India 2: 476. 1993).

Polygala longifolia Poir. in Lam., Encycl. 5: 501. 1804. *P. leptalea* DC., Prodr. 1: 325. 1824; Bennett in Hook. f., Fl. Brit. India 1: 202. 1872; Haines, Bot. Bihar Orissa 41. 1921 (Repr. ed., 1: 43. 1961).

Fl. & Fr.: July - November.

Distrib.: Palamau, Ranchi, Santal Pargana.

Polygala persicariifolia DC., Prodr. 1: 326. 1824; Bennett in Hook. f., Fl. Brit. India 202. 1872, "*persicariaefolia*"

Fl. & Fr.: July - October.

Distrib.: Palamau.

Polygala umbonata Craib in Bull. Misc. Inform. Kew 1916: 260. 1916. *P. triphylla* auct. non Buch.-Ham. ex D. Don, 1825; Haines, Bot. Bihar Orissa 42. 1921 (Repr. ed., 1: 44. 1961).

Fl. & Fr.: October - November.

Distrib.: Giridih, Hazaribagh, Ranchi.

SALOMONIA Lour., *nom. cons.*

Salomonium ciliata (L.) DC., Prodr. 1: 334. 1824; Bennett in Hook. f., Fl. Brit. India 1: 206. 1872. *Polygala ciliata* L., Sp. Pl. 705. 1753. *Salomonium oblongifolia* DC., Prodr. 1: 334. 1824; Bennett in Hook. f., Fl. Brit. India 1: 207. 1872; Haines, Bot. Bihar Orissa 43. 1921 (Repr. ed., 1: 44. 1961).

Fl. & Fr.: August - December.

Distrib.: Ranchi, West Champaran.

CARYOPHYLLACEAE

CERASTIUM L.

Cerastium glomeratum Thuill., Fl. Env. Paris ed. 2. 226. 1799. *C. vulgatum auct. non L.*, 1753; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 228. 1874.

Fl. & Fr.: July - October.

Distrib.: Santal Pargana.

DIANTHUS L.

Dianthus barbatus L., Sp. Pl. 409. 1753.

Fl. & Fr.: December - February.

Distrib.: Cultivated in gardens.

Dianthus caryophyllus L., Sp. Pl. 410. 1753; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 214. 1874.

Fl. & Fr.: November - January.

Distrib.: Patna, West Champaran.

Dianthus chinensis L., Sp. Pl. 411. 1753; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 213. 1874; Haines, Bot. Bihar Orissa 1235. 1924 (Repr. ed., 3: 1289. 1961).

Fl. & Fr.: January - April.

Distrib.: Cultivated in gardens.

DRYMARIA Schult.

Drymaria diandra Blume, Bijdr. 62. 1825. *D. cordata auct. non (L.)* Roem. & Schult., 1819; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 244. 1874; Haines, Bot. Bihar Orissa 45. 1921 (Repr. ed., 1: 46. 1961).

Fl. & Fr.: February - November.

Distrib.: Chota Nagpur, Giridih, Hazaribagh.

POLYCARPAEA Lam., *nom. cons.*

Polycarpaea corymbosa (L.) Lam., Tabl. Encycl. 2: 129. 1797; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 245. 1874; Haines, Bot. Bihar Orissa 46. 1921 (Repr. ed., 1: 47. 1961). *Achyranthes corymbosa* L., Sp. Pl. 205. 1753.

var. corymbosa

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, Giridih, Hazaribagh, Koderma, Ranchi, Santal Pargana, West Champaran.

POLYCARPON L.

Polycarpon prostratum (Forssk.) Aschers. & Schweinf. in Oest. Bot. Z. 39: 128. 1889. *Alsine prostrata* Forssk., Fl. Aegypt.-Arab. 207. 1775. *Polycarpon loeflingiae* (Wight & Arnott) Benth. in Benth. & Hook. *f.*, Gen. Pl. 1: 153. 1862; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 245. 1874; Haines, Bot. Bihar Orissa 45. 1921 (Repr. ed., 1: 47. 1961).

Fl. & Fr.: June - September.

Distrib.: Bhagalpur, Koderma, Palamau, Patna, Purnia, Singhbhum, West Champaran.

SILENE L.

Silene armeria L., Sp. Pl. 420. 1753.

Distrib.: Cultivated.

Silene conoldea L., Sp. Pl. 418. 1753; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 218. 1874.

Fl. & Fr.: March - August.

Distrib.: Bhagalpur, Patna, Ranchi, West Champaran.

SPERGULA L.

Spargula arvensis L., Sp. Pl. 440. 1753; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 243. 1874; Haines, Bot. Bihar Orissa 44. 1921 (Repr. ed., 1: 46. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Palamau, Patna, West Champaran.

Spargula fallax (Lowe) E.H. Krause in Sturm, Deutschl. Fl. ed. 2, 5: 21. 1901. *Spergularia fallax* Lowe in Hook., J. Bot. Kew Gard. Misc. 8: 289. 1856. *Spargula pentandra auct. non L.*, 1753; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 243. 1874; Haines, Bot. Bihar Orissa 45. 1921 (Repr. ed., 1: 46. 1961).

Fl. & Fr.: December - April.

Distrib.: Bhagalpur, Chota Nagpur, Patna.

STELLARIA L.

Stellaria media (L.) Villars, Hist. Pl. Dauphine 3: 615. 1789, *p.p.*; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 230. 1874, *p.p.*; Haines, Bot. Bihar Orissa 44. 1921 (Repr. ed., 1: 45. 1961). *Alsine media* L., Sp. Pl. 272. 1753.

Fl. & Fr.: December - March.

Distrib.: Bhagalpur, East Champaran, Palamau, Patna, Purnia, West Champaran.

Stellaria wallichiana Benth. ex Haines in Bull. Misc. Inform. Kew 1920: 66. 1920 & Bot. Bihar Orissa 44. 1921 (Repr. ed., 1: 46. 1961). *S. media* (L.) Villars, Hist. Pl. Dauphine 3: 615. 1789, *p.p.*; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 230. 1874, *p.p.*

Fl. & Fr.: February - August.

Distrib.: Purnia.

VACCARIA Medik.

Vaccaria pyramidata Medik., Philos. Bot. 1: 96. 1789. *Saponaria vaccaria* L., Sp. Pl. 409. 1753; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit.

India 1: 217. 1874, *p.p.*; Haines, Bot. Bihar Orissa 43. 1921 (Repr. ed., 1: 45. 1961).

Fl. & Fr.: July - September.

Distrib.: Bhagalpur, East Champaran, Palamau, Patna, West Champaran.

PORTULACACEAE

PORTULACA L.

Portulaca grandiflora Hook. in Curtis, Bot. Mag. n. s. 3: t. 2885. 1829; Haines, Bot. Bihar Orissa 47. 1921 (Repr. ed., 1: 48. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Bhagalpur, Chota Nagpur, Patna, West Champaran.

Portulaca oleracea L., Sp. Pl. 445. 1753; Dyer in Hook. *f.*, Fl. Brit. India 1: 246. 1874; Haines, Bot. Bihar Orissa 47. 1921 (Repr. ed., 1: 48. 1961).

var. **linearifolia** Sivarajan & Manilal in New Botanist 4: 30. 1977; Sivarajan in J. Bombay Nat. Hist. Soc. 78: 258. 1981.

Distrib.: Bihar (Rao in Sharma and Sanjappa (eds.), Fl. India 3: 4. 1993).

var. **oleracea**

Fl. & Fr.: Throughout the year.

Distrib.: Throughout the state.

Portulaca pilosa L., Sp. Pl. 445. 1753.

Distrib.: Bhagalpur, Santal Pargana, West Champaran.

Portulaca quadrifolia L., Mant. Pl. 73. 1767; Dyer in Hook. *f.*, Fl. Brit. India 1: 247. 1874; Haines, Bot. Bihar Orissa 47. 1921 (Repr. ed., 1: 48. 1961).

Fl. & Fr.: July - October.

Distrib.: Bhagalpur, Darbhanga, Palamau, Patna, Ranchi, Samastipur, West Champaran.

Portulaca tuberosa Roxb., Fl. Ind. 2: 464. 1832; Dyer in Hook. *f.*, Fl. Brit. India 1: 247. 1874; Haines, Bot. Bihar Orissa 46. 1921 (Repr. ed., 1: 48. 1961).

Fl. & Fr.: July - October.

Distrib.: Munger. Rare.

TAMARICACEAE

TAMARIX L.

Tamarix dioica Roxb. *ex* Roth, Nov. Pl. Sp. 185. 1821; Dyer in Hook. *f.*, Fl. Brit. India 1: 249. 1874; Haines, Bot. Bihar Orissa 51. 1921 (Repr. ed., 1: 52. 1961).

Fl. & Fr.: September - January.

Distrib.: Bhagalpur, East Champaran, Koderma, Patna, Sahibganj, Saran, West Champaran.

Tamarix ericoides Rottler & Willd. in Ges. Naturf. Freunde Berlin Neve Schriften 4: 214. t. 4. 1803; Dyer in Hook. *f.*, Fl. Brit. India 1: 249. 1874; Haines, Bot. Bihar Orissa 51. 1921 (Repr. ed., 1: 52. 1961). *Trichaurus ericoides* (Rottler & Willd.) Arnott *ex* Wight & Arnott, Prodr. 40. 1834, *p.p.*

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur, Dumka, Hazaribagh, West Champaran.

Tamarix indica Willd. in Ges. Naturf. Freunde Berlin Neve Schriften 4: 214. 1803; Haines, Bot. Bihar Orissa 51. 1921 (Repr. ed., 1: 53. 1961). *T. gallica* L. var. *indica* (Willd.) Ehrenb. in Linnaea 2: 276. 1827; Dyer in Hook. *f.*, Fl. Brit. India 1: 248. 1874. *T. gallica auct. non* L., 1753; Dyer in Hook. *f.*, Fl. Brit. India 1: 248. 1874.

Fl. & Fr.: August - December.

Distrib.: West Champaran.

ELATINACEAE**BERGIA L.**

Bergia ammannioides Roxb. ex Roth, Nov. Pl. Sp. 219. 1821; Dyer in Hook. f., Fl. Brit. India 1: 251. 1874; Haines, Bot. Bihar Orissa 50. 1921 (Repr. ed., 1: 51. 1961), '*ammanoides* Roxb.'

Fl. & Fr.: August - March.

Distrib.: Bhagalpur, Buxar, Patna, West Champaran.

Bergia capensis L., Mant. Pl. 241. 1771. *B. verticillata* Willd., Sp. Pl. ed. 4, 2: 770. 1799; Dyer in Hook. f., Fl. Brit. India 1: 252. 1874; Haines, Bot. Bihar Orissa 50. 1921 (Repr. ed., 1: 51. 1961).

Fl. & Fr.: August - October.

Distrib.: Bihar (Bhattacharya in Sharma and Sanjappa (eds.), Fl. India 3: 34. 1993).

HYPERICACEAE**CRATOXYLUM Blume**

Cratoxylum cochinchinense (Lour.) Blume, Mus. Bot. 2: 17. 1852. *Hypericum cochinchinense* Lour., Fl. Cochinch. 2: 471. 1790. *Cratoxylum polyanthum* Korth. in Temminck, Verh. Nat. Gesch. Ned. Bezitt. Bot. 175. t. 36. 1842; Dyer in Hook. f., Fl. Brit. India 1: 257. 1874, *incl. vars. ligustrinum & wightii*.

Fl. & Fr.: Throughout the year.

Distrib.: Ranchi.

HYPERICUM L.

Hypericum gaitii Haines in J. Asiat. Soc. Bengal n.s. 15: 311. 1919 & Bot. Bihar Orissa 52. 1921 (Repr. ed., 1: 53. 1961).

Fl. & Fr.: April - June.

Distrib.: Palamau, Ranchi.

Hypericum himalaicum N. Robson in J. Jap. Bot. 52: 287. 1977.
H. napaulense auct. non Choisy, 1824; Dyer in Hook. f., Fl. Brit. India
1: 256. 1874, *p. p.*

Fl. & Fr.: July - August.

Distrib.: Purnia.

Hypericum japonicum Thunb. ex Murray, Syst. Veg. ed. 14. 702.
1784; Dyer in Hook. f., Fl. Brit. India 1: 256. 1874; Haines, Bot. Bihar
Orissa 52. 1921 (Repr. ed., 1: 53. 1961).

Fl. & Fr.: August - February.

Distrib.: Dumka, Godda, Palamau, Purnia, West Champaran.

Hypericum monogynum L., Sp. Pl. ed. 2. 1107. 1763. *H. chinense*
L., Syst. Nat. ed. 10. 1184. 1759, non Osbeck, 1757; Haines, Bot. Bihar
Orissa 52. 1921 (Repr. ed., 1: 54. 1961).

Distrib.: Cultivated. Ranchi, West Champaran.

CLUSIACEAE

CALOPHYLLUM L.

Calophyllum inophyllum L., Sp. Pl. 513. 1753; T. Anderson in Hook.
f., Fl. Brit. India 1: 273. 1874; Haines, Bot. Bihar Orissa 54. 1921 (Repr.
ed., 1: 56. 1961).

Fl. & Fr.: January - October.

Distrib.: Bhagalpur.

GARCINIA L.

Garcinia cowa Roxb. ex DC., Prodr. 1: 561. 1824; T. Anderson in
Hook. f., Fl. Brit. India 1: 262. 1874, *p. p.*; Haines, Bot. Bihar Orissa 53.
1921 (Repr. ed., 1: 54. 1961).

Fl. & Fr.: January - September.

Distrib.: Munger, Singhbhum.

Garcinia xanthochymus Hook. *f.*, Fl. Brit. India 1: 269. 1874; Haines, Bot. Bihar Orissa 53. 1921 (Repr. ed., 1: 55. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated. Bhojpur.

MESUA L. *emend.* Kosterm.

Mesua ferrea L., Sp. Pl. 515. 1753; T. Anderson in Hook. *f.*, Fl. Brit. India 1: 277. 1874; Haines, Bot. Bihar Orissa 55. 1921 (Repr. ed., 1: 56. 1961).

var. **ferrea**

Fl. & Fr.: April - November.

Distrib.: Hazaribagh, Patna, Purnia, Ranchi.

THEACEAE

CAMELLIA L.

Camellia sinensis (L.) Kuntze var. **assamica** (Masters) Kitamura in Acta Phytotax. Geobot. Kyoto 14: 59. 1950. *Thea assamica* Masters in J. Agric. Hort. Soc. India 3: 63. 1844. *Camellia theifera* Griff., Not. Pl. Asiat. 4: 558: t. 601. f. 1. 1854; Dyer in Hook. *f.*, Fl. Brit. India 1: 292. 1874; Haines, Bot. Bihar Orissa 55. 1921 (Repr. ed., 1: 57. 1961).

Fl. & Fr.: January - September.

Distrib.: Giridih, Hazaribagh, Gumla, Koderma, Palamau, Ranchi.

DIPTEROCARPACEAE

SHOREA Roxb. *ex* Gaertn. *f.*

Shorea robusta Roxb. *ex* Gaertn. *f.*, Suppl. Carp. 3: 48. t. 186. 1805; Dyer in Hook. *f.*, Fl. Brit. India 1: 306. 1874; Haines, Bot. Bihar Orissa 56. 1921 (Repr. ed., 1: 58. 1961). - *Sakhu*, *Sal*.

Fl. & Fr.: February - July.

Distrib.: Throughout the state.

MALVACEAE

ABELMOSCHUS Medik.

Abelmoschus angulosus Wallich ex Wight & Arnott, Prodr. 53. 1834. *Hibiscus angulosus* (Wallich ex Wight & Arnott) Steud., Nomen. Bot. ed. 2. 1: 758. 1840; Masters in Hook. f., Fl. Brit. India 1: 341. 1874, *incl. vars.*

Fl. & Fr.: September - December.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 111. 1998).

Abelmoschus crinitus Wallich, Pl. Asiat. Rar. 1: 39. t. 44. 1830. *Hibiscus cancellatus* Roxb., Fl. Ind. 3: 201. 1832, *non* L. f., 1782; Masters in Hook. f., Fl. Brit. India 1: 342. 1874; Haines, Bot. Bihar Orissa 64. 1921 (Repr. ed., 1: 67. 1961).

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur, Palamau, Sahibganj, Santal Pargana, West Champaran.

Abelmoschus esculentus (L.) Moench, Meth. Pl. 617. 1794. *Hibiscus esculentus* L., Sp. Pl. 696. 1753; Masters in Hook. f., Fl. Brit. India 1: 343. 1874; Haines, Bot. Bihar Orissa 65. 1921 (Repr. ed., 1: 68. 1961). - *Bhindi*.

Fl. & Fr.: April - October.

Distrib.: Cultivated throughout the state.

Abelmoschus ficulneus (L.) Wight & Arnott in Wight, Cat. 14. 1833 *et* in Prodr. 53. 1834. *Hibiscus ficulneus* L., Sp. Pl. 695. 1753; Masters in Hook. f., Fl. Brit. India 1: 340. 1874; Haines, Bot. Bihar Orissa 66. 1921 (Repr. ed., 1: 69. 1961).

Fl. & Fr.: September - February.

Distrib.: Cultivated.

Abelmoschus manihot (L.) Medik. var. **pungens** (Roxb.) Hochr. in Candollea 2: 87. 1924. *Hibiscus pungens* Roxb., Fl. Ind. 3: 213. 1832;

Masters in Hook. *f.*, Fl. Brit. India 1: 341. 1874; Haines, Bot. Bihar Orissa 66. 1921 (Repr. ed., 1: 68. 1961).

Fl. & Fr.: August - December.

Distrib.: Giridih, Hazaribagh, Palamau, Purnia, Sahibganj, Santal Pargana, Singhbhum.

Abelmoschus manihot (L.) Medik. var. **tetraphyllus** (Roxb. ex Hornem.) Hochr. in Ann. Cons. Jard. Bot. Geneve 4: 155. 1900. *Hibiscus tetraphyllus* Roxb. ex Hornem., Hort. Hafn. 661. 1815; Masters in Hook. *f.*, Fl. Brit. India 1: 341. 1874; Haines, Bot. Bihar Orissa 66. 1921 (Repr. ed., 1: 68. 1961). *Abelmoschus manihot* (L.) Medik. subsp. *tetraphyllus* (Roxb. ex Hornem.) Borss. in Blumea 14: 97. 1966.

Fl. & Fr.: August - December.

Distrib.: Palamau, Santal Pargana.

Abelmoschus moschatus Medik., Malv. 46. 1787. *Hibiscus abelmoschus* L., Sp. Pl. 696. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 342. 1874; Haines, Bot. Bihar Orissa 65. 1921 (Repr. ed., 1: 67. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Ranchi.

ABUTILON Mill.

Abutilon hirtum (Lam.) Sweet, Hort. Brit. ed. 1. 53. 1826; Haines, Bot. Bihar Orissa 62. 1921 (Repr. ed., 1: 64. 1961). *Sida hirta* Lam., Encycl. 1: 7. 1783. *Abutilon graveolens* (Roxb. ex Hornem.) Wight & Arnott ex Masters in Hook. *f.*, Fl. Brit. India 1: 327. 1874.

var. **hirtum**

Fl. & Fr.: October - March.

Distrib.: Bhagalpur, Palamau, Singhbhum, West Champaran.

Abutilon indicum (L.) Sweet, Hort. Brit. ed. 1. 54. 1826; Masters in Hook. *f.*, Fl. Brit. India 1: 326. 1874; Haines, Bot. Bihar Orissa 61. 1921 (Repr. ed., 1: 64. 1961). *Sida indica* L., Cent. Pl. 2: 26. 1756.

subsp. **indicum**

Fl. & Fr.: October - March.

Distrib.: Throughout the state.

Abutilon persicum (Burm. *f.*) Merr. in Philipp. J. Sci. 19: 364. 1921. *Sida persica* Burm. *f.*, Fl. Ind. 148. t. 47. f. 1. 1768. *Abutilon polyandrum* (Roxb.) Wight & Arnott ex Wight, Cat. 12. 1833, non G. Don, 1831; Masters in Hook. *f.*, Fl. Brit. India 1: 325. 1874; Haines, Bot. Bihar Orissa 61. 1921 (Repr. ed., 1: 63. 1961).

Fl. & Fr.: October - April.

Distrib.: East Champaran, Hazaribagh, Lohardaga, Singhbhum, West Champaran.

ALCEA L.

Alcea rosea L., Sp. Pl. 687. 1753. *Althaea rosea* (L.) Cav., Diss. 2: 91. t. 28. f. 1. 1786; Masters in Hook. *f.*, Fl. Brit. India 1: 319. 1874; Haines, Bot. Bihar Orissa 57. 1921 (Repr. ed., 1: 60. 1961).

Fl. & Fr.: March - September.

Distrib.: Cultivated in gardens.

FIORIA Mattei

Floria vitifolia (L.) Mattei in Bot. Ort. Bot. Palermo n.s. 2: 71. 1916. *Hibiscus vitifolius* L., Sp. Pl. 696. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 338. 1874; Haines, Bot. Bihar Orissa 68. 1921 (Repr. ed., 1: 70. 1961).

Fl. & Fr.: April - November.

Distrib.: Bhagalpur, Muzaffarpur, West Champaran.

GOSSYPIUM L.

Gossypium arboreum L., Sp. Pl. 693. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 347. 1874; Haines, Bot. Bihar Orissa 71. 1921, *p.p. excl. syn.* (Repr. ed., 1: 74. 1961).

var. arboreum*Distrib.*: Cultivated.

var. obtusifolium (Roxb.) Roberty in *Candollea* 13: 38. 1950. *G. obtusifolium* Roxb., *Fl. Ind.* 3: 183. 1832. *G. herbaceum* L. var. *obtusifolium* (Roxb.) Masters in *Hook. f.*, *Fl. Brit. India* 1: 347. 1874.

Distrib.: Cultivated.

Gossypium barbadense L., *Sp. Pl.* 693. 1753; Masters in *Hook. f.*, *Fl. Brit. India* 1: 347. 1874; Haines, *Bot. Bihar Orissa* 73. 1921 (*Repr. ed.*, 1: 76. 1961).

var. acuminatum (Roxb.) Masters in *Hook. f.*, *Fl. Brit. India* 1: 347. 1874. *G. acuminatum* Roxb., *Fl. Ind.* 3: 186. 1832.

Distrib.: Ranchi.**var. barbadense***Distrib.*: Bhagalpur.

Gossypium herbaceum L., *Sp. Pl.* 693. 1753; Masters in *Hook. f.*, *Fl. Brit. India* 1: 346. 1874.

Distrib.: Cultivated. Patna, Ranchi.

Gossypium hirsutum L., *Sp. Pl. ed. 2.* 975. 1763; Haines, *Bot. Bihar Orissa* 73. 1921 (*Repr. ed.*, 1: 75. 1961). *G. herbaceum* L. var. *hirsutum* L., *Sp. Pl. ed. 2.* 975. 1763; Masters in *Hook. f.*, *Fl. Brit. India* 1: 347. 1874.

Distrib.: Cultivated. Patna, Singhbhum, West Champaran.**HIBISCUS L., nom. cons.**

Hibiscus aculeatus Roxb., *Fl. Ind.* 3: 206. 1832. *H. furcatus* Roxb. ex DC., *Prodr.* 1: 449. 1824 non Willd., 1809; Masters in *Hook. f.*, *Fl. Brit. India* 1: 335. 1874; Haines, *Bot. Bihar Orissa* 67. 1921 (*Repr. ed.*, 1: 70. 1961).

Fl. & Fr.: September - January.*Distrib.*: Chota Nagpur.

Hibiscus cannabinus L., Syst. Nat. ed. 10. 2: 1149. 1759; Masters in Hook. *f.*, Fl. Brit. India 1: 339. 1874; Haines, Bot. Bihar Orissa 67. 1921 (Repr. ed., 1: 70. 1961).

Fl. & Fr.: August - October.

Distrib.: Bhagalpur, Gumla, Patna, Ranchi, Santal Pargana, West Champaran.

Hibiscus hirtus L., Sp. Pl. 694. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 335. 1874; Haines, Bot. Bihar Orissa 67. 1921 (Repr. ed., 1: 69. 1961).

Fl. & Fr.: November - May.

Distrib.: Bihar (Paul in Sharma and Sanjappa (eds.), Fl. India 3: 329. 1993).

Hibiscus lobatus (Murray) Kuntze, Revis. Gen. Pl. 3, 2: 19. 1898. *Solandra lobata* Murray, Comm. Soc. Reg. Sc. Goetting 6: 20. t. 1. 1785. *Hibiscus solandra* L'Hérit., Strip. Nov. 1: 103. t. 49. 1788; Masters in Hook. *f.*, Fl. Brit. India 1: 336. 1874; Haines, Bot. Bihar Orissa 66. 1921 (Repr. ed., 1: 69. 1961).

Fl. & Fr.: August - December.

Distrib.: Munger, Palamau, Ranchi.

Hibiscus micranthus L. *f.*, Suppl. Pl. 308. 1782; Masters in Hook. *f.*, Brit. India 1: 335. 1874; Haines, Bot. Bihar Orissa 67. 1921 (Repr. ed., 1: 69. 1961).

var. micranthus

Fl. & Fr.: September - March.

Distrib.: Chota Nagpur, Patna.

Hibiscus mutabilis L., Sp. Pl. 694. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 344. 1874; Haines, Bot. Bihar Orissa 69. 1921 (Repr. ed., 1: 72. 1961).

Fl. & Fr.: September - December.

Distrib.: Cultivated. Bhagalpur, Hazaribagh, Patna, West Champaran.

Hibiscus panduraeformis Burm. *f.*, Fl. Ind. 151. t. 47. f. 2. 1768; Masters in Hook. *f.*, Fl. Brit. India 1: 338. 1874; Haines, Bot. Bihar Orissa 68. 1921 (Repr. ed., 1: 71. 1961).

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Palamau, Patna.

Hibiscus radiatus Cav., Diss. 3: 150. t. 54. f. 2. 1787; Masters in Hook. *f.*, Fl. Brit. India 1: 335. 1874.

Fl. & Fr.: August - December.

Distrib.: Ranchi.

Hibiscus rosa-sinensis L., Sp. Pl. 694. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 344. 1874; Haines, Bot. Bihar Orissa 69. 1921 (Repr. ed., 1: 72. 1961).

var. **liliflorus** (Griff. ex Masters) Hochr. in Ann. Cons. Jard. Bot. Geneve 4: 134. 1900. *H. liliflorus* Griff. ex Masters in Hook. *f.*, Fl. Brit. India 1: 344. 1874, *non* Cav., 1787.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated.

var. **rosa-sinensis**

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated throughout the state.

Hibiscus sabdariffa L., Sp. Pl. 695. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 340. 1874; Haines, Bot. Bihar Orissa 67. 1921 (Repr. ed., 1: 70. 1961).

Fl. & Fr.: August - January.

Distrib.: Cultivated. Bhagalpur, Patna, Ranchi, West Champaran.

Hibiscus schizopetalus (Masters) Hook. *f.* in Curtis, Bot. Mag. 3: 36. t. 6524. 1880; Haines, Bot. Bihar Orissa 69. 1921 (Repr. ed., 1: 72. 1961). *H. rosa-sinensis* var. *schizopetalus* Masters in Gard. Chron. n.s. 12: 272. f. 45. 1879.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated. Bhagalpur, Patna, Ranchi.

Hibiscus surattensis L., Sp. Pl. 696. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 334. 1874.

Fl. & Fr.: September - December.

Distrib.: Bihar (Paul in Sharma and Sanjappa (eds.), Fl. India 3: 327. 1993).

Hibiscus syriacus L., Sp. Pl. 695. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 344. 1874; Haines, Bot. Bihar Orissa 69. 1921 (Repr. ed., 1: 72. 1961).

Fl. & Fr.: July - October.

Distrib.: Cultivated in gardens. Bhagalpur, Ranchi.

Hibiscus tiliaceus L., Sp. Pl. 694. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 343. 1874; Haines, Bot. Bihar Orissa 69. 1921 (Repr. ed., 1: 71. 1961).

subsp. **tiliaceus**

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated in gardens.

Hibiscus trionum L., Sp. Pl. 697. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 334. 1874.

Fl. & Fr.: August - December.

Distrib.: Throughout (Paul in Sharma and Sanjappa (eds.), Fl. India 3: 341. 1993).

KYDIA Roxb.

Kydia calycina Roxb., Pl. Corom. 3: 11. t. 215. 1819 & Fl. Ind. 3: 188. 1832; Masters in Hook. *f.*, Fl. Brit. India 1: 348. 1874; Haines, Bot. Bihar Orissa 73. 1921 (Repr. ed., 1: 76. 1961).

Fl. & Fr.: September - February.

Distrib.: Throughout the state.

MALACHRA L.

Malachra capitata (L.) L., Syst. Nat. ed. 12, 2: 458. 1767; Masters in Hook. *f.*, Fl. Brit. India 1: 329. 1874; Haines, Bot. Bihar Orissa 62. 1921 (Repr. ed., 1: 64. 1961). *Sida capitata* L., Sp. Pl. 685. 1753.

Fl. & Fr.: April - December.

Distrib.: Koderma, Palamau, West Champaran.

MALVA L.

Malva neglecta Wallr., Syll. Pl. Nov. Ratisbon 1: 140. 1824. *M. rotundifolia* L., Sp. Pl. 689. 1753, *p.p.*; Masters in Hook. *f.*, Fl. Brit. India 1: 320. 1874.

Fl. & Fr.: April - September.

Distrib.: Purnia.

Malva verticillata L., Sp. Pl. 689. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 320. 1874; Haines, Bot. Bihar Orissa 58. 1921 (Repr. ed., 1: 60. 1961).

var. **verticillata**

Fl. & Fr.: August - December.

Distrib. : Palamau.

MALVASTRUM A. Gray, nom. cons.

Malvastrum americanum (L.) Torr., Rep. U. S. Mex. Bound. Surv. 2: 38. 1859. *Malva americana* L., Sp. Pl. 687. 1753. *Malvastrum spicatum* (L.) A. Gray, Mem. American Acad. Sci. Sec. II, 4 (Pl. Fendl.) 22. 1849; Masters in Hook. *f.*, Fl. Brit. India 1: 321. 1874.

Fl. & Fr.: August - November.

Distrib.: Palamau.

Malvastrum coromandellianum (L.) Garcke in Bonplandia 5: 295. 1857; Haines, Bot. Bihar Orissa 58. 1921 (Repr. ed., 1: 64. 1961). *Malva coromandeliana* L., Sp. Pl. 687. 1753. *Malvastrum tricuspidata* (R. Br.)

A. Gray, Pl. Wright 1: 16. 1852; Masters in Hook. *f.*, Fl. Brit. India 1: 321. 1874.

Fl. & Fr.: August - November.

Distrib.: Bhagalpur, East Champaran, Patna, Ranchi, West Champaran.

MALVAVISCUS Fabric.

Malvaviscus arboreus Cav., Diss. 3: 131. t. 48. f. 1. 1787.

var. **arboreus**

Distrib.: Cultivated. Bhagalpur, West Champaran.

var. **penduliflorus** (Mocino & Sesse ex DC.) Schery in Ann. Miss. Bot. Gard. 29: 223. 1942. *M. penduliflorus* Mocino & Sesse ex DC., Prodr. 1: 445. 1824.

Distrib.: Cultivated. Bhagalpur, Patna.

Malvaviscus congattii Greenm. in Publ. Field Mus. Nat. Hist. Chicago (Bot.) 2: 333. 1912.

Fl. & Fr.: Throughout the year.

Distrib.: Planted in gardens. Bhagalpur.

NAYARIOPHYTON Paul

Nayariophyton zizyphifolium (Griffith) Long & A.G. Miller in Edinb. J. Bot. 47: 357. 1990. *Kydia zizyphifolium* Griffith, Itin. Notes 108. 1848. *Dicellostyles jujubifolia* (Griffith) Benth. in Benth. & Hook. *f.*, Gen. Pl. 1: 207. 1862; Masters in Hook. *f.*, Fl. Brit. India 1: 333. 1874.

Fl. & Fr.: July - October.

Distrib.: Chota Nagpur.

PAVONIA Cav., *nom. cons.*

Pavonia odorata Willd., Sp. Pl. 3: 837. 1800; Masters in Hook. *f.*, Fl. Brit. India 1: 331. 1874; Haines, Bot. Bihar Orissa 63. 1921 (Repr. ed., 1: 66. 1961).

Fl. & Fr.: August - December.

Distrib.: Purnia, Ranchi.

Pavonia repanda (Roxb. ex Sm.) Spreng., Syst. Veg. 3: 98. 1926. *Urena repanda* Roxb. ex Sm. in Rees, Cyclop. 37. no. 6. 1819; Masters in Hook. f., Fl. Brit. India 1: 330. 1874; Haines, Bot. Bihar Orissa 63. 1921 (Repr. ed., 1: 65. 1961).

Fl. & Fr.: September - December.

Distrib.: Champaran, Ranchi.

Pavonia zeylanica (L.) Cav., Diss. 3: 134. t. 48. f. 2. 1787; Masters in Hook. f., Fl. Brit. India 1: 331. 1874. *Hibiscus zeylanica* L., Sp. Pl. 697. 1753.

Fl. & Fr.: August - December.

Distrib.: Palamau.

SIDA L.

Sida acuta Burm. f., Fl. Ind. 147. 1768; Haines, Bot. Bihar Orissa 61. 1921 (Repr. ed., 1: 63. 1961). *S. carpinifolia auct. non L. f.*, 1782; Masters in Hook. f., Fl. Brit. India 1: 323. 1874.

Fl. & Fr.: September - February.

Distrib.: Bhagalpur, Champaran, Giridih, Palamau, Patna, Ranchi.

Sida alba L., Sp. Pl. ed. 2. 966. 1763. *S. rhombifolia* var. *obovata* Wallich ex Masters in Hook. f., Fl. Brit. India 1: 324. 1874; Haines, Bot. Bihar Orissa 60. 1921 (Repr. ed., 1: 63. 1961).

Fl. & Fr.: September - December.

Distrib.: Chota Nagpur, Purnia.

✧ **Sida cordata** (Burm. f.) Borss. in Blumea 14: 182. 1966. *Melochia cordata* Burm. f., Fl. Ind. 143. 1768. *Sida veronicifolia* Lam., Encycl. 1: 5. 1783; Haines, Bot. Bihar Orissa 59. 1921 (Repr. ed., 1: 61. 1961). *S. humilis* Cav., Diss. 5. t. 134. f. 2. 1788; Masters in Hook. f., Fl. Brit. India 1: 322. 1874.

Fl. & Fr.: September - December.

Distrib.: Throughout the state.

Sida cordifolia L., Sp. Pl. 684. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 324. 1874; Haines, Bot. Bihar Orissa 59. 1921 (Repr. ed., 1: 61. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Throughout the state.

Sida mysorensis Wight & Arnott, Prodr. 59. 1834; Masters in Hook. *f.*, Fl. Brit. India 1: 322. 1874. *S. glutinosa* Roxb., Fl. Ind. 3: 172. 1832, *non* Cav., 1785; Haines, Bot. Bihar Orissa 59. 1921 (Repr. ed., 1: 61. 1961).

Fl. & Fr.: October - February.

Distrib.: Chota Nagpur, Santal Pargana.

Sida ovata Forssk., Fl. Aegypt.-Arab. 124. 1775. *S. grewioides* Guill. & Perr. in Guill. *et al.*, Fl. Seneg. Tent. 1: 71. 1830; Masters in Hook. *f.*, Fl. Brit. India 1: 323. 1874.

Fl. & Fr.: August - December.

Distrib.: Singhbhum.

Sida rhombifolia L., Sp. Pl. 684. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 323. 1874; Haines, Bot. Bihar Orissa 60. 1921 (Repr. ed., 1: 62. 1961).

subsp. ***retusa*** (L.) Borss. in Blumea 14: 198. 1966. *S. retusa* L., Sp. Pl. ed. 2. 961. 1763. *S. rhombifolia* var. *retusa* (L.) Masters in Hook. *f.*, Fl. Brit. India 1: 324. 1874.

Fl. & Fr.: August - December.

Distrib.: Bihar (Paul in Sharma and Sanjappa (eds.), Fl. India 3: 289. 1993).

subsp. ***rhombifolia***

var. ***rhombifolia***

Fl. & Fr.: August - December.

Distrib.: Throughout the state.

var. **scabrida** (Wight & Arnott) Masters in Hook. *f.*, Fl. Brit. India 1: 324. 1874. *S. scabrida* Wight & Arnott, Prodr. 57. 1834.

Fl. & Fr.: August - December.

Distrib.: Bihar (Paul in Sharma and Sanjappa (eds.), Fl. India 3: 290. 1993).

Sida spinosa L., Sp. Pl. 683. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 323. 1874; Haines, Bot. Bihar Orissa 59. 1921 (Repr. ed., 1: 62. 1961).

Fl. & Fr.: April - November.

Distrib.: Bhagalpur, East Champaran, Giridih, Hazaribagh, Muzaffarpur, Palamau, Patna, Purnia, Ranchi, Sasaram, West Champaran.

THESPESIA Soland. *ex* Correa, *nom. cons.*

Thespesia lampas (Cav.) Dalz. & Gibs., Bombay Fl. 19. 1861; Masters in Hook. *f.*, Fl. Brit. India 1: 345. 1874; Haines, Bot. Bihar Orissa 70. 1921 (Repr. ed., 1: 73. 1961). *Hibiscus lampas* Cav., Diss. 3: 154. t. 56. f. 2. 1787.

Fl. & Fr.: August - December.

Distrib.: East Champaran, Giridih, Hazaribagh, Koderma, Palamau, Ranchi, Singhbhum, West Champaran.

Thespesia populnea (L.) Soland. *ex* Correa in Ann. Mus. Herb. Paris 9: 290. t. 8. f. 1. 1807; Masters in Hook. *f.*, Fl. Brit. India 1: 345. 1874; Haines, Bot. Bihar Orissa 70. 1921 (Repr. ed., 1: 72. 1961). *Hibiscus populneus* L., Sp. Pl. 694. 1753.

Fl. & Fr.: August - December.

Distrib.: Cultivated. Patna, West Champaran.

URENA L.

Urena lobata L., Sp. Pl. 692. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 329. 1874; Haines, Bot. Bihar Orissa 62. 1921 (Repr. ed., 1: 65. 1961).

subsp. **lobata**

var. **lobata**

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, East Champaran, Giridih, Muzaffarpur, Palamau, Patna, Purnia, West Champaran.

var. **viminea** (Cav.) Gürke in Engler, Bot. Jahrb. 16: 375. 1892. *U. viminea* Cav., Diss. 6: 335. t. 184. f. 1. 1788.

Fl. & Fr.: August - December.

Distrib.: Throughout (Paul in Sharma and Sanjappa (eds.), Fl. India 3: 382. 1993).

subsp. **sinuata** (L.) Borss. in Blumea 14: 142. 1966. *U. sinuata* L., Sp. Pl. 692. 1753; Masters in Hook. f., Fl. Brit. India 1: 329. 1874; Haines, Bot. Bihar Orissa 63. 1921 (Repr. ed., 1: 65. 1961).

var. **glauc**a (Blume) Borss. in Blumea 14: 144. 1966. *U. lappago* Sm. var. *glauc*a Blume, Bijdr. 2: 65. 1825. *U. lobata* L. var. *scabriuscula* (DC.) Masters in Hook. f., Fl. Brit. India 1: 329. 1874.

Fl. & Fr.: September - December.

Distrib.: Throughout (Paul in Sharma and Sanjappa (eds.), Fl. India 3: 382. 1993).

var. **sinuata**

Fl. & Fr.: August - December.

Distrib.: Palamau, Singhbhum, West Champaran.

WISSADULA Medik.

Wissadula contracta (Link) R. E. Fries, K. Svensk. Vent. Ak. Hansl. n.s. 43. 4: 60. 1908. *Sida contracta* Link, Enum. Hort. Berol. 2: 204. 1822. *Wissadula leschenaultiana* (DC.) Masters in Hook. f., Fl. Brit. India 1: 325. 1874.

Fl. & Fr.: November - February.

Distrib.: Cultivated in gardens.

Wissadula periplocifolia (L.) Pers. ex Thwaites, Enum. Pl. Zeyl. 27. 1858. *Sida periplocifolia* L., Sp. Pl. 684. 1753. *Wissadula rostrata* var. *zeylanica* (Medik.) Masters in Hook. f., Fl. Brit. India 1: 325. 1874.

Fl. & Fr.: November - March.

Distrib.: Ranchi.

BOMBACACEAE

ADANSONIA L.

Adansonia digitata L., Sp. Pl. 1190. 1753; Masters in Hook. f., Fl. Brit. India 1: 348. 1874; Haines, Bot. Bihar Orissa 74. 1921 (Repr. ed., 1: 77: 1961).

Fl. & Fr.: April - September.

Distrib.: Bhagalpur, Hazaribagh, Patna, Ranchi.

BOMBAX L., *nom. cons.*

Bombax ceiba L., Sp. Pl. 511. 1753, *p.p.* *B. malabaricum* DC., Prodr. 1: 479. 1824; Masters in Hook. f., Fl. Brit. India 1: 349. 1874; Haines, Bot. Bihar Orissa 74. 1921 (Repr. ed., 1: 77. 1961). *Salmalia malabarica* (DC.) Schott in Schott & Endl., Melet. Bot. 35. 1832.

Fl. & Fr.: February - May.

Distrib.: Throughout the state.

CEIBA Mill. *emend. Gaertn.*

Ceiba pentandra (L.) Gaertn., Fruct. Sem. Pl. 2: 244. t. 133. f. 1. 1791. *Bombax pentandrum* L., Sp. Pl. 511. 1753. *Eriodendron anfractuosum* DC., Prodr. 1: 479. 1824; Masters in Hook. f., Fl. Brit. India 1: 350. 1874.

Fl. & Fr.: December - March.

Distrib. Bhagalpur.

STERCULIACEAE

ABROMA Jacq.

Abroma augusta (L.) L. f., Suppl. Pl. 341. 1782; Masters in Hook. f., Fl. Brit. India 1: 375. 1874; Haines, Bot. Bihar Orissa 82. 1921 (Repr. ed., 1: 86. 1961). *Theobroma augusta* L., Syst. Nat. ed. 12. 233. 1770.

Fl. & Fr.: July - December.

Distrib.: Patna.

BYTTNERIA Loefl., *nom. cons.*

Byttneria grandifolia DC., Prodr. 1: 486. 1824. *Buettneria aspera* Colebr. ex Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 383. 1824; Masters in Hook. f., Fl. Brit. India 1: 377. 1874; Haines, Bot. Bihar Orissa 83. 1921 (Repr. ed., 1: 87. 1961).

Fl. & Fr.: April - September.

Distrib.: Sahibganj.

Byttneria herbacea Roxb., Pl. Corm. 1: t. 29. 1795; Masters in Hook. f., Fl. Brit. India 1: 376. 1874; Haines, Bot. Bihar Orissa 83. 1921 (Repr. ed., 1: 86. 1961), '*Buettneria*'.

Fl. & Fr.: Throughout the year.

Distrib.: Gaya, Hazaribagh, Koderma, Palamau, Ranchi, Sahibganj, Singhbhum.

DOMBEYA Cav., *nom. cons.*

Dombeya alipurense Lancaster ex Bressers, Bot. Ranchi Dist. 10. 1951.

Fl. & Fr.: July - December.

Distrib.: Cultivated in gardens. Ranchi.

Dombeya cayeuxii Hort., Bailey, Man. Cult. Pl. 669. 1924.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated. Bhagalpur.

Dombeya natalensis Sond. in *Linnaea* 23: 17. 1850.

Fl. & Fr.: July - December.

Distrib.: Patna.

ERIOLAENA DC.

Eriolaena hookeriana Wight & Arnott, *Prodr.* 70. 1834; Masters in *Hook. f.*, *Fl. Brit. India* 1: 370. 1874; Haines, *Bot. Bihar Orissa* 81. 1921 (Repr. ed., 1: 84. 1961).

var. **hookeriana**

Fl. & Fr.: April - November.

Distrib.: Giridih, Palamau, Ranchi, Santal Pargana.

Eriolaena quinquelocularis (Wight & Arnott) Cleghorn, *Gen. Index* 36. 1856; Masters in *Hook. f.*, *Fl. Brit. India* 1: 371. 1874; Haines, *Bot. Bihar Orissa* 181. 1921 (Repr. ed., 1: 84. 1961). *Microchlaena quinquelocularis* Wight & Arnott, *Prodr.* 71. 1834.

Fl. & Fr.: February - May.

Distrib.: Chota Nagpur, Giridih.

Eriolaena spectabilis Planch. ex Masters in *Hook. f.*, *Fl. Brit. India* 1: 371. 1874; Haines, *Bot. Bihar Orissa* 81. 1921 (Repr. ed., 1: 85. 1961).

Fl. & Fr.: March - June.

Distrib.: Bihar (Haines, *l.c.*).

Eriolaena stocksii *Hook. f. & Thomson ex Masters in Hook. f.*, *Fl. Brit. India* 1: 370. 1874; Haines, *Bot. Bihar Orissa* 81. 1921 (Repr. ed., 1: 85. 1961).

Fl. & Fr.: May - September.

Distrib.: Sahibganj.

Eriolaena wallichii DC. in *Mem. Mus. Hist. Nat. Paris* 10: 102. t. 5. 1823; Masters in *Hook. f.*, *Fl. Brit. India* 1: 370. 1874; Haines, *Bot. Bihar Orissa* 80. 1921 (Repr. ed., 1: 83. 1961).

Fl. & Fr.: August - November.

Distrib.: West Champaran.

FIRMIANA Marsili

Firmiana colorata (Roxb.) R. Br. in Benn., R. Br. & Horsf., Pl. Jav. Rar. 235. 1844. *Sterculia colorata* Roxb., Pl. Corom. 1: 26. t. 25. 1795, *quoad* t. 25. *descr. excl.* & Fl. Ind. 3: 146. 1832, *p.p.*; Masters in Hook. *f.*, Fl. Brit. India 1: 359. 1874; Haines, Bot. Bihar Orissa 76. 1921 (Repr. ed., 1: 80. 1961).

Fl. & Fr.: February - May.

Distrib.: Champaran, Giridih, Hazaribagh, Koderma, Ranchi.

Firmiana fulgens (Wallich ex Masters) Corner, Wayside Trees, Malaya 1: 610. 1940, *p.p. quoad descr.* *Sterculia fulgens* Wallich ex Masters in Hook. *f.*, Fl. Brit. India 1: 360. 1874. *S. pallens* Wallich ex King in J. Asiat. Soc. Bengal 60: 73. 1891; Haines, Bot. Bihar Orissa 77. 1921 (Repr. ed., 1: 80. 1961).

Fl. & Fr.: April - June.

Distrib.: West Champaran.

GUAZUMA Mill.

Guazuma ulmifolia Lam., Encycl. 3: 52. 1789. *G. tomentosa* Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. 5: 320. 1823; Masters in Hook. *f.*, Fl. Brit. India 1: 375. 1874; Haines, Bot. Bihar Orissa 83. 1921 (Repr. ed., 1: 86. 1961).

Fl. & Fr.: April - October.

Distrib.: Bhagalpur, Patna.

HELICTERES L.

Helicteres isora L., Sp. Pl. 963. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 365. 1874; Haines, Bot. Bihar Orissa 78. 1921 (Repr. ed., 1: 82. 1961).

Fl. & Fr.: July - October.

Distrib.: Throughout the state.

KLEINHOVIA L.

Kleinhovia hospita L., Sp. Pl. ed. 2. 1365. 1763; Masters in Hook. *f.*, Fl. Brit. India 1: 364. 1874; Haines, Bot. Bihar Orissa 78. 1921 (Repr. ed., 1: 81. 1961).

Fl. & Fr.: October - December.

Distrib.: Bhagalpur, Palamau, Patna.

MELHANIA Forssk.

Melhania hamiltoniana Wallich, Pl. Asiat. Rar. 1: 69. t. 77. 1830; Masters in Hook. *f.*, Fl. Brit. India 1: 372. 1874, *incl. vars.*

Fl. & Fr.: August - December.

Distrib.: Bihar (Malick in Sharma and Sanjappa (eds.), Fl. India 3: 439. 1993).

MELOCHIA L.

Melochia corchorifolia L., Sp. Pl. 675. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 374. 1874; Haines, Bot. Bihar Orissa 82. 1921 (Repr. ed., 1: 85. 1961).

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, East Champaran, Koderma, Giridih, Hazaribagh, Palamau, Patna, Ranchi, West Champaran.

Melochia nodiflora Sw., Prodr. 97. 1788.

Fl. & Fr.: October - December.

Distrib.: Ranchi.

PENTAPETES L.

Pentapetes phoenicea L., Sp. Pl. 698. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 371. 1874; Haines, Bot. Bihar Orissa 82. 1921 (Repr. ed., 1: 85. 1961).

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, Palamau, Patna, Purnia, Santal Pargana, West Champaran.

PTEROSPERMUM Schreb., *nom. cons.*

Pterospermum acerifolium (L.) Willd., Sp. Pl. 3: 729. 1800; Masters in Hook. *f.*, Fl. Brit. India 1: 368. 1874, *p.p.*; Haines, Bot. Bihar Orissa 79. 1921 (Repr. ed., 1: 82. 1961). *Pentapetes acerifolia* L., Sp. Pl. 698. 1753.

Fl. & Fr.: April - October.

Distrib.: Bhagalpur, Champaran, Hazaribagh, Palamau, Patna, Ranchi.

Pterospermum lancifolium Roxb., Fl. Ind. 3: 163. 1832; Masters in Hook. *f.*, Fl. Brit. India 1: 368. 1874, '*lanceaefolium*'.

Fl. & Fr.: May - October.

Distrib.: Bhagalpur.

Pterospermum semisagittatum Buch.-Ham. *ex* Roxb., Fl. Ind. 3: 160. 1832; Masters in Hook. *f.*, Fl. Brit. India 1: 368. 1874; Haines, Bot. Bihar Orissa 80. 1921 (Repr. ed., 1: 83. 1961).

Fl. & Fr.: May - August.

Distrib.: Planted in gardens.

Pterospermum suberifolium (L.) Lam., Tabl. Encycl. 3: 136. t. 576. 1794; Haines, Bot. Bihar Orissa 80. 1921 (Repr. ed., 1: 83. 1961). *Pentapetes suberifolia* L., Sp. Pl. 698. 1753.

Fl. & Fr.: July - November.

Distrib.: Patna, Purnia.

PTERYGOTA H.W. Schott & Endl.

Pterygota alata (Roxb.) R. Br. in Benn., R. Br. & Horsf., Pl. Jav. Rar. 234. 1844. *Sterculia alata* Roxb., Pl. Corom. 3: 84. t. 287. 1820; Haines, Bot. Bihar Orissa 77. 1921 (Repr. ed., 1: 80 1961).

Fl. & Fr.: December - July.

Distrib.: Bhagalpur, Patna, Ranchi, Singhbhum, West Champaran.

STERCULIA L.

***Sterculia foetida* L.**, Sp. Pl. 1008. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 354. 1874; Haines, Bot. Bihar Orissa 75. 1921 (Repr. ed., 1: 78. 1961).

Fl. & Fr.: February - August.

Distrib.: Bhagalpur, Gaya, Giridih, Patna, Ranchi, West Champaran.

***Sterculia urens* Roxb.**, Pl. Corom. 1: 25. t. 24. 1795 & Fl. Ind. 3: 145. 1832; Masters in Hook. *f.*, Fl. Brit. India 1: 355. 1874; Haines, Bot. Bihar Orissa 76. 1921 (Repr. ed., 1: 79. 1961).

Fl. & Fr.: November - March.

Distrib.: Gaya, Giridih, Hazaribagh, Koderma, Palamau, Patna, Ranchi, Sahibganj, Santal Pargana, Singhbhum, West Champaran.

***Sterculia villosa* Roxb. ex Sm.** in Rees, Cyclop. 34: no. 16. 1816; Masters in Hook. *f.*, Fl. Brit. India 1: 355. 1874; Haines, Bot. Bihar Orissa 76. 1921 (Repr. ed., 1: 79. 1961).

Fl. & Fr.: December - March.

Distrib.: Giridih, Hazaribagh, Palamau, Ranchi, Sahibganj, Singhbhum, West Champaran.

WALTHERIA L.

***Waltheria indica* L.**, Sp. Pl. 673. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 374. 1874; Haines, Bot. Bihar Orissa 82. 1921 (Repr. ed., 1: 85. 1961).

Fl. & Fr.: January - June.

Distrib.: Palamau, Patna, Ranchi, West Champaran.

TILIACEAE**BROWNLOWIA** Roxb., *nom. cons.*

***Brownlowia tersa* (L.) Kosterm.** in Penerbitan Majd. Pangetahuan Indonesia 1: 73. 1959. *Glabraria tersa* L., Mant. Pl. 276. 1771.

Brownlowia lanceolata Benth. in J. Linn. Soc. London (Bot.) 5, suppl. 2: 57. 1861; Masters in Hook. *f.*, Fl. Brit. India 1: 381. 1874; Haines, Bot. Bihar Orissa 84. 1921 (Repr. ed., 1: 87. 1961).

Fl. & Fr.: May - September.

Distrib.: Bihar (Daniel and Chandrabose in Sharma and Sanjappa (eds.), Fl. India 3: 480. 1993).

CORCHORUS L.

Corchorus aestuans L., Syst. Nat. ed. 10. 2: 1079. 1759. *C. acutangulus auct. non* Forssk., 1775; Masters in Hook. *f.*, Fl. Brit. India 1: 398. 1874; Haines, Bot. Bihar Orissa 87. 1921 (Repr. ed., 1: 90. 1961).

Fl. & Fr.: August - December.

Distrib.: Champaran, Hazaribagh, Ranchi, Singhbhum.

Corchorus capsularis L., Sp. Pl. 529. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 397. 1874; Haines, Bot. Bihar Orissa 86. 1921 (Repr. ed., 1: 89. 1961).

Fl. & Fr.: July - October.

Distrib.: Champaran, Palamau, Ranchi.

Corchorus fascicularis Lam., Encycl. 2: 104. 1786; Masters in Hook. *f.*, Fl. Brit. India 1: 398. 1874; Haines, Bot. Bihar Orissa 87. 1921 (Repr. ed., 1: 90. 1961).

Fl. & Fr.: August - November.

Distrib.: Palamau, Santal Pargana, Singhbhum.

Corchorus olitorius L., Sp. Pl. 529. 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 397. 1874; Haines, Bot. Bihar Orissa 86. 1921 (Repr. ed., 1: 90. 1961).

Fl. & Fr.: July - December.

Distrib.: Throughout the state.

Corchorus tridens L., Mant. Pl. 566. 1771; Masters in Hook. *f.*, Fl. Brit. India 1: 398. 1874; Haines, Bot. Bihar Orissa 87. 1921 (Repr. ed., 1: 91. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Throughout (Daniel and Chandrabose in Sharma and Sanjappa (eds.), Fl. India 3: 488. 1993).

Corchorus trilocularis L., Mant. Pl. 77. 1767; Masters in Hook. *f.*, Fl. Brit. India 1: 397. 1874; Haines, Bot. Bihar Orissa 87. 1921 (Repr. ed., 1: 90. 1961).

Fl. & Fr.: July - October.

Distrib.: Gaya, Giridih.

GREWIA L.

Grewia abutilifolia Vent. ex A. L. Juss. in Ann. Mus. Natl. Hist. Nat. 4: 92. 1804; Masters in Hook. *f.*, Fl. Brit. India 1: 390. 1874. *G. aspera* Roxb., Fl. Ind. 2: 591. 1832; Haines, Bot. Bihar Orissa 89. 1921 (Repr. ed., 1: 92. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Chota Nagpur, Singhbhum, West Champaran.

Grewia araria Wallich ex Burret in Notizbl. Bot. Gart. Mus. Berlin 9: 661. 1926.

Distrib.: Bihar (Naithani, Fl. Pl. India, Nepal & Bhutan 68. 1990).

Grewia asiatica L., Mant. Pl. 122. 1767; Masters in Hook. *f.*, Fl. Brit. India 1: 386. 1874, *excl. var. vestita*; Haines, Bot. Bihar Orissa 94. 1921 (Repr. ed., 1: 98. 1961). *G. hainesiana* Hole in Indian For. 43: 126. 1917; Haines, Bot. Bihar Orissa 94. 1921 (Repr. ed., 1: 97. 1961).

Fl. & Fr.: November - February.

Distrib.: Cultivated. Bhagalpur, Hazaribagh, Muzaffarpur, Palamau, Purnia.

Grewia bracteata Roth, Nov. Pl. Sp. 243. 1821; Masters in Hook. *f.*, Fl. Brit. India 1: 389. 1874.

Fl. & Fr.: August - January.

Distrib.: Chota Nagpur.

Grewia damine Gaertn., Fruct. Sem. Pl. 2: 113. t. 106. f. 9. 1790. *G. salvifolia* Heyne ex Roth, Nov. Pl. Sp. 239. 1821; Masters in Hook. f., Fl. Brit. India 1: 386. 1874, p.p.

Fl. & Fr.: August - November.

Distrib.: Bihar (Daniel and Chandrabose in Sharma and Sanjappa (eds.), Fl. India 3: 496. 1993).

Grewia eriocarpa A. L. Juss. in Ann. Mus. Natl. Hist. Nat. 4: 93. 1804. *G. elastica* Royle, Ill. Bot. Himal. 1: 104. t. 22. 1834; Haines, Bot. Bihar Orissa 93. 1921 (Repr. ed., 1: 96. 1961). *G. asiatica* L. var. *vestita* (Wallich ex Brandis) Masters in Hook. f., Fl. Brit. India 1: 387. 1874. *G. elastica* Royle subsp. *vestita* (Wallich ex Brandis) Haines, Bot. Bihar Orissa 93. 1921 (Repr. ed., 1: 97. 1961).

Fl. & Fr.: March - November.

Distrib.: Champaran, Chota Nagpur, Gaya, Giridih, Singhbhum.

Grewia flavescens A. L. Juss. in Ann. Mus. Natl. Hist. Nat. 4: 91. 1804; Haines, Bot. Bihar Orissa 89. 1921 (Repr. ed., 1: 93. 1961). *G. pilosa auct. non* Lam., 1789: Masters in Hook. f., Fl. Brit. India 1: 388. 1874.

Fl. & Fr.: July - January.

Distrib.: Giridih, Hazaribagh, Ranchi.

Grewia helicterifolia Wallich ex G. Don, Gen. Hist. 1: 548. 1831. *G. polygama auct. non* Roxb., 1832: Masters in Hook. f., Fl. Brit. India 1: 391. 1874. *G. hirsuta* Vahl forma *helicterifolia* (Wallich ex G. Don) Haines, Bot. Bihar Orissa 90. 1921 (Repr. ed., 1: 94. 1961). *G. hirsuta* Vahl forma *polygama* sensu Haines, Bot. Bihar Orissa 90. 1921 (Repr. ed., 1: 94. 1961), *non G. polygama* Roxb., 1832.

Fl. & Fr.: July - October.

Distrib.: Giridih, Hazaribagh, Palamau, Santal Pargana, Singhbhum, West Champaran.

Grewia hirsuta Vahl, Symb. Bot. 1: 34. 1790; Masters in Hook. f., Fl. Brit. India 1: 391. 1874; Haines, Bot. Bihar Orissa 90. 1921 (Repr. ed., 1: 94. 1961).

Fl. & Fr.: July - November.

Distrib.: Champaran, Hazaribagh, Palamau.

Grewia orbiculata Rottler in Ges. Naturf. Freunde Berlin Neue Schr. 4: 205. 1803; Masters in Hook. *f.*, Fl. Brit. India 1: 386. 1874. *G. rotundifolia* A. L. Juss. in Ann. Mus. Natl. Hist. Nat. 4: 92. t. 50. f. 3. 1804; Haines, Bot. Bihar Orissa 92. 1921 (Repr. ed., 1: 96. 1961).

Fl. & Fr.: April - October.

Distrib.: Bihar (Daniel and Chandrabose in Sharma and Sanjappa (eds.), Fl. India 3: 504. 1993).

Grewia rhamnifolia Heyne ex Roth, Nov. Pl. Sp. 244. 1821; Haines, Bot. Bihar Orissa 88. 1921 (Repr. ed., 1: 92. 1961). *G. orientalis auct. non L.*, 1753; Masters in Hook. *f.*, Fl. Brit. India 1: 384. 1874, *p.p.*

Fl. & Fr.: May - December.

Distrib.: Bihar (Daniel and Chandrabose in Sharma and Sanjappa (eds.), Fl. India 3: 507. 1993).

Grewia rothii DC., Prodr. 1: 509. 1824; Haines, Bot. Bihar Orissa 95. 1921 (Repr. ed., 1: 98. 1961). *G. excelsa auct. non Vahl*, 1790; Masters in Hook. *f.*, Fl. Brit. India 1: 385. 1874, *excl. syn.*

Fl. & Fr.: April - August.

Distrib.: Palamau, Santal Pargana, Singhbhum.

Grewia sapida Roxb. ex DC., Prodr. 1: 512. 1824; Masters in Hook. *f.*, Fl. Brit. India 1: 387. 1874; Haines, Bot. Bihar Orissa 94. 1921 (Repr. ed., 1: 98. 1961).

Fl. & Fr.: March - July.

Distrib.: Champaran, Purnia, Ranchi.

Grewia sclerophylla Roxb. ex G. Don, Gen. Hist. 1: 550. 1831; Haines, Bot. Bihar Orissa 89. 1921 (Repr. ed., 1: 93. 1961). *G. scabrophylla* Roxb., Fl. Ind. 2: 584. 1832; Masters in Hook. *f.*, Fl. Brit. India 1: 387. 1874.

Fl. & Fr.: April - November.

Distrib.: Champaran.

Grewia serrulata DC., Prodr. 1: 510. 1824. *G. multiflora auct. non* A. L. Juss., 1804: Masters in Hook. *f.*, Fl. Brit. India 1: 388. 1874, *incl. syn. G. sepiaria* G. Don, 1831; Haines, Bot. Bihar Orissa 91. 1921 (Repr. ed., 1: 94. 1961) *G. disperma auct. non* Rottler ex Spreng., 1825: Haines, Bot. Bihar Orissa 91. 1921 (Repr. ed., 1: 95. 1961).

Fl. & Fr.: June - February.

Distrib.: Champaran, Giridih, Purnia, Santal Pargana, Singhbhum.

Grewia tillifolia Vahl, Symb. Bot. 1: 35. 1790; Masters in Hook. *f.*, Fl. Brit. India 1: 386. 1874, '*tilliaefolia*'; Haines, Bot. Bihar Orissa 91. 1921 (Repr. ed., 1: 95. 1961).

Fl. & Fr.: May - October.

Distrib.: Dumka, Hazaribagh, Santal Pargana, Singhbhum.

TRIUMFETTA L.

Triumfetta annua L., Mant. Pl. 73. 1767; Masters in Hook. *f.*, Fl. Brit. India 1: 396. 1874; Haines, Bot. Bihar Orissa 85. 1921 (Repr. ed., 1: 88. 1961).

Fl. & Fr.: August - February.

Distrib.: Purnia.

Triumfetta pentandra A. Rich. in Guill., Perr. & A. Rich., Fl. Seneg. Tent. 93. t. 19. 1831. *T. neglecta* Wight & Arnott, Prodr. 75. 1834; Masters in Hook. *f.*, Fl. Brit. India 1: 396. 1874; Haines, Bot. Bihar Orissa 85. 1921 (Repr. ed., 1: 89. 1961).

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur, Hazaribagh, Singhbhum.

Triumfetta pilosa Roth, Nov. Pl. Sp. 223. 1821; Masters in Hook. *f.*, Fl. Brit. India 1: 394. 1874; Haines, Bot. Bihar Orissa 85. 1921 (Repr. ed., 1: 88. 1961).

Fl. & Fr.: September - January.

Distrib.: Palamau, Singhbhum.

Triumfetta rhomboidea Jacq., Enum. Syst. Pl. 22. 1760; Masters in Hook. *f.*, Fl. Brit. India 1: 395. 1874; Haines, Bot. Bihar Orissa 85. 1921 (Repr. ed., 1: 89. 1961).

Fl. & Fr.: October - January.

Distrib.: Throughout the state.

Triumfetta rotundifolia Lam., Encycl. 3: 421. 1792; Masters in Hook. *f.*, Fl. Brit. India 1: 395. 1874; Haines, Bot. Bihar Orissa 86. 1921 (Repr. ed., 1: 89. 1961).

Fl. & Fr.: September - February.

Distrib.: Giridih, Hazaribagh, Ranchi, Singhbhum.

ELAEOCARPACEAE

ELAEOCARPUS L.

Elaeocarpus floribundus Blume, Bijdr. 120. 1825; Masters in Hook. *f.*, Fl. Brit. India 1: 401. 1874. *E. serratus* L. var. *floribundus* (Blume) Haines, Bot. Bihar Orissa 96. 1921 (Repr. ed., 1: 99. 1961).

Fl. & Fr.: June - January.

Distrib.: Planted. Purnia, Ranchi.

Elaeocarpus sphaericus (Gaertn.) K. Schum. in Engler & Prantl, Nat. Pflanzenfam. 3, 6: 5. 1890. *Ganitrus sphaericus* Gaertn., Fruct. Sem. Pl. 2: 271. t. 139. 1791, *p.p.* *Elaeocarpus ganitrus* Roxb. ex D. Don, Gen. Hist. 1: 559. 1831; Masters in Hook. *f.*, Fl. Brit. India 1: 400. 1874; Haines, Bot. Bihar Orissa 95. 1921 (Repr. ed., 1: 99. 1961).

Fl. & Fr.: August - February.

Distrib.: Planted. Purnia.

Elaeocarpus tectorius (Lour.) Poir. in Lam., Encycl. Suppl. 2: 704. 1812. *Craspedum tectorium* Lour., Fl. Cochinch. 1: 336. 1790. *Elaeocarpus robustus* Roxb., Fl. Ind. 2: 597. 1832; Masters in Hook. *f.*, Fl. Brit. India 1: 402. 1874, *p.p.*; Haines, Bot. Bihar Orissa 96. 1921 (Repr. ed., 1: 100. 1961), *excl. syn. cit.*

Fl. & Fr.: May - October.

Distrib.: Bihar (Murti in Sharma and Sanjappa (eds.), Fl. India 3: 559. 1993).

LINACEAE

LINUM L.

Linum usitatissimum L., Sp. Pl. 277. 1753; Hook. *f.*, Fl. Brit. India 1: 410. 1874; Haines, Bot. Bihar Orissa 150. 1921 (Repr. ed., 1: 155. 1961).

Fl. & Fr.: December - March.

Distrib.: Cultivated throughout the state.

REINWARDTIA Dumort.

Reinwardtia indica Dumort., Comm. Bot. 19. 1822. *R. trigyna* (Roxb.) Planch. in Hook., J. Bot. 7: 522. 1848; Hook. *f.*, Fl. Brit. India 1: 412. 1874; Haines, Bot. Bihar Orissa 150. 1921 (Repr. ed., 1: 155. 1961), *excl. R. tetragyna* Planch.

Fl. & Fr.: September - February.

Distrib.: Throughout the state.

ERYTHROXYLACEAE

ERYTHROXYLUM P. Browne

Erythroxylum coca Lam., Encycl. 2: 393. 1786; Haines, Bot. Bihar Orissa 151. 1921 (Repr. ed., 1: 156. 1961).

Distrib.: Cultivated. Ranchi.

MALPIGHIACEAE

ASPIDOPTERYS A. Juss.

Aspidopterys nutans (Roxb.) A. Juss. in Ann. Sci. Nat. Bot. ser. 5. 13: 267. 1840; Hook. *f.*, Fl. Brit. India 1: 421. 1874, *p.p. Hiraesa nutans* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 448. 1824.

Fl. & Fr.: November - March.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 232. 1998).

GALPHIMIA Cav.

Galphimia gracilis Bartl. in *Linnaea* 13: 552. 1839.

Fl. & Fr.: Usually throughout the year.

Distrib.: Cultivated. Santal Pargana.

HIPTAGE Gaertn.

Hiptage benghalensis (L.) Kurz in *J. Asiat. Soc. Bengal* 43(2): 136. 1874. *Banisteria benghalensis* L., *Sp. Pl.* 427. 1753. *Hiptage madablota* Gaertn., *Fruct. Sem. Pl.* 2: 169. t. 116. 1791; Hook. *f.*, *Fl. Brit. India* 1: 418. 1874; Haines, *Bot. Bihar Orissa* 152. 1921 (Repr. ed., 1: 157. 1961).

Fl. & Fr.: January - April.

Distrib.: Throughout the state.

MALPIGHIA L.

Malpighia angustifolia L., *Sp. Pl. ed. 2.* 610. 1762.

Fl. & Fr.: September - November.

Distrib.: Bhojpur.

Malpighia coccigera L., *Sp. Pl.* 426. 1753.

Fl. & Fr.: October - December.

Distrib.: Cultivated. Patna.

Malpighia puniceifolia L., *Sp. Pl. ed. 2.* 609. 1762.

Fl. & Fr.: January - March.

Distrib.: Cultivated.

Malpighia urens L., *Sp. Pl.* 426. 1753.

Fl. & Fr.: April - July.

Distrib.: Cultivated. Buxar.

ZYGOPHYLLACEAE**GUAICUM L.**

Guaicum officinale L., Sp. Pl. 381. 1753; Haines, Bot. Bihar Orissa 154. 1921 (Repr. ed., 1: 159. 1961).

Distrib.: Cultivated. Santal Pargana.

KALLSTROEMIA Scopoli

Kallstroemia pubescens (G. Don) Dandy in Kew Bull. 10: 138. 1955. *Tribulus pubescens* G. Don, Gen. Hist. 1: 769. 1831.

Distrib.: Bihar (Singh and Singh in Hajra *et al.* (eds.), Fl. India 4: 45. 1997).

PEGANUM L.

Peganum harmala L., Sp. Pl. 444. 1753; Hook. *f.*, Fl. Brit. India 1: 486. 1875; Haines, Bot. Bihar Orissa 154. 1921 (Repr. ed., 1:159. 1961).

Fl. & Fr.: March - October.

Distrib.: North Bihar.

TRIBULUS L.

Tribulus lanuginosus L., Sp. Pl. 387. 1753.

Fl. & Fr.: Usually throughout the year.

Distrib.: Bihar (Singh and Singh in Hajra *et al.* (eds.), Fl. India 4: 51. 1997).

Tribulus terrestris L., Sp. Pl. 387. 1753; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 423. 1874; Haines, Bot. Bihar Orissa 153. 1921 (Repr. ed., 1: 159. 1961).

Fl. & Fr.: Usually throughout the year.

Distrib.: Throughout the state.

GERANIACEAE**GERANIUM L.**

Geranium ocellatum Cambess. in Jacq., Voy. Ind. 4(Bot.) 33. t. 38. 1844; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 433. 1874; Haines, Bot. Bihar Orissa 155. 1921 (Repr. ed., 1: 161. 1961).

Fl. & Fr.: March - April.

Distrib.: Giridih, Hazaribagh, Palamau, Santal Pargana.

TROPAEOLACEAE**TROPAEOLUM L.**

Tropaeolum majus L., Sp. Pl. 345. 1753.

Fl. & Fr.: December - January.

Distrib.: Cultivated.

OXALIDACEAE**BIOPHYTUM DC.**

Biophytum petersianum Klotz. in Peters, Reise Mossamb. Bot. 1: 81. t. 15. 1862. *B. apodiscias* (Turcz.) Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 437. 1874; Haines, Bot. Bihar Orissa 156. 1921 (Repr. ed., 1: 161. 1961).

Fl. & Fr.: January - October.

Distrib.: Begusarai, Khagaria, Munger, Ranchi.

Biophytum reinwardtii (Zucc.) Klotz. in Peters, Reise Mossamb. Bot. 1: 85. 1862; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 437. 1874; Haines, Bot. Bihar Orissa 156. 1921 (Repr. ed., 1: 162. 1961). *Oxalis reinwardtii* Zucc. in Abh. Akad. Wiss. Muench. 1: 274. 1829-1830.

Fl. & Fr.: October - December.

Distrib.: Koderma, Muzaffarpur, Palamau, Ranchi, Singhbhum.

Biophytum sensitivum (L.) DC., Prodr. 1: 690. 1824; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 436. 1874; Haines, Bot. Bihar Orissa 156. 1921 (Repr. ed., 1: 161. 1961). *Oxalis sensitiva* L., Sp. Pl. 434. 1753.

Fl. & Fr.: October - January.

Distrib.: Throughout the state.

OXALIS L.

Oxalis corniculata L., Sp. Pl. 435. 1753; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 436. 1874; Haines, Bot. Bihar Orissa 157. 1921 (Repr. ed., 1: 162. 1961).

Fl. & Fr.: March - December.

Distrib.: Throughout the state.

Oxalis corymbosa DC., Prodr. 1: 696. 1824.

Fl. & Fr.: September - December.

Distrib.: Bihar (Manna in Hajra *et al.* (eds.), Fl. India 4: 246. 1997).

Oxalis dehradunensis Raizada, Suppl. Fl. Upp. Gang. Plain 37-38. 1976.

Fl. & Fr.: May - October.

Distrib.: Bihar (Manna in Hajra *et al.* (eds.), Fl. India 4: 246. 1997).

AVERRHOACEAE

AVERRHOA L.

Averrhoa bilimbi L., Sp. Pl. 428. 1753; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 439. 1874; Haines, Bot. Bihar Orissa 157. 1921 (Repr. ed., 1: 163. 1961).

Fl. & Fr.: March - May.

Distrib.: Bihar (Haines, *l.c.* 1921; Manna in Hajra *et al.* (eds.), Fl. India 4: 256. 1997).

Averrhoa carambola L., Sp. Pl. 428. 1753; Edgew. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 1: 439. 1874; Haines, Bot. Bihar Orissa 157. 1921 (Repr. ed., 1: 162. 1961).

Fl. & Fr.: March - August.

Distrib.: Cultivated. East Champaran, Singhbhum, West Champaran.

BALSAMINACEAE

IMPATIENS L.

Impatiens balsamina L., Sp. Pl. 938. 1753; Hook. *f.*, Fl. Brit. India 1: 453. 1874; Haines, Bot. Bihar Orissa 158. 1921 (Repr. ed., 1: 163. 1961).

Fl. & Fr.: July - October.

Distrib.: Cultivated throughout the state.

RUTACEAE

AEGLE Correa, *nom. cons.*

Aegle marmelos (L.) Correa in Trans. Linn. Soc. London 5: 223. 1800; Hook. *f.*, Fl. Brit. India 1: 516. 1875. *Crateva marmelos* L., Sp. Pl. 444. 1753; Haines, Bot. Bihar Orissa 167. 1921 (Repr. ed., 1: 173. 1961).

Fl. & Fr.: March - July.

Distrib.: Champaran, Chota Nagpur, Purnia, cultivated elsewhere.

ATALANTIA Correa, *nom. cons.*

Atalantia monophylla (L.) Correa in Ann. Mus. Hist. Nat. 6: 383. 1805; Hook. *f.*, Fl. Brit. India 1: 511. 1875; Haines, Bot. Bihar Orissa 161. 1921 (Repr. ed., 1: 167. 1961). *Limonia monophylla* L., Mant. Pl. 237. 1771.

Fl. & Fr.: October - April.

Distrib.: Hazaribagh.

CITRUS L.

Citrus aurantifolia (Christm. & Panz.) Swingle in J. Wash. Acad. Sci. 3: 465. 1913. *Limonia aurantifolia* Christm. & Panz., Pflanzenr. Syst. 1: 618. 1777. *Citrus medica* L. var. *acida* (Roxb.) Hook. f., Fl. Brit. India 1: 515. 1875.

Distrib.: Cultivated throughout the state.

Citrus aurantium L., Sp. Pl. 782. 1753; Hook. f., Fl. Brit. India 1: 515. 1875; Haines, Bot. Bihar Orissa 166. 1921 (Repr. ed., 1: 172. 1961).

Distrib.: Cultivated.

Citrus limon (L.) Burm. f., Fl. Ind. 173. 1768. *C. medica* L. var. *limon* L., Sp. Pl. 782. 1753. *C. medica* L. var. *limonum* (Wight & Arnott) Hook. f., Fl. Brit. India 1: 515. 1875.

Distrib.: Cultivated.

Citrus maxima (Burm.) Merr., Sp. Blancoanae 46. 1918. *Aurantium maximum* Burm. in Rumph., Herb. Amboin. Actuar. Ind. Univ. unnumbered p. 16. 1735. *Citrus grandis* Osbeck, Dagb. Ostind. Resa 98. 1757. *C. decumana* L., Syst. Veg. ed. 12. 508. 1767; Hook. f., Fl. Brit. India 1: 516. 1875; Haines, Bot. Bihar Orissa 167. 1921 (Repr. ed., 1: 172. 1961).

Distrib.: Cultivated.

Citrus medica L., Sp. Pl. 782. 1753; Hook. f., Fl. Brit. India 1: 514. 1875; Haines, Bot. Bihar Orissa 167. 1921 (Repr. ed., 1: 172. 1961).

Distrib.: Cultivated.

Citrus reticulata Blanco, Fl. Filip. 610. 1837.

Distrib.: Cultivated.

Citrus sinensis (L.) Osbeck, Dagb. Ostind. Resa 41. 1775. *C. aurantium* L. var. *sinensis* L., Sp. Pl. 783. 1753.

Distrib.: Cultivated.

CLAUSENA Burm. f.

Clausena excavata Burm. f., Fl. Ind. 87. 1768; Hook. f., Fl. Brit. India 1: 504. 1875; Haines, Bot. Bihar Orissa 165. 1921 (Repr. ed., 1: 171. 1961).

Fl. & Fr.: March - September.

Distrib.: Chota Nagpur, Singhbhum.

Clausena heptaphylla (Roxb.) Wight & Arnott ex Steud., Nom. Bot. ed. 2. 1: 377. 1840; Hook. f., Fl. Brit. India 1: 504. 1875. *Amyris heptaphylla* Roxb., Fl. Ind. 2: 248. 1832.

Fl. & Fr.: March - August.

Distrib.: Singhbhum.

Clausena kanpurensis J. F. Molino in Bull. Mus. Hist. Nat. Paris 16: 177. t. 2. 8-9. 1994. *C. pentaphylla auct. non* DC., 1824; Hook. f., Fl. Brit. India 1: 503. 1875; Haines, Bot. Bihar Orissa 166. 1921 (Repr. ed., 1: 171. 1961).

Fl. & Fr.: May - July.

Distrib.: West Champaran.

Clausena lansium (Lour.) Skeels in U. S. D. A. Bur. Pl. Ind. Bull. 168: 31. 1909. *Quinaria lansium* Lour., Fl. Cochinch. 1: 272. 1790. *Clausena wampi* (Blanco) Oliver in J. Linn. Soc. London (Bot.) 5: suppl. 2: 34. 1861; Hook. f., Fl. Brit. India 1: 505. 1875; Haines, Bot. Bihar Orissa 166. 1921 (Repr. ed., 1: 171. 1961).

Fl. & Fr.: May - July.

Distrib.: Cultivated.

GLYCOSMIS Correa

Glycosmis pentaphylla (Retz.) DC., Prodr. 1: 538. 1824, *quoad basion*. Hook. f., Fl. Brit. India 1: 499. 1875, *p.p.*; Haines, Bot. Bihar Orissa 164. 1921 (Repr. ed., 1: 169. 1961). *Limonia pentaphylla* Retz., Observ. Bot. 5: 24. 1788. *Glycosmis arborea* (Roxb.) DC., Prodr. 1: 538. 1824; Haines, Bot. Bihar Orissa 163. 1921 (Repr. ed., 1: 169. 1961).

Fl. & Fr.: September - February.

Distrib.: Giridih, Santal Pargana, West Champaran.

LIMONIA L.

Limonia acidissima L., Sp. Pl. ed. 2. 554. 1762; Hook. f., Fl. Brit. India 1: 507. 1875. *Feronia elephantum* Correa in Trans. Linn. Soc. London 5: 225. 1800; Haines, Bot. Bihar Orissa 168. 1921 (Repr. ed., 1: 173. 1961).

Fl. & Fr.: March - December.

Distrib.: Muzaffarpur, Palamau, Santal Pargana, West Champaran, cultivated elsewhere.

MICROMELUM Blume, *nom. cons.*

Micromelum integerrimum (Roxb. ex DC.) M. Roem., Syn. Mon. Hesper. 1: 47. 1846. *Bergera integerrima* Roxb. ex DC., Prodr. 1: 537. 1824. *Micromelum pubescens auct. non* Blume, 1825; Hook. f., Fl. Brit. India 1: 501. 1875, *p.p., excl.* vars. 1 & 3; Haines, Bot. Bihar Orissa 164. 1921 (Repr. ed., 1: 170. 1961).

Fl. & Fr.: October - April.

Distrib.: Hazaribagh, Singhbhum, West Champaran.

MURRAYA Koenig ex L., *nom. et orth. cons.*

Murraya koenigii (L.) Spreng., Syst. Veg. 2: 315. 1825; Hook. f., Fl. Brit. India 1: 503. 1875; Haines, Bot. Bihar Orissa 165. 1921 (Repr. ed., 1: 170. 1961). *Bergera koenigii* L., Mant. Pl. 563. 1771.

Fl. & Fr.: March - July.

Distrib.: West Champaran, cultivated elsewhere.

Murraya paniculata (L.) Jack., Malay. Misc. 1(5): 31. 1820. *Chalcas paniculata* L., Mant. Pl. 68. 1767. *Murraya exotica* L., Mant. Pl. 563. 1771; Hook. f., Fl. Brit. India 1: 502. 1875; Haines, Bot. Bihar Orissa 164. 1921 (Repr. ed., 1: 170. 1961).

Fl. & Fr.: March - July.

Distrib.: Giridih, Hazaribagh, Santal Pargana, Singhbhum, West Champaran.

NARINGI Adans.

Naringi crenulata (Roxb.) Nicolson in Saldanha & Nicolson, Fl. Hassan Dist. 387. 1976. *Limonia crenulata* Roxb., Pl. Corom. 1: 60. t. 86. 1798. *L. acidissima auct. non L.*, 1762: Hook. f., Fl. Brit. India 1: 507. 1875; Haines, Bot. Bihar Orissa 163. 1921 (Repr. ed., 1: 168. 1961).

Fl. & Fr.: March - August.

Distrib.: Chota Nagpur, Santal Pargana.

RUTA L.

Ruta chalepensis L., Mant. Pl. 69. 1767. *R. graveolens* L. var. *angustifolia* Hook. f., Fl. Brit. India 1: 485. 1875, *non R. angustifolia* Pers., 1805.

Distrib.: Cultivated.

TETRADIUM Lour.

Tetradium glabrifolium (Champ. ex Benth.) T.G. Hartley in Gard. Bull. Straits Settle. 34: 109. 1981. *Boymia glabrifolia* Champ. ex Benth. in Hook., J. Bot. Kew Gard. Misc. 3: 330. 1851. *Euodia meliaefolia* (Hance ex Walp.) Benth., Fl. Hongkong 58. 1861, 'Evodia'; Hook. f., Fl. Brit. India 1: 490. 1875; Haines, Bot. Bihar Orissa 159. 1921 (Repr. ed., 1: 165. 1961).

Fl. & Fr.: April - December.

Distrib.: Bihar (Nair and Nayar in Hajra *et al.* (eds.), Fl. India 4: 373. 1997).

TODDALIA Juss.

Toddalia asiatica (L.) Lam., Tab. Encycl. 2: 116. 1797. *Paullinia asiatica* L., Sp. Pl. 365. 1753. *Toddalia aculeata* (Sm.) Pers., Syn. Pl. 1: 249. 1805, *nom. superfl.*; Hook. f., Fl. Brit. India 1: 497. 1875; Haines, Bot. Bihar Orissa 160. 1921 (Repr. ed., 1: 166. 1961).

Fl. & Fr.: September - February.

Distrib.: Throughout (Nair and Nayar in Hajra *et al.* (eds.), Fl. India 4: 403. 1997).

ZANTHOXYLUM L.

Zanthoxylum nitidum (Roxb.) DC., Prodr. 1: 727. 1824. *Fagara nitida* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 439. 1820. *Zanthoxylum hamiltonianum* Wallich ex Hook. f., Fl. Brit. India 1: 494. 1875.

Fl. & Fr.: February - August.

Distrib.: Bihar (Nair and Nayar in Hajra *et al.* (eds.), Fl. India 4: 382. 1997).

Zanthoxylum rhetsa (Roxb.) DC., Prodr. 1: 728. 1824; Hook. f., Fl. Brit. India 1: 495. 1875. *Fagara rhetsa* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 438. 1820. *Zanthoxylum budrunga* (Roxb.) DC., Prodr. 1: 728. 1824; Hook. f., Fl. Brit. India 1: 495. 1875; Haines, Bot. Bihar Orissa 160. 1921 (Repr. ed., 1: 165. 1961).

Fl. & Fr.: March - September.

Distrib.: Ranchi (Haines, *l.c.*).

SIMAROUBACEAE**AILANTHUS Desf.**

Ailanthus excelsa Roxb., Pl. Corom. 1: 24. t. 23. 1795; Bennett in Hook. f., Fl. Brit. India 1: 518. 1875; Haines, Bot. Bihar Orissa 1237. 1924 (Repr. ed., 3: 1291. 1961).

Fl. & Fr.: December - July.

Distrib.: Gaya, Hazaribagh, Palamau, Ranchi, Singhbhum.

BALANITACEAE**BALANITES Delile**

Balanites roxburghii Planch. in Ann. Sci. Nat. Bot. ser. 4, 2: 258. 1854; Bennett in Hook. f., Fl. Brit. India 1: 522. 1875; Haines, Bot. Bihar Orissa 154. 1921 (Repr. ed., 1: 160. 1961). *B. aegyptiaca auct. non* (L.) Delile, 1813; Basak in Fasc. Fl. India 4: 20. 1980.

Fl. & Fr.: Usually throughout the year.

Distrib.: Gaya, Hazaribagh, Palamau.

OCHNACEAE**OCHNA L.**

Ochna obtusata DC. in Ann. Mus. Hist. Nat. 17: 411. 1811. *O. squarrosa auct. non L.*, 1753; Bennett in Hook. *f.*, Fl. Brit. India 1: 523. 1875; Haines, Bot. Bihar Orissa 169. 1921 (Repr. ed., 1: 175. 1961).

Fl. & Fr.: March - August.

Distrib.: Sahibganj.

Ochna pumila Buch.-Ham. ex DC., Prodr. 1: 736. 1824; Bennett in Hook. *f.*, Fl. Brit. India 1: 524. 1875; Haines, Bot. Bihar Orissa 170. 1921 (Repr. ed., 1: 175. 1961).

Fl. & Fr.: March - August.

Distrib.: Gaya, Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

BURSERACEAE**BOSWELLIA Roxb. ex Colebr.**

Boswellia serrata Roxb. ex Colebr. in Asiat. Res. 9: 379. t. 5. 1807; Bennett in Hook. *f.*, Fl. Brit. India 1: 528. 1875; Haines, Bot. Bihar Orissa 172. 1921 (Repr. ed., 1: 177. 1961).

Fl. & Fr.: January - June.

Distrib.: Hazaribagh, Palamau, Ranchi, Santal Pargana, Singhbhum.

GARUGA Roxb.

Garuga pinnata Roxb., Pl. Corom. 3: 5. t. 208. 1811; Bennett in Hook. *f.*, Fl. Brit. India 1: 528. 1875; Haines, Bot. Bihar Orissa 170. 1921 (Repr. ed., 1: 176. 1961).

Fl. & Fr.: January - August.

Distrib.: Throughout the state.

PROTIUM Burm. *f.*, *nom. cons.*

Protium serratum (Wallich *ex* Colebr.) Engler in A. & C. DC., Monogr. Phan. 4: 88. 1883. *Bursera serrata* Wallich *ex* Colebr. in Trans. Linn. Soc. London 15: 361. t. 4. 1827; Bennett in Hook. *f.*, Fl. Brit. India 1: 530. 1875; Haines, Bot. Bihar Orissa 171. 1921 (Repr. ed., 1: 177. 1961).

Fl. & Fr.: February - June.

Distrib.: Giridih, Palamau, Santal Pargana, Singhbhum, West Champaran.

MELIACEAE**AGLAIA** Lour.

Aglaia elaeagnoidea (A. Juss.) Benth., Fl. Austral. 1: 383. 1863. *Nemadra elaeagnoidea* A. Juss. in Mem. Mus. Hist. Nat. Paris 19: 259. t. 14. 1832. *Aglaia roxburghiana* (Wight & Arnott) Miq. in Ann. Mus. Bot. Lugd.-Bat. 4: 41. 1888; Hiern in Hook. *f.*, Fl. Brit. India 1: 555. 1875; Haines, Bot. Bihar Orissa 181. 1921 (Repr. ed., 1: 187. 1961).

var. **beddomei** (Gamble) K.K.N. Nair in J. Bombay Nat. Hist. Soc. 78: 426. 1981. *A. roxburghiana* (Wight & Arnott) Miq. var. *beddomei* Gamble, Fl. Madras 180. 1915.

Fl. & Fr.: December - February.

Distrib.: Bihar (Jain and Bennet in Hajra *et al.* (eds.), Fl. India 4: 462. 1997).

var. **elaeanoidea**

Fl. & Fr.: November - August.

Distrib.: Chota Nagpur.

Aglaia spectabilis (Miq.) Jain & Bennet in Indian J. For. 9(3): 271. 1986. *Amoora spectabilis* Miq. in Ann. Mus. Bot. Lugd.-Bat. 4: 37. 1868; Hiern in Hook. *f.*, Fl. Brit. India 1: 561. 1875; Haines, Bot. Bihar Orissa 180. 1921 (Repr. ed., 1: 186. 1961).

Fl. & Fr.: June - February.

Distrib.: Singhbhum (Haines, *l.c.*).

APHANAMIXIS Blume

Aphanamixis polystachya (Wallich) R. Parker in Indian For. 57: 486. 1931. *Aglaiia polystachya* Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 429. 1824. *Amoora rohituka* (Roxb.) Wight & Arnott in Wight, Cat. Indian Pl. 24. 1833 & Prodr. 119. 1834; Hiern in Hook. *f.*, Fl. Brit. India 1: 559. 1875; Haines, Bot. Bihar Orissa 179. 1921 (Repr. ed., 1: 185. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: East Champaran, Purnia, Ranchi, Singhbhum, West Champaran.

AZADIRACHTA A. Juss.

Azadirachta indica A. Juss. in Mem. Mus. Hist. Nat. Paris 19: 221. t. 13. f. 5. 1830; Haines, Bot. Bihar Orissa 176. 1921 (Repr. ed., 1: 182. 1961). *Melia azadirachta* L., Sp. Pl. 385. 1753; Hiern in Hook. *f.*, Fl. Brit. India 1: 544. 1875.

Fl. & Fr.: February - August.

Distrib.: Champaran, Hazaribagh, Ranchi.

CHUKRASSIA A. Juss.

Chukrassia tabularis A. Juss. in Mem. Mus. Hist. Nat. Paris 19: 251. t. 22. 1830; Hiern in Hook. *f.*, Fl. Brit. India 1: 568. 1875; Haines, Bot. Bihar Orissa 176. 1921 (Repr. ed., 1: 182. 1961).

Fl. & Fr.: May - March.

Distrib.: Giridih, Hazaribagh (Haines, *l.c.*)

CIPADESSA Blume

Cipadessa baccifera (Roth) Miq. in Ann. Mus. Bot. Lugd.-Bat. 4: 6. 1868. *Melia baccifera* Roth, Nov. Sp. Pl. 215. 1821. *Cipadessa*

fruticosa Blume, Bijdr. 162. 1825; Hiern in Hook. *f.*, Fl. Brit. India 1: 545. 1875; Haines, Bot. Bihar Orissa 177. 1921 (Repr. ed., 1: 183. 1961).

Fl. & Fr.: March - August.

Distrib.: Giridih, Hazaribagh, Ranchi, Singhbhum.

DYSOXYLUM Blume

Dysoxylum gobarum (Buch.-Ham.) Merr. in J. Arnold Arb. 23: 173. 1942. *Guarea gobara* Buch.-Ham. in Mem. Wern. Nat. Hist. Soc. 6: 306. f. 1. 1832. *Dysoxylum procerum* Hiern in Hook. *f.*, Fl. Brit. India 1: 547. 1875.

Fl. & Fr.: April - August.

Distrib.: Singhbhum.

MELIA L.

Melia azedarach L., Sp. Pl. 384. 1753; Hiern in Hook. *f.*, Fl. Brit. India 1: 544. 1875; Haines, Bot. Bihar Orissa 177. 1921 (Repr. ed., 1: 183. 1961).

Fl. & Fr.: May - December.

Distrib.: Cultivated throughout the state.

Melia dubia Cav., Diss. 7: 364. 1789; Hiern in Hook. *f.*, Fl. Brit. India 1: 545. 1875. *M. composita* Willd., Sp. Pl. 2: 559. 1799; Haines, Bot. Bihar Orissa 177. 1921 (Repr. ed., 1: 183. 1961).

Fl. & Fr.: March - February.

Distrib.: Throughout (Jain and Bennet in Hajra *et al.* (eds.), Fl. India 4: 495. 1997).

SOYMIDA A. Juss.

Soymida febrifuga (Roxb.) A. Juss. in Mem. Mus. Hist. Nat. Paris 19: 251. t. 22. f. 26. 1830; Hiern in Hook. *f.*, Fl. Brit. India 1: 567. 1875; Haines, Bot. Bihar Orissa 175. 1921 (Repr. ed., 1: 181. 1961). *Swietenia febrifuga* Roxb., Bot. Desr. Swietenia 1. 1793 & Pl. Corom. t. 17. 1795.

Fl. & Fr.: March - July.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

SWIETENIA Jacq.

Swietenia macrophylla King in Hook., Icon. Pl. 16: t. 1550. 1886; Haines, Bot. Bihar Orissa 175. 1921 (Repr. ed., 1: 180. 1961).

Fl. & Fr.: April - March.

Distrib.: Cultivated. Dumka, Purnia, Ranchi, West Champaran.

Swietenia mahagoni (L.) Jacq., Enum. Syst. Pl. 20. 1760; Haines, Bot. Bihar Orissa 175. 1921 (Repr. ed., 1: 181. 1961). *Cedrela mahagoni* L., Syst. Nat. ed. 10. 940. 1759.

Fl. & Fr.: April - November.

Distrib.: Cultivated. Dumka, Muzaffarpur, West Champaran.

TOONA (Endl.) M. Roem.

Toona ciliata M. Roem., Fam. Nat. Syn. Monogr. 1: 139. 1846. *Cedrela toona* Roxb. ex Rottler in Ges. Naturf. Freunde Berlin Neue Schriften 4: 198. 1803; Hiern in Hook. f., Fl. Brit. India 1: 568. 1875, *p.p.*; Haines, Bot. Bihar Orissa 174. 1921 (Repr. ed., 1: 179. 1961).

subsp. **ciliata** Bahadur, Monogr. Gen. Toona 64. 1988.

var. **australis** (F. v. Muell.) Bahadur, Monogr. Gen. Toona 78. 1988. *Cedrela australis* F. v. Muell., Fragm. Phytogr. Austral. 1: 4. 1858.

Fl. & Fr.: February - July.

Distrib.: Throughout (Jain and Bennet in Hajra *et al.* (eds.), Fl. India 4: 505. 1997).

var. **ciliata**

Fl. & Fr.: February - May.

Distrib.: Champaran, Ranchi.

var. **haslettii** (Haines) Bahadur, Monogr. Gen. Toona 92. 1988. *Cedrela toona* Roxb. ex Rottler var. *haslettii* Haines, Forest Fl. Chota Nagpur 250. 1910 & Bot. Bihar Orissa 174. 1921 (Repr. ed., 1: 180. 1961).

Fl. & Fr.: March - July.

Distrib.: Santal Pargana.

var. **pubinervis** (C. DC.) Bahadur, Monogr. Gen. Toona 96. 1988. *Cedrela toona* Roxb. ex Rottler var. *pubinervis* C. DC. in Rec. Bot. Surv. India 3: 368. 1908. *C. toona* Roxb. ex Rottler var. *multijuga* Haines, Bot. Bihar Orissa 174. 1921 (Repr. ed., 1: 180. 1961).

Fl. & Fr.: March - June.

Distrib.: Singhbhum.

subsp. **velutina** (DC.) Bahadur, Monogr. Gen. Toona 97. 1988. *Cedrela velutina* DC., Prodr. 1: 625. 1824.

var. **velutina** Bahadur, Monogr. Gen. Toona 104. 1988.

Fl. & Fr.: March - June.

Distrib.: Bihar (Jain and Bennet in Hajra *et al.* (eds.), Fl. India 4: 508. 1997).

Toona hainesii (C. DC.) Harms in Engler & Prantl, Nat. Pflanzenfam. ed. 2. 1961: 47. 1940. *Cedrela hainesii* C. DC. in Rec. Bot. Surv. India 3:363. 1908. *C. toona* Roxb. ex Rottler var. *hainesii* (C. DC.) Haines, Forest Fl. Chota Nagpur 250. 1910 & Bot. Bihar Orissa 174. 1921 (Repr. ed., 1: 180. 1961).

Fl. & Fr.: May - November.

Distrib.: Singhbhum (Haines, *l.c.*).

TRICHILIA P. Br., *nom. cons.*

Trichilla connaroides (Wight & Arnott) Bentvelzen in Acta Bot. Neerl. 11: 13. 1962. *Zanthoxylum connaroides* Wight & Arnott, Prodr. 148. 1834. *Heynea trijuga* Roxb. ex Sims in Bot. Mag. 41: t. 1738. 1815, non *Trichilia trijuga* Vell., 1825; Hiern in Hook. *f.* Fl. Brit. India 1: 565. 1875; Haines, Bot. Bihar Orissa 179. 1921 (Repr. ed., 1: 185. 1961).

Fl. & Fr.: March - September.

Distrib.: Champaran, Singhbhum.

WALSURA Roxb.

Walsura trifoliata (A. Juss.) Harms in Engler & Prantl, Nat. Pflanzenfam. ed. 2. 19bI: 119, 177. 1940, '*trifolia*' *Heynea trifolia* A. Juss. in Mem. Mus. Hist. Nat. Paris 19: 235. 1830. *Walsura piscidia* Roxb., Fl. Ind. 2: 387. 1832; Hiern in Hook. f., Fl. Brit. India 1: 564. 1875; Haines, Bot. Bihar Orissa 178. 1921 (Repr. ed., 1: 184. 1961).

Fl. & Fr.: November - June.

Distrib.: Hazaribagh, Koderma.

OLACACEAE**OLAX** L.

Olax nana Wallich ex Benth. in Trans. Linn. Soc. London 18: 678. 1838-1841; Masters in Hook. f., Fl. Brit. India 1: 576. 1875; Haines, Bot. Bihar Orissa 183. 1921 (Repr. ed., 1: 190. 1961).

Fl. & Fr.: March - June.

Distrib.: East Champaran, Madhubani, Palamau, Sitamarhi, West Champaran.

Olax scandens Roxb., Pl. Corom. 2: 2. t. 102. 1798 & Fl. Ind. (Carey & Wallich ed.) 1: 163. 1820; Masters in Hook. f., Fl. Brit. India 1: 575. 1875. Haines, Bot. Bihar Orissa 183. 1921 (Repr. ed., 1: 189. 1961).

Fl. & Fr.: April - December.

Distrib.: East Champaran, Ranchi, Santal Pargana, Singhbhum, West Champaran.

OPILIACEAE**CANSJERA** Juss., *nom. cons.*

Cansjera rheedii J.F. Gmelin, Syst. Nat. 1: 280. 1791, '*Cansiera rheedii*'; Masters in Hook. f., Fl. Brit. India 1: 582. 1875; Haines, Bot. Bihar Orissa 184. 1921 (Repr. ed., 1: 191. 1961).

Fl. & Fr.: March - November.

Distrib.: Bhojpur, Buxar, Gaya, Hazaribagh, Munger, Patna, Santal Pargana, Singhbhum, West Champaran.

OPILIA Roxb.

Opilia amentacea Roxb., Pl. Corom. 2: 31. t. 158. 1802; Masters in Hook. f., Fl. Brit. India 1: 583. 1875; Haines, Bot. Bihar Orissa 184. 1921 (Repr. ed., 1: 190. 1961).

Fl. & Fr.: April - July.

Distrib.: Santal Pargana, Singhbhum.

ICACINACEAE**NATSIATUM** Buch.-Ham. ex Arnott

Natsiatum herpeticum Buch.-Ham. ex Masters in Hook. f., Fl. Brit. India 1: 595. 1875; Haines, Bot. Bihar Orissa 182. 1921 (Repr. ed., 1: 188. 1961).

Fl. & Fr.: January - April.

Distrib.: Purnia.

AQUIFOLIACEAE**ILEX** L.

Ilex umbellulata (Wallich) Loes., Monogr. Aquifol. 1: 99. 1901; Haines, Bot. Bihar Orissa 185. 1921 (Repr. ed., 1: 192. 1961). *Ehretia umbellulata* Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 344. 1824. *Ilex godajam* Colebr. ex Hook. f., Fl. Brit. India 1: 604. 1875.

Fl. & Fr.: March - June.

Distrib.: East Champaran, Sitamarhi.

CELASTRACEAE**CASSINE** L.

Cassine glauca (Rottb.) Kuntze, Revis. Gen. Pl. 1: 114. 1891. *Mangifera glauca* Rottb. in Nye Samml. Vid. Selsk. Skr. 2: 534. t. 4. f. 1. 1783. *Elaeodendron glaucum* (Rottb.) Pers., Syn. Pl. 1: 241. 1805.

Lawson in Hook. *f.*, Fl. Brit. India 1: 623. 1875, *p.p.*; Haines, Bot. Bihar Orissa 189. 1921 (Repr. ed., 1: 196. 1961).

Fl. & Fr.: May - December.

Distrib.: Chota Nagpur, Singhbhum, West Champaran.

CELASTRUS L.

Celastrus paniculatus Willd., Sp. Pl. 1: 1125. 1797; Lawson in Hook. *f.*, Fl. Brit. India 1: 617. 1875; Haines, Bot. Bihar Orissa 188. 1921 (Repr. ed., 1: 195. 1961), '*paniculata*'.

Fl. & Fr.: April - January.

Distrib.: East Champaran, Palamau, Ranchi, Santal Pargana, West Champaran.

EUONYMUS Tourn. ex L.

Euonymus glaber Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 403. 1824; Lawson in Hook. *f.*, Fl. Brit. India 1: 609. 1875; Haines, Bot. Bihar Orissa 186. 1921 (Repr. ed., 1: 193. 1961).

Fl. & Fr.: April - May.

Distrib.: Hazaribagh (Paria and Chattopadhyay, Fl. Hazaribagh Dist. Bihar 449. 2000).

MAYTENUS Molina

Maytenus emarginata (Willd.) Ding Hou in Fl. Males. ser. I, 6: 241. 1962. *Celastrus emarginatus* Willd., Sp. Pl. 1, 2: 1128. 1798. *Gymnosporia emarginata* Roth, Nov. Pl. Sp. 155. 1821; Lawson in Hook. *f.*, Fl. Brit. India 1: 621. 1875; Haines, Bot. Bihar Orissa 187. 1921 (Repr. ed., 1: 194. 1961).

Fl. & Fr.: October - March.

Distrib.: Singhbhum.

Maytenus rufa (Wallich) Hara in J. Jap. Bot. 40: 327. 1962. *Celastrus rufa* Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 397. 1824. *Gymnosporia rufa* (Wallich) Lawson in Hook. *f.*, Fl. Brit. India 1: 620. 1875.

var. **latifolia** (Haines) R.P. Bhattach., *comb. nov.* *Gymnosporia rufa* (Wallich) Lawson var. *latifolia* Haines, Bot. Bihar Orissa 188. 1921 (Repr. ed., 1: 194. 1961).

Fl. & Fr.: April - November.

Distrib.: West Champaran.

var. **rufa**

Fl. & Fr.: April - November.

Distrib.: West Champaran.

Maytenus senegalensis (Lam.) Exell. in Bot. Soc. Brot., ser. 2, 26: 223. 1952. *Celastrus senegalensis* Lam., Encycl. 1: 661. 1783. *Gymnosporia montana* (Roth) Benth., Fl. Austral. 1: 400. 1863; Lawson in Hook. f., Fl. Brit. India 1: 621. 1875; Haines, Bot. Bihar Orissa 188. 1921 (Repr. ed., 1: 194. 1961).

Fl. & Fr.: October - December.

Distrib.: Giridih, Hazaribagh, West Champaran.

SIPHONODONTACEAE

SIPHONODON Griff.

Siphonodon celastrineus Griff. in Calcutta J. Nat. Hist. 4: 247. t. 14. 1844; Lawson in Hook. f., Fl. Brit. India 1: 629. 1875; Haines, Bot. Bihar Orissa 190. 1921 (Repr. ed., 1: 196. 1961).

Fl. & Fr.: April - June.

Distrib.: Sahibganj.

HIPPOCRATEACEAE

REISSANTIA Hallé

Reissantia arborea (Roxb.) Hara in J. Jap. Bot. 40: 327. 1965. *Hippocratea arborea* Roxb., Pl. Corom. 3: 3. t. 205. 1819; Lawson in Hook. f., Fl. Brit. India 1: 625. 1875.

Fl. & Fr.: November - August.

Distrib.: Bihar (Ramamurthy and Naithani in Singh *et al.* (eds.), Fl. India 5: 147. 2000).

Reissantia indica (Willd.) Hallé in Mem. Dict. Fr. Afr. Noiren. 64: 85. 1962. *Hippocratea indica* Willd., Sp. Pl. 1: 193. 1797; Lawson in Hook. *f.*, Fl. Brit. India 1: 624. 1875.

Fl. & Fr.: April - December.

Distrib.: Bihar (Ramamurthy and Naithani in Singh *et al.* (eds.), Fl. India 5: 149. 2000).

SALACIA L.

Salacia chinensis L., Mant. Pl. 293. 1771. *S. latifolia* Wallich ex Lawson in Hook. *f.*, Fl. Brit. India 1: 629. 1875. *S. prinoides* DC., Prodr. 1: 571. 1824; Lawson in Hook. *f.*, Fl. Brit. India 1: 626. 1875.

Fl. & Fr.: January - April.

Distrib.: Bihar (Ramamurthy and Naithani in Singh *et al.* (eds.), Fl. India 5: 152. 2000).

RHAMNACEAE

GOUANIA Jacq.

Gouania leptostachya DC., Prodr. 2: 40. 1825; Lawson in Hook. *f.*, Fl. Brit. India 1: 643. 1875; Haines, Bot. Bihar Orissa 198. 1921 (Repr. ed., 1: 205. 1961).

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur, Purnia, Singhbhum.

Gouania nepalensis Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 417. 1824; Lawson in Hook. *f.*, Fl. Brit. India 1: 644. 1875.

Fl. & Fr.: June - November.

Distrib.: Bihar (Bhandari and Bhansali in Fasc. Fl. India 20: 40. 1990).

HELINUS Meyer ex Endl., *nom. cons.*

Helinus lanceolatus Brandis, For. Fl. 574. 1874; Lawson in Hook. *f.*, Fl. Brit. India 1: 644. 1875; Haines, Bot. Bihar Orissa 199. 1921 (Repr. ed., 1: 206. 1961).

Fl. & Fr.: December - May.

Distrib.: Palamau, Ranchi, Santal Pargana, Singhbhum.

RHAMNUS L.

Rhamnus dahurica Pallas in Reiss. 3: 721. 1776 & Fl. Ross. 2. t. 61. 1789; Lawson in Hook. *f.*, Fl. Brit. India 1: 639. 1875; Haines, Bot. Bihar Orissa 197. 1921 (Repr. ed., 1: 204. 1961).

Fl. & Fr.: March - June.

Distrib.: Palamau.

Rhamnus napalensis (Wallich) Lawson in Hook. *f.*, Fl. Brit. India 1: 640. 1875; Haines, Bot. Bihar Orissa 197. 1921 (Repr. ed., 1: 204. 1961). *Ceanothus napalensis* Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 375. 1824.

Fl. & Fr.: July - February.

Distrib.: Bihar (Bhandari and Bhansali in Fasc. Fl. India 20: 51. 1990).

SAGERETIA Brongn.

Sageretia parviflora (Roem. & Schult.) G. Don, Gen. Hist. 2: 29. 1832. *Rhamnus parviflora* Roem. & Schult., Syst. Veg. 5: 295. 1819. *Sageretia oppositifolia* Brongn., Mem. Fam. Rham. 53. 1826; Lawson in Hook. *f.*, Fl. Brit. India 1: 641. 1875.

Fl. & Fr.: July - January.

Distrib.: Bihar (Bhandari and Bhansali in Fasc. Fl. India 20: 66. 1990).

SCUTIA Comm. ex Brongn., *nom. cons.*

Scutia myrtina (Burm. *f.*) Kurz in J. Asiat. Soc. Bengal 44: 168. 1875; Haines, Bot. Bihar Orissa 197. 1921 (Repr. ed., 1: 205. 1961). *Rhamnus*

myrtina Burm. f., Fl. Ind. 60. 1768, 'myrtinus' *Scutia indica* Brongn., Mem. Fam. Rham. 56. t. 4. 1826, *nom. superfl.*; Lawson in Hook. f., Fl. Brit. India 1: 640. 1875.

var. myrtina

Fl. & Fr.: February - December.

Distrib.: Bihar (Bhandari and Bhansali in Fasc. Fl. India 20: 73. 1990).

VENTILAGO Gaertn.

Ventilago denticulata Willd. in Ges. Naturf. Fr. Neue Sch. 3: 417. 1801. *V. calyculata* Tulasne in Ann. Sci. Nat. Bot. ser. 4, 8: 124. 1857; Lawson in Hook. f., Fl. Brit. India 1: 631. 1875; Haines, Bot. Bihar Orissa 193. 1921 (Repr. ed., 1: 200. 1961). *V. madraspatana auct. non Gaertn.*, 1788 : Roxb., Pl. Corom. 1: 55. t. 76. 1796.

var. bifida Bhandari & Bhansali in Fasc. Fl. India 20: 84. 1990.

Fl. & Fr.: January - March.

Distrib.: Bihar (Bhandari and Bhansali, l.c.)

var. denticulata

Fl. & Fr.: September - April.

Distrib.: Throughout the state.

Ventilago madraspatana Gaertn., Fruct. Sem. Pl. 1: 223. t. 49. f. 2. 1788; Lawson in Hook. f., Fl. Brit. India 1: 631. 1875; Haines, Bot. Bihar Orissa 193. 1921 (Repr. ed., 1: 200. 1961).

Fl. & Fr.: September - March.

Distrib.: Chota Nagpur, Santal Pargana, Singhbhum.

ZIZIPHUS Tourn. ex Mill.

Ziziphus caracutta Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 361. 1824. *Z. xylopyra* var. *glaberrima* Sedgw. in Indian For. 45: 71. 1919.

Fl. & Fr.: March - June.

Distrib.: Bihar (Bhandari and Bhansali, Fasc. Fl. India 20: 93. 1990).

Ziziphus mauritiana Lam., *Encycl.* 3: 319. 1789. *Z. jujuba* (L.) Gaertn., *Fruct. Sem. Pl.* 1: 203. 1788, *non* Mill., 1768; Lawson in Hook. *f.*, *Fl. Brit. India* 1: 632. 1875; Haines, *Bot. Bihar Orissa* 194. 1921 (Repr. ed., 1: 201. 1961).

var. **fruticosa** (Haines) Sebast. & Balakr. in *Indian For.* 89: 525. 1963. *Z. jujuba* Lam. var. *fruticosa* Haines, *For. Fl. Chota Nagpur* 270. 1910 & *Bot. Bihar Orissa* 195. 1921 (Repr. ed., 1: 201. 1961).

Fl. & Fr.: August - April.

Distrib.: Champaran.

var. **mauritiana**

Fl. & Fr.: September - June.

Distrib.: Bhagalpur, Lohardaga, Ranchi, Sahibganj, Singhbhum; cultivated elsewhere.

var. **pedunculata** Bhandari & Bhansali in *Fasc. Fl. India* 20: 101. 1990.

Fl. & Fr.: August - March.

Distrib.: Bihar (Bhandari and Bhansali, *l.c.*).

Ziziphus nummularia (Burm. *f.*) Wight & Arnott, *Prodr.* 162. 1834; Lawson in Hook. *f.*, *Fl. Brit. India* 1: 633. 1875; Haines, *Bot. Bihar Orissa* 195. 1921 (Repr. ed., 1: 202. 1961). *Rhamnus nummularia* Burm. *f.*, *Fl. Ind.* 61. 1768.

Fl. & Fr.: March - November.

Distrib.: West Champaran.

Ziziphus oenoplia (L.) Mill., *Gard. Dict.* ed. 8, 3. 1768; Lawson in Hook. *f.*, *Fl. Brit. India* 1: 634. 1875; Haines, *Bot. Bihar Orissa* 196. 1921 (Repr. ed., 1: 203. 1961). *Rhamnus oenoplia* L., *Sp. Pl.* 194. 1753.

var. **fasciculata** Bhandari & Bhansali in *Fasc. Fl. India* 20: 105. 1990.

Fl.: August - January.

Distrib.: Singhbhum (Bhandari and Bhansali, *l.c.*).

var. oenoplia*Fl. & Fr.*: June - December.*Distrib.*: Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

Ziziphus rugosa Lam., *Encycl.* 3: 319. 1789; Lawson in Hook. *f.*, *Fl. Brit. India* 1: 636. 1875. Haines, *Bot. Bihar Orissa* 196. 1921 (*Repr. ed.*, 1: 203. 1961).

var. rugosa*Fl. & Fr.*: February - July.*Distrib.*: Ranchi, West Champaran.

Ziziphus xylopyra (Retz.) Willd., *Sp. Pl.* 1: 1104. 1797; Lawson in Hook. *f.*, *Fl. Brit. India* 1: 634. 1875; Haines, *Bot. Bihar Orissa* 195. 1921 (*Repr. ed.*, 1: 202. 1961). *Rhamnus xylopyrus* Retz., *Observ. Bot.* 2: 11. 1781.

Fl. & Fr.: May - December.*Distrib.*: Giridih, Ranchi, Singhbhum.**VITACEAE****AMPELOCISSUS** Planch., *nom. cons.*

Ampelocissus arnottiana Planch. in A. & C. DC., *Monogr. Phan.* 5: 379. 1887.

Fl. & Fr.: October - January.*Distrib.*: Hazaribagh (Paria and Chattopadhyay, *Fl. Hazaribagh Dist. Bihar* 493. 2000).

Ampelocissus barbata (Wallich) Planch. in A. & C. DC., *Monogr. Phan.* 5: 375. 1887. *Vitis barbata* Wallich in Roxb., *Fl. Ind.* (Carey & Wallich ed.) 2: 478. 1824; Lawson in Hook. *f.*, *Fl. Brit. India* 1: 651. 1875.

Fl. & Fr.: May - September.*Distrib.*: Chota Nagpur.

Ampelocissus divaricata (Wallich ex Lawson) Planch. in J. Vigne Amer. 8: 375. 1884. *Vitis divaricata* Wallich ex Lawson in Hook. f., Fl. Brit. India 1: 657. 1875; Haines, Bot. Bihar Orissa 203. 1921 (Repr. ed., 1: 211. 1961).

Fl. & Fr.: October - December.

Distrib.: West Champaran.

Ampelocissus latifolia (Roxb.) Planch. in J. Vigne Amer. 8: 374. 1884. *Vitis latifolia* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 661. 1820; Lawson in Hook. f., Fl. Brit. India 1: 652. 1875; Haines, Bot. Bihar Orissa 203. 1921 (Repr. ed., 1: 210. 1961).

Fl. & Fr.: July - October.

Distrib.: Giridih, Ranchi, Singhbhum, West Champaran.

Ampelocissus tomentosa (Heyne ex Roth) Planch. in J. Vigne Amer. 8: 374. 1884. *Vitis tomentosa* Heyne ex Roth, Nov. Pl. Sp. 157. 1821; Lawson in Hook. f., Fl. Brit. India 1: 650. 1875; Haines, Bot. Bihar Orissa 203. 1921 (Repr. ed., 1: 210. 1961).

Fl. & Fr.: August - December.

Distrib.: Gaya, Giridih, Hazaribagh, Palamau, Ranchi, Sahibganj, Santal Pargana, Singhbhum.

CAYRATIA Juss., *nom. cons.*

Cayratia auriculata (Roxb.) Gamble, Fl. Madras 237. 1918. *Cissus auriculata* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 430. 1820. *Vitis auriculata* Wight & Arnott, Prodr. 129. 1834, *p.p.*; Lawson in Hook. f., Fl. Brit. India 1: 658. 1875; Haines, Bot. Bihar Orissa 206. 1921 (Repr. ed., 1: 213. 1961).

Fl. & Fr.: August - November.

Distrib.: Ranchi, Singhbhum, West Champaran.

Cayratia japonica (Thunb.) Gagnep. var. *mollis* (Wallich ex Lawson) Momiyama in Hara, Fl. E. Himal. 199. 1966. *Vitis mollis* Wallich ex Lawson in Hook. f., Fl. Brit. India 1: 660. 1875. *V. tenuifolia* auct. non Wight & Arnott, 1834; Lawson in Hook. f., Fl. Brit. India 1: 660. 1875, *p.p.*

Fl. & Fr.: May - September.

Distrib.: Singhbhum.

Cayratia pedata (Lam.) Juss. ex Gagnep. in Lecomte, Not. Syst. 1: 346. 1910. *Cissus pedata* Lam., Encycl. 1: 31. 1783. *Vitis pedata* (Lam.) Wallich ex Wight in Wight & Arnott, Prodr. 128. 1834; Lawson in Hook. f., Fl. Brit. India 1: 661. 1875; Haines, Bot. Bihar Orissa 206. 1921 (Repr. ed., 1: 214. 1961).

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, Santal Pargana.

Cayratia trifolia (L.) Domin in Biblioth. Bot. 89: 371. 1927. *Vitis trifolia* L., Sp. Pl. 203. 1753; Haines, Bot. Bihar Orissa 205. 1921 (Repr. ed., 1: 213. 1961). *V. carnososa* (Lam.) Wallich ex Wight & Arnott, Prodr. 127. 1834; Lawson in Hook. f., Fl. Brit. India 1: 654. 1875.

Fl. & Fr.: August - December.

Distrib.: Throughout the state.

CISSUS L.

Cissus adnata Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 423. 1820. *Vitis adnata* Wallich ex Wight & Arnott, Prodr. 1: 126. 1834; Lawson in Hook. f., Fl. Brit. India 1: 649. 1875, *p.p.*; Haines, Bot. Bihar Orissa 202. 1921 (Repr. ed., 1: 209. 1961).

Fl. & Fr.: September - January.

Distrib.: Purnia (Haines, *l.c.*).

Cissus assamica (Lawson) Craib in Bull. Misc. Inform. Kew 1911: 31. 1911. *Vitis assamica* Lawson in Hook. f., Fl. Brit. India 1: 648. 1875; Haines, Bot. Bihar Orissa 201. 1921 (Repr. ed., 1: 208. 1961).

Fl. & Fr.: August - December.

Distrib.: Ranchi.

Cissus quadrangularis L., Mant. Pl. 39. 1767. *Vitis quadrangularis* (L.) Wallich ex Wight in Wight & Arnott, Prodr. 125. 1834; Lawson in Hook. f., Fl. Brit. India 1: 645. 1875; Haines, Bot. Bihar Orissa 200. 1921 (Repr. ed., 1: 207. 1961).

Fl. & Fr.: August - December.

Distrib.: Ranchi.

Cissus repanda Vahl, Symb. Bot. 3: 18. 1794. *Vitis repanda* (Vahl) Wight & Arnott, Prodr. 125. 1834; Lawson in Hook. *f.*, Fl. Brit. India 1: 648. 1875; Haines, Bot. Bihar Orissa 202. 1921 (Repr. ed., 1: 209. 1961).

Fl. & Fr.: July - November.

Distrib.: Chota Nagpur, West Champaran.

TETRASTIGMA (Miq.) Planch.

Tetrastigma alcorni Haines in Bull. Misc. Inform. Kew 1920: 2. 1920. *Vitis alcorni* Haines, Bot. Bihar Orissa 205. 1921 (Repr. ed., 1: 212. 1961).

Fl. & Fr.: November - December.

Distrib.: West Champaran (Haines, *l.c.*; Bhattacharyya and Sarkar, Fl. W. Champaran 231. 1998). Endemic.

Tetrastigma bracteolatum (Wallich) Planch. in A. & C. DC., Monogr. Phan. 5: 428. 1887. *Vitis bracteolata* Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 483. 1824; Lawson in Hook. *f.*, Fl. Brit. India 1: 654. 1875; Haines, Bot. Bihar Orissa 204. 1921 (Repr. ed., 1: 211. 1961).

Fl. & Fr.: September - February.

Distrib.: Purnia.

Tetrastigma dubium (Lawson) Planch. in A. & C. DC., Monogr. Phan. 5: 437. 1887. *Vitis dubia* Lawson in Hook. *f.*, Fl. Brit. India 1: 661. 1875.

Fl. & Fr.: February - March.

Distrib.: Singhbhum.

Tetrastigma lanceolarium (Roxb.) Planch. in A. & C. DC., Monogr. Phan. 5: 423. 1887. *Cissus lanceolaria* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 430. 1820. *Vitis lanceolaria* (Roxb.) Gamble, Fl. Madras 228.

1916; Lawson in Hook. *f.*, Fl. Brit. India 1: 660. 1875; Haines, Bot. Bihar Orissa 205. 1921 (Repr. ed., 1: 212. 1961).

Fl. & Fr.: January - July.

Distrib.: Giridih, Hazaribagh, Sahibganj, Santal Pargana, West Champaran.

Tetrastigma thomsonianum Planch. in A. & C. DC., Monogr. Phan. 5: 438. 1887. *Cissus angustifolius* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 408. 1820. *Vitis angustifolia* (Roxb.) Wight, Icon. Pl. Ind. Orient. 1: 9. t. 176. 1839; Lawson in Hook. *f.*, Fl. Brit. India 1: 654. 1875; Haines, Bot. Bihar Orissa 200. 1921 (Repr. ed., 1: 212. 1961).

Fl. & Fr.: February - December.

Distrib.: Purnia, West Champaran.

VITIS L.

Vitis heyneana Roem. & Schult. Syst. Veg. 5: 318. 1820. *V. lanata* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 474. 1824; Lawson in Hook. *f.*, Fl. Brit. India 1: 651. 1875; Haines, Bot. Bihar Orissa 203. 1921 (Repr. ed., 1: 210. 1961).

Fl. & Fr.: March - May.

Distrib.: Singhbhum.

LEEACEAE

LEEA D. van Royen ex L., *nom. cons.*

Leea aequata L., Syst. Nat. ed. 12, 2: 627. 1767. *L. hirta* Roxb. ex Hornem., Hort. Hafn. 1: 231. 1813; Lawson in Hook. *f.*, Fl. Brit. India 1: 668. 1875.

Fl. & Fr.: June - January.

Distrib.: Bihar (Naithani in Singh *et al.* (eds.), Fl. India 5: 326. 2000).

Leea alata Edgew. in Trans. Linn. Soc. London 20: 36. 1846; Lawson in Hook. *f.*, Fl. Brit. India 1: 665. 1875; Haines, Bot. Bihar Orissa 207. 1921 (Repr. ed., 1: 214. 1961).

Fl. & Fr.: June - September.

Distrib.: Purnia.

Leea asiatica (L.) Ridsdale in Manilal, Bot. Hist. Hort. Malabaricus 189. 1980. *Phytolacca asiatica* L., Sp. Pl. 441. 1753. *Leea crispa* L., Syst. Nat. ed. 12. 2: 627. 1767 & Mant. Pl. 124. 1767; Lawson in Hook. f., Fl. Brit. India 1: 665. 1875; Haines, Bot. Bihar Orissa 208. 1921 (Repr. ed., 1: 215. 1961). *L. aspera* Edgew. in Trans. Linn. Soc. London 20: 36. 1846, non Wallich ex G. Don, 1831; Lawson in Hook. f., Fl. Brit. India 1: 665. 1875; Haines, Bot. Bihar Orissa 208. 1921 (Repr. ed., 1: 215. 1961).

Fl. & Fr.: June - December.

Distrib.: Champaran, Giridih, Hazaribagh, Palamau, Purnia, Ranchi, Singhbhum.

Leea compactiflora Kurz in J. Asiat. Bengal 42(2): 65. 1873. *L. trifoliata* Lawson in Hook. f., Fl. Brit. India 1: 666. 1875. *L. robusta* auct. non Roxb., 1824; Lawson in Hook. f., Fl. Brit. India 1: 667. 1875, p.p.; Haines, Bot. Bihar Orissa 209. 1921 (Repr. ed., 1: 216. 1961).

Fl. & Fr.: September - November.

Distrib.: Chota Nagpur, Santal Pargana, Singhbhum.

Leea indica (Burm. f.) Merr. in Philipp. J. Sci. Bot. 14: 245. 1919. *Staphylea indica* Burm. f., Fl. Ind. 75. t. 24. f. 2. 1768. *Leea sambucina* (L.) Willd., Sp. Pl. 1: 1177. 1798; Lawson in Hook. f., Fl. Brit. India 1: 666. 1875, p.p.; Haines, Bot. Bihar Orissa 208. 1921 (Repr. ed., 1: 216. 1961).

Fl. & Fr.: June - December.

Distrib.: Sahibganj, Santal Pargana.

Leea macrophylla Roxb. ex Hornem., Hort. Hafn. 1: 231. 1813; Lawson in Hook. f., Fl. Brit. India 1: 664. 1875; Haines, Bot. Bihar Orissa 207. 1921 (Repr. ed., 1: 215. 1961).

Fl. & Fr.: September - December.

Distrib.: Purnia, Ranchi, Santal Pargana, West Champaran.

SAPINDACEAE**ALLOPHYLUS L.**

Allophylus serratus (Roxb.) Kurz in J. Asiat. Soc. Bengal 44(2): 185. 1876. *Ornitrophe serrata* Roxb., Pl. Corom. 1: 44. t. 61. 1795. *Allophylus cobbe* forma *serratus* Hiern in Hook. f., Fl. Brit. India 1: 674. 1875.

Fl. & Fr.: June - September.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 235. 1998).

CARDIOSPERMUM L.

Cardiospermum halicacabum L., Sp. Pl. 366. 1753; Hiern in Hook. f., Fl. Brit. India 1: 670. 1875; Haines, Bot. Bihar Orissa 211. 1921 (Repr. ed., 1: 218. 1961).

Fl. & Fr.: March - November.

Distrib.: Throughout the state.

DIMOCARPUS Lour.

Dimocarpus longan Lour., Fl. Cochinch. 1: 233. 1790. *Nephelium longana* (Lam.) Cambess. in Mem. Mus. Hist. Nat. Paris 18: 30. 1829; Hiern in Hook. f., Fl. Brit. India 1: 688. 1875; Haines, Bot. Bihar Orissa 214. 1921 (Repr. ed., 1: 222. 1961).

Fl.: March - April.

Distrib.: Planted.

DODONAEA Mill.

Dodonaea viscosa Jacq., Enum. Syst. Pl. 19. 1760; Hiern in Hook. f., Fl. Brit. India 1: 697. 1875; Haines, Bot. Bihar Orissa 217. 1921 (Repr. ed., 1: 225. 1961).

Fl. & Fr.: January - August.

Distrib.: Often grown as a hedge plant. Chota Nagpur, West Champaran.

LITCHI Sonner.

Litchi chinensis Sonner., Voy. Indes Orient. 3: 255. 1782. *Nephelium litchi* Cambess. in Mém. Mus. Hist. Nat. Paris 18: 30. 1829; Haines, Bot. Bihar Orissa 214. 1921 (Repr. ed., 1: 222. 1961).

Fl. & Fr.: February - June.

Distrib.: Cultivated. Muzaffarpur, West Champaran.

SAPINDUS L.

Sapindus emarginatus Vahl, Symb. Bot. 3: 54. 1794; Haines, Bot. Bihar Orissa 215. 1921 (Repr. ed., 1: 223. 1961). *S. trifoliatus auct. non* L., 1753: Hiern in Hook. f., Fl. Brit. India 1: 682. 1875, *p.p.*

Fl. & Fr.: October - May.

Distrib.: Chota Nagpur.

Sapindus laurifolia Vahl, Symb. Bot. 3: 54. 1794, '*laurifolius*'. *S. trifoliatus auct. non* L., 1753: Hiern in Hook. f., Fl. Brit. India 1: 682. 1875, *p.p.*; Haines, Bot. Bihar Orissa 215. 1921 (Repr. ed., 1: 223. 1961).

Fl. & Fr.: November - March.

Distrib.: Chota Nagpur, Hazaribagh.

SCHLEICHERA Willd., *nom. cons.*

Schleichera oleosa (Lour.) Oken., Allg. Naturgesch. Bot. 3(2): 1341. 1841. *Pistacia oleosa* Lour., Fl. Cochinch. 2: 615. 1790. *Schleichera trijuga* Willd., Sp. Pl. 4, 2: 1096. 1806; Hiern in Hook. f., Fl. Brit. India 1: 681. 1875; Haines, Bot. Bihar Orissa 213. 1921 (Repr. ed., 1: 221. 1961).

Fl. & Fr.: March - September.

Distrib.: Hazaribagh, Ranchi, Sahibganj, Singhbhum, West Champaran.

SABIACEAE**MELIOSMA** Blume

Meliosma simplicifolia (Roxb.) Walp., Repert. Bot. Syst. 1: 103. 1842; Hook. f., Fl. Brit. India 2: 5. 1876; Haines, Bot. Bihar Orissa 218.

1921 (Repr. ed., 1: 226. 1961). *Millingtonia simplicifolia* Roxb., Pl. Corom. 3: 50. t. 254. 1820.

Fl. & Fr.: December - June.

Distrib.: East Champaran, Palamau, Purnia, Singhbhum, West Champaran.

SABIA Colebr.

Sabia paniculata Edgew. ex Hook. f. & Thomson, Fl. Ind. 1: 211. 1855; Hook. f., Fl. Brit. India 2: 3. 1876; Haines, Bot. Bihar Orissa 218. 1921 (Repr. ed., 1: 226. 1961).

Fl. & Fr.: January - March.

Distrib.: West Champaran (Haines, l.c.).

ANACARDIACEAE

ANACARDIUM L.

Anacardium occidentale L., Sp. Pl. 383. 1753; Hook. f., Fl. Brit. India 2: 20. 1876; Haines, Bot. Bihar Orissa 220. 1921 (Repr. ed., 1: 228. 1961).

Fl. & Fr.: September - June.

Distrib.: Planted. Bhagalpur, West Champaran.

BUCHANANIA Spreng.

Buchanania lanzan Spreng. in Schrad., J. Bot. 1800(2): 234. 1801. *B. latifolia* Roxb., Fl. Ind. 2: 385. 1832; Hook. f., Fl. Brit. India 2: 23. 1876; Haines, Bot. Bihar Orissa 221. 1921 (Repr. ed., 1: 229. 1961).

Fl. & Fr.: January - June.

Distrib.: Bhagalpur, Champaran, Giridih, Gumla, Hazaribagh, Koderma, Palamau, Ranchi, Santal Pargana, Singhbhum.

LANNEA A. Rich., *nom. cons.*

Lannea coromandelica (Houtt.) Merr. in J. Arnold Arb. 19: 353.

1938. *Dialium coromandelicum* Houtt. in Nat. Hist. ser. 2, 2: 39. t. 5. f. 2. 1774. *Odina wodier* Roxb., Fl. Ind. 2: 293. 1832; Hook. f., Fl. Brit. India 2: 29. 1876; Haines, Bot. Bihar Orissa 223. 1921 (Repr. ed., 1: 231. 1961).

Fl. & Fr.: February - May.

Distrib.: Champaran, Gumla, Hazaribagh, Koderma, Singhbhum.

MANGIFERA L.

Mangifera indica L., Sp. Pl. 200. 1753; Hook. f., Fl. Brit. India 2: 13. 1876; Haines, Bot. Bihar Orissa 220. 1921 (Repr. ed., 1: 228. 1961).

Fl. & Fr.: February - July.

Distrib.: Commonly cultivated throughout the state.

RHUS L.

Rhus chinensis Mill., Gard. Dict. ed. 8. 7. 1768. *R. semialata* Murray in Comm. Soc. Goetting 5: 27. t. 3. 1784; Hook. f., Fl. Brit. India 2: 10. 1876; Haines, Bot. Bihar Orissa 223. 1921 (Repr. ed., 1: 231. 1961).

Fl. & Fr.: April - December.

Distrib.: Champaran, Giridih, Hazaribagh, Palamau.

SEMECARPUS L. f.

Semecarpus anacardium L. f., Suppl. Pl. 182. 1782; Hook. f., Fl. Brit. India 2: 30. 1876; Haines, Bot. Bihar Orissa 222. 1921 (Repr. ed., 1: 230. 1961).

Fl. & Fr.: February - December.

Distrib.: Giridih, Hazaribagh, Koderma, Ranchi, Singhbhum, West Champaran.

SPONDIAS L.

Spondias pinnata (L. f.) Kurz, Prelim. Rep. For. & Veg. Pegu, Append. A. 44 & B. 42. 1875. *Mangifera pinnata* L. f., Suppl. Pl. 156.

1782. *Spondias mangifera* Willd., Sp. Pl. 2: 751. 1799; Hook. *f.*, Fl. Brit. India 2: 42. 1876; Haines, Bot. Bihar Orissa 224. 1921 (Repr. ed., 1: 232. 1961).

Fl. & Fr.: February - October.

Distrib.: Chota Nagpur, Sahibganj, West Champaran.

MORINGACEAE

MORINGA Adans.

Moringa concanensis Nimmo in Graham, Cat. Bombay Pl. 43. 1839; Hook. *f.*, Fl. Brit. India 2: 45. 1876.

Fl. & Fr.: January - June.

Distrib.: Cultivated throughout the state.

Moringa oleifera Lam., Encycl. 1: 398. 1785. *M. pterygosperma* Gaertn., Fruct. Sem. Pl. 2: 314. 1791; Hook. *f.*, Fl. Brit. India 2: 45. 1876; Haines, Bot. Bihar Orissa 225. 1922 (Repr. ed., 2: 235. 1961).

Fl. & Fr.: January - June.

Distrib.: Cultivated throughout the state. Bhagalpur, East Champaran, Chota Nagpur, Purnia, West Champaran.

FABACEAE

ABRUS Adans.

Abrus precatorius L., Syst. Nat. ed. 2, 2: 472. 1767; Baker in Hook. *f.*, Fl. Brit. India 2: 175. 1876; Haines, Bot. Bihar Orissa 247. 1922 (Repr. ed., 2: 259. 1961).

Fl. & Fr.: August - March.

Distrib.: Bhagalpur, Champaran, Chota Nagpur, Hazaribagh, Koderma, Palamau, Patna, Santal Pargana.

Abrus pulchellus Wallich ex Thwaites, Enum. Pl. Zeyl. 91. 1859; Baker in Hook. *f.*, Fl. Brit. India 2: 175. 1876; Haines, Bot. Bihar Orissa 247. 1922 (Repr. ed., 2: 258. 1961).

Fl. & Fr.: August - January.

Distrib.: Champaran, Purnia.

AESCHYNOMENE L.

Aeschynomene americana L., Sp. Pl. 713. 1753.

Fl. & Fr.: August - November.

Distrib.: Bihar (Sanjappa, Legumes India 75. 1992).

Aeschynomene aspera L., Sp. Pl. 713. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 152. 1876; Haines, Bot. Bihar Orissa 254. 1922 (Repr. ed., 2: 266. 1961).

Fl. & Fr.: September - December.

Distrib.: Patna, Purnia, Ranchi.

Aeschynomene indica L., Sp. Pl. 713. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 151. 1876; Haines, Bot. Bihar Orissa 254. 1922 (Repr. ed., 2: 265. 1961).

Fl. & Fr.: August - December.

Distrib.: Usually throughout the state.

AGANOPE Miq.

Aganope heptaphylla (L.) Polhill in Kew Bull. 25: 268. 1971. *Sophora heptaphylla* L., Sp. Pl. 373. 1753, *excl. syn. Pluk. Derris sinuata* Benth. *ex* Thwaites, Enum. Pl. Zeyl. 93. 1859; Baker in Hook. *f.*, Fl. Brit. India 2: 246. 1878.

Fl. & Fr.: September - December.

Distrib.: Hazaribagh.

ALHAGI Gagnebin

Alhagi maurorum Medik. in Vorles, Chrupf. Phys. Oek. Ges. 2: 397. 1787; Baker in Hook. *f.*, Fl. Brit. India 2: 145. 1876. *A. camelorum* Fisch. *ex* DC., Prodr. 2: 352. 1825; Haines, Bot. Bihar Orissa 251. 1922 (Repr. ed., 2: 263. 1961).

Fl. & Fr.: May - August.

Distrib.: Bhagalpur, Gaya, Munger, Patna.

ALYSICARPUS Neck. *ex Desv., nom. cons.*

Alysicarpus bupleurifolius (L.) DC., Prodr. 2: 352. 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 158. 1876; Haines, Bot. Bihar Orissa 258. 1922 (Repr. ed., 2: 269. 1961). *Hedysarum bupleurifolium* L., Sp. Pl. 745. 1753.

var. bupleurifolius

Fl. & Fr.: August - January.

Distrib.: Bhagalpur, Champaran, Koderma, Palamau, Patna, Santal Pargana.

var. gracilis (Edgew.) Baker in Hook. *f.*, Fl. Brit. India 2: 158. 1876; Haines, Bot. Bihar Orissa 258. 1922 (Repr. ed., 2: 270. 1961). *Alysicarpus gracilis* Edgew. in J. Asiat. Soc. Bengal 21: 170. 1853.

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Ranchi.

var. hybridus DC., Prodr. 2: 352. 1825. *Alysicarpus bupleurifolius* (L.) DC. var. *intermedius* Haines, Bot. Bihar Orissa 258. 1922 (Repr. ed., 2: 270. 1961).

Fl. & Fr.: October - January.

Distrib.: Hazaribagh.

Alysicarpus glumaceus (Vahl) DC., Prodr. 2: 353. 1825. *Hedysarum glumaceum* Vahl, Symb. Bot. 2: 106. 1791. *Alysicarpus rugosus* (Willd.) DC., Prodr. 2: 353. 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 159. 1876; Haines, Bot. Bihar Orissa 258. 1922 (Repr. ed., 2: 270. 1961).

Fl. & Fr.: September - January.

Distrib.: Champaran, Deoghar, Giridih, Hazaribagh, Koderma, Palamau, Purnia.

Alysicarpus hamosus Edgew. in J. Asiat. Soc. Bengal 21: 171. 1853; Baker in Hook. f., Fl. Brit. India 2: 157. 1876; Haines, Bot. Bihar Orissa 259. 1922 (Repr. ed., 2: 271. 1961).

Fl. & Fr.: August - November.

Distrib.: Gaya, Hazaribagh, Palamau.

Alysicarpus heyneanus Wight & Arnott, Prodr. 234. 1834. *A. rugosus* (Willd.) DC. var. *heyneanus* (Wight & Arnott) Baker in Hook. f., Fl. Brit. India 2: 159. 1876; Haines, Bot. Bihar Orissa 258. 1922 (Repr. ed., 2: 270. 1961).

Fl. & Fr.: September - December.

Distrib.: Purnia.

Alysicarpus longifolius (Rottler ex Spreng.) Wight & Arnott, Prodr. 233. 1834; Baker in Hook. f., Fl. Brit. India 2: 159. 1876. *Hedysarum longifolium* Rottler ex Spreng., Syst. Veg. 3: 319. 1826. *Alysicarpus bupleurifolius* (L.) DC. var. *erecta* Haines, Bot. Bihar Orissa 258. 1922 (Repr. ed., 2: 270. 1961).

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

Alysicarpus monilifer (L.) DC., Prodr. 2: 353. 1825; Baker in Hook. f., Fl. Brit. India 2: 157. 1876; Haines, Bot. Bihar Orissa 259. 1922 (Repr. ed., 2: 270. 1961). *Hedysarum moniliferum* L., Mant. Pl. 102. 1767.

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, Champaran, Gaya, Hazaribagh, Koderma, Palamau, Patna, Ranchi, Santal Pargana.

Alysicarpus pubescens Law in Wight, Icon. Pl. Ind. Orient. 250. 1840; Baker in Hook. f., Fl. Brit. India 2: 160. 1876; Haines, Bot. Bihar Orissa 257. 1922 (Repr. ed., 2: 269. 1961).

var. **pubescens**

Fl. & Fr.: September - November.

Distrib.: Bihar (Kurz, s.l. (CAL); Sanjappa, Legumes India 80. 1992).

Alysicarpus roxburghianus Thoth. & Namanik in Bull. Bot. Surv. India 21: 189. 1981. *Hedysarum bupleurifolium* auct. non L., 1753; Roxb., Pl. Corom. 2: t. 194. 1805.

Fl. & Fr.: September - November.

Distrib.: Chota Nagpur, Hazaribagh, Ranchi.

Alysicarpus scariosus (Rottler ex Spreng.) Graham ex Thwaites, Enum. Pl. Zeyl. 88. 1859. *Hedysarum scariosum* Rottler ex Spreng., Syst. Veg. 3: 319. 1926. *Alysicarpus rugosus* (Willd.) DC. var. *styracifolius* (DC.) Baker in Hook. f., Fl. Brit. India 2: 159. 1876; Haines, Bot. Bihar Orissa 258. 1922 (Repr. ed., 2: 270. 1961). *A. glumaceus* (Roth) Schindler in Fedd. Repert. 21: 12. 1925.

Fl. & Fr.: September - February.

Distrib.: Gaya, Palamau, Singhbhum.

Alysicarpus tetragonolobus Edgew. in J. Asiat. Soc. Bengal 21: 69. 1853 & J. Linn. Soc. London (Bot.) 9: 312, 322. 1866; Baker in Hook. f., Fl. Brit. India 2: 159. 1876; Haines, Bot. Bihar Orissa 257. 1922 (Repr. ed., 2: 269. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh.

Alysicarpus vaginalis (L.) DC., Prodr. 2: 353. 1825; Baker in Hook. f., Fl. Brit. India 2: 158. 1876; Haines, Bot. Bihar Orissa 259. 1922 (Repr. ed., 2: 271. 1961). *Hedysarum vaginale* L., Sp. Pl. 746. 1753.

var. **nummularifolia** (DC.) Miq., Fl. Ind. Bat. 1, 1: 232. 1855; Baker in Hook. f., Fl. Brit. India 2: 158. 1876. *Alysicarpus nummularifolius* DC., Prodr. 2: 353. 1825, *p.p.*

Fl. & Fr.: August - October.

Distrib.: Patna, Ranchi, Singhbhum.

var. **vaginalis**

Fl. & Fr.: September - December.

Distrib.: Throughout the state.

ARACHIS L.

Arachis hypogea L., Sp. Pl. 741. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 161. 1876; Haines, Bot. Bihar Orissa 252. 1922 (Repr. ed., 2: 264. 1961).

Fl. & Fr.: August - November.

Distrib.: Cultivated throughout the state.

BUTEA Koenig ex Willd., nom. cons.

Butea monosperma (Lam.) Taub. in Engler & Prantl, Nat. Pflanzenfam. III 3: 365. 1894. *Erythrina monosperma* Lam., Encycl. 2: 391. 1786. *Butea frondosa* Roxb. ex Willd., Sp. Pl. 3: 917. 1802, *nom. superfl.*; Baker in Hook. *f.*, Fl. Brit. India 2: 194. 1876; Haines, Bot. Bihar Orissa 279. 1922 (Repr. ed., 2: 292. 1961).

Fl. & Fr.: February - July.

Distrib.: Bhagalpur, Gumla, Hazaribagh, Koderma, Palamau, Patna, Singhbhum.

Butea superba Roxb. ex Willd., Sp. Pl. 3: 917. 1802; Baker in Hook. *f.*, Fl. Brit. India 2: 195. 1876; Haines, Bot. Bihar Orissa 280. 1922 (Repr. ed., 2: 292. 1961).

Fl. & Fr.: March - July.

Distrib.: Giridih, Hazaribagh, Koderma, Palamau, Santal Pargana.

CAJANUS DC., nom. cons.

Cajanus cajan (L.) Millsp., Field Columb. Mus. Bot. 2, 1: 53. 1900. *Cytisus cajan* L., Sp. Pl. 739. 1753. *Cajanus indicus* Spreng., Syst. Veg. 3: 248. 1826; Baker in Hook. *f.*, Fl. Brit. India 2: 217. 1876; Haines, Bot. Bihar Orissa 275. 1922 (Repr. ed., 2: 287. 1961).

Fl. & Fr.: August - March.

Distrib.: Cultivated throughout the state.

✓ **Cajanus crassus** (Prain & King) van der Maesen in Agric. Univ. Wageningen Pap. 85-4: 105. 1985. *Atylosia crassa* Prain & King in J.

Asiat. Soc. Bengal 66: 45. 1897; Haines, Bot. Bihar Orissa 274. 1922 (Repr. ed., 2: 286. 1961).

Fl. & Fr.: December - April.

Distrib.: Champaran, Dumka, Giridih, Hazaribagh, Palamau, Ranchi, Sahibganj, Singhbhum.

Cajanus platycarpus (Benth.) van der Maesen in Agric. Univ. Wageningen Pap. 85-4: 160. 1985. *Atylosia platycarpa* Benth. in Miq., Pl. Jungh. 2: 243. 1852; Baker in Hook. f., Fl. Brit. India 2: 216. 1876; Haines, Bot. Bihar Orissa 274. 1922 (Repr. ed., 2: 287. 1961). *Cantharospermum platycarpum* (Benth.) Raizada in Mooney, Suppl. Bot. Bihar Orissa 53. 1950.

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Ranchi.

✓ **Cajanus scarabaeoides** (L.) du Petit-Thou., Dict. Sci. Nat. 6: 617. 1817. *Dolichos scarabaeoides* L., Sp. Pl. 726. 1753. *Atylosia scarabaeoides* (L.) Benth. in Miq., Pl. Jungh. 2: 242. 1852; Baker in Hook. f., Fl. Brit. India 2: 215. 1876; Haines, Bot. Bihar Orissa 274. 1922 (Repr. ed., 2: 287. 1961).

Fl. & Fr.: August - April.

Distrib.: Throughout the state.

CAMPYLOTROPIS Bunge

Campylotropis macrostyla (D. Don) Lindl. ex Miq., Fl. Ind. Bat. 1, 1: 230. 1855. *Crotalaria macrostyla* D. Don, Prodr. Fl. Nepal. 242. 1825. *Lespedeza macrostyla* (D. Don) Baker ex Maxim., Acta Hort. Petrop. 2: 348. 1873, *p. major p.*; Baker in Hook. f., Fl. Brit. India 2: 143. 1876, *p.p.*; Haines, Bot. Bihar Orissa 251. 1922 (Repr. ed., 2: 262. 1961).

Fl. & Fr.: November - December.

Distrib.: Champaran.

Campylotropis stenocarpa (Klotz.) Schindler in Fedd. Repert. 11: 345. 1912. *Oxyramphis stenocarpa* Klotz. in Klotz. & Garcke, Bot. Ergben Reise Wald. 151. t. 1. f. 2. 1862. *Lespedeza macrostyla auct.*

non (D. Don) Baker ex Maxim., 1873: Baker in Hook. *f.*, Fl. Brit. India 2: 143. 1876, *p.p.*

Fl. & Fr.: March - April.

Distrib.: West Champaran.

CANAVALIA DC., *nom. cons.*

Canavalia africana Dunn in Pipers & Dunn in Bull. Misc. Inform. Kew 1922: 135. 1922. *Dolichos virosus* Roxb., Fl. Ind. 3: 301. 1832. *Canavalia virosa* (Roxb.) Wight & Arnott, Prodr. 253. 1834, *p.p.*; Haines, Bot. Bihar Orissa 278. 1922 (Repr. ed., 2: 291. 1961). *C. ensiformis* (L.) DC. var. *virosa* (Roxb.) Baker in Hook. *f.*, Fl. Brit. India 2: 196. 1876.

Fl. & Fr.: August - March.

Distrib.: Purnia.

Canavalia ensiformis (L.) DC., Prodr. 2: 404. 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 195. 1876; Haines, Bot. Bihar Orissa 278. 1922 (Repr. ed., 2: 290. 1961). *Dolichos ensiformis* L., Sp. Pl. 725. 1753.

Fl. & Fr.: August - April.

Distrib.: Cultivated.

Canavalia gladiata (Jacq.) DC., Prodr. 2: 404. 1825. *Dolichos gladiata* Jacq., Coll. Bot. 2: 276. 1788.

Fl. & Fr.: August - February.

Distrib.: Bhagalpur, Chota Nagpur, Patna.

CICER L.

Cicer arietinum L., Sp. Pl. 738. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 176. 1876; Haines, Bot. Bihar Orissa 248. 1922 (Repr. ed., 2: 259. 1961).

Fl. & Fr.: November - March.

Distrib.: Cultivated throughout the state.

CLIANTHUS Soland. *ex* Lindl., *nom. cons.*

Clianthus formosus (G. Don) Ford. & Vickery, Contrib. N. S. Wales Nat. Herb. 1: 303. 1950. *Donia formosa* G. Don, Gen. Hist. 2: 468. 1832.

Fl. & Fr.: March - June.

Distrib.: Cultivated in gardens. Bhagalpur.

CLITORIA L.

Clitoria ternata L., Sp. Pl. 753. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 208. 1876; Haines, Bot. Bihar Orissa 293. 1922 (Repr. ed., 2: 306. 1961).

Fl. & Fr.: August - December.

Distrib.: Common in gardens throughout the state.

CROTALARIA L.

Crotalaria acicularis Buch.-Ham. *ex* Benth. in Hook., Lond. J. Bot. 2: 476. 1843; Baker in Hook. *f.*, Fl. Brit. India 2: 68. 1876; Haines, Bot. Bihar Orissa 230. 1922 (Repr. ed., 2: 241. 1961).

Fl. & Fr.: November - February.

Distrib.: Hazaribagh, Palamau, Purnia.

Crotalaria alata Buch.-Ham. *ex* D. Don, Prodr. Fl. Nepal. 241. 1825; Haines, Bot. Bihar Orissa 230. 1922 (Repr. ed., 2: 241. 1961).

Fl. & Fr.: August - December.

Distrib.: Champaran, Hazaribagh, Palamau, Ranchi, Santal Pargana.

Crotalaria albida Heyne *ex* Roth, Nov. Pl. Sp. 333. 1821; Baker in Hook. *f.*, Fl. Brit. India 2: 71. 1876; Haines, Bot. Bihar Orissa 231. 1922 (Repr. ed., 2: 242. 1961).

Fl. & Fr.: August - April.

Distrib.: Throughout the state.

Crotalaria angulata Mill., Gard. Dict. ed. 8, no. 9. 1768. *C. biflora* (L.) L., Mant. Pl. 570. 1771; Baker in Hook. *f.*, Fl. Brit. India 2: 66. 1876; Haines, Bot. Bihar Orissa 229. 1922 (Repr. ed., 2: 240. 1961).

Distrib.: Bihar (Haines, *l.c.*; Sanjappa, Legumes India 116. 1992).

Crotalaria blalata Schrank., Pl. Rar. Hort. Monac. t. 13. 1819.

Fl. & Fr.: April - June.

Distrib.: Palamau.

Crotalaria calycina Schrank., Pl. Rar. Hort. Monac. t. 12. 1819; Baker in Hook. *f.*, Fl. Brit. India 2: 72. 1876; Haines, Bot. Bihar Orissa 232. 1922 (Repr. ed., 2: 242. 1961).

Fl. & Fr.: September - March.

Distrib.: Throughout the state.

Crotalaria chinensis L., Syst. Nat. ed. 10. 1158. 1759; Baker in Hook. *f.*, Fl. Brit. India 2: 73. 1876.

Fl. & Fr.: November - January.

Distrib.: Patna.

Crotalaria evolvuloides Wight ex Wight & Arnott, Prodr. 188. 1834.

Fl. & Fr.: September - November.

Distrib.: Patna.

Crotalaria ferruginea Graham ex Benth. in Hook., Lond. J. Bot. 2: 476, 570. 1843; Baker in Hook. *f.*, Fl. Brit. India 2: 68. 1876; Haines, Bot. Bihar Orissa 230. 1922 (Repr. ed., 2: 241. 1961).

Fl. & Fr.: September - November.

Distrib.: Chota Nagpur.

Crotalaria filipes Benth. var. **trichophora** (Benth. ex Baker) T. Cooke, Fl. Pres. Bombay 1: 293. 1903. *C. trichophora* Benth. ex Baker in Hook. *f.*, Fl. Brit. India 2: 67. 1876; Haines, Bot. Bihar Orissa 229. 1922 (Repr. ed., 2: 240. 1961).

Distrib.: Bihar (Haines, *l.c.*; Sanjappa, Legumes India 120. 1992).

Crotalaria globosa Wight & Arnott, Prodr. 190. 1834; Baker in Hook. *f.*, Fl. Brit. India 2: 66. 1876.

Distrib.: Bihar (Sanjappa, Legumes India 120. 1992).

Crotalaria hebecarpa (DC.) Rudd in Phytologia 54: 28. 1983. *Goniogyna hebecarpa* DC. in Ann. Sci. Nat. Paris 4: 92. 1825. *Heylandia latebrosa* DC., Mem. Legum. 6: 201. 1826; Baker in Hook. *f.*, Fl. Brit. India 2: 65. 1876; Haines, Bot. Bihar Orissa 228. 1922 (Repr. ed., 2: 238. 1961).

Distrib.: Throughout (Haines, *l.c.*; Sanjappa, Legumes India 121. 1992).

Crotalaria hirsuta Willd. in Sp. Pl. 3: 978. 1803; Baker in Hook. *f.*, Fl. Brit. India 2: 68. 1876; Haines, Bot. Bihar Orissa 230. 1922 (Repr. ed., 2: 241. 1961).

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur, Munger, Singhbhum.

Crotalaria hirta Willd. in Ges. Naturf. Freude Berlin Neue Schrift. 4: 217. 1803; Baker in Hook. *f.*, Fl. Brit. India 2: 70. 1876; Haines, Bot. Bihar Orissa 231. 1922 (Repr. ed., 2: 241. 1961).

Fl. & Fr.: September - February.

Distrib.: Singhbhum.

Crotalaria humifusa Graham ex Benth. in Hook., Lond. J. Bot. 2: 476. 1843; Baker in Hook. *f.*, Fl. Brit. India 2: 67. 1876.

Fl. & Fr.: August - November.

Distrib.: Palamau.

Crotalaria juncea L., Sp. Pl. 714. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 79. 1876; Haines, Bot. Bihar Orissa 233. 1922 (Repr. ed., 2: 243. 1961).

Fl. & Fr.: August - February.

Distrib.: Bhagalpur, Champaran, Gumla, Palamau, Patna, Singhbhum.

Crotalaria linifolia L. f., Suppl. Pl. 322. 1782; Baker in Hook. f., Fl. Brit. India 2: 72. 1876; Haines, Bot. Bihar Orissa 231. 1922 (Repr. ed., 2: 242. 1961).

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Koderma, Palamau, Ranchi, Singhbhum.

Crotalaria medicaginea Lam., Encycl. 2: 201. 1786; Baker in Hook. f., Fl. Brit. India 2: 81. 1876; Haines, Bot. Bihar Orissa 234. 1922 (Repr. ed., 2: 244. 1961).

var. ***medicaginea***

Fl. & Fr.: August - November.

Distrib.: Bhagalpur, Champaran, Darbhanga, Hazaribagh, Palamau, Patna.

Crotalaria mysorensis Roth, Nov. Pl. Sp. 338. 1821; Baker in Hook. f., Fl. Brit. India 2: 70. 1876; Haines, Bot. Bihar Orissa 231. 1922 (Repr. ed., 2: 242. 1961).

Fl. & Fr.: August - January.

Distrib.: Champaran, Gumla, Hazaribagh, Koderma, Palamau, Patna, Ranchi, Santal Pargana, Singhbhum.

Crotalaria orixensis Willd. in Ges. Naturf. Freude Berlin Neue Schrift. 4: 217. 1803; Baker in Hook. f., Fl. Brit. India 2: 83. 1876; Haines, Bot. Bihar Orissa 233. 1922 (Repr. ed., 2: 244. 1961).

Fl. & Fr.: August - October.

Distrib.: Bhagalpur.

Crotalaria pallida Aiton, Hortus Kew. 2: 20. 1789. *C. striata* DC., Prodr. 2: 131. 1825; Baker in Hook. f., Fl. Brit. India 2: 84. 1876, *excl. syn.*; Haines, Bot. Bihar Orissa 233. 1922 (Repr. ed., 2: 244. 1961).

Fl. & Fr.: August - April.

Distrib.: Champaran, Hazaribagh, Patna, Purnia, Ranchi.

Crotalaria prostrata Rottler in Willd., Enum. Hort. Berol. 744. 1809; Baker in Hook. f., Fl. Brit. India 2: 67. 1876; Haines, Bot. Bihar Orissa 229. 1922 (Repr. ed., 2: 240. 1961).

var. **levis** Haines, Bot. Bihar Orissa 230. 1922 (Repr. ed., 2: 240. 1961).

Fl. & Fr.: May - December.

Distrib.: Palamau.

var. **prostrata**

Fl. & Fr.: September - March.

Distrib.: Throughout the state.

Crotalaria pusilla Heyne ex DC., Prodr. 2: 128. 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 70. 1876; Haines, Bot. Bihar Orissa 231. 1922 (Repr. ed., 2: 241. 1961).

Fl. & Fr.: September - January.

Distrib.: Patna.

Crotalaria quinquefolia L., Sp. Pl. 716. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 84. 1876; Haines, Bot. Bihar Orissa 234. 1922 (Repr. ed., 2: 245. 1961).

Fl. & Fr.: November - February.

Distrib.: Chota Nagpur.

Crotalaria retusa L., Sp. Pl. 715. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 75. 1876.

Fl. & Fr.: November - April.

Distrib.: Throughout, often cultivated (Sanjappa, Legumes India 128. 1992).

Crotalaria sessiliflora L., Sp. Pl. ed. 2. 1004. 1763; Baker in Hook. *f.*, Fl. Brit. India 2: 73. 1876; Haines, Bot. Bihar Orissa 232. 1922 (Repr. ed., 2: 243. 1961).

var. **sessiliflora**

Fl. & Fr.: September - December.

Distrib.: Bihar (Haines, *l.c.*; Sanjappa, Legumes India 129. 1992).

Crotalaria spectabilis Roth, Nov. Pl. Sp. 341. 1821. *C. sericea* Retz., Observ. Bot. 5: 26. 1789, *non* Burm. f., 1768; Baker in Hook. f., Fl. Brit. India 2: 75. 1876; Haines, Bot. Bihar Orissa 232. (Repr. ed., 2: 243. 1961).

Fl. & Fr.: September - May.

Distrib.: Bhagalpur, Palamau, Santal Pargana.

Crotalaria tetragona Andr., Bot. Repos. 10. t. 593. 1810; Baker in Hook. f., Fl. Brit. India 2: 78. 1876; Haines, Bot. Bihar Orissa 233. 1922 (Repr. ed., 2: 244. 1961).

Fl. & Fr.: July - October.

Distrib.: Champaran, Purnia.

Crotalaria topouensis Debbarman in Proc. Ind. Sci. Cong. 9: 117. 1922.

Distrib.: Bihar (Sanjappa, Legumes India 130. 1992).

Crotalaria verrucosa L., Sp. Pl. 715. 1753; Baker in Hook. f., Fl. Brit. India 2: 77. 1876; Haines, Bot. Bihar Orissa 232. 1922 (Repr. ed., 2: 243. 1961).

Fl. & Fr.: January - March.

Distrib.: Santal Pargana.

CULLEN Medik.

Cullen corylifolia (L.) Medik., Vorles. Churpf. Phys-Oek. Ges. 2: 381. 1787. *Psoralea corylifolia* L., Sp. Pl. 764. 1753; Baker in Hook. f., Fl. Brit. India 2: 103. 1876; Haines, Bot. Bihar Orissa 242. 1922 (Repr. ed., 2: 253. 1961).

Fl. & Fr.: September - December.

Distrib.: Bhagalpur, Palamau.

CYAMOPSIS DC.

Cyamopsis tetragonoloba (L.) Taub. in Engler & Prantl, Nat. Pflanzenfam. III 3: 259. 1894; Haines, Bot. Bihar Orissa 236. 1922 (Repr. ed., 2: 247. 1961). *Psoralea tetragonoloba* L., Mant. Pl. 104. 1767.

Fl. & Fr.: April - December.

Distrib.: Cultivated. Bhagalpur, Santal Pargana.

DALBERGIA L. f., nom. cons.

Dalbergia lanceolaria L. f., Suppl. Pl. 316. 1782; Baker in Hook. f., Fl. Brit. India 2: 235. 1876; Haines, Bot. Bihar Orissa 296. 1922 (Repr. ed., 2: 309. 1961).

Fl. & Fr.: April - June.

Distrib.: Deoghar, Giridih, Hazaribagh, Sahibganj, Singhbhum.

Dalbergia latifolia Roxb., Pl. Corom. 2: 7. t. 113. 1799 & Fl. Ind. 3: 221. 1832; Baker in Hook. f., Fl. Brit. India 2: 231. 1876; Haines, Bot. Bihar Orissa 294. 1922 (Repr. ed., 2: 307. 1961).

Fl. & Fr.: September - February.

Distrib.: Champaran, Giridih, Hazaribagh, Palamau, Santal Pargana, Singhbhum.

Dalbergia melanoxylon Guill. & Perr. in Guill., Perr. & A. Rich., Fl. Seneg. Tent. 227. t. 53. 1832. *D. stocksii* Benth. in J. Linn. Soc. London (Bot.) 4: Suppl. 42. 1860; Baker in Hook. f., Fl. Brit. India 2: 234. 1876.

Distrib.: Cultivated. Bhagalpur.

Dalbergia pinnata (Lour.) Prain in Ann. Roy. Bot. Gard. Calc. 10: 48. 1904. *Derris pinnata* Lour., Fl. Cochinch. 1: 432. 1790. *Dalbergia tamarindifolia* Roxb., Fl. Ind. 3: 233. 1832; Baker in Hook. f., Fl. Brit. India 2: 234. 1876; Haines, Bot. Bihar Orissa 295. 1922 (Repr. ed., 2: 308. 1961).

Fl. & Fr.: January - May.

Distrib.: Sahibganj, Santal Pargana.

Dalbergia sissoo Roxb., Fl. Ind. 3: 223. 1832; Baker in Hook. f., Fl. Brit. India 2: 231. 1876; Haines, Bot. Bihar Orissa 293. 1922 (Repr. ed., 2: 307. 1961).

Fl. & Fr.: February - May.

Distrib.: Throughout the state, often planted.

Dalbergia volubilis Roxb., Pl. Corom. 2: 48. t. 191. 1805 & Fl. Ind. 3: 231. 1832; Baker in Hook. *f.*, Fl. Brit. India 2: 235. 1876; Haines, Bot. Bihar Orissa 295. 1922 (Repr. ed., 2: 309. 1961).

Fl. & Fr.: November - May.

Distrib.: Champaran, Giridih, Hazaribagh, Santal Pargana, Singhbhum.

DERRIS Lour., *nom. cons.*

Derris cuneifolia Benth. in Miq., Pl. Jungh. 1: 253. 1852; Baker in Hook. *f.*, Fl. Brit. India 2: 243. 1876; Haines, Bot. Bihar Orissa 298. 1922 (Repr. ed., 2: 312. 1961).

var. **cuneifolia**

Fl. & Fr.: April - January.

Distrib.: Champaran, Santal Pargana.

Derris hainesiana Thoth. in Bull. Bot. Surv. India 3: 198. 1962. *D. laziflora auct. non* Benth., 1860; Haines, Bot. Bihar Orissa 299. 1922 (Repr. ed., 2: 312. 1961).

Fl. & Fr.: August - December.

Distrib.: North Champaran. Rare. Endemic.

Derris scandens (Roxb.) Benth. in J. Linn. Soc. London (Bot.) 4: Suppl. 103. 1860; Baker in Hook. *f.*, Fl. Brit. India 2: 240. 1876; Haines, Bot. Bihar Orissa 298. 1922 (Repr. ed., 2: 312. 1961). *Dalbergia scandens* Roxb., Pl. Corom. 2: 29. t. 192. 1805.

var. **scandens**

Fl. & Fr.: July - February.

Distrib.: Throughout (Sanjappa, Legumes India 148. 1992).

DESMODIUM Desv., *nom. cons.*

Desmodium benthamii Balakr. in J. Bombay Nat. Hist. Soc. 63: 328. 1966. *D. brachystachyum* Graham *ex* Benth. in Miq., Pl. Jungh. 223. 1852, *non* Schlecht., 1838; Baker in Hook. *f.*, Fl. Brit. India 2: 171. 1876; Haines, Bot. Bihar Orissa 265. 1922 (Repr. ed., 2: 277. 1961).

Fl. & Fr.: September - December.

Distrib.: Gaya, Hazaribagh, Lohardaga, Santal Pargana, Singhbhum.

Desmodium confertum DC. in Ann. Sci. Nat. Paris 4: 101. 1825 & Prodr. 2: 335. 1825; Baker in Hook. *f.* Fl. Brit. India 2: 167. 1876; Haines, Bot. Bihar Orissa 263. 1922 (Repr. ed., 2: 275. 1961).

Fl. & Fr.: November - February.

Distrib.: Champaran.

Desmodium dichotomum (Willd.) DC., Prodr. 2: 336. 1825. *Hedysarum dichotomum* Willd., Sp. Pl. 3: 1180. 1802. *Desmodium diffusum* (Willd.) DC., Prodr. 2: 336, non 335. 1825; Baker in Hook. *f.* Fl. Brit. India 2: 169. 1876; Haines, Bot. Bihar Orissa 263. 1922 (Repr. ed., 2: 275. 1961).

Fl. & Fr.: September - December.

Distrib.: Hazaribagh, Patna, Santal Pargana, Singhbhum.

Desmodium gangeticum (L.) DC., Prodr. 2: 327. 1825; Baker in Hook. *f.* Fl. Brit. India 2: 168. 1876; Haines, Bot. Bihar Orissa 264. 1922 (Repr. ed., 2: 276. 1961). *Hedysarum gangeticum* L., Sp. Pl. 746. 1753.

Fl. & Fr.: May - January.

Distrib.: Throughout the state.

Desmodium gyroides (Roxb. ex Link) DC., Prodr. 2: 326. 1825; Baker in Hook. *f.* Fl. Brit. India 2: 175. 1876; Haines, Bot. Bihar Orissa 267. 1922 (Repr. ed., 2: 279. 1961). *Hedysarum gyroides* Roxb. ex Link, Enum. Alt. 2: 247. 1822.

Fl. & Fr.: August - January.

Distrib.: Champaran, Hazaribagh, Palamau, Purnia, Singhbhum.

Desmodium heterocarpon (L.) DC., Prodr. 2: 337. 1825. *Hedysarum heterocarpon* L., Sp. Pl. 747. 1753. *Desmodium polycarpum* (Poir.) DC., Prodr. 2: 334. 1825, *p.p.*; Baker in Hook. *f.* Fl. Brit. India 2: 171. 1876, *p.p.*; Haines, Bot. Bihar Orissa 264. 1922 (Repr. ed., 2: 276. 1961), *p.p.* *D. polycarpum* (Poir.) DC. var. *trichocaulon* (DC.) Baker in Hook. *f.* Fl. Brit. India 2: 172. 1876; Haines, Bot. Bihar Orissa 264. 1922 (Repr. ed., 2: 276. 1961).

var. heterocarpon*Fl. & Fr.*: September - December.*Distrib.*: Giridih, Hazaribagh, Palamau, Ranchi.

var. strigosum van Meeusen in *Reinwardtia* 6: 95. 1961. *D. polycarpum* (Poir.) DC., *Prodr.* 2: 334. 1825, *p.p.*; Baker in Hook. *f.*, *Fl. Brit. India* 2: 171. 1876, *p.p.*; Haines, *Bot. Bihar Orissa* 264. 1922 (*Repr. ed.*, 2: 276. 1961), *p.p.*

Fl. & Fr.: September - December.*Distrib.*: Chota Nagpur.

Desmodium laxiflorum DC. in *Ann. Sci. Nat. Paris* 4: 100. 1825 & *Prodr.* 2: 335. 1825; Baker in Hook. *f.*, *Fl. Brit. India* 2: 164. 1876; Haines, *Bot. Bihar Orissa* 263. 1922 (*Repr. ed.*, 2: 275. 1961).

Fl. & Fr.: August - January.*Distrib.*: Champaran, Giridih, Hazaribagh, Palamau, Sahibganj, Singhbhum.

Desmodium microphyllum (Thunb.) DC., *Prodr.* 2: 337. 1825. *Hedysarum microphyllum* Thunb., *Fl. Jap.* 284. 1784. *Desmodium parvifolium* DC. in *Ann. Sci. Nat. Paris* 4: 100. 1825 & *Prodr.* 2: 334. 1825; Baker in Hook. *f.*, *Fl. Brit. India* 2: 174. 1876; Haines, *Bot. Bihar Orissa* 266. 1922 (*Repr. ed.*, 2: 278. 1961).

var. microphyllum*Fl. & Fr.*: April - November.*Distrib.*: Palamau.

Desmodium motorium (Houtt.) Merr. in *J. Arnold Arb.* 19: 345. 1938. *Hedysarum motorium* Houtt., *Nat. Hist.* 2, 10: 246. 1779. *Desmodium gyrans* (L. *f.*) DC., *Prodr.* 2: 326. 1825; Baker in Hook. *f.*, *Fl. Brit. India* 2: 174. 1876; Haines, *Bot. Bihar Orissa* 266. 1922 (*Repr. ed.*, 2: 278. 1961).

Fl. & Fr.: August - December.*Distrib.*: Throughout the state.

Desmodium pulchellum (L.) Benth., Fl. Hongk. 83. 1861; Baker in Hook. f., Fl. Brit. India 2: 162. 1876; Haines, Bot. Bihar Orissa 261. 1922 (Repr. ed., 2: 273. 1961). *Hedysarum pulchellum* L., Sp. Pl. 747. 1753.

Fl. & Fr.: September - March.

Distrib.: Throughout the state.

Desmodium triangulare (Retz.) Merr. in J. Arnold Arb. 23: 170. 1942. *Hedysarum triangulare* Retz., Observ. Bot. 3: 40. 1783. *Desmodium cephalotes* (Roxb.) Wallich ex Wight & Arnott, Prodr. 224. 1834; Baker in Hook. f., Fl. Brit. India 2: 161. 1876; Haines, Bot. Bihar Orissa 261. 1922 (Repr. ed., 2: 273. 1961). *D. congestum* Wallich ex Wight & Arnott, Prodr. 224. 1834; Haines, Bot. Bihar Orissa 262. 1922 (Repr. ed., 2: 273. 1961).

Fl. & Fr.: August - January.

Distrib.: Champaran, Gumla, Hazaribagh, Koderma, Lohardaga, Palamau, Purnia, Santal Pargana, Singhbhum.

Desmodium triflorum (L.) DC., Prodr. 2: 334. 1825; Baker in Hook. f., Fl. Brit. India 2: 173. 1876; Haines, Bot. Bihar Orissa 266. 1922 (Repr. ed., 2: 278. 1961). *Hedysarum triflorum* L., Sp. Pl. 749. 1753, *excl. vars.*

Fl. & Fr.: October - April.

Distrib.: Champaran, Hazaribagh, Lohardaga, Singhbhum.

Desmodium triquetrum (L.) DC., Prodr. 2: 326. 1825; Baker in Hook. f., Fl. Brit. India 2: 163. 1876, *p.p.*; Haines, Bot. Bihar Orissa 262. 1922 (Repr. ed., 2: 274. 1961). *Hedysarum triquetrum* L., Sp. Pl. 746. 1753.

subsp. pseudotriquetrum (DC.) Prain in J. Asiat. Soc. Bengal 6: 263. 1962. *Desmodium pseudotriquetrum* DC. in Ann. Sci. Nat. Paris 4: 100. 1825 & Prodr. 2: 326. 1825; Haines, Bot. Bihar Orissa 262. 1922 (Repr. ed., 2: 274. 1961).

Fl. & Fr.: August - March.

Distrib.: Purnia (Haines, *l.c.*), Throughout (Sanjappa, Legumes India 164. 1992).

subsp. triquetrum*Fl. & Fr.*: August - March.*Distrib.*: Purnia.

Desmodium velutinum (Willd.) DC., Prodr. 2: 328. 1825.
Hedysarum velutnum Willd., Sp. Pl. 3: 117. 1803. *Desmodium latifolium*
 (Roxb.) DC., Prodr. 2: 327. 1825; Baker in Hook. *f.*, Fl. Brit. India 2:
 168. 1876; Haines, Bot. Bihar Orissa 265. 1922 (Repr. ed., 2: 277. 1961).

subsp. velutinum*Fl. & Fr.*: August - January.*Distrib.*: Giridih, Hazaribagh, Koderma, Palamau, Ranchi, Singhbhum.**DUMASIA DC.**

Dumasia villosa DC. in Ann. Sci. Nat. Paris ser. 1, 4: 96. 1825;
 Baker in Hook. *f.*, Fl. Brit. India 2: 183. 1876; Haines, Bot. Bihar Orissa
 276. 1922 (Repr. ed., 2: 288. 1961).

Fl. & Fr.: August - November.*Distrib.*: Giridih, Hazaribagh, Palamau.**ELEIOTIS DC.**

Eleiotis monophylla (Burm. *f.*) DC., Mem. Legum. 7: 350. 1825.
Glycine monophylla Burm. *f.*, Fl. Ind. 161. t. 50. f. 2. 1768. *Eleiotis*
sororia (L.) DC., Mem. Legum. 7: 350. 1825; Haines, Bot. Bihar Orissa
 255. 1922 (Repr. ed., 2: 267. 1961).

Fl. & Fr.: September - October.*Distrib.*: Bihar (Haines, *l.c.*; Sanjappa, Legumes India 171. 1992).**ERIOSEMA (DC.) G. Don, nom. cons.**

Eriosema chinense Vogel, Nov. Act. Cut. 19. Suppl. 1: 31. 1843;
 Baker in Hook. *f.*, Fl. Brit. India 2: 219. 1876; Haines, Bot. Bihar Orissa
 271. 1922 (Repr. ed., 2: 283. 1961).

Fl. & Fr.: August - November.*Distrib.*: Palamau, Singhbhum.

Eriosema himalaicum Ohashi in J. Jap. Bot. 41: 96. 1966.

Fl. & Fr.: August - November.

Distrib.: Kumaon to Sikkim (Sanjappa, Legumes India 172. 1992).

ERYTHRINA L.

Erythrina crista-galli L., Mant. Pl. 99. 1767.

Distrib.: Cultivated (Sanjappa, Legumes India 174. 1992).

Erythrina resupinata Roxb., Pl. Corom. t. 220. 1811 & Fl. Ind. 3: 257. 1832; Baker in Hook. *f.*, Fl. Brit. India 2: 189. 1876; Haines, Bot. Bihar Orissa 286. 1922 (Repr. ed., 2: 299. 1961).

Fl. & Fr.: March - May.

Distrib.: Chota Nagpur, Hazaribagh (Haines, *l.c.*).

Erythrina suberosa Roxb., Fl. Ind. 3: 253. 1832; Baker in Hook. *f.*, Fl. Brit. India 2: 189. 1876; Haines, Bot. Bihar Orissa 285. 1922 (Repr. ed., 2: 298. 1961). *E. suberosa* Roxb. var. *sublobata* (Roxb.) Baker in Hook. *f.*, Fl. Brit. India 2: 190. 1876; Haines, Bot. Bihar Orissa 285. 1922 (Repr. ed., 2: 298. 1961). *E. suberosa* Roxb. var. *glabrescens* Prain in J. Asiat. Soc. Bengal 66: 410. 1897; Haines, Bot. Bihar Orissa 285. 1922 (Repr. ed., 2: 299. 1961).

Fl. & Fr.: March - April.

Distrib.: Giridih, Hazaribagh, Palamau, Santal Pargana.

Erythrina variegata L., Herb. Amboin. 10. 1754. *E. indica* Lam., Encycl. 2: 391. 1786; Baker in Hook. *f.*, Fl. Brit. India 2: 188. 1876; Haines, Bot. Bihar Orissa 284. 1922 (Repr. ed., 2: 297. 1961).

Fl. & Fr.: March - August.

Distrib.: Bhagalpur, Palamau, Purnia, Ranchi.

FLEMINGIA Roxb. ex Aiton & Aiton *f.*, *nom. cons.*

Flemingia chappar Buch.-Ham. ex Benth. in Miq., Pl. Jungh. 244. 1852; Baker in Hook. *f.*, Fl. Brit. India 2: 227. 1876; Haines, Bot. Bihar Orissa 267. 1922 (Repr. ed., 2: 279. 1961).

Fl. & Fr.: October - March.

Distrib.: Giridih, Gumla, Hazaribagh, Lohardaga, Palamau, Ranchi, Sahibganj, Singhbhum.

Flemingia involucrata Benth. in Miq., Pl. Jungh. 246. 1852; Baker in Hook. *f.*, Fl. Brit. India 2: 229. 1876; Haines, Bot. Bihar Orissa 270. 1922 (Repr. ed., 2: 288. 1961).

Fl. & Fr.: October - December.

Distrib.: Champaran.

Flemingia lineata (L.) Roxb. ex Aiton *f.*, Hortus Kew. ed. 2. 4: 350. 1812; Baker in Hook. *f.*, Fl. Brit. India 2: 228. 1876. *Hedysarum lineatum* L., Syst. Nat. ed. 10. 2: 1170. 1759.

Distrib.: Throughout from Himalayas southwards (Sanjappa, Legumes India 176. 1992).

Flemingia macrophylla (Willd.) Kuntze ex Merr. in Philipp. J. Sci. Bot. 5: 130. 1910. *Crotalaria macrophylla* Willd., Sp. Pl. 3: 982. 1802. *Flemingia congesta* Roxb. ex Aiton *f.*, Hortus Kew. ed. 2. 4: 349. 1812; Baker in Hook. *f.*, Fl. Brit. India 2: 228. 1876; Haines, Bot. Bihar Orissa 270. 1922 (Repr. ed., 2: 282. 1961). *F. prostrata* Roxb., Fl. Ind. 3: 338. 1832; Haines, Bot. Bihar Orissa 269. 1922 (Repr. ed., 2: 281. 1961). *F. nana* Roxb., Fl. Ind. 3: 339. 1832; Haines, Bot. Bihar Orissa 270. 1922 (Repr. ed. 2: 202. 1961). *F. angustifolia* Roxb., Fl. Ind. 3: 341. 1832; Haines, Bot. Bihar Orissa 269. 1922 (Repr. ed., 2: 281. 1961).

var. macrophylla

Fl. & Fr.: August - May.

Distrib.: Champaran, Koderma, Lohardaga, Palamau, Ranchi, Santal Pargana, Singhbhum.

var. viridis (Prain) H.B. Naithani, Fl. Pl. India, Nepal & Bhutan 117. 1990. *F. congesta* Roxb. ex Aiton *f.* var. *viridis* Prain in J. Asiat. Soc. Bengal 66: 440. 1897.

Distrib.: Bihar (Naithani, *l.c.*).

Flemingia paniculata Wallich ex Benth. in Miq., Pl. Jungh. 245. 1852; Baker in Hook. *f.*, Fl. Brit. India 2: 227. 1876; Haines, Bot. Bihar Orissa 268. 1922 (Repr. ed., 2: 280. 1961).

Fl. & Fr.: February - April.

Distrib.: Champaran, Giridih, Hazaribagh, Santal Pargana, Singhbhum.

Flemingia semialata Roxb. ex Aiton *f.*, Hortus Kew. ed. 2. 4: 349. 1812; Haines, Bot. Bihar Orissa 269. 1922 (Repr. ed., 2: 282. 1961). *F. congesta* Roxb. ex Aiton *f.* var. *semialata* (Roxb. ex Aiton *f.*) Baker in Hook. *f.*, Fl. Brit. India 2: 229. 1876.

Fl. & Fr.: August - February.

Distrib.: Giridih, Hazaribagh, Palamau.

Flemingia stricta Roxb., Pl. Corom. 3: t. 248. 1815 & Fl. Ind. 3: 342. 1832; Baker in Hook. *f.*, Fl. Brit. India 2: 228. 1876; Haines, Bot. Bihar Orissa 269. 1922 (Repr. ed., 2: 281. 1961).

Fl. & Fr.: January - March.

Distrib.: Champaran, Ranchi, Singhbhum.

Flemingia strobilifera (L.) Aiton & Aiton *f.*, Hortus Kew. ed. 2. 4: 350. 1812; Baker in Hook. *f.*, Fl. Brit. India 2: 227. 1876; Haines, Bot. Bihar Orissa 268. 1922 (Repr. ed., 2: 280. 1961). *Hedysarum strobiliferum* L., Sp. Pl. 746. 1753. *Flemingia bracteata* (Roxb.) Wight, Icon. Pl. Ind. Orient. 1: 14. t. 268. 1840; Haines, Bot. Bihar Orissa 268. 1922 (Repr. ed., 2: 280. 1961).

var. **nudiflora** Haines, Bot. Bihar Orissa 268. 1922 (Repr. ed., 2: 280. 1961).

Distrib.: Singhbhum.

var. **strobilifera**

Fl. & Fr.: September - March.

Distrib.: Champaran, Giridih, Gumla, Hazaribagh, Palamau, Ranchi, Santal Pargana, Singhbhum.

GALACTIA P. Br.

Galactia tenuiflora (Klein ex Willd.) Wight & Arnott, Prodr. 206. 1834; Baker in Hook. f., Fl. Brit. India 2: 192. 1876; Haines, Bot. Bihar Orissa 277. 1922 (Repr. ed., 2: 290. 1961). *Glycine tenuiflora* Klein ex Willd., Sp. Pl. 3: 1059. 1802.

var. tenuiflora

Fl. & Fr.: August - January.

Distrib.: Throughout (Sanjappa, Legumes India 180. 1992).

var. villosa (Wight & Arnott) Benth. in Mart., Fl. Bras. 15: 143. 1859; Baker in Hook. f., Fl. Brit. India 2: 192. 1876. *Galactia villosa* Wight & Arnott, Prodr. 207. 1834.

Distrib.: Bihar (CAL, s.l.; Sanjappa, Legumes India 180. 1992).

GLIRICIDIA Humb., Bonpl. & Kunth

Gliricidia sepium (Jacq.) Kunth ex Walp., Repert. Bot. Syst. 1: 679. 1842. *Robinia sepium* Jacq., Enum. Syst. Pl. 28. 1760.

Fl. & Fr.: February - September.

Distrib.: Cultivated. Koderma.

GLYCINE Willd.

Glycine max (L.) Merr., Interpr. Rumph. Herb. Amboin. 274. 1917. *Phaseolus max* L., Sp. Pl. 725. 1753. *Glycine hispida* (Moench) Maxim., Acad. Pétersb. Bull. 18: 398. 1873; Haines, Bot. Bihar Orissa 276. 1922 (Repr. ed., 2: 289. 1961). *G. soja auct. non* Sieb. & Succ., 1843; Baker in Hook. f., Fl. Brit. India 2: 184. 1876.

Fl. & Fr.: September - May.

Distrib.: Cultivated. Purnia, Santal Pargana.

INDIGOFERA L.

Indigofera arrecta Hochst. ex A. Rich., Tent. Fl. Abyss. 1: 184. 1847; Haines, Bot. Bihar Orissa 239. 1922 (Repr. ed., 2: 250. 1961).

Fl. & Fr.: August - December.

Distrib.: Cultivated. Darbhanga, Ranchi.

Indigofera astragalina DC., Prodr. 2: 228. 1825. *I. hirsuta auct. non L.*, 1753: Baker in Hook. *f.*, Fl. Brit. India 2: 98. 1876, *p.p.*; Haines, Bot. Bihar Orissa 239. 1922 (Repr. ed., 2: 250. 1961), *p.p.*

Fl. & Fr.: August - November.

Distrib.: Champaran, Hazaribagh, Koderma, Palamau, Ranchi, Santal Pargana, Singhbhum.

Indigofera cassioides Rottler *ex* DC., Prodr. 2: 225. 1825. *I. pulchella* Roxb., Fl. Ind. 3: 382. 1832; Baker in Hook. *f.*, Fl. Brit. India 2: 101. 1876. *I. pulchella* Roxb. var. *purpurascens* (Roxb.) Haines, Bot. Bihar Orissa 240. 1922 (Repr. ed., 2: 251. 1961).

Fl. & Fr.: October - May.

Distrib.: Champaran, Palamau, Santal Pargana.

Indigofera coerulea Roxb., Fl. Ind. 3: 377. 1832. *I. argentea auct. non* Burm. *f.*, 1768: Baker in Hook. *f.*, Fl. Brit. India 2: 98. 1876, *p.p.* *I. articulata auct. non* Gouan, 1773: Haines, Bot. Bihar Orissa 240. 1922 (Repr. ed., 2: 251. 1961).

Fl. & Fr.: July - October.

Distrib.: Patna.

Indigofera colutea (Burm. *f.*) Merr. in Philipp. J. Sci. 19: 355. 1921. *Galega colutea* Burm. *f.*, Fl. Ind. 172. 1768.

Fl. & Fr.: July - December.

Distrib.: Throughout the plains of the country (Sanjappa, Legumes India 187. 1992).

Indigofera cordifolia Heyne *ex* Roth, Nov. Pl. Sp. 357. 1821; Baker in Hook. *f.*, Fl. Brit. India 2: 93. 1876; Haines, Bot. Bihar Orissa 237. 1922 (Repr. ed., 2: 248. 1961).

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, Gaya, Palamau.

Indigofera glabra L., Sp. Pl. 751. 1753. *I. pentaphylla* Murray, Syst. Veg. ed. 13. 564. 1774; Baker in Hook. f., Fl. Brit. India 2: 95. 1876; Haines, Bot. Bihar Orissa 238. 1922 (Repr. ed., 2: 249. 1961).

Fl. & Fr.: August - December.

Distrib.: Giridih, Hazaribagh, Lohardaga, Ranchi, Singhbhum.

Indigofera glandulosa Wendl., Bot. Roeb. 55. 1748. *I. glandulosa* Roxb. ex Willd., Sp. Pl. 3: 1227. 1803; Baker in Hook. f., Fl. Brit. India 2: 94. 1876; Haines, Bot. Bihar Orissa 237. 1922 (Repr. ed., 2: 248. 1961).

var. **glandulosa**

Fl. & Fr.: August - November.

Distrib.: Palamau.

Indigofera hamiltonii Graham ex Duthie & Prain in Ann. Roy. Bot. Gard. Calc. 9: 22. t. 29. 1901; Haines, Bot. Bihar Orissa 241. 1922 (Repr. ed., 2: 252. 1961). *I. atropurpurea auct. non* Buch.-Ham. ex Horn., 1819; Baker in Hook. f., Fl. Brit. India 2: 101. 1876, *p.p.*

Fl. & Fr.: April - July.

Distrib.: Chota Nagpur.

Indigofera hirsuta L., Sp. Pl. 751. 1753; Baker in Hook. f., Fl. Brit. India 2: 98. 1876, *p.p.*; Haines, Bot. Bihar Orissa 239. 1922 (Repr. ed., 2: 250. 1961), *p.p.*

Fl. & Fr.: August - December.

Distrib.: Godda, Palamau.

Indigofera linifolia (L. f.) Retz., Observ. Bot. 4: 29. 1786 & 6: 33. t. 2. 1791; Baker in Hook. f., Fl. Brit. India 2: 92. 1876; Haines, Bot. Bihar Orissa 237. 1922 (Repr. ed., 2: 248. 1961). *Hedysarum linifolium* L. f., Suppl. Pl. 331. 1782.

Fl. & Fr.: August - March.

Distrib.: Champaran, Palamau, Singhbhum.

Indigofera linnaei Ali in Bot. Notis. 111: 549. 1958. *I. enneaphylla* L., Mant. Pl. 272. 1771, *nom. illeg.* & Mant. Pl. App. 571. 1771; Baker

in Hook. *f.*, Fl. Brit. India 2: 94. 1876; Haines, Bot. Bihar Orissa 238. 1922 (Repr. ed., 2: 249. 1961).

Fl. & Fr.: August - December.

Distrib.: Gaya, Hazaribagh, Palamau, Patna.

Indigofera nummularifolia (L.) Livera ex Alston in Trimen, Handb. Fl. Ceylon 6, Suppl. 72. 1931. *Hedysarum nummularifolium* L., Sp. Pl. 746. 1753. *Indigofera echinata* Willd., Sp. Pl. 3: 1222. 1802; Baker in Hook. *f.*, Fl. Brit. India 2: 92. 1876; Haines, Bot. Bihar Orissa 237. 1922 (Repr. ed., 2: 248. 1961).

Fl. & Fr.: September - December.

Distrib.: Lohardaga, Ranchi.

Indigofera spicata Forssk., Fl. Aegypt.-Arab. 138. 1775. *I. endecaphylla auct. non* Jacq., 1793; Baker in Hook. *f.*, Fl. Brit. India 2: 98. 1876; Haines, Bot. Bihar Orissa 238. 1922 (Repr. ed., 2: 249. 1961).

Fl. & Fr.: May - December.

Distrib.: Darbhanga.

Indigofera suffruticosa Mill., Gard. Dict. ed. 8, no. 2. 1768.

Fl. & Fr.: August - November.

Distrib.: Darbhanga.

Indigofera tinctoria L., Sp. Pl. 751. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 99. 1876; Haines, Bot. Bihar Orissa 239. 1922 (Repr. ed., 2: 250. 1961). *I. sumatrana* Gaertn., Fruct. Sem. Pl. 2: 317. t. 148. 1791; Haines, Bot. Bihar Orissa 240. 1922 (Repr. ed., 2: 251. 1961).

Fl. & Fr.: August - March.

Distrib.: Champaran, Darbhanga, Deoghar, Gumla, Palamau, Patna, Purnia, Ranchi.

Indigofera trifoliata L., Cent. Pl. 2: 29. 1756 & Amoen. Acad. 4: 327. 1759; Baker in Hook. *f.*, Fl. Brit. India 2: 96. 1876, *p.p.*; Haines, Bot. Bihar Orissa 238. 1922 (Repr. ed., 2: 248. 1961).

var. trifoliata*Fl. & Fr.*: August - February.*Distrib.*: Hazaribagh, Palamau.

Indigofera trita L. *f.*, *Suppl. Pl.* 335. 1782; Baker in Hook. *f.*, *Fl. Brit. India* 2: 96. 1876; Haines, *Bot. Bihar Orissa* 238. 1922 (*Repr. ed.*, 2: 249. 1961).

var. trita*Fl. & Fr.*: Throughout the year.*Distrib.*: Gaya, Palamau.**LABLAB** Adans.

Lablab purpureus (L.) Sweet, *Hort. Brit. ed.* 1: 481. 1827. *Dolichos purpureus* L., *Sp. Pl. ed.* 2. 1021. 1763. *D. lablab* L., *Sp. Pl.* 725. 1753; Baker in Hook. *f.*, *Fl. Brit. India* 2: 209. 1876; Haines, *Bot. Bihar Orissa* 291. 1922 (*Repr. ed.*, 2: 305. 1961).

subgen. **bengalensis** (Jacq.) Verdc. in *Kew Bull.* 24: 411. 1970. *Dolichos bengalensis* Jacq., *Hort. Vindob.* 2: 57. t. 124. 1772.

Distrib.: Cultivated (Sanjappa, *Legumes India* 199. 1992).subgen. **lablab****var. purpureus***Fl. & Fr.*: October - January.*Distrib.*: Cultivated throughout the state.**LATHYRUS** L.

Lathyrus aphaca L., *Sp. Pl.* 729. 1753; Baker in Hook. *f.*, *Fl. Brit. India* 2: 179. 1876; Haines, *Bot. Bihar Orissa* 250. 1922 (*Repr. ed.*, 2: 261. 1961).

Fl. & Fr.: February - April.*Distrib.*: Muzaffarpur, Palamau, Sahibganj.

Lathyrus odoratus L., Sp. Pl. 732. 1753.

Fl. & Fr.: January - March.

Distrib.: Cultivated.

Lathyrus sativus L., Sp. Pl. 730. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 179. 1876; Haines, Bot. Bihar Orissa 249. 1922 (Repr. ed., 2: 261. 1961).

Fl. & Fr.: December - March.

Distrib.: Cultivated, Bhagalpur, Palamau, Patna, Sahibganj.

Lathyrus sphaericus Retz., Observ. Bot. 3: 39. 1783; Baker in Hook. *f.*, Fl. Brit. India 2: 180. 1876.

Fl. & Fr.: December - March.

Distrib.: Champaran.

LENS Mill., *nom. cons.*

Lens culinaris Medik., Vorles. Churpf. Phys. Ges. 2: 361. 1787 (1788). *Ervum lens* L., Sp. Pl. 738. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 179. 1876. *Lens esculenta* Moench., Meth. Pl. 131. 1794; Haines, Bot. Bihar Orissa 249. 1922 (Repr. ed., 2: 261. 1961).

Fl. & Fr.: November - April.

Distrib.: Cultivated.

LESPEDEZA Michx.

Lespedeza juncea (L. *f.*) Pers. var. **sericea** (Thunb.) Lace & Hemsl. in J. Linn. Soc. London (Bot.) 23: 181. 1887. *Hedysarum sericeum* Thunb., Fl. Jap. 289. 1784, *non* Mill., 1768. *Lespedeza sericea* (Thunb.) Miq., Ann. Mus. Ludg.-Bat. 3: 49. 1867; Baker in Hook. *f.*, Fl. Brit. India 2: 142. 1876; Haines, Bot. Bihar Orissa 250. 1922 (Repr. ed., 2: 262. 1961).

Fl. & Fr.: November - January.

Distrib.: Godda, Palamau.

Lespedeza tomentosa (Thunb.) Sieb. ex Maxim., Acta Hort. Petrop. 2: 376. 1873; Baker in Hook. f., Fl. Brit. India 2: 143. 1876. *Hedysarum tomentosum* Thunb., Fl. Jap. 281. 1784.

Distrib.: Bihar (Sanjappa, Legumes India 205. 1992).

MACROTYLOMA (Wight & Arnott) Verdc.

Macrotyloma uniflorum (Lam.) Verdc. in Kew Bull. 24: 322, 401. 1970. *Dolichos uniflorus* Lam., Encycl. 2: 299. 1786. *D. biflorus* Murray, Syst. Nat. ed. 13. 548. 1774, p.p.; Baker in Hook. f., Fl. Brit. India 2: 210. 1876; Haines, Bot. Bihar Orissa 292. 1922 (Repr. ed., 2: 305. 1961), non L., 1753.

Fl. & Fr.: September - December.

Distrib.: Cultivated; Bhagalpur, Chota Nagpur, Gaya, Santal Pargana.

MEDICAGO L.

Medicago lupulina L., Sp. Pl. 779. 1753; Baker in Hook. f., Fl. Brit. India 2: 90. 1876; Haines, Bot. Bihar Orissa 235. 1922 (Repr. ed., 2: 246. 1961).

Fl. & Fr.: March - April.

Distrib.: Champaran, Muzaffarpur, Sahibganj.

Medicago polymorpha L., Sp. Pl. 779. 1753 *emend.* Shin. in Rhodora 58: 5. 1956. *M. denticulata* Willd., Sp. Pl. 3: 1414. 1802; Baker in Hook. f., Fl. Brit. India 2: 90. 1876; Haines, Bot. Bihar Orissa 236. 1922 (Repr. ed., 2: 246. 1961).

var. **polymorpha**

Fl. & Fr.: January - February.

Distrib.: Muzaffarpur, Sahibganj.

Medicago sativa L., Sp. Pl. 778. 1753; Haines, Bot. Bihar Orissa 235. 1922 (Repr. ed., 2: 246. 1961).

Fl. & Fr.: May - September.

Distrib.: Cultivated. Bhagalpur, Sahibganj.

MEIZOTROPIS Voigt.

Meizotropis buteiformis Voigt, Hort. Suburb. Calc. 239. 1845, '*buteaeformis*'. *Butea minor* Buch.-Ham. ex Baker in Hook. f., Fl. Brit. India 2: 195. 1876; Haines, Bot. Bihar Orissa 280. 1922 (Repr. ed., 2: 293. 1961), *excl. syn.*

Fl. & Fr.: September - January.

Distrib.: Champaran.

Meizotropis pellita (Hook. f. ex Prain) Sanj. in Bull. Bot. Surv. India 29: 219. 1989. *Butea pellita* Hook. f. ex Prain in Bull. Misc. Inform. Kew 1908: 385. 1908. *B. minor auct. non* Buch.-Ham. ex Baker, 1876; Haines, Bot. Bihar Orissa 280. 1922 (Repr. ed., 2: 293. 1961).

Fl. & Fr.: September - January.

Distrib.: Champaran.

MELILOTUS Mill.

✓**Melilotus alba** Medik. ex Desr. in Lam., Encycl. 4: 63. 1797; Baker in Hook. f., Fl. Brit. India 2: 89. 1876; Haines, Bot. Bihar Orissa 235. 1922 (Repr. ed., 2: 246. 1961).

Fl. & Fr.: January - April.

Distrib.: Muzaffarpur, Palamau, Patna, West Champaran.

Melilotus indica (L.) All., Fl. Pedem. 1: 308. 1785; Haines, Bot. Bihar Orissa 235. 1922 (Repr. ed., 2: 245. 1961). *Trifolium indicum* L., Sp. Pl. 765. 1753. *Melilotus parviflorus* Desf., Fl. Alt. 2: 192. 1799; Baker in Hook. f., Fl. Brit. India 2: 89. 1876.

Fl. & Fr.: January - March.

Distrib.: Hazaribagh, Muzaffarpur, West Champaran.

MILLETTIA Wight & Arnott

Millettia extensa (Benth.) Benth. ex Baker in Hook. f., Fl. Brit. India 2: 109. 1876. *Otosema extensa* Benth. in Miq., Pl. Jungh. 249. 1852. *Millettia auriculata* Baker ex Brandis, For. Fl. Ind. 138. 1874; Baker in

Hook. *f.*, Fl. Brit. India 2: 108. 1876; Haines, Bot. Bihar Orissa 246. 1922 (Repr. ed., 2: 257. 1961).

Fl. & Fr.: March - May.

Distrib.: Throughout the state.

Millettia peguensis Ali in Kew Bull. 21: 489. 1968. *M. ovalifolia* Kurz in J. Asiat. Soc. Bengal 42: 68. 1873, *excl. syn.*; Baker in Hook. *f.*, Fl. Brit. India 2: 107. 1876.

Distrib.: Hazaribagh.

Millettia racemosa Benth. in Miq., Pl. Jungh. 249. 1852; Baker in Hook. *f.*, Fl. Brit. India 2: 105. 1876; Haines, Bot. Bihar Orissa 246. 1922 (Repr. ed., 2: 258. 1961).

Fl. & Fr.: May - February.

Distrib.: Bhagalpur, Chota Nagpur.

MUCUNA Adans., *nom. cons.*

Mucuna imbricata DC. *ex* Baker in Hook. *f.*, Fl. Brit. India 2: 185. 1876, *p.p.*; Haines, Bot. Bihar Orissa 283. 1922 (Repr. ed., 2: 296. 1961).

Fl. & Fr.: August - February.

Distrib.: Champaran, Hazaribagh, Santal Pargana, Singhbhum.

Mucuna nigricans (Lour.) Steud., Nom. Bot. ed. 2: 2: 163. 1841. *Citta nigricans* Lour., Fl. Cochinch. 2: 456. 1790, *excl. ref.* to Rumph. & Clusius. *Mucuna imbricata* DC. *ex* Baker in Hook. *f.*, Fl. Brit. India 2: 185. 1876, *p.p.*

Fl. & Fr.: July - December.

Distrib.: Bhagalpur.

Mucuna pruriens (L.) DC., Prodr. 2: 405. 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 187. 1876. *Dolichos pruriens* L. in Stickman, Diss. Herb. Amb. 23. 1754 & Syst. Nat. ed. 10. 1162. 1759. *Mucuna prurita* Hook., Bot. Misc. 2: 384. 1831; Haines, Bot. Bihar Orissa 283. 1922 (Repr. ed., 2: 296. 1961). *M. minima* Haines in J. Asiat. Soc. Bengal n.s. 15: 313. 1920 & Bot. Bihar Orissa 284. 1922 (Repr. ed., 2: 297. 1961).

var. pruriens*Fl. & Fr.*: September - April.*Distrib.*: Bhagalpur, Hazaribagh, Palamau, Purnia, Santal Pargana.

var. utilis (Wallich ex Wight) Baker ex Burck. in Ann. Jard. Britenz. 11: 187. 1893; Haines, Bot. Bihar Orissa 284. 1922 (Repr. ed., 2: 297. 1961). *Mucuna utilis* Wallich ex Wight, Icon. Pl. Ind. Orient. 1: t. 280. 1840.

Fl. & Fr.: September - April.*Distrib.*: Chota Nagpur, Sahibganj.**NOGRA Merr.**

Nogra grahmi (Wallich ex Benth.) Merr. in Trans. Amer. Philos. Soc. ser. 2, 24: 201. 1935. *Glycine grahmi* Wallich ex Benth. in Miq., Pl. Jungh. 233. 1852. *Grona grahmi* (Wallich ex Benth.) Benth. ex Baker in Hook. f., Fl. Brit. India 2: 191. 1876; Haines, Bot. Bihar Orissa 277. 1922 (Repr. ed., 2: 289. 1961).

Fl. & Fr.: August - September.*Distrib.*: Ranchi.**OUGEINIA Benth.**

Ougeinia oojeinensis (Roxb.) Hochr. in Ann. Cons. Jard. Bot. Geneva 13 & 14: 51. 1909. *Dalbergia oojeinensis* Roxb., Fl. Ind. 3: 220. 1832. *Ougeinia dalbergioides* Benth. in Miq., Pl. Jungh. 216. 1852; Haines, Bot. Bihar Orissa 259. 1922 (Repr. ed., 2: 271. 1961).

Fl. & Fr.: February - June.*Distrib.*: Champaran, Giridih, Hazaribagh, Koderma, Palamau, Singhbhum.**PACHYRHIZUS L. C. Rich. ex DC., nom. cons.**

Pachyrhizus erosus (L.) Urban, Symb. Antill. 4: 311. 1905. *Dolichos erosus* L., Sp. Pl. 726. 1753. *Pachyrhizus angulatus* L. C. Rich ex DC. Prodr. 2: 402. 1825; Baker in Hook. f., Fl. Brit. India 2: 207. 1876.

Fl. & Fr.: October - December.

Distrib.: Sahibganj.

PARACALYX Ali

Paracalyx scariosus (Roxb.) Ali in Univ. Stud. Karachi 5: 95. 1968. *Cylista scariosa* Roxb., Pl. Corom. 1: 64. t. 92. 1798; Baker in Hook. *f.*, Fl. Brit. India 2: 219. 1876; Haines, Bot. Bihar Orissa 273. 1922 (Repr. ed., 2: 285. 1961).

Fl. & Fr.: November - March.

Distrib.: Munger.

PHASEOLUS L.

Phaseolus lunatus L., Sp. Pl. 724. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 200. 1876; Haines, Bot. Bihar Orissa 287. 1922 (Repr. ed., 2: 300. 1961).

Distrib.: Cultivated.

Phaseolus multiflorus Lam., Encycl. 3: 70. 1789; Baker in Hook. *f.*, Fl. Brit. India 2: 200. 1876; Haines, Bot. Bihar Orissa 287. 1922 (Repr. ed., 2: 300. 1961).

Distrib.: Cultivated.

Phaseolus vulgaris L., Sp. Pl. 723. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 200. 1876; Haines, Bot. Bihar Orissa 287. 1922 (Repr. ed., 2: 300. 1961).

Fl. & Fr.: September - November.

Distrib.: Cultivated.

PISUM L.

Pisum arvense L., Sp. Pl. 727. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 181. 1876; Haines, Bot. Bihar Orissa 250. 1922 (Repr. ed., 2: 261. 1961).

Fl. & Fr.: January - March.

Distrib.: Cultivated. Champaran, Palamau, Patna, Purnia.

Pisum sativum L., Sp. Pl. 727. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 181. 1876; Haines, Bot. Bihar Orissa 250. 1922 (Repr. ed., 2: 262. 1961).

Fl. & Fr.: November - February.

Distrib.: Cultivated throughout the state.

PONGAMIA Vent., *nom. cons.*

Pongamia pinnata (L.) Pierre, For. Fl. Cochinch. t. 385. 1899. *Cytisus pinnatus* L., Sp. Pl. 741. 1753. *Pongamia glabra* Vent., Jard. Malm. 1: 28. t. 28. 1803; Baker in Hook. *f.*, Fl. Brit. India 2: 240. 1876; Haines, Bot. Bihar Orissa 299. 1922 (Repr. ed., 2: 313. 1961).

Fl. & Fr.: May - February.

Distrib.: Throughout the state.

PSEUDARTHRIA Wight & Arnott

Pseudarthria viscida (L.) Wight & Arnott, Prodr. 209. 1834; Baker in Hook. *f.*, Fl. Brit. India 2: 154. 1876. *Hedysarum viscidum* L., Sp. Pl. 747. 1753. *Desmodium viscidum auct. non DC.*, 1825; Haines, Bot. Bihar Orissa 262. 1922 (Repr. ed., 2: 274. 1961).

Distrib.: Bihar (Sanjappa, Legumes India 230. 1992).

PSOPHOCARPUS Neck. *ex DC.*, *nom. cons.*

Psophocarpus tetragonolobus (L.) DC., Prodr. 2: 403. 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 211. 1876. *Dolichos tetragonolobus* L., Syst. Nat. ed. 10. 1162. 1759.

Distrib.: Cultivated. Bhagalpur.

PTEROCARPUS Jacq., *nom. cons.*

Pterocarpus marsupium Roxb., Pl. Corom. 2: t. 116. 1799 & Fl. Ind. 3: 234. 1832; Baker in Hook. *f.*, Fl. Brit. India 2: 239. 1876; Haines, Bot. Bihar Orissa 297. 1922 (Repr. ed., 2: 310. 1961).

var. **acuminata** Prain in J. Asiat. Soc. Bengal 66: 455. 1897; Haines, Bot. Bihar Orissa 297. 1922 (Repr. ed., 2: 311. 1961).

Distrib.: Sahibganj (Haines, l.c.).

var. marsupium

Fl. & Fr.: July - January.

Distrib.: Hazaribagh, Palamau, Santal Pargana, Singhbhum.

PUERARIA DC.

Pueraria phaseoloides (Roxb.) Benth. in J. Linn. Soc. London (Bot.) 9: 125. 1867; Baker in Hook. *f.*, Fl. Brit. India 2: 199. 1876; Haines, Bot. Bihar Orissa 282. 1922 (Repr. ed., 2: 295. 1961). *Dolichos phaseoloides* Roxb., Fl. Ind. 3: 316. 1832.

var. phaseoloides

Fl. & Fr.: September - December.

Distrib.: Hazaribagh, Purnia.

Pueraria tuberosa (Roxb. ex Willd.) DC. in Ann. Sci. Nat. Paris 4: 97. 1825 & Prodr. 2: 240. 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 197. 1876; Haines, Bot. Bihar Orissa 281. 1922 (Repr. ed., 2: 294. 1961). *Hedysarum tuberosum* Roxb. ex Willd., Sp. Pl. 3: 1197. 1803.

Fl. & Fr.: February - June.

Distrib.: Chota Nagpur, Hazaribagh.

PYCNOSPORA R. Br. ex Wight & Arnott

Pycnospora lutescens (Poir.) Schindl. in J. Bot. 64: 145. 1926. *Hedysarum lutescens* Poir. in Lam., Encycl. 6: 417. 1805. *Pycnospora hedysaroides* R. Br. ex Wight & Arnott, Prodr. 197. 1834; Baker in Hook. *f.*, Fl. Brit. India 2: 153. 1876.

Distrib.: Throughout (Sanjappa, Legumes India 236. 1992).

RHYNCHOSIA Lour., *nom. cons.*

Rhynchosia bracteata Benth. ex Baker in Hook. *f.*, Fl. Brit. India 2: 225. 1876; Haines, Bot. Bihar Orissa 271. 1922 (Repr. ed., 2: 284. 1961).

Fl. & Fr.: February - April.

Distrib.: Bihar (Sanjappa, Legumes India 237. 1992).

Rhynchosia cana (Willd.) DC., Prodr. 2: 386. 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 222. 1876; Haines, Bot. Bihar Orissa 272. 1922 (Repr. ed., 2: 284. 1961). *Glycine cana* Willd., Sp. Pl. 3: 1063. 1802.

Distrib.: Bihar (Sanjappa, Legumes India 237. 1992).

Rhynchosia capitata (Heyne ex Roth) DC., Prodr. 2: 386. 1825. *Glycine capitata* Heyne ex Roth, Nov. Pl. Sp. 346. 1821. *Rhynchosia aurea auct. non* (Willd.) DC., 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 221. 1876. *R. aurea* DC. var. *capitata* Haines, Bot. Bihar Orissa 272. 1922 (Repr. ed., 2: 285. 1961).

Fl. & Fr.: August - January.

Distrib.: Palamau.

Rhynchosia minima (L.) DC., Prodr. 2: 385. 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 223. 1876; Haines, Bot. Bihar Orissa 272. 1922 (Repr. ed., 2: 284. 1961). *Dolichos minimus* L., Sp. Pl. 726. 1753. *Rhynchosia minima* (L.) DC. var. *laxiflora* (Camb.) Baker in Hook. *f.*, Fl. Brit. India 2: 223. 1876; Haines, Bot. Bihar Orissa 272. 1922 (Repr. ed., 2: 284. 1961).

Fl. & Fr.: September - November.

Distrib.: Bhagalpur, Koderma, Palamau, Patna, Sahibganj.

Rhynchosia rufescens (Willd.) DC., Prodr. 2: 387. 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 220. 1876; Haines, Bot. Bihar Orissa 272. 1922 (Repr. ed., 2: 285. 1961). *Glycine rufescens* Willd., Nov. Act. Berol. 222. 1803.

Fl. & Fr.: December - March.

Distrib.: Hazaribagh, Koderma, Singhbhum.

SESBANIA Scop., *nom. cons.*

Sesbania aculeata Pers., Syn. Pl. 2: 316. 1807; Baker in Hook. *f.*, Fl. Brit. India 2: 114. 1876, *excl. vars.*; Haines, Bot. Bihar Orissa 246. 1922 (Repr. ed., 2: 256. 1961).

var. aculeata

Fl. & Fr.: August - October.

Distrib.: Champaran, Chota Nagpur.

var. paludosa (Roxb.) Baker in Hook. *f.*, Fl. Brit. India 2: 115. 1876. *Aeschynomene paludosa* Roxb., Fl. Ind. 3: 333. 1832. *Sesbania paludosa* (Roxb.) Prain in J. Asiat. Soc. Bengal 66: 82. 1897; Haines, Bot. Bihar Orissa 245. 1922 (Repr. ed., 2: 257. 1961).

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur.

Sesbania bispinosa (Jacq.) W.F. Wight in U. S. Dept. Agric. Bur. Pl. Ind. Bull. 137: 15. 1909. *Aeschynomene bispinosa* Jacq., Ic. Pl. Rar. 3: 13. t. 564. 1792.

Fl. & Fr.: September - January.

Distrib.: Santal Pargana.

Sesbania cannabina (Retz.) Poir. in Lam., Encycl. 7: 130. 1806. *Aeschynomene cannabina* Retz., Observ. Bot. 5: 26. 1789. *Sesbania aculeata* (Willd.) Poir. var. *cannabina* (Retz.) Baker in Hook. *f.*, Fl. Brit. India 2: 115. 1876.

Distrib.: Purnia.

Sesbania grandiflora (L.) Poir. in Lam., Encycl. 7: 127. 1806; Baker in Hook. *f.*, Fl. Brit. India 2: 115. 1876; Haines, Bot. Bihar Orissa 245. 1922 (Repr. ed., 2: 256. 1961). *Robinia grandiflora* L., Sp. Pl. 722. 1753.

Fl. & Fr.: October - February.

Distrib.: Cultivated.

Sesbania sesban (L.) Merr. in Philipp. J. Sci. Bot. 7: 235. 1912. *Aeschynomene sesban* L., Sp. Pl. 714. 1753. *Sesbania aegyptiaca* Poir. in Lam., Encycl. 7: 128. 1806; Baker in Hook. *f.*, Fl. Brit. India 2: 114. 1876; Haines, Bot. Bihar Orissa 245. 1922 (Repr. ed., 2: 256. 1961).

Fl. & Fr.: August - March.

Distrib.: Champaran, Chota Nagpur, Patna.

Sesbania uliginosa Sweet, Hort. Brit. ed. 1. 129. 1827; Haines, Bot. Bihar Orissa 246. 1922 (Repr. ed., 2: 257. 1961). *Aeschynomene uliginosa* Roxb., Fl. Ind. 2: 334. 1832.

Distrib.: Bihar (Sanjappa, Legumes India 244. 1992).

SHUTERIA Wight & Arnott, *nom. cons.*

Shuteria vestita (Wallich) Wight & Arnott var. **vestita** forma **densiflora** (Benth.) Ohashi in J. Jap. Bot. 50: 305. 1975. *Shuteria densiflora* Benth. in Miq., Pl. Jungh. 232. 1852; Haines, Bot. Bihar Orissa 275. 1922 (Repr. ed., 2: 288. 1961). *S. vestita* var. *densiflora* (Benth.) Baker in Hook. f., Fl. Brit. India 2: 182. 1876.

Fl. & Fr.: December - April.

Distrib.: Palamau, Singhbhum, West Champaran.

SMITHIA Aiton, *nom. cons.*

Smithia ciliata Royle, Ill. Bot. Himal. 201. t. 35. f. 2. 1835; Baker in Hook. f., Fl. Brit. India 2: 150. 1876; Haines, Bot. Bihar Orissa 253. 1922 (Repr. ed., 2: 265. 1961).

Fl. & Fr.: September - October.

Distrib.: Giridih, Hazaribagh, Palamau.

Smithia conferta Sm. in Rees, Cyclop. 33: no. 2. 1816; Haines, Bot. Bihar Orissa 253. 1922 (Repr. ed., 2: 264. 1961). *S. geminiflora* Roth, Nov. Pl. Sp. 352. 1821; Baker in Hook. f., Fl. Brit. India 2: 149. 1876, *incl. vars.*

Fl. & Fr.: September - March.

Distrib.: Chota Nagpur, Hazaribagh, Singhbhum.

Smithia sensitiva Aiton, Hortus Kew. ed. 1. 3: 496. 1789; Baker in Hook. f., Fl. Brit. India 2: 148. 1876; Haines, Bot. Bihar Orissa 253. 1922 (Repr. ed., 2: 265. 1961).

Fl. & Fr.: October - November.

Distrib.: Hazaribagh, Purnia, Santal Pargana, Singhbhum.

SOPHORA L.

Sophora bakeri C.B. Clarke ex Prain in J. Asiat. Soc. Bengal 66: 466. 1897; Haines, Bot. Bihar Orissa 300. 1922 (Repr. ed., 2: 313. 1961).

Fl. & Fr.: May - March.

Distrib.: Palamau, Ranchi. Endemic.

Sophora tomentosa L., Sp. Pl. 373. 1753; Baker in Hook. f., Fl. Brit. India 2: 249. 1878.

Fl. & Fr.: August - October.

Distrib.: Cultivated. Bhagalpur.

SPATHOLOBUS Hassk.

Spatholobus parviflorus (Roxb. ex DC.) Kuntze, Revis. Gen. Pl. 1: 205. 1891. *Butea parviflora* Roxb. ex DC., Prodr. 2: 415. 1825; Haines, Bot. Bihar Orissa 281. 1922 (Repr. ed., 2: 293. 1961). *Spatholobus roxburghii* Benth. ex Baker in Hook. f., Fl. Brit. India 2: 193. 1876.

Fl. & Fr.: August - March.

Distrib.: Throughout the state.

TEPHROSIA Pers., nom. cons.

Tephrosia candida DC., Prodr. 2: 249. 1825; Baker in Hook. f., Fl. Brit. India 2: 111. 1876; Haines, Bot. Bihar Orissa 242. 1922 (Repr. ed., 2: 253. 1961).

Fl. & Fr.: August - December.

Distrib.: Champaran, Palamau, Ranchi.

Tephrosia hookeriana Wight & Arnott, Prodr. 112. 1834; Baker in Hook. f., Fl. Brit. India 2: 113. 1876, *p.p.*

Fl. & Fr.: August - October.

Distrib.: Throughout the plains (Sanjappa, Legumes India 256. 1992).

Tephrosia pumila (Lam.) Pers., Syn. Pl. 2: 330. 1807; Haines, Bot. Bihar Orissa 244. 1922 (Repr. ed., 2: 255. 1961). *Galega pumila* Lam.,

Encycl. 2: 599. 1786. *Tephrosia purpurea* (L.) Pers. var. *pumila* (Lam.) Baker in Hook. *f.*, Fl. Brit. India 2: 113. 1876.

Fl. & Fr.: August - November.

Distrib.: Bhagalpur, Santal Pargana.

Tephrosia purpurea (L.) Pers., Syn. Pl. 2: 329. 1807; Baker in Hook. *f.*, Fl. Brit. India 2: 112. 1876; Haines, Bot. Bihar Orissa 244. 1922 (Repr. ed., 2: 255. 1961). *Cracca purpurea* L., Sp. Pl. 752. 1753.

Fl. & Fr.: August - February.

Distrib.: Bhagalpur, Champaran, Gumla, Hazaribagh, Koderma, Palamau, Ranchi, Singhbhum.

Tephrosia strigosa (Dalz.) Sant. & Maheshw. in J. Bombay Nat. Hist. Soc. 54: 805. 1956. *Macromyx strigosus* Dalz. in Hook., J. Bot. Kew Gard. Misc. 2: 35. 1850. *Tephrosia tenuis* Wallich ex Dalz. & Gibs., Bombay Fl. 61. 1864; Baker in Hook. *f.*, Fl. Brit. India 2: 111. 1876.

Fl. & Fr.: August - November.

Distrib.: Purnia, Sahibganj.

Tephrosia tinctoria Pers., Syn. Pl. 2: 329. 1807; Baker in Hook. *f.*, Fl. Brit. India 2: 111. 1876; Haines, Bot. Bihar Orissa 243. 1922 (Repr. ed., 2: 254. 1961).

Fl. & Fr.: September - November.

Distrib.: Palamau, Santal Pargana.

Tephrosia villosa (L.) Pers., Syn. Pl. 2: 329. 1807. no. 23 non Pers. no. 17; Baker in Hook. *f.*, Fl. Brit. India 2: 113. 1876; Haines, Bot. Bihar Orissa 244. 1922 (Repr. ed., 2: 256. 1961). *Cracca villosa* L., Sp. Pl. 752. 1753.

Fl. & Fr.: July - December.

Distrib.: Palamau.

TERAMNUS P. Br.

Teramnus labialis (L. *f.*) Spreng., Syst. Veg. 3: 235. 1826; Baker in Hook. *f.*, Fl. Brit. India 2: 184. 1876; Haines, Bot. Bihar Orissa 276. 1922 (Repr. ed., 2: 289. 1961). *Glycine labialis* L. *f.*, Suppl. Pl. 325. 1782.

Fl. & Fr.: August - December.

Distrib.: Gaya, Munger, Palamau, Sahibganj.

Teramnus mollis Benth. in J. Linn. Soc. London (Bot.) 8: 265. 1865, non *Glycine mollis* Wight & Arnott, 1834. *Teramnus labialis* (L. f.) Spreng. var. *mollis* (Wight & Arnott) Baker in Hook. f., Fl. Brit. India 2: 184. 1876.

Distrib.: Throughout (Sanjappa, Legumes India 261. 1992).

TRIFOLIUM L.

Trifolium alexandrinum L., Cent. Pl. 1: 25. 1755.

Distrib.: Cultivated.

Trifolium hybridum L., Sp. Pl. 766. 1753.

Distrib.: Cultivated (Sanjappa, Legumes India 263. 1992).

Trifolium resupinatum L., Sp. Pl. 771. 1753; Baker in Hook. f., Fl. Brit. India 2: 86. 1876.

Fl. & Fr.: March - May.

Distrib.: Hazaribagh (Paria and Chattopadhyay, Fl. Hazaribagh Dist. Bihar 388. 2000).

Trifolium tomentosum L., Sp. Pl. 771. 1753.

Distrib.: Cultivated (Sanjappa, Legumes India 263. 1992).

TRIGONELLA L.

Trigonella corniculata (L.) L., Syst. Nat. ed. 10. 2: 1180. 1759; Baker in Hook. f., Fl. Brit. India 2: 88. 1876; Haines, Bot. Bihar Orissa 234. 1922 (Repr. ed., 2: 245. 1961). *Trifolium corniculatum* L., Sp. Pl. 766. 1753.

Fl. & Fr.: February - March.

Distrib.: Bhagalpur, Champaran.

Trigonella foenum-graecum L., Sp. Pl. 777. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 87. 1876; Haines, Bot. Bihar Orissa 234. 1922 (Repr. ed., 2: 245. 1961).

Fl. & Fr.: January - March.

Distrib.: Cultivated. Palamau, Purnia.

Trigonella incisa Benth. in Royle, Ill. Bot. Himal. 197. 1835. *T. polycerata auct. non* L., 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 87. 1876.

Fl. & Fr.: January - March.

Distrib.: Bhagalpur.

URARIA Desv.

Uraria lacei Craib in Bull. Misc. Inform. Kew 1910: 276. 1910. *U. pulchra* Haines in Bull. Misc. Inform. Kew 1921: 8. 1921 & Bot. Bihar Orissa 256. 1922 (Repr. ed., 2: 268. 1961).

Fl. & Fr.: November - December.

Distrib.: Champaran.

Uraria lagopodioides (L.) Desv. in Mem. Soc. Linn. Paris 4: 309. 1826; Haines, Bot. Bihar Orissa 256. 1922 (Repr. ed., 2: 267. 1961). *Hedysarum lagopodioides* L., Sp. Pl. 1198. 1753. *Uraria lagopoides* (Burm. *f.*) DC., Prodr. 2: 324. 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 156. 1876.

Fl. & Fr.: September - March.

Distrib.: Champaran, Purnia, Singhbhum.

Uraria lagopus DC. in Ann. Sci. Nat. Paris 4: 100. 1825 & Prodr. 2: 324. 1825; Baker in Hook. *f.*, Fl. Brit. India 2: 156. 1876. *U. alopecuroides* (Roxb.) Wight, Icon. Pl. Ind. Orient. t. 290. 1840; Haines, Bot. Bihar Orissa 256. 1922 (Repr. ed., 2: 268. 1961).

Fl. & Fr.: August - October.

Distrib.: Gaya, Hazaribagh, Palamau, Singhbhum.

Uraria picta (Jacq.) Desv. ex DC., Prodr. 2: 324. 1825; Baker in Hook. f., Fl. Brit. India 2: 155. 1876; Haines, Bot. Bihar Orissa 255. 1922 (Repr. ed., 2: 267. 1961). *Hedysarum pictum* Jacq., Coll. Bot. 2: 262. 1788.

Fl. & Fr.: August - September.

Distrib.: Champaran, Hazaribagh, Koderma, Palamau, Santal Pargana.

Uraria rufescens (DC.) Schindl. in Fedd. Repert. 21: 14. 1925. *Desmodium rufescens* DC. in Ann. Sci. Nat. Paris 4: 101. 1825. *Uraria hamosa* Wallich ex Wight & Arnott, Prodr. 222. 1834; Haines, Bot. Bihar Orissa 256. 1922 (Repr. ed., 2: 268. 1961).

Fl. & Fr.: September - January.

Distrib.: Champaran, Giridih, Santal Pargana.

VICIA L.

Vicia faba L., Sp. Pl. 737. 1753; Baker in Hook. f., Fl. Brit. India 2: 179. 1876; Haines, Bot. Bihar Orissa 249. 1922 (Repr. ed., 2: 260. 1961).

Fl. & Fr.: February - March.

Distrib.: Bhagalpur, Champaran, Muzaffarpur.

Vicia hirsuta (L.) S.F. Gray, Nat. Arr. Brit. Pl. 2: 614. 1821; Baker in Hook. f., Fl. Brit. India 2: 177. 1876; Haines, Bot. Bihar Orissa 248. 1922 (Repr. ed., 2: 260. 1961). *Eryum hirsutum* L., Sp. Pl. 738. 1753.

Fl. & Fr.: November - February.

Distrib.: Champaran, Hazaribagh, Muzaffarpur, Palamau, Santal Pargana.

Vicia sativa L., Sp. Pl. 736. 1753; Baker in Hook. f., Fl. Brit. India 2: 178. 1876, *excl. var.*; Haines, Bot. Bihar Orissa 249. 1922 (Repr. ed., 2: 260. 1961).

Fl. & Fr.: December - March.

Distrib.: Bhagalpur, Champaran, Hazaribagh, Palamau, Santal Pargana.

Vicia tetrasperma (L.) Schreb., Spicil. Fl. Lips. 26. 1771; Baker in Hook. f., Fl. Brit. India 2: 177. 1876; Haines, Bot. Bihar Orissa 248. 1922 (Repr. ed., 2: 260. 1961). *Ervum tetraspermum* L., Sp. Pl. 738. 1753.

Distrib.: Bihar (Sanjappa, Legumes India 271. 1992).

VIGNA Savi

Vigna aconitifolia (Jacq.) Marechal in Bull. Jard. Bot. Natt. Belg. 39: 160. 1969. *Phaseolus aconitifolius* Jacq., Obs. Bot. 3: 2. t. 52. 1768; Baker in Hook. f., Fl. Brit. India 2: 202. 1876; Haines, Bot. Bihar Orissa 288. 1922 (Repr. ed., 2: 301. 1961).

Fl. & Fr.: August - December.

Distrib.: Giridih, Palamau, Ranchi, Santal Pargana, Singhbhum.

Vigna adenantha (G.F. Meyer) Marechal *et al.* in Taxon 27: 202. 1978. *Phaseolus adenanthus* G.F. Meyer, Prim. Fl. Esseq. 239. 1818; Baker in Hook. f., Fl. Brit. India 2: 200. 1876.

Distrib.: Cultivated throughout the country (Sanjappa, Legumes India 272. 1992).

Vigna dalzelliana (Kuntze) Verdc. in Kew Bull. 24: 558. 1970. *Phaseolus dalzellianus* Kuntze, Revis. Gen. Pl. 1: 202. 1891. *P. pauciflorus* Dalz. in Hook., J. Bot. Kew Gard. Misc. 3: 209. 1851, *non* G. Don, 1823, *nec* Benth., 1837 & Dalz. & Gibs., 1861; Baker in Hook. f., Fl. Brit. India 2: 202. 1876.

Distrib.: Bihar (Sanjappa, Legumes India 272. 1992).

Vigna glabrescens Marechal *et al.* in Taxon 27: 201. 1978. *Phaseolus mungo* L. var. *glabra* (Roxb.) Baker in Hook. f., Fl. Brit. India 2: 203. 1876.

Distrib.: Bihar (Sanjappa, Legumes India 273. 1992).

Vigna hainiana Babu *et al.* in Bull. Bot. Surv. India 27: 15. 1987. *Phaseolus calcaratus* auct. *non* Roxb., 1832; Haines, Bot. Bihar Orissa 288. 1922 (Repr. ed., 2: 301. 1961).

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Koderma, Lohardaga, Sahibganj, Singhbhum.

Vigna mungo (L.) Hepper in Kew Bull. 1956: 128. 1956. *Phaseolus mungo* L., Mant. Pl. 101. 1767; Baker in Hook. f., Fl. Brit. India 2: 203. 1876; Haines, Bot. Bihar Orissa 289. 1922 (Repr. ed., 2: 302. 1961).

Fl. & Fr.: August - November.

Distrib.: Cultivated. Chota Nagpur, Sahibganj.

Vigna pilosa (Willd.) Baker in Hook. f., Fl. Brit. India 2: 207. 1876; Haines, Bot. Bihar Orissa 290. 1922 (Repr. ed., 2: 303. 1961). *Dolichos pilosus* Willd., Sp. Pl. 3: 1043. 1802.

Fl. & Fr.: October - March.

Distrib.: Singhbhum.

Vigna radiata (L.) R. Wilczek, Fl. Cong.-Belg. Ruand.-Uru. 6: 386. 1954. *Phaseolus radiatus* L., Sp. Pl. 725. 1753; Haines, Bot. Bihar Orissa 289. 1922 (Repr. ed., 2: 302. 1961). *P. mungo* L. var. *radiatus* (L.) Baker in Hook. f., Fl. Brit. India 2: 203. 1876.

Fl. & Fr.: September - December.

Distrib.: Cultivated. Bhagalpur, Darbhanga, Hazaribagh, Lohardaga.

Vigna ricciardiana (Ten.) Babu & Sharma in Bull. Bot. Surv. India 27: 21. 1985. *Phaseolus ricciardianus* Ten., Ind. Sem. Hort. Neap. 4. 1833.

Distrib.: Bihar (Babu *et al.*, l.c.).

Vigna sublobata (Roxb.) Babu & Sharma in Bull. Bot. Surv. India 27: 21. 1987. *Phaseolus sublobatus* Roxb., Fl. Ind. 3: 288. 1832; Haines, Bot. Bihar Orissa 288. 1922 (Repr. ed., 2: 301. 1961).

Fl. & Fr.: September - December.

Distrib.: Champaran, Giridih, Palamau, Ranchi.

Vigna trilobata (L.) Verdc. in Taxon 17: 172. 1968 & Kew Bull. 24: 560. 1970. *Dolichos trilobatus* L., Mant. Pl. 101. 1767. *Phaseolus trilobata* (L.) Schreb., Nov. Act. Acad. Caes. Leop.-Carol. Germ. Nat. Curios 4: 132. 1770; *sensu* Haines, Bot. Bihar Orissa 287. 1922 (Repr. ed., 2: 301. 1961), '*trilobus*' non Aiton.

Fl. & Fr.: August - December.

Distrib.: Santal Pargana.

Vigna umbellata (Thunb.) Ohwi & Ohashi in J. Jap. Bot. 44: 31. 1969. *Dolichos umbellatus* Thunb. in Trans. Linn. Soc. London 2: 339. 1794. *Phaseolus calcaratus* Roxb., Fl. Ind. 3: 289. 1832; Baker in Hook. f., Fl. Brit. India 2: 203. 1876. *excl. syn. Phaseolus pubescens* Blume.

Fl. & Fr.: September - November.

Distrib.: Santal Pargana.

Vigna unguiculata (L.) Walp. subsp. **cylindrica** (L.) van Eseltine, Hendricks. Veg. New York 1(2): 11. 1931. *Phaseolus cylindricus* L., Herb. Amboin. 23. 1754 & Amoen. Acad. 4: 132. 1759. *Dolichos catjang* Burm. f., Fl. Ind. 161. 1768. *Vigna catjang* (Burm. f.) Walp. in Linnaea 13: 533. 1839; Baker in Hook. f., Fl. Brit. India 2: 205. 1876; Haines, Bot. Bihar Orissa 290. 1922 (Repr. ed., 2: 304. 1961).

Fl. & Fr.: September - November.

Distrib.: Cultivated throughout the state.

subsp. **sesquipedalis** (L.) Verdc. in Davis, Fl. Turkey 3: 266. 1970 & Kew Bull. 24: 544. 1970. *Dolichos sesquipedalis* L., Sp. Pl. ed. 2. 1019. 1763.

Distrib.: Bihar (Sanjappa, Legumes India 277. 1992).

Vigna vexillata (L.) A. Rich., Hist. Fis. Polit. Nat. 1 Cuba 11: 191. 1845; Baker in Hook. f., Fl. Brit. India 2: 206. 1876; Haines, Bot. Bihar Orissa 290. 1922 (Repr. ed., 2: 303. 1961). *Phaseolus vexillatus* L., Sp. Pl. 724. 1753.

var. **angustifolia** (Schumach. & Thonn.) Baker in Oliver, Fl. Trop. Africa 2: 200. 1871. *Plectrotropis angustifolia* Schumach. & Thonn. in Schumach., Beskr. Guin. Pl. 338. 1827.

Distrib.: Bihar (Sanjappa, Legumes India 278. 1992).

var. **stocksii** Benth. *ex* Baker in Hook. f., Fl. Brit. India 2: 206. 1876.

Distrib.: Bihar (Sanjappa, Legumes India 278. 1992).

var. vexillata*Fl. & Fr.*: August - October.*Distrib.*: Giridih, Hazaribagh, Koderma, Palamau, Singhbhum.**ZORNIA J.F. Gmelin**

Zornia diphylla (L.) Pers., Syn. Pl. 2: 318. 1807; Baker in Hook. *f.*, Fl. Brit. India 2: 147. 1876; Haines, Bot. Bihar Orissa 251. 1922 (Repr. ed., 2: 263. 1961). *Hedysarum diphyllum* L., Sp. Pl. 747. 1753.

Fl. & Fr.: September - November.*Distrib.*: Giridih, Hazaribagh, Palamau, Santal Pargana, Singhbhum.**CAESALPINIACEAE****AMHERSTIA Wallich**

Amherstia nobilis Wallich, Pl. Asiat. Rar. 1: 1. t. 1-2. 1829; Baker in Hook. *f.*, Fl. Brit. India 2: 272. 1878; Haines, Bot. Bihar Orissa 311. 1922 (Repr. ed., 2: 325. 1961).

Fl. & Fr.: May - June.*Distrib.*: Cultivated in gardens.**BAUHINIA L.**

Bauhinia acuminata L., Sp. Pl. 375. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 276. 1878; Haines, Bot. Bihar Orissa 309. 1922 (Repr. ed., 2: 323. 1961).

Fl. & Fr.: May - April.*Distrib.*: Bhagalpur, Santal Pargana.

Bauhinia corymbosa Roxb. ex DC., Prodr. 2: 515. 1825.

Fl. & Fr.: June - October.*Distrib.*: Cultivated in gardens. Bhagalpur.

Bauhinia malabarica Roxb., Fl. Ind. 2: 321. 1832; Baker in Hook. f., Fl. Brit. India 2: 277. 1878, *incl. var. reniformis* Royle ex Baker; Haines, Bot. Bihar Orissa 308. 1922 (Repr. ed., 2: 322. 1961).

Fl. & Fr.: September - March.

Distrib.: Champaran, Giridih, Hazaribagh, Santal Pargana, Singhbhum.

Bauhinia purpurea L., Sp. Pl. 375. 1753; Baker in Hook. f., Fl. Brit. India 2: 284. 1878; Haines, Bot. Bihar Orissa 310. 1922 (Repr. ed., 2: 323. 1961).

Fl. & Fr.: September - March.

Distrib.: Throughout the state.

Bauhinia racemosa Lam., Encycl. 1(2): 390. 1785; Baker in Hook. f., Fl. Brit. India 2: 276. 1878, *p.p. excl. syn. cit. B. timoriensis* Decne.; Haines, Bot. Bihar Orissa 308. 1922 (Repr. ed., 2: 322. 1961).

Fl. & Fr.: April - February.

Distrib.: Hazaribagh, Palamau, Ranchi.

Bauhinia scandens L. var. *anguina* (Roxb.) Ohashi in J. Jap. Bot. 63: 159. 1988. *B. anguina* Roxb., Pl. Corom. 3: 82. t. 285. 1820 & Fl. Ind. 2: 328. 1832; Baker in Hook. f., Fl. Brit. India 2: 284. 1878; Haines, Bot. Bihar Orissa 311. 1922 (Repr. ed., 2: 325. 1961).

Fl. & Fr.: October - March.

Distrib.: Champaran.

Bauhinia semla Wund. in Taxon 25(2/3): 362. 1976, *p.p. excl. syn. cit. B. emarginata* Roxb. ex G. Don: *B. retusa* Roxb., Fl. Ind. 2: 322. 1832, *non* Poir., 1811 *nec* Roxb. ex DC., 1825; Baker in Hook. f., Fl. Brit. India 2: 279. 1878; Haines, Bot. Bihar Orissa 310. 1922 (Repr. ed., 2: 324. 1961).

Fl. & Fr.: September - February.

Distrib.: Hazaribagh, Koderma, Palamau.

Bauhinia tomentosa L., Sp. Pl. 375. 1753; Baker in Hook. f., Fl. Brit. India 2: 275. 1878; Haines, Bot. Bihar Orissa 309. 1922 (Repr. ed., 2: 322. 1961).

Fl. & Fr.: April - February.

Distrib.: Bhagalpur, Gaya, Hazaribagh, Palamau.

Bauhinia vahlii Wight & Arnott, Prodr. 297. 1834; Baker in Hook. *f.*, Fl. Brit. India 2: 279. 1878; Haines, Bot. Bihar Orissa 310. 1922 (Repr. ed., 2: 324. 1961).

Fl. & Fr.: April - March.

Distrib.: Throughout the state.

Bauhinia variegata L., Sp. Pl. 375. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 284. 1878; Haines, Bot. Bihar Orissa 309. 1922 (Repr. ed., 2: 323. 1961).

Fl. & Fr.: February - April.

Distrib.: Bhagalpur, Palamau, Santal Pargana, Sahibganj.

CAESALPINIA L.

Caesalpinia bonduc (L.) Roxb., Fl. Ind. 2: 362. 1832, *p.p. excl. pl. descr. emend.* Dandy & Excell, 1938; Baker in Hook. *f.*, Fl. Brit. India 2: 255. 1878. *Guilandina bonduc* L., Sp. Pl. 381. 1753. *Caesalpinia crista* L., Sp. Pl. 380. 1753, *p.p. min.*; Haines, Bot. Bihar Orissa 317. 1922 (Repr. ed., 2: 331. 1961). *C. bonducella* (L.) Fleming in Asiat. Res. 11: 159. 1810, *nom. illeg.*; Baker in Hook. *f.*, Fl. Brit. India 2: 254. 1878.

Fl. & Fr.: August - April.

Distrib.: Champaran, Gaya, Ranchi, Santal Pargana.

Caesalpinia coriaria (Jacq.) Willd., Sp. Pl. 2: 532. 1800; Haines, Bot. Bihar Orissa 315. 1922 (Repr. ed., 2: 329. 1961). *Poinciana coriaria* Jacq., Select. Strip. Amer. Hist. 123. t. 175. 1763.

Fl. & Fr.: May - August.

Distrib.: Cultivated. Bhagalpur, Koderma, Santal Pargana, Singhbhum.

Caesalpinia crista L., Sp. Pl. 380. 1753, *p.p. excl. syn.* Pluk. & Breyn., *emend.* Dandy & Excell, J. Bot. 76: 179. 1938. *C. nuga* (L.) Aiton, Hortus Kew. ed. 2. 3: 32. 1811; Baker in Hook. *f.*, Fl. Brit. India 2: 255. 1878.

Fl. & Fr.: January - May.

Distrib.: Bhagalpur.

Caesalpinia cucullata Roxb., Fl. Ind. 2: 358. 1832. *Mezoneurum cucullatum* (Roxb.) Wight & Arnott, Prodr. 1: 283. 1834; Baker in Hook. f., Fl. Brit. India 2: 258. 1878; Haines, Bot. Bihar Orissa 315. 1922 (Repr. ed., 2: 329. 1961).

Fl. & Fr.: September - February.

Distrib.: Champaran, Hazaribagh, Purnia, Sahibganj.

Caesalpinia decapetala (Roth) Alston in Trimen, Handb. Fl. Ceylon Suppl. 6: 89. 1931. *Reichardia decapetala* Roth, Nov. Pl. Sp. 212. 1821. *Caesalpinia sepiaria* Roxb., Fl. Ind. 2: 360. 1832; Baker in Hook. f., Fl. Brit. India 2: 256. 1878; Haines, Bot. Bihar Orissa 317. 1922 (Repr. ed., 2: 331. 1961).

Fl. & Fr.: December - April.

Distrib.: Bhagalpur, Palamau, Ranchi, Santal Pargana.

Caesalpinia digyna Rottler in Ges. Naturf. Fr. Neue Schr. 4: 200. t. 3. 1803; Baker in Hook. f., Fl. Brit. India 2: 256. 1878; Haines, Bot. Bihar Orissa 316. 1922 (Repr. ed., 2: 330. 1961).

Fl. & Fr.: August - February.

Distrib.: Champaran, Purnia, Santal Pargana.

Caesalpinia pulcherrima (L.) Sw., Observ. Bot. 166. 1791; Baker in Hook. f., Fl. Brit. India 2: 255. 1878; Haines, Bot. Bihar Orissa 316. 1922 (Repr. ed., 2: 330. 1961). *Poinciana pulcherrima* L., Sp. Pl. 380. 1753.

Fl. & Fr.: August - April.

Distrib.: Cultivated. Bhagalpur, Patna.

Caesalpinia sappan L., Sp. Pl. 381. 1753; Baker in Hook. f., Fl. Brit. India 2: 255. 1878; Haines, Bot. Bihar Orissa 315. 1922 (Repr. ed., 2: 330. 1961).

Fl. & Fr.: August - December.

Distrib.: Cultivated. Hazaribagh, Ranchi.

CASSIA L.

Cassia absus L., Sp. Pl. 376. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 265. 1878; Haines, Bot. Bihar Orissa 305. 1922 (Repr. ed., 2: 319. 1961).

Fl. & Fr.: August - November.

Distrib.: Bhagalpur, Palamau.

Cassia alata L., Sp. Pl. 378. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 264. 1878.

Fl. & Fr.: October - December.

Distrib.: Bhagalpur, Patna.

Cassia auriculata L., Sp. Pl. 379. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 263. 1878; Haines, Bot. Bihar Orissa 304. 1922 (Repr. ed., 2: 317. 1961).

Fl. & Fr.: August - December.

Distrib.: Planted. Chota Nagpur.

Cassia biflora L., Sp. Pl. 378. 1753.

Fl. & Fr.: November - February.

Distrib.: Bhagalpur.

Cassia fistula L., Sp. Pl. 377. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 261. 1878; Haines, Bot. Bihar Orissa 302. 1922 (Repr. ed., 2: 315. 1961).

Fl. & Fr.: April - March.

Distrib.: Throughout the state.

Cassia floribunda Cav., Descr. Pl. 132. 1801.

var. **floribunda**

Distrib.: Bihar (Sanjappa, Legumes India 15. 1992).

Cassia hirsuta L., Sp. Pl. 378. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 263. 1878.

Fl. & Fr.: August - October.

Distrib.: Santal Pargana.

***Cassia javanica* L.**, Sp. Pl. 379. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 267. 1878; Haines, Bot. Bihar Orissa 302. 1922 (Repr. ed., 2: 316. 1961).

var. *javanica*

Fl. & Fr.: May - June.

Distrib.: Cultivated.

***Cassia kleinii* Wight & Arnott**, Prodr. 293. 1834; Baker in Hook. *f.*, Fl. Brit. India 2: 266. 1878; Haines, Bot. Bihar Orissa 306. 1922 (Repr. ed., 2: 320. 1961).

Distrib.: Bihar (Haines, *l.c.*; Sanjappa, Legumes India 17. 1992).

***Cassia mimosoides* L.**, Sp. Pl. 379. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 266. 1878; Haines, Bot. Bihar Orissa 306. 1922 (Repr. ed., 2: 319. 1961).

subsp. ***leschenaultiana*** (DC.) Ohashi in J. Jap. Bot. 50: 308. 1975.
Cassia leschenaultiana DC. in Mem. Soc. Phys. Geneve 2: 132. 1824; Haines, Bot. Bihar Orissa 305. 1922 (Repr. ed., 2: 319. 1961). *C. mimosoides* L. var. ***wallichiana*** (DC.) Baker in Hook. *f.*, Fl. Brit. India 2: 266. 1878.

Fl. & Fr.: August - October.

Distrib.: Palamau, Purnia, Ranchi.

subsp. ***mimosoides***

Fl. & Fr.: August - December.

Distrib.: Palamau.

***Cassia multijuga* L.C. Rich.** in Act. Soc. Hist. Nat. Paris 1: 108. 1792.

Distrib.: Cultivated.

Cassia nodosa Buch.-Ham. ex Roxb., Fl. Ind. 2: 336. 1832; Baker in Hook. f., Fl. Brit. India 2: 261. 1878; Haines, Bot. Bihar Orissa 303. 1922 (Repr. ed., 2: 316. 1961).

Fl. & Fr.: August - December.

Distrib.: Cultivated. Ranchi.

Cassia obtusifolia L., Sp. Pl. 377. 1753. *C. tora* var. *obtusifolia* (L.) Haines, Bot. Bihar Orissa 304. 1922 (Repr. ed., 2: 318. 1961). *C. tora auct. non* L., 1753; Baker in Hook. f., Fl. Brit. India 2: 263. 1878, p.p.

Fl. & Fr.: August - April.

Distrib.: Champaran, Chota Nagpur.

Cassia occidentalis L., Sp. Pl. 377. 1753; Baker in Hook. f., Fl. Brit. India 2: 262. 1878; Haines, Bot. Bihar Orissa 304. 1922 (Repr. ed., 2: 318. 1961).

Fl. & Fr.: August - January.

Distrib.: Throughout the state.

Cassia pumila Lam., Encycl. 1: 651. 1785; Baker in Hook. f., Fl. Brit. India 2: 266. 1878.

Fl. & Fr.: August - November.

Distrib.: Bhagalpur, Hazaribagh, Palamau.

Cassia purpurea Roxb. ex Lindl., Bot. Reg. t. 857. 1824. *C. sophera* L. var. *purpurea* (Roxb. ex Lindl.) Voigt, Hort. Suburb. Calc. 248. 1845; Baker in Hook. f., Fl. Brit. India 2: 263. 1878.

Distrib.: Bihar (Sanjappa, Legumes India 19. 1992).

Cassia rhombifolia Roxb., Fl. Ind. 2: 334. 1832.

Distrib.: Cultivated throughout (Sanjappa, Legumes India 20. 1992).

Cassia roxburghii DC., Prodr. 2: 489. 1825. *C. marginata auct. non* Willd., 1809; Roxb., Fl. Ind. 2: 338. 1832; Baker in Hook. f., Fl. Brit. India 2: 262. 1878; Haines, Bot. Bihar Orissa 303. 1922 (Repr. ed., 2: 317. 1961).

Fl. & Fr.: November - February.

Distrib.: Cultivated. Bhagalpur, Dumka.

Cassia siamea Lam., *Encycl.* 1: 648. 1785; Baker in Hook. *f.*, *Fl. Brit. India* 2: 264. 1878; Haines, *Bot. Bihar Orissa* 303. 1922 (Repr. ed., 2: 317. 1961).

Fl. & Fr.: September - December.

Distrib.: Planted throughout the state.

Cassia sophera L., *Sp. Pl.* 379. 1753; Baker in Hook. *f.*, *Fl. Brit. India* 2: 262. 1878; Haines, *Bot. Bihar Orissa* 305. 1922 (Repr. ed., 2: 318. 1961).

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, Champaran, Patna, Singhbhum.

Cassia surattensis Burm. *f.*, *Fl. Ind.* 97. 1768.

subsp. **glauca** (Lam.) K. & S. Larsen in *Fl. Cambodge, Laos & Vietnam* 18: 102. 1980. *C. glauca* Lam., *Encycl.* 1: 647. 1785; Baker in Hook. *f.*, *Fl. Brit. India* 2: 265. 1878; Haines, *Bot. Bihar Orissa* 303. 1922 (Repr. ed., 2: 317. 1961).

Fl. & Fr.: November - February.

Distrib.: Santal Pargana.

subsp. **surattensis**

var. **suffruticosa** (Koen. ex Roth) D. Chatterjee in *J. Bombay Nat. Hist. Soc.* 57: 697. 1960. *Cassia suffruticosa* Koen. ex Roth, *Nov. Pl. Sp.* 213. 1821. *C. glauca* Lam. var. *suffruticosa* (Koen. ex Roth) Baker in Hook. *f.*, *Fl. Brit. India* 2: 265. 1878.

Distrib.: Throughout - often cultivated (Sanjappa, *Legumes India* 21. 1992).

var. **surattensis**

Distrib.: Throughout - often cultivated (Sanjappa, *Legumes India* 21. 1992).

Cassia thyrsoidea Brenan in Kew Bull. 13: 234. 1958.

Distrib.: Palamau.

Cassia tora L., Sp. Pl. 376. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 263. 1878, *p.p.*; Haines, Bot. Bihar Orissa 304. 1922 (Repr. ed., 2: 318. 1961).

Fl. & Fr.: August - December.

Distrib.: Throughout the state.

CERATONIA L.

Ceratonia siliqua L., Sp. Pl. 1026. 1753; Haines, Bot. Bihar Orissa 302. 1922 (Repr. ed., 2: 320. 1961).

Fl. & Fr.: August - November.

Distrib.: Cultivated.

COLVILLEA Bojer

Colvillea racemosa Bojer in Hook. in Bot. Mag. t. 3325-3326. 1834; Haines, Bot. Bihar Orissa 312. 1922 (Repr. ed., 2: 326. 1961).

Distrib.: Cultivated (Haines, *l.c.*; Sanjappa, Legumes India 25. 1992).

DELONIX Rafin.

Delonix elata (L.) Gamble, Fl. Madras 396. 1919. *Poinciana elata* L., Cent. Pl. 2: 16. 1756; Baker in Hook. *f.*, Fl. Brit. India 2: 260. 1878; Haines, Bot. Bihar Orissa 313. 1922 (Repr. ed., 2: 327. 1961).

Fl. & Fr.: March - August.

Distrib.: Cultivated (Haines, *l.c.*; Sanjappa, Legumes India 27. 1992).

Delonix regia (Bojer ex Hook.) Rafin., Fl. Tell. 2: 92. 1837. *Poinciana regia* Bojer ex Hook. in Bot. Mag. t. 2884. 1826; Baker in Hook. *f.*, Fl. Brit. India 2: 260. 1878; Haines, Bot. Bihar Orissa 313. 1922 (Repr. ed., 2: 327. 1961).

Fl. & Fr.: April - August.

Distrib.: Planted throughout the state.

GLEDITSIA L.

Gleditsia macrantha Desf., Hist. Arb. Arbr. 2: 247. 1809; Haines, Bot. Bihar Orissa 314. 1922 (Repr. ed., 2: 328. 1961).

Distrib.: Planted.

Gleditsia sinensis Lam., Encycl. 2: 465. 1788; Haines, Bot. Bihar Orissa 314. 1922 (Repr. ed., 2: 328. 1961).

Distrib.: Planted.

HAEMATOXYLUM L.

Haematoxylum campechianum L., Sp. Pl. 384. 1753.

Distrib.: Cultivated. Bhagalpur.

HARDWICKIA Roxb.

Hardwickia binata Roxb., Pl. Corom. 3: 6. t. 209. 1811; Baker in Hook. f., Fl. Brit. India 2: 270. 1878; Haines, Bot. Bihar Orissa 307. 1922 (Repr. ed., 2: 321. 1961).

Fl. & Fr.: August - April.

Distrib.: Champaran, Palamau.

PARKINSONIA L.

Parkinsonia aculeata L., Sp. Pl. 375. 1753; Baker in Hook. f., Fl. Brit. India 2: 260. 1878; Haines, Bot. Bihar Orissa 313. 1922 (Repr. ed., 2: 327. 1961).

Fl. & Fr.: September - April.

Distrib.: Cultivated. Bhagalpur, Palamau, Santal Pargana.

PELTOPHORUM (Vogel) Benth., *nom. cons.*

Peltophorum pterocarpum (DC.) Back. ex K. Heyne, Nutt. Pl. Ned.-Ind. ed. 2. 2: 755. 1927. *Inga pterocarpa* DC., Prodr. 2: 441. 1825. *Peltophorum ferrugineum* (Decne.) Benth., Fl. Austral. 2: 279. 1864; Baker in Hook. f., Fl. Brit. India 2: 257. 1878; Haines, Bot. Bihar Orissa 314. 1922 (Repr. ed., 2: 328. 1961).

Fl. & Fr.: August - May.

Distrib.: Planted throughout the state.

SARACA L.

Saraca asoca (Roxb.) de Wilde in Blumea 15: 393. 1968. *Jonesia asoca* Roxb. in Asiat. Res. 4: 355. t. 252-253. 1799. *Saraca indica auct. non L.*, 1767; Baker in Hook. f., Fl. Brit. India 2: 271. 1878; Haines, Bot. Bihar Orissa 312. 1922 (Repr. ed., 2: 326. 1961).

Fl. & Fr.: March - September.

Distrib.: Champaran, Singhbhum.

SCHIZOLOBIUM Vogel

Schizolobium parahyba (Vell.) Blake in Contrib. U. S. Nat. Herb. 20: 240. 1919. *Cassia parahyba* Vell., Fl. Flum. 168. 1790. *Schizolobium excelsum* Vogel in Linnaea 11: 399. 1837, *nom. illeg.*; Haines, Bot. Bihar Orissa 314. 1922 (Repr. ed., 2: 328. 1961).

Distrib.: Planted. Ranchi.

TAMARINDUS L.

Tamarindus indica L., Sp. Pl. 34. 1753; Baker in Hook. f., Fl. Brit. India 2: 273. 1878; Haines, Bot. Bihar Orissa 311. 1922 (Repr. ed., 2: 325. 1961).

Fl. & Fr.: April - February.

Distrib.: Cultivated throughout the state.

MIMOSACEAE

ACACIA Mill.

✓*Acacia auriculiformis* A. Cunn. ex Benth. in Hook., Lond. J. Bot. 1: 377. 1842; Haines, Bot. Bihar Orissa 330. 1922 (Repr. ed., 2: 345. 1961).

Fl. & Fr.: August - May.

Distrib.: Planted. Bhagalpur, Ranchi.

✓*Acacia caesia* (L.) Willd., Sp. Pl. 4: 1090. 1806; Haines, Bot. Bihar Orissa 328. 1922 (Repr. ed., 2: 342. 1961), *excl. syn. cit. Mimosa caesia* L., Sp. Pl. 522. 1753, *p.p. Acacia intsia* (L.) Willd. var. *caesia* (L.) Wight & Arnott ex Baker in Hook. f., Fl. Brit. India 2: 297. 1878.

Fl. & Fr.: May - December.

Distrib.: Chota Nagpur, Santal Pargana.

Acacia catechu (L. f.) Willd., Sp. Pl. 4: 1079. 1806; Baker in Hook. f., Fl. Brit. India 2: 295. 1878; Haines, Bot. Bihar Orissa 329. 1922 (Repr. ed., 2: 343. 1961). *Mimosa catechu* L. f., Suppl. Pl. 439. 1782. *Acacia catechu* (L. f.) Willd. var. *catechuoides* (Roxb.) Prain in J. Asiat. Soc. Bengal 66: 508. 1898; Haines, Bot. Bihar Orissa 329. 1922 (Repr. ed., 2: 344. 1961).

Fl. & Fr.: August - March.

Distrib.: Champaran, Godda, Hazaribagh, Koderma, Palamau, Ranchi, Sahibganj.

Acacia concinna (Willd.) DC., Prodr. 2: 464. 1825; Baker in Hook. f., Fl. Brit. India 2: 296. 1878; Haines, Bot. Bihar Orissa 328. 1922 (Repr. ed., 2: 343. 1961). *Mimosa concinna* Willd., Sp. Pl. 4: 1039. 1806. *Acacia concinna* (Willd.) DC. var. *rugata* (Lam.) Baker in Hook. f., Fl. Brit. India 2: 297. 1878; Haines, Bot. Bihar Orissa 328. 1922 (Repr. ed., 2: 343. 1961).

Fl. & Fr.: April - March.

Distrib.: Champaran, Purnia, Singhbhum.

Acacia eburnea (L. f.) Willd., Sp. Pl. 4: 1081. 1806; Baker in Hook. f., Fl. Brit. India 2: 293. 1878, *p.p. Mimosa eburnea* L. f., Suppl. Pl. 437. 1782.

Fl. & Fr.: April - September.

Distrib.: Bihar (Sanjappa, Legumes India 39. 1992).

Acacia farnesiana (L.) Willd., Sp. Pl. 4: 1083. 1806; Baker in Hook. f., Fl. Brit. India 2: 292. 1878; Haines, Bot. Bihar Orissa 324. 1922 (Repr. ed., 2: 338. 1961). *Mimosa farnesiana* L., Sp. Pl. 521. 1753.

Fl. & Fr.: September - April.

Distrib.: Bhagalpur, Champaran, Palamau, Purnia, Ranchi, Singhbhum.

Acacia gageana Craib in Bull. Misc. Inform. Kew 1915: 409. 1915.

Fl. & Fr.: October - December.

Distrib.: Patna.

Acacia intsia (L.) Willd., Sp. Pl. 4: 1091. 1806; Baker in Hook. f., Fl. Brit. India 2: 297. 1878. *Mimosa intsia* L., Sp. Pl. 522. 1753.

Fl. & Fr.: August - April.

Distrib.: Singhbhum.

Acacia lenticularis Buch.-Ham. ex Benth. in Hook., Lond. J. Bot. 1: 508. 1842; Baker in Hook. f., Fl. Brit. India 2: 296. 1878; Haines, Bot. Bihar Orissa 330. 1922 (Repr. ed., 2: 344. 1961).

Fl. & Fr.: May - December.

Distrib.: Palamau, Ranchi, Sahibganj.

Acacia megaladena Desv., J. Bot. (Desvaux) 1: 69. 1814. *A. pennata* (L.) Willd. var. *arrophula* (D. Don) Baker in Hook. f., Fl. Brit. India 2: 298. 1878.

Fl. & Fr.: September - February.

Distrib.: Ranchi, Sahibganj.

Acacia modesta Wallich, Pl. Asiat. Rar. 2: 27. t. 130. 1831; Baker in Hook. f., Fl. Brit. India 2: 296. 1878.

Fl. & Fr.: August - April.

Distrib.: Bhagalpur.

Acacia nilotica (L.) Willd. ex Delile subsp. **indica** (Benth.) Brenan in Kew Bull. 12: 84. 1957. *A. arabica* (Lam.) Willd. var. *indica* Benth. in Hook., Lond. J. Bot. 1: 500. 1842. *A. arabica auct. non* (Lam.) Willd., 1805; Baker in Hook. f., Fl. Brit. India 2: 293. 1878; Haines, Bot. Bihar Orissa 324. 1922 (Repr. ed., 2: 338. 1961).

Fl. & Fr.: August - April.

Distrib.: Throughout the state.

Acacia pennata (L.) Willd., Sp. Pl. 4: 1090. 1806; Baker in Hook. f., Fl. Brit. India 2: 297. 1878, *p.p.*; Haines, Bot. Bihar Orissa 326. 1922 (Repr. ed., 2: 341. 1961). *Mimosa pennata* L., Sp. Pl. 522. 1753.

subsp. **pennata**

var. **canescens** Grah. ex Kurz in J. Asiat. Soc. Bengal 45(2): 298. 1876; Baker in Hook. f., Fl. Brit. India 2: 298. 1878. *A. canescens* Grah. ex Gamble, Fl. Madras 1: 304. 1928; Haines, Bot. Bihar Orissa 326. 1922 (Repr. ed., 2: 341. 1961).

Fl. & Fr.: May - August.

Distrib.: Gaya, Purnia, Singhbhum.

var. **pennata**

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Lohardaga, Ranchi.

Acacia pseudo-eburnea J. R. Drum. in Bull. Misc. Inform. Kew 1922: 185. 1922; Haines, Bot. Bihar Orissa 325. 1922 (Repr. ed., 2: 339. 1961).

Fl. & Fr.: November - January.

Distrib.: Bihar (Haines, *l.c.*; Sanjappa, Legumes India 43. 1992).

Acacia suma (Roxb.) Kurz in Brandis, For. Fl. N. W. C. Ind. 187. 1874; Baker in Hook. f., Fl. Brit. India 2: 294. 1878; Haines, Bot. Bihar Orissa 330. 1922 (Repr. ed., 2: 344. 1961). *Mimosa suma* Roxb., Fl. Ind. 2: 563. 1832.

Fl. & Fr.: August - December.

Distrib.: Champaran, Ranchi.

Acacia torta (Roxb.) Craib in Bull. Misc. Inform. Kew 1915: 410. 1915; Haines, Bot. Bihar Orissa 326. 1922 (Repr. ed., 2: 342. 1961). *Mimosa torta* Roxb., Fl. Ind. 2: 566. 1832. *Acacia pennata auct. non* (L.) Willd., 1806; Baker in Hook. f., Fl. Brit. India 2: 297. 1878, *p.p.*

Fl. & Fr.: May - March.

Distrib.: Hazaribagh, Palamau, Patna, Ranchi, Sahibganj, Singhbhum.

ADENANTHERA L.

Adenantha pavonina L., Sp. Pl. 384. 1753; Baker in Hook. f., Fl. Brit. India 2: 287. 1878; Haines, Bot. Bihar Orissa 319. 1922 (Repr. ed., 2: 333. 1961).

Fl. & Fr.: July - August.

Distrib.: Bhagalpur, Dumka, Patna, Ranchi.

ALBIZIA Durazz.

Albizia chinensis (Osb.) Merr. in Amer. J. Bot. 3: 575. 1916. *Mimosa chinensis* Osb., Dajb. Ostind. Resa 233. 1757. *Albizia stipulata* (DC.) Boiv., Encycl. 19e, siecle 2: 33. 1834; Baker in Hook. f., Fl. Brit. India 2: 300. 1878; Haines, Bot. Bihar Orissa 334. 1922 (Repr. ed., 2: 349. 1961).

Fl. & Fr.: May - April.

Distrib.: Champaran, Palamau, Purnia, Ranchi.

Albizia lebbeck (L.) Benth. in Hook., Lond. J. Bot. 3: 87. 1844, *p.p.* 'lebbeck' & Trans. Linn. Soc. London 30: 562. 1875, *p.p.*; Baker in Hook. f., Fl. Brit. India 2: 298. 1878; Haines, Bot. Bihar Orissa 332. 1922 (Repr. ed., 2: 346. 1961). *Mimosa lebbeck* L., Sp. Pl. 516. 1753.

var. **lebbeck**

Fl. & Fr.: April - March.

Distrib.: Bhagalpur, Champaran, Palamau, Ranchi, Singhbhum.

var. **pubescens** Haines, Bot. Bihar Orissa 332. 1922 (Repr. ed., 2: 347. 1961).

Fl. & Fr.: April - October.

Distrib.: Palamau.

var. *rostrata* Haines, Bot. Bihar Orissa 332. 1922 (Repr. ed., 2: 347. 1961).

Fl. & Fr.: April - October.

Distrib.: Palamau.

Albizia lucidior (Steud.) Nielsen in Adansonia 2. 19: 222. 1979. *Inga lucidior* Steud., Nom. Bot. ed. 2. 810. 1840. *Albizia lucida* (Roxb.) Benth. in Hook., Lond. J. Bot. 3: 86. 1844; Baker in Hook. f., Fl. Brit. India 2: 299. 1878; Haines, Bot. Bihar Orissa 331. 1922 (Repr. ed., 2: 346. 1961).

Fl. & Fr.: April - March.

Distrib.: Champaran, Ranchi.

Albizia odoratissima (L. f.) Benth. in Hook., Lond. J. Bot. 3: 88. 1844; Baker in Hook. f., Fl. Brit. India 2: 299. 1878; Haines, Bot. Bihar Orissa 333. 1922 (Repr. ed., 2: 347. 1961). *Mimosa odoratissima* L. f., Suppl. Pl. 437. 1782.

Fl. & Fr.: May - February.

Distrib.: Champaran, Giridih, Palamau, Ranchi, Singhbhum.

Albizia procera (Roxb.) Benth. in Hook., Lond. J. Bot. 3: 89. 1844; Baker in Hook. f., Fl. Brit. India 2: 299. 1878; Haines, Bot. Bihar Orissa 331. 1922 (Repr. ed., 2: 346. 1961). *Mimosa procera* Roxb., Pl. Corom. 2: 12. t. 121. 1799.

Fl. & Fr.: August - May.

Distrib.: Palamau, Ranchi, Singhbhum.

Albizia retusa Benth. in Hook., Lond. J. Bot. 3: 90. 1844.

Distrib.: Bihar (Sanjappa, Legumes India 58. 1992).

Albizia thompsonii Brandis var. *galbana* Haines, Bot. Bihar Orissa 334. 1922 (Repr. ed., 2: 348. 1961).

Distrib.: Bihar (Sanjappa, Legumes India 59. 1992).

CALLIANDRA Benth., *nom. cons.*

Calliandra brevipes Benth. in Hook., Lond. J. Bot. 2: 140. 1840.

Distrib.: Cultivated. Patna.

Calliandra haematocephala Hassk., *Retzia* 1: 216. 1855.

Distrib.: Cultivated in gardens.

Calliandra surinamensis Benth. in Hook., *Lond. J. Bot.* 3: 105. 1841 & *Trans. Linn. Soc. London* 30: 547. 1875.

Distrib.: Cultivated in gardens.

ENTADA Adans., *nom. cons.*

Entada rheedei Spreng., *Syst. Veg.* 2: 325. 1825. *E. scandens auct. non* Benth., 1841: Baker in Hook. *f.*, *Fl. Brit. India* 2: 287. 1878, *p.p.*; Haines, *Bot. Bihar Orissa* 319. 1922 (*Repr. ed.*, 2: 333. 1961).

Fl. & Fr.: March - April.

Distrib.: Palamau, Purnia, Ranchi, Santal Pargana, Singhbhum.

LEUCAENA Benth.

Leucaena latisiliqua (L.) Gillis in *Taxon* 23: 190. 1974. *Mimosa latisiliqua* L., *Sp. Pl.* 519. 1753. *Leucaena glauca* Benth. in Hook., *Lond. J. Bot.* 4: 416. 1845; Baker in Hook. *f.*, *Fl. Brit. India* 2: 290. 1878; Haines, *Bot. Bihar Orissa* 321. 1922 (*Repr. ed.*, 2: 335. 1961). *L. leucocephala* (Lam.) de Wit. in *Taxon* 10: 84. 1961.

Fl. & Fr.: August - February.

Distrib.: Commonly planted. Bhagalpur, Palamau, West Champaran.

MIMOSA L.

Mimosa himalayana Gamble in *Bull. Misc. Inform. Kew* 1920: 4. 1920; Haines, *Bot. Bihar Orissa* 322. 1922 (*Repr. ed.*, 2: 336. 1961). *M. rubicaulis auct. non*, Lam., 1783: Baker in Hook. *f.*, *Fl. Brit. India* 2: 291. 1878, *p.p.*

Fl. & Fr.: August - March.

Distrib.: Champaran, Hazaribagh, Palamau, Purnia, Ranchi, Santal Pargana.

Mimosa prainiana Gamble, Fl. Madras 421. 1919 & in Bull. Misc. Inform. Kew 1920: 5. 1920.

Fl. & Fr.: December - March.

Distrib.: Bhagalpur.

Mimosa pudica L., Sp. Pl. 518. 1753; Baker in Hook. *f.*, Fl. Brit. India 2: 291. 1878; Haines, Bot. Bihar Orissa 322. 1922 (Repr. ed., 2: 336. 1961).

Fl. & Fr.: August - March.

Distrib.: Champaran, Hazaribagh, Ranchi, Santal Pargana.

NEPTUNIA Lour.

Neptunia oleracea Lour., Fl. Cochinch. 2: 654. 1790; Baker in Hook. *f.*, Fl. Brit. India 2: 285. 1878.

Fl. & Fr.: September - April.

Distrib.: Patna.

Neptunia triquetra (Vahl) Benth. in Hook., J. Bot. 4: 355. 1842; Baker in Hook. *f.*, Fl. Brit. India 2: 286. 1878. *Mimosa triquetra* Vahl, Symb. Bot. 3: 102. 1794.

Fl. & Fr.: August - September.

Distrib.: Central India (Sanjappa, Legumes India 69. 1992).

PARKIA R. Br.

Parkia biglandulosa Wight & Arnott, Prodr. 279. 1834; Baker in Hook. *f.*, Fl. Brit. India 2: 289. 1878; Haines, Bot. Bihar Orissa 321. 1922 (Repr. ed., 2: 335. 1961).

Fl. & Fr.: January - April.

Distrib.: Singhbhum.

PITHECELLOBIUM Mart., *nom. cons.*

Pithecellobium dulce (Roxb.) Benth. in Hook., Lond. J. Bot. 3: 199. 1844. '*Pithecolobium*'; Baker in Hook. *f.*, Fl. Brit. India 2: 302. 1878:

Haines, Bot. Bihar Orissa 335. 1922 (Repr. ed., 2: 349. 1961). *Mimosa dulcis* Roxb., Pl. Corom. 1: 67. t. 99. 1798.

Fl. & Fr.: January - June.

Distrib.: Often cultivated. Bhagalpur, Hazaribagh, Koderma, Palamau.

PROSOPIS L.

Prosopis cineraria (L.) Druce, Rep. Bot. Soc. Exch. Club Brit. Isles 1913, 3: 422. 1914. *Mimosa cineraria* L., Sp. Pl. ed. 2, 2: 1500. 1763, excl. ref. Br. (*cinerea*). *Prosopis spicigera* L., Mant. Pl. 68. 1767; Baker in Hook. f., Fl. Brit. India 2: 288. 1878; Haines, Bot. Bihar Orissa 320. 1922 (Repr. ed., 2: 334. 1961).

Fl. & Fr.: December - May.

Distrib.: Bhagalpur.

SAMANEA (DC.) Merr.

Samanea saman (Jacq.) Merr. in J. Wash. Acad. Sci. 6: 46. 1916. *Mimosa saman* Jacq., Fragm. Bot. 15. t. 9. 1800. *Enterolobium saman* (Jacq.) Prain in J. Asiat. Soc. Bengal 66: 252. 1897; Haines, Bot. Bihar Orissa 335. 1922 (Repr. ed., 2: 350. 1961).

Fl. & Fr.: March - June.

Distrib.: Cultivated, Ranchi.

XYLIA Benth.

Xylia xylocarpa (Roxb.) Taub., Bot. Centralbl. 67: 395. 1891; Haines, Bot. Bihar Orissa 321. 1922 (Repr. ed., 2: 335. 1961). *Mimosa xylocarpa* Roxb., Pl. Corom. 1: 68. t. 100. 1796 & Fl. Ind. 2: 543. 1832. *Xylia dolabriformis* Benth. in Hook., Lond. J. Bot. 4: 417. 1845; Baker in Hook. f., Fl. Brit. India 2: 286. 1878.

Fl. & Fr.: April - March.

Distrib.: Bihar (Sanjappa, Legumes India 73. 1992).

ROSACEAE**ERIOBOTRYA Lindl.**

Eriobotrya japonica Lindl. in Trans. Linn. Soc. London 13: 102. 1822; Hook. f., Fl. Brit. India 2: 372. 1878; Haines, Bot. Bihar Orissa 341. 1922 (Repr. ed., 2: 355. 1961).

Fl. & Fr.: September - April.

Distrib.: Cultivated. Patna, Ranchi.

FRAGARIA L.

Fragaria elatior Ehrh., Beitr. 7: 23. 1792; Haines, Bot. Bihar Orissa 339. 1922 (Repr. ed., 2: 353. 1961).

Fl.: February.

Distrib.: Cultivated. Ranchi (Haines, *l.c.*).

POTENTILLA L.

Potentilla bannehalensis Cambess. in Jacquem., Voy. Inde 4: 52, 2, t. 64. 1844. *P. leschenaultiana* Ser. var. *bannehalensis* (Cambess.) Hook. f., Fl. Brit. India 2: 350. 1878. *P. leschenaultiana* Ser. var. *biharensis* Haines, Bot. Bihar Orissa 339. 1922 (Repr. ed., 2: 354. 1961).

Fl. & Fr.: July - August.

Distrib.: Palamau.

Potentilla indica (Andr.) Wolf, Monogr. Potentilla 664. 1908; *Fragaria indica* Andr., Bot. Repos. 7: t. 479. 1807; Hook. f., Fl. Brit. India 2: 343. 1878; Haines, Bot. Bihar Orissa 339. 1922 (Repr. ed., 2: 353. 1961). *Duchesnea indica* (Andr.) Focke in Engler & Prantl, Nat. Pflanzenfam. 3(3): 33. 1888.

Fl. & Fr.: November - March.

Distrib.: Purnia, West Champaran.

Potentilla sundaica (Blume) Kuntze, Revis. Gen. Pl. 1: 219. 1891. *Fragaria sundaica* Blume, Bijdr. 1106. 1826. *Potentilla kleiniana* Wight

& Arnott in Wight, *Illustr. Ind. Bot.* 1: t. 85. 1831; Hook. *f.*, *Fl. Brit. India* 2: 359. 1878; Haines, *Bot. Bihar Orissa* 339. 1922 (Repr. ed., 2: 354. 1961).

Fl. & Fr.: April - September.

Distrib.: Palamau, Ranchi.

Potentilla supina L., *Sp. Pl.* 497. 1753, *p.p. excl.* Moguntiam spec.; Hook. *f.*, *Fl. Brit. India* 2: 359. 1878, *excl.* *P. amurensis* Maxim.; Haines, *Bot. Bihar Orissa* 340. 1922 (Repr. ed., 2: 354. 1961).

Fl. & Fr.: December - May.

Distrib.: Hazaribagh, Patna, Purnia, Sahibganj, West Champaran.

PRUNUS L.

Prunus amygdalus Batsch, *Beytr. Entw. Pragm. Gesch. Natur. Reiche* 1: 30. 1801; Hook. *f.*, *Fl. Brit. India* 2: 313. 1878; Haines, *Bot. Bihar Orissa* 336. 1922 (Repr. ed., 2: 351. 1961).

Fl. & Fr.: February - June.

Distrib.: Cultivated.

Prunus ceylanica (Wight) Miq., *Fl. Ind. Bat.* 1, 1: 365. 1855. *Polydontia ceylanica* Wight, *Illustr. Ind. Bot.* 1: 203. 1840, '*Polydontia*' *Pygeum acuminatum* Colebr. in *Trans. Linn. Soc. London* 12: 306. t. 18. 1818; Hook. *f.*, *Fl. Brit. India* 2: 318. 1878; Haines, *Bot. Bihar Orissa* 337. 1922 (Repr. ed., 2: 351. 1961).

Fl. & Fr.: April - October.

Distrib.: Singhbhum.

Prunus x domestica L., *Sp. Pl.* 475. 1753, *pro sp.* *P. communis* Huds. var. *domestica* (L.) Huds., *Fl. Anglica* ed. 2. 1: 212. 1778; Hook. *f.*, *Fl. Brit. India* 2: 315. 1878.

subsp. **domestica**

Fl. & Fr.: February - May.

Distrib.: Palamau.

subsp. **insititia** (L.) Schneid., *Ill. Handb. Laubholz* 1: 630. 1906. *P. insititia* L., *Cent. Pl.* 1: 12. 1755. *P. communis* Huds. var. *insititia* (L.)

Huds., Fl. Anglica ed. 2. 1: 212. 1778; Hook. f., Fl. Brit. India 2: 315. 1878.

Fl. & Fr.: April - September.

Distrib.: Palamau.

Prunus persica (L.) Batsch, Beytr. Ent. Pragm. Gesch. Natur. Reiche 1: 30. 1801; Hook. f., Fl. Brit. India 2: 313. 1878; Haines, Bot. Bihar Orissa 336. 1922 (Repr. ed., 2: 351. 1961). *Amygdalus persica* L., Sp. Pl. 472. 1753.

Fl. & Fr.: January - June.

Distrib.: Cultivated. Palamau, Ranchi.

Prunus pygeoides Koehne in Engler, Bot. Jahrb. 52: 297. 1915. *Pygeum andersonii* Hook. f., Fl. Brit. India 2: 320. 1878; Haines, Bot. Bihar Orissa 337. 1922 (Repr. ed., 2: 352. 1961). *P. lucidum* T. Anders. ex Haines, For. Fl. Chota Nagpur 238. 1910, *nom. illeg.*

Fl. & Fr.: November - December.

Distrib.: Giridih.

PYRUS L.

Pyrus communis L., Sp. Pl. 479. 1753; Hook. f., Fl. Brit. India 2: 374. 1878; Haines, Bot. Bihar Orissa 341. 1922 (Repr. ed., 2: 356. 1961).

Fl. & Fr.: March - July.

Distrib.: Cultivated. Palamau, Ranchi.

Pyrus pashia Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 236. 1825; Hook. f., Fl. Brit. India 2: 374. 1878.

Fl. & Fr.: November - April.

Distrib.: Palamau.

ROSA L.

Rosa brunonii Lindl., Ros. Monogr. 120. t. 14. 1820. *R. moschata* sensu Brandis, For. Fl. 201. 1874; Hook. f., Fl. Brit. India 2: 367. 1878, *non* Herrm., 1762, *nec* Mill., 1768.

Fl. & Fr.: July - October.

Distrib.: Deoghar.

Rosa x centifolia L., Sp. Pl. 491. 1753; Hook. *f.*, Fl. Brit. India 2: 364. 1878.

Fl. & Fr.: February - April.

Distrib.: Deoghar.

Rosa chinensis Jacq., Obs. Bot. 3: t. 55. 1768. *R. indica auct. non* L., 1753, *nec* Lindl., 1820: Thory in Redoute, Ros. 1: 49. t. 13. 1817; Hook. *f.*, Fl. Brit. India 2: 364. 1878.

Fl. & Fr.: October - February.

Distrib.: Deoghar; also cultivated elsewhere.

Rosa clinophylla Thory in Redoute, Ros. 1: 43. t. 10. 1817, '*clinophylla*'. *R. involucrata* Roxb. *ex* Lindl., Ros. Monogr. 8. 1820; Hook. *f.*, Fl. Brit. India 2: 365. 1878, *p.p. excl. syn. R. lyellii* Lindl.; Haines, Bot. Bihar Orissa 340. 1922 (Repr. ed., 2: 355. 1961).

var. clinophylla

Fl. & Fr.: February - April.

Distrib.: Chota Nagpur, Purnia.

var. glabra (Lindl. *ex* Prain) Ghora & Panigrahi in J. Jap. Bot. 60(2): 57. 1985 & Rosac. India 2: 222. 1995. *Rosa involucrata* Roxb. var. *glabra* Lindl. *ex* Prain in J. Asiat. Soc. Bengal 73(2), no. 5: 202. 1904; Hook. *f.*, Fl. Brit. India 2: 365. 1878.

Fl. & Fr.: March - April.

Distrib.: Chota Nagpur, Patna.

Rosa x damascena Herrm., Diss. Ros. 7. 1762; Hook. *f.*, Fl. Brit. India 2: 364. 1878.

Fl.: February - July.

Distrib.: Deoghar.

Rosa macrophylla Lindl., Ros. Monogr. 35. t. 6. 1820; Hook. *f.*, Fl. Brit. India 2: 366. 1878.

Fl. & Fr.: March - October.

Distrib.: Patna.

Rosa multiflora Thunb., Fl. Jap. 214. 1784; Hook. *f.*, Fl. Brit. India 2: 364. 1878.

Fl.: June - July.

Distrib.: Deoghar.

RUBUS L.

Rubus ellipticus Sm. in Rees, Cyclop. 30: Rubus n. 16. 1815; Hook. *f.*, Fl. Brit. India 2: 336. 1878; Haines, Bot. Bihar Orissa 338. 1922 (Repr. ed., 2: 353. 1961).

Fl. & Fr.: December - March.

Distrib.: Palamau, West Champaran.

Rubus niveus Thunb., Diss. Bot. Med de Rubo 9. f. 3. 1813. *R. lasiocarpus* Sm. in Rees, Cyclop. 32, n. 6. 1816; Hook. *f.*, Fl. Brit. India 2: 339. 1878.

Fl. & Fr.: December - February.

Distrib.: Palamau.

Rubus rugosus Sm. in Rees, Cyclop. 30: Rubus n. 34. 1819. *R. moluccanus auct. non L.*, 1753; Hook. *f.*, Fl. Brit. India 2: 330. 1878, *p.p.*; Haines, Bot. Bihar Orissa 338. 1922 (Repr. ed., 2: 352. 1961).

Fl. & Fr.: August - October.

Distrib.: Palamau.

VAHLIACEAE

VAHLIA Thunb., *nom. cons.*

Vahlia dichotoma (Murray) Kuntze, Revis. Gen. Pl. 227. 1891. *Heuchera dichotoma* Murray in Nov. Comm. Soc. Reg. Sci. Gott. 3: 64.

t. 1. 1773. *Vahlia oldenlandioides* Roxb., Fl. Ind. 2: 89. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 2: 399. 1878; Haines, Bot. Bihar Orissa 341. 1922 (Repr. ed., 2: 356. 1961).

Fl. & Fr.: November - January.

Distrib.: Bihar (Haines, l.c.).

Vahlia digyna (Retz.) Kuntze, Revis. Gen. Pl. 227. 1891. *Oldenlandia digyna* Retz., Observ. Bot. 4: 23. 1786. *Vahlia viscosa* Roxb., Fl. Ind. 2: 89. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 2: 399. 1878; Haines, Bot. Bihar Orissa 342. 1922 (Repr. ed., 2: 356. 1961).

Fl. & Fr.: January - May.

Distrib.: Patna.

CRASSULACEAE

KALANCHOE Adans.

Kalanchoe daigremontiana Hamet & Perrier in Ann. Mus. Col. Marseille ser. 3, 2: 128. 1914.

Fl.: January.

Distrib.: Cultivated. Singhbhum.

Kalanchoe laciniata (L.) DC., Hist. Pl. Grass. 2: 100. 1802; C.B. Clarke in Hook. f., Fl. Brit. India 2: 415. 1878; Haines, Bot. Bihar Orissa 343. 1922 (Repr. ed., 2: 358. 1961). *Cotyledon laciniata* L., Sp. Pl. 430. 1753.

Fl. & Fr.: January - April.

Distrib.: Patna.

Kalanchoe lanceolata (Forssk.) Pers., Syn. Pl. 1: 445. 1805. *Cotyledon lanceolata* Forssk., Fl. Aegypt.-Arab. 89. 1775. *Kalanchoe floribunda* Wight & Arnott, Prodr. 359. 1834; C.B. Clarke in Hook. f., Fl. Brit. India 2: 414. 1878.

var. ***glabra*** (C.B. Clarke) Srinivasan in Fl. Tamil Nadu 1: 145. 1983. *K. floribunda* var. *glabra* C.B. Clarke in Hook. f., Fl. Brit. India 2: 415.

1878. *K. heterophylla* Prain, Bengal Pl. 340. 1963 (Repr. ed.); Haines, Bot. Bihar Orissa 343. 1922 (Repr. ed., 2: 358. 1961).

Fl. & Fr.: January - April.

Distrib.: Chota Nagpur, Giridih, Hazaribagh.

var. **lanceolata**

Fl. & Fr.: January - March.

Distrib.: Hazaribagh.

Kalanchoe pinnata (Lam.) Pers., Syn. Pl. 1: 446. 1805. *Cotyledon pinnatum* Lam., Encycl. 2: 141. 1786. *Bryophyllum calycinum* Salisb., Parad. Lond. t. 3. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 2: 413. 1878; Haines, Bot. Bihar Orissa 342. 1922 (Repr. ed., 2: 357. 1961).

Fl. & Fr.: October - February.

Distrib.: Cultivated. Bhagalpur, Palamau, Patna.

Kalanchoe tubiflora (Harvey) Raym.-Hamet, Beih. Bot. Centralbl. 29(2): 44. 1912. *Bryophyllum tubiflorum* Harvey in Harvey & Sonder, Fl. Cap. 2: 380. 1862.

Fl.: January.

Distrib.: Cultivated. Singhbhum.

Kalanchoe verticillata Elliot in J. Linn. Soc. London (Bot.) 29: 14. 1891.

Fl.: January.

Distrib.: Singhbhum.

DROSERACEAE

DROSERA L.

Drosera burmanni Vahl, Symb. Bot. 3: 50. 1794; C.B. Clarke in Hook. f., Fl. Brit. India 2: 424. 1878; Haines, Bot. Bihar Orissa 344. 1922 (Repr. ed., 2: 359. 1961).

Fl. & Fr.: October - April.

Distrib.: Chota Nagpur, Purnia.

Drosera indica L., Sp. Pl. 282. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 424. 1878; Haines, Bot. Bihar Orissa 344. 1922 (Repr. ed., 2: 359. 1961).

Fl. & Fr.: August - January.

Distrib.: Chota Nagpur, Giridih, Hazaribagh.

Drosera peltata Sm. *ex* Willd., Sp. Pl. 1: 1546. 1798; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 424. 1878; Haines, Bot. Bihar Orissa 344. 1922 (Repr. ed., 2: 359. 1961).

Fl. & Fr.: September - January.

Distrib.: Palamau.

HALORAGIDACEAE

MYRIOPHYLLUM L.

Myriophyllum oliganthum (Wight & Arnott) F. v. Muell., *Fragm. Phyt. Aust.* 10: 54. 1876. *Haloragis oligantha* Wight & Arnott, *Prodr.* 338. 1838. *Myriophyllum intermedium auct. non* DC., 1828; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 433. 1878, *excl. syn. M. variaefolium* Hook. *f.*

Fl. & Fr.: March - May.

Distrib.: Chota Nagpur.

Myriophyllum tetrandrum Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 470. 1820. *M. indicum auct. non* Willd., 1805; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 433. 1878, *p.p.*; Haines, Bot. Bihar Orissa 345. 1922 (Repr. ed., 2: 360. 1961).

Fl. & Fr.: August - October.

Distrib.: Purnia, West Champaran.

Myriophyllum tuberculatum Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 451. 1820; Haines, Bot. Bihar Orissa 345. 1922 (Repr. ed., 2: 360. 1961).

Fl. & Fr.: September - December.

Distrib.: Chota Nagpur.

CALLITRICHACEAE**CALLITRICHE L.**

Callitriche stagnalis Scop., Fl. Carn. ed. 2, 2: 251. 1772; C.B. Clarke in Hook. f., Fl. Brit. India 2: 434. 1878; Haines, Bot. Bihar Orissa 149. 1921 (Repr. ed., 1: 154. 1961).

Fl. & Fr.: June - August.

Distrib.: Chota Nagpur.

RHIZOPHORACEAE**CARALLIA Roxb.**

Carallia brachiata (Lour.) Merr. in Philipp. J. Sci. 15: 249. 1919. *Diatoma brachiata* Lour., Fl. Cochinch. 1: 296. 1790. *Carallia integerrima* DC., Prodr. 3: 33. 1828; Henslow in Hook. f., Fl. Brit. India 2: 439. 1878; Haines, Bot. Bihar Orissa 350. 1922 (Repr. ed., 2: 365. 1961).

Fl. & Fr.: December - May.

Distrib.: Chota Nagpur, Purnia, Santal Pargana, Singhbhum.

COMBRETACEAE**ANOGEISSUS (DC.) Guill., Perr. & A. Rich.**

Anogeissus acuminata (Roxb. ex DC.) Guill. & Perr. in Guill., Perr. & A. Rich., Fl. Seneg. Tent. 7: 280. 1832; Haines, Bot. Bihar Orissa 355. 1922 (Repr. ed., 2: 371. 1961). *Conocarpus acuminata* Roxb. ex DC., Prodr. 3: 16. 1828. *Anogeissus acuminata* (Roxb. ex DC.) Guill. & Perr. var. *typica* C.B. Clarke in Hook. f., Fl. Brit. India 2: 451. 1878.

Fl. & Fr.: March - May.

Distrib.: Palamau, Patna, Singhbhum.

Anogeissus latifolia (Roxb. ex DC.) Wallich ex Guill. & Perr. in Guill., Perr. & A. Rich., Fl. Seneg. Tent. 7: 280. 1832; Haines, Bot. Bihar Orissa 355. 1922 (Repr. ed., 2: 370. 1961). *Conocarpus latifolia* Roxb.

ex DC., Prodr. 3: 16. 1828. *Anogeissus latifolia* var. *glabra* & var. *villosa* C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 450. 1878. *A. latifolia* var. *tomentosa* Haines, Bot. Bihar Orissa 355. 1922 (Repr. ed., 2: 370. 1961).

Fl. & Fr.: September - January.

Distrib.: Throughout the state.

Anogeissus pendula Edgew. in J. Asiat. Soc. Bengal 21: 171. 1853; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 451. 1878.

Fl. & Fr.: August - March.

Distrib.: Bhagalpur.

Anogeissus sericea Brandis in Indian For. 25: 287. 1899. *A. latifolia* (Roxb. *ex DC.*) Wallich *ex* Guill. & Perr. var. *parviflora* C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 450. 1878.

Fl. & Fr.: March - July.

Distrib.: Singhbhum.

CALYCOPTERIS Lam.

Calycopteris floribunda Lam., Encycl. 2: 485. t. 357. 1797; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 449. 1878; Haines, Bot. Bihar Orissa 356. 1922 (Repr. ed., 2: 372. 1961).

Fl. & Fr.: February - April.

Distrib.: Singhbhum.

COMBRETUM Loefl.

Combretum albidum G. Don in Trans. Linn. Soc. London 15: 429. 1827. *C. ovalifolium* Roxb., Fl. Ind. 2: 226. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 458. 1878; Haines, Bot. Bihar Orissa 358. 1922 (Repr. ed., 2: 373. 1961).

Fl. & Fr.: December - May.

Distrib.: Chota Nagpur.

Combretum coccineum (Sonner.) Lam., Encycl. 1: 734. 1785.
Cristaria coccinea Sonner., Voy. Ind. Or. Chine 3: 284. 1782.

Fl. & Fr.: October - June.

Distrib.: Chota Nagpur.

Combretum nanum Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 219.
1825; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 457. 1878; Haines, Bot.
Bihar Orissa 358. 1922 (Repr. ed., 2: 374. 1961).

Fl. & Fr.: March - August.

Distrib.: Champaran, Chota Nagpur, Gaya.

Combretum roxburghii Spreng., Syst. Veg. 2: 331. 1825. *C.*
decandrum Roxb., Pl. Corom. t. 59. 1796, *non* Jacq., 1760; C.B. Clarke
in Hook. *f.*, Fl. Brit. India 2: 452. 1878; Haines, Bot. Bihar Orissa 357.
1922 (Repr. ed., 2: 373. 1961).

Fl. & Fr.: October - June.

Distrib.: Throughout the state.

Combretum wallichii DC., Prodr. 3: 21. 1828; C.B. Clarke in Hook.
f., Fl. Brit. India 2: 456. 1878.

Fl. & Fr.: October - December.

Distrib.: Chota Nagpur.

QUISQUALIS L.

Quisqualis indica L., Sp. Pl. ed. 2. 556. 1762; C.B. Clarke in Hook.
f., Fl. Brit. India 2: 459. 1878; Haines, Bot. Bihar Orissa 359. 1922 (Repr.
ed., 2: 374. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated in gardens.

TERMINALIA L.

Terminalia alata Heyne ex Roth, Nov. Pl. Sp. 379. 1821. *T.*
tomentosa (Roxb. ex DC.) Wight & Arnott, Prodr. 314. 1834; C.B. Clarke
in Hook. *f.*, Fl. Brit. India 2: 447. 1878; Haines, Bot. Bihar Orissa 353.

1922 (Repr. ed., 2: 369. 1961). *Pentaptera tomentosa* Roxb. ex DC., Prodr. 3: 14. 1828.

Fl. & Fr.: May - March.

Distrib.: Throughout the state.

Terminalia arjuna (Roxb. ex DC.) Wight & Arnott, Prodr. 314. 1834; C.B. Clarke in Hook. f., Fl. Brit. India 2: 447. 1878; Haines, Bot. Bihar Orissa 353. 1922 (Repr. ed., 2: 368. 1961). *Pentaptera arjuna* Roxb. ex DC., Prodr. 3: 14. 1828. - *Arjun*

Fl. & Fr.: May - March.

Distrib.: Bhagalpur, Chota Nagpur, Giridih, Hazaribagh, Koderma, Patna, Singhbhum, West Champaran.

Terminalia bellirica (Gaertn.) Roxb., Pl. Corom. t. 198. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 2: 445. 1878; Haines, Bot. Bihar Orissa 352. 1922 (Repr. ed., 2: 367. 1961). *Myrobalanus bellirica* Gaertn., Fruct. Sem. Pl. 2: 90. t. 97. f. a-d. 1791. *Baheda, Bahera*

Fl. & Fr.: March - February.

Distrib.: Bhagalpur, East Champaran, Hazaribagh, Palamau, Patna, West Champaran.

Terminalia catappa L., Syst. Nat. ed. 12. 2: 674. 1767; C.B. Clarke in Hook. f., Fl. Brit. India 2: 444. 1878; Haines, Bot. Bihar Orissa 352. 1922 (Repr. ed., 2: 367. 1961).

Fl. & Fr.: March - September.

Distrib.: Patna, Singhbhum.

Terminalia chebula Retz., Observ. Bot. 5: 31. 1789; C.B. Clarke in Hook. f., Fl. Brit. India 2: 446. 1878, *p.p.*; Haines, Bot. Bihar Orissa 352. 1922 (Repr. ed., 2: 368. 1961). - *Harra*

Fl. & Fr.: April - December.

Distrib.: East Champaran, Chota Nagpur, Hazaribagh, Patna, Santal Pargana, Singhbhum, West Champaran.

Terminalia citrina (Gaertn.) Roxb. ex Flem. in Asiat. Res. 11: 183. 1810; C.B. Clarke in Hook. f., Fl. Brit. India 2: 446. 1878. *Myrobalanus citrina* Gaertn., Fruct. Sem. Pl. 2: t. 97. 1791.

Fl. & Fr.: April - December.

Distrib.: Koderma.

MYRTACEAE

CALLISTEMON R. Br.

Callistemon lanceolatus DC., Prodr. 3: 223. 1828.

Fl. & Fr.: February - May.

Distrib.: Cultivated in gardens.

Callistemon linearis DC., Prodr. 3: 223. 1828; Haines, Bot. Bihar Orissa 366. 1922 (Repr. ed., 2: 382. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated in gardens.

Callistemon salignus Sweet, Fl. Austral. sub t. 29. 1827-1828; Haines, Bot. Bihar Orissa 366. 1922 (Repr. ed., 2: 382. 1961).

Fl. & Fr.: February - May.

Distrib.: Cultivated in gardens.

EUCALYPTUS L' Hérit.

Eucalyptus amygdalina Labill., Nov. Holl. Pl. 2: 14. t. 154. 1806; Haines, Bot. Bihar Orissa 365. 1922 (Repr. ed., 2: 381. 1961)

Distrib.: Cultivated.

Eucalyptus camaldulensis Dehnh., Cat. Pl. Hort. Camald. 20. 1832.

Distrib.: Cultivated.

Eucalyptus crebra F. v. Muell. in J. Linn. Soc. London 3: 87. 1859; Haines, Bot. Bihar Orissa 365. 1922 (Repr. ed., 2: 381. 1961).

Distrib.: Cultivated.

Eucalyptus globulus Labill., Voy. 1: 153. t. 13. 1800; Haines, Bot. Bihar Orissa 366. 1922 (Repr. ed., 2: 382. 1961).

Distrib.: Cultivated.

Eucalyptus maculata Hook., Icon. Pl. 7: 619. 1844; Haines, Bot. Bihar Orissa 365. 1922 (Repr. ed., 2: 381. 1961).

Fl. & Fr.: September - April.

Distrib.: Cultivated. Bhagalpur, Patna.

Eucalyptus rostrata Schlecht. in Linnaea 20: 655. 1847; Haines, Bot. Bihar Orissa 365. 1922 (Repr. ed., 2: 381. 1961).

Distrib.: Cultivated.

Eucalyptus tereticornis Sm., Bot. New Holl. 41. 1793; Haines, Bot. Bihar Orissa 366. 1922 (Repr. ed., 2: 382. 1961).

Distrib.: Cultivated. Bhagalpur, Hazaribagh, Palamau, Patna.

Eucalyptus umbellata Dum., Cours. Bot. Cult. ed. 2, 7: 279. 1814.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated.

MELALEUCA L.

Melaleuca leucadendron L., Mant. Pl. 105. 1767; Duthie in Hook. f., Fl. Brit. India 2: 465. 1879; Haines, Bot. Bihar Orissa 366. 1922 (Repr. ed., 2: 382. 1961).

Fl. & Fr.: August - October.

Distrib.: Bhagalpur, Patna.

MYRTUS L.

Myrtus communis L., Sp. Pl. 471. 1753; Haines, Bot. Bihar Orissa 364. 1922 (Repr. ed., 2: 380. 1961).

Distrib.: Planted in gardens.

PIMENTA Lindl.

Pimenta officinalis Lindl., Coll. Bot. sub t. 19. 1821; Haines, Bot. Bihar Orissa 364. 1922 (Repr. ed., 2: 380. 1961).

Distrib.: Cultivated in gardens.

PSIDIUM L.

Psidium guajava L., Sp. Pl. 470. 1753; Duthie in Hook. *f.*, Fl. Brit. India 2: 468. 1878; Haines, Bot. Bihar Orissa 364. 1922 (Repr. ed., 2: 380. 1961). - *Amrud*

Fl. & Fr.: Rainy and winter seasons.

Distrib.: Cultivated almost throughout the state.

SYZYGium Gaertn., *nom. cons.*

Syzygium calophyllifolium Walp., Rep. 2: 180. 1843. *Eugenia calophyllifolia* (Walp.) Wight, Icon. Pl. Ind. Orient. t. 1000. 1845; Duthie in Hook. *f.*, Fl. Brit. India 2: 494. 1878.

Fl. & Fr.: May - June.

Distrib.: Chota Nagpur.

Syzygium caryophyllifolium (Lam.) K.K. Khanna, *comb. nov.* *Eugenia caryophyllifolia* Lam., Encycl. 3: 198. 1789; Haines, Bot. Bihar Orissa 361. 1922 (Repr. ed., 2: 377. 1961). *E. jambolana* Lam. var. *caryophyllifolia* (Lam.) Duthie in Hook. *f.*, Fl. Brit. India 2: 499. 1879.

Considering Duthie's view (*l.c.*) the combination will be as follows :

Syzygium cumini (L.) Skeels var. **caryophyllifolium** (Lam.) K.K. Khanna, *comb. nov.* *Eugenia jambolana* Lam. var. *caryophyllifolia* (Lam.) Duthie in Hook. *f.*, Fl. Brit. India 2: 499. 1879. *E. caryophyllifolia* Lam., Encycl. 3: 198. 1789.

Fl. & Fr.: May - June.

Distrib.: Chota Nagpur.

Syzygium cumini (L.) Skeels in U. S. D. A. Bur. Pl. Ind. Bull. 248: 25. 1812. *Myrtus cumini* L., Sp. Pl. 471. 1753. *Eugenia jambolana* Lam.,

Encycl. 3: 198. 1789; Duthie in Hook. *f.*, Fl. Brit. India 2: 499. 1879; Haines, Bot. Bihar Orissa 360. 1922 (Repr. ed., 2: 376. 1961). - *Jamun*.

Fl. & Fr.: March - August.

Distrib.: Throughout the state.

Syzygium fruticosum DC., Prodr. 3: 260. 1828. *Eugenia fruticosa* Roxb., Fl. Ind. 2: 487. 1832; Duthie in Hook. *f.*, Fl. Brit. India 2: 499. 1879; Haines, Bot. Bihar Orissa 361. 1922 (Repr. ed., 2: 377. 1961).

Fl. & Fr.: May - July.

Distrib.: Chota Nagpur.

Syzygium glaucissimum (Haines) Rathakr. & Nair in J. Econ. Tax. Bot. 4: 287. 1983. *Eugenia glaucissima* Haines, Bot. Bihar Orissa 362. 1922 (Repr. ed., 2: 378. 1961).

Fl. & Fr.: May - June.

Distrib.: Chota Nagpur (Haines, *l.c.*).

Syzygium heyneanum Wallich ex Wight & Arnott, Prodr. 1: 329. 1834. *Eugenia heyneana* Duthie in Hook. *f.*, Fl. Brit. India 2: 500. 1879; Haines, Bot. Bihar Orissa 361. 1922 (Repr. ed., 2: 377. 1961).

Fl. & Fr.: March - August.

Distrib.: Bhagalpur, East Champaran, Chota Nagpur, Hazaribagh, Singhbhum.

Syzygium jambos (L.) Alston in Trimen, Handb. Fl. Ceylon 6: 116. 1931. *Eugenia jambos* L., Sp. Pl. 470. 1753; Duthie in Hook. *f.*, Fl. Brit. India 2: 474. 1878; Haines, Bot. Bihar Orissa 363. 1922 (Repr. ed., 2: 379. 1961).- *Gulabjamun*.

Fl. & Fr.: March - August.

Distrib.: Cultivated. Bhagalpur, Purnia, Santal Pargana.

Syzygium nervosum DC., Prodr. 3: 260. 1828. *Eugenia operculata* Roxb., Fl. Ind. 2: 486. 1832; Duthie in Hook. *f.*, Fl. Brit. India 2: 498. 1879; Haines, Bot. Bihar Orissa 362. 1922 (Repr. ed., 2: 378. 1961).

var. nervosum

Fl. & Fr.: March - July.

Distrib.: Gaya, Giridih, Hazaribagh, Purnia, Ranchi, Santal Pargana, Singhbhum.

var. obovatum (Kurz) Anand Kumar in J. Econ. Tax. Bot. 7(3): 664. 1985. *Eugenia operculata* Roxb. var. *obovata* Kurz in For. Fl. Brit. Burma 1: 482. 1877; Duthie in Hook. f., Fl. Brit. India 2: 498. 1879.

Fl. & Fr.: December - May.

Distrib.: Hazaribagh, Singhbhum.

Syzygium ramosissimum (Duthie) Balakrishnan, Fl. Jowai 1: 200. 1981. *Eugenia ramosissima* Duthie in Hook. f., Fl. Brit. India 2: 480. 1878.

Fl. & Fr.: March - May.

Distrib.: Singhbhum.

Syzygium ruscifolium (Willd.) Sant. & Wagh in Bull. Bot. Surv. India 5: 109. 1964. *Myrtus ruscifolia* Willd., Sp. Pl. 2: 970. 1800. *Eugenia bracteata* (Willd.) Roxb. ex DC., Prodr. 3: 264. 1828; Duthie in Hook. f., Fl. Brit. India 2: 502. 1879; Haines, Bot. Bihar Orissa 363. 1922 (Repr. ed., 2: 379. 1961).

Fl. & Fr.: February - August.

Distrib.: Chota Nagpur.

Syzygium samarangense (Blume) Merr. & Perry in J. Arnold Arb. 19: 115. 1938. *Myrtus samarangensis* Blume, Bijdr. 1084. 1826. *Eugenia javanica* Lam., Encycl. 3: 200. 1789; Duthie in Hook. f., Fl. Brit. India 2: 474. 1878; Haines, Bot. Bihar Orissa 363. 1922 (Repr. ed., 2: 379. 1961).

Fl. & Fr.: April - May.

Distrib.: Cultivated. Bhagalpur, Singhbhum, West Champaran.

Notes: A new combination for a Bengal plant is proposed hereunder.

Syzygium obtusifolium (Roxb.) K.K. Khanna, *comb. nov.* *Eugenia obtusifolia* Roxb., Fl. Ind. 2: 485. 1832. *E. jambolana* Lam. var. *obtusifolia* (Roxb.) Duthie in Hook. f., Fl. Brit. India 2: 500. 1879.

Considering Duthie's view (*l.c.*) the combination will be as follows :

Syzygium cumini (L.) Skeels var. **obtusifolia** (Roxb.) K.K. Khanna, *comb. nov.* *Eugenia jambolana* Lam. var. *obtusifolia* (Roxb.) Duthie in Hook. *f.*, Fl. Brit. India 2: 500. 1879. *E. obtusifolia* Roxb., Fl. Ind. 2: 485. 1832.

LECYTHIDACEAE

BARRINGTONIA J.R. Forster & G. Forster

Barringtonia acutangula (L.) Gaertn., Fruct. Sem. Pl. 2: 97. t. 101. 1791; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 508. 1879; Haines, Bot. Bihar Orissa 368. 1922 (Repr. ed., 2: 384. 1961). *Eugenia acutangula* L., Sp. Pl. 471. 1753.

Fl. & Fr.: October - November.

Distrib.: Bhagalpur, Patna, Singhbhum, West Champaran.

CAREYA Roxb.

Careya arborea Roxb., Pl. Corom. 3: 14. t. 218. 1811; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 511. 1879; Haines, Bot. Bihar Orissa 367. 1922 (Repr. ed., 2: 383. 1961).

Fl. & Fr.: March - July.

Distrib.: Giridih, Hazaribagh, Palamau, Patna, West Champaran.

Careya herbacea Roxb., Pl. Corom. 3. 13. t. 217. 1811 & Fl. Ind. (Carey & Wallich ed.) 2: 638. 1824; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 510. 1879; Haines, Bot. Bihar Orissa 367. 1922 (Repr. ed., 2: 383. 1961).

Fl. & Fr.: March - January.

Distrib.: West Champaran.

COUROUPITA Aublet

Couroupita guianensis Aublet, Hist. Pl. Guiane 2: 708. t. 282. 1775.

Fl. & Fr.: March - May (next year).

Distrib.: Planted in gardens. Bhagalpur, Patna.

MELASTOMATACEAE

MELASTOMA L.

Melastoma malabathricum L., Sp. Pl. 390. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 523. 1879; Haines, Bot. Bihar Orissa 371. 1922 (Repr. ed., 2: 388. 1961).

Fl. & Fr.: March - December.

Distrib.: Gaya, Palamau, Purnia, Singhbhum.

MEMECYLON L.

Memecylon umbellatum Burm. *f.*, Fl. Ind. 87. 1768. *M. edule* Roxb., Pl. Corom. 1: 59. 1795; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 563. 1879; Haines, Bot. Bihar Orissa 372. 1922 (Repr. ed., 2: 389. 1961).

Fl. & Fr.: December - August.

Distrib.: Bhagalpur, Patna.

OSBECKIA L.

Osbeckia chinensis L., Sp. Pl. 345. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 515. 1879; Haines, Bot. Bihar Orissa 370. 1922 (Repr. ed., 2: 386. 1961).

var. **chinensis**

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur.

var. **parasnathensis** Haines, Bot. Bihar Orissa 370. 1922 (Repr. ed., 2: 386. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Palamau.

Osbeckia muralis Naud. in Ann. Sci. Nat. Bot. ser. 3, 14: 56. 1850. *O. truncata* D. Don ex Wight & Arnott, Prodr. 322. 1834; C.B. Clarke in Hook. f., Fl. Brit. India 2: 514. 1879; Haines, Bot. Bihar Orissa 369. 1922 (Repr. ed., 2: 385. 1961).

var. **kurzii** (Haines) K.K. Khanna, *comb. nov.* *Osbeckia truncata* D. Don var. *kurzii* Haines, Bot. Bihar Orissa 369. 1922 (Repr. ed., 2: 386. 1961).

Distrib.: Hazaribagh.

var. **muralis**

Fl. & Fr.: August - December.

Distrib.: Gaya, Giridih, Hazaribagh, Ranchi.

Osbeckia nepalensis Hook., Fl. Exot. t. 31. 1822; C.B. Clarke in Hook. f., Fl. Brit. India 2: 521. 1879; Haines, Bot. Bihar Orissa 371. 1922 (Repr. ed., 2: 387. 1961).

Fl. & Fr.: October - December.

Distrib.: East Champaran, Purnia, West Champaran.

Osbeckia nutans Wallich ex C.B. Clarke in Hook. f., Fl. Brit. India 2: 521. 1879; Haines, Bot. Bihar Orissa 371. 1922 (Repr. ed., 2: 387. 1961).

Fl. & Fr.: October - January.

Distrib.: West Champaran.

Osbeckia rostrata D. Don, Prodr. Fl. Nepal. 221. 1825; C.B. Clarke in Hook. f., Fl. Brit. India 2: 517. 1879; Haines, Bot. Bihar Orissa 370. 1922 (Repr. ed., 2: 386. 1961).

var. **pulchella** Benth. ex C.B. Clarke in Hook. f., Fl. Brit. India 2: 518. 1879; Haines, Bot. Bihar Orissa 370. 1922 (Repr. ed., 2: 386. 1961).

Fl. & Fr.: August - December.

Distrib.: Purnia.

var. **rostrata**

Fl. & Fr.: August - December.

Distrib.: Singhbhum.

var. **sexangulata** Haines, Bot. Bihar Orissa 370. 1922 (Repr. ed., 2: 387. 1961).

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur.

Osbeckia stellata Wallich ex D. Don, Prodr. Fl. Nepal. 221. 1825; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 517. 1879.

Fl. & Fr.: September - December.

Distrib.: Santal Pargana.

SONERILA Roxb.

Sonerila tenera Royle, Ill. Bot. Himal. 215. t. 45. f. 2. 1834; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 530. 1878; Haines, Bot. Bihar Orissa 372. 1922 (Repr. ed., 2: 388. 1961).

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Palamau.

LYTHRACEAE

AMMANNIA L.

Ammannia auriculata Willd., Enum. Pl. Hort. Berol. 1: 7. t. 7. 1803. *A. senegalensis auct. non* Lam., 1791; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 570. 1879; Haines, Bot. Bihar Orissa 379. 1922 (Repr. ed., 2: 396. 1961).

Fl. & Fr.: August - December.

Distrib.: Purnia (Haines, *l.c.*).

Ammannia baccifera L., Sp. Pl. 120. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 569. 1879; Haines, Bot. Bihar Orissa 379. 1922 (Repr. ed., 2: 396. 1961).

subsp. **aegyptiaca** (Willd.) Koehne in Engler, Bot. Jahrb. Syst. 1: 260. 1880. *A. aegyptiaca* Willd., Enum. Pl. Hort. Berol. 167. 1809. *A. salicifolia* Hiern in Oliver, Fl. Trop. Afr. 2: 478. 1871, *excl. syn., non*

Monti ex Blume, 1767; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 569. 1879; Haines, Bot. Bihar Orissa 379. 1922 (Repr. ed., 2: 396. 1961).

Fl. & Fr.: November - April.

Distrib.: Chota Nagpur.

subsp. **baccifera**

Fl. & Fr.: November - April.

Distrib.: Throughout the state.

Ammannia dentelloides Kurz in J. Asiat. Soc. Bengal 39: 76. 1870; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 568. 1879; Haines, Bot. Bihar Orissa 378. 1922 (Repr. ed., 2: 395. 1961).

Fl. & Fr.: November - January.

Distrib.: Purnia.

Ammannia multiflora Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 447. 1820; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 570. 1879; Haines, Bot. Bihar Orissa 380. 1922 (Repr. ed., 2: 396. 1961).

Fl. & Fr.: November - February.

Distrib.: Palamau, Singhbhum, West Champaran.

Ammannia octandra L. *f.*, Suppl. Pl. 127. 1782; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 571. 1879.

Fl. & Fr.: December - March.

Distrib.: Chota Nagpur.

LAGERSTROEMIA L.

Lagerstroemia druperreana Pierre ex Gagnep. in Lec. Nat. Syst. 3: 358. 1918.

Fl. & Fr.: March - July.

Distrib.: Cultivated.

Lagerstroemia indica L., Syst. Nat. ed. 10. 2: 1076. 1759; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 575. 1879; Haines, Bot. Bihar Orissa 375. 1922 (Repr. ed., 2: 391. 1961).

Fl. & Fr.: May - December.

Distrib.: Cultivated in gardens.

Lagerstroemia parviflora Roxb., Pl. Corom. 1: 47. t. 66. 1795; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 575. 1879; Haines, Bot. Bihar Orissa 375. 1922 (Repr. ed., 2: 392. 1961).

Fl. & Fr.: April - January.

Distrib.: Throughout the state.

Lagerstroemia reginae Roxb., Pl. Corom. 1: 46. t. 65. 1795. *L. flos-reginae auct. non* Retz., 1788; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 577. 1879, *p.p.*; Haines, Bot. Bihar Orissa 375. 1922 (Repr. ed., 2: 391. 1961).

Fl. & Fr.: June - January.

Distrib.: Chota Nagpur.

Lagerstroemia speciosa (L.) Pers., Syn. Pl. 2: 72. 1806. *Munchousia speciosa* L., Mant. Pl. 243. 1771.

Fl. & Fr.: September - December.

Distrib.: Palamau, West Champaran.

LAWSONIA L.

Lawsonia inermis L., Sp. Pl. 349. 1753; Haines, Bot. Bihar Orissa 374. 1922 (Repr. ed., 2: 390. 1961). *L. alba* Lam., Illustr. t. 296. f. 2. 1792; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 573. 1879.- *Mehndi*.

Fl. & Fr.: April - November.

Distrib.: Chota Nagpur, Gaya, Hazaribagh, West Champaran; often cultivated elsewhere.

NESAEA Comm. ex Kunth

Nesaea lanceolata (Heyne ex C.B. Clarke) Koehne in Engler, Bot. Jahrb. 3: 325. 1882. *Ammannia lanceolata* Heyne ex C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 570. 1879.

Fl. & Fr.: September - November.

Distrib.: Purnia.

ROOTALA L.

Rotala densiflora (Roth ex Roem. & Schult.) Koehne in Engler, Bot. Jahrb. 1: 164. 1880. *Ammannia densiflora* Roth ex Roem. & Schult., Syst. Veg. 3: 304. 1818; Haines, Bot. Bihar Orissa 378. 1922 (Repr. ed., 2: 395. 1961). *A. pentandra auct. non Roxb.*, 1820; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 568. 1879, *p.p.*

Fl. & Fr.: December - February.

Distrib.: Palamau, Purnia.

Rotala indica (Willd.) Koehne in Engler, Bot. Jahrb. 1: 172. 1880. *Peplis indica* Willd., Sp. Pl. 2: 244. 1799. *Ammannia peploides* Spreng., Syst. 1: 444. 1824; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 566. 1879. *A. indica* DC., Prodr. 3: 77. 1828; Haines, Bot. Bihar Orissa 377. 1922 (Repr. ed., 2: 394. 1961).

Fl. & Fr.: October - February.

Distrib.: East Champaran, Giridih, Hazaribagh, Lohardaga, Palamau, Patna, Purnia, Ranchi, Singhbhum, West Champaran.

Rotala mexicana Cham. & Schlecht. in Linnaea 5: 567. 1830. *Ammannia pygmaea* Kurz in Seem, J. Bot. 5: 376. 1867; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 568. 1879; Haines, Bot. Bihar Orissa 378. 1922 (Repr. ed., 2: 395. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Purnia, Ranchi, Singhbhum.

Rotala pentandra (Roxb.) Blatt. & Hallb. in J. Bombay Nat. Hist. Soc. 25: 707. 1918, *p.p.* *Ammannia pentandra* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 448. 1820; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 568. 1879, *p.p.*; Haines, Bot. Bihar Orissa 379. 1922 (Repr. ed., 2: 395. 1961).

Fl. & Fr.: November - February.

Distrib.: Hazaribagh, Lohardaga, Palamau, Ranchi, West Champaran.

Rotala rosea (Poir.) C.D. Cook in *Boissiera* 29: 86. 1979. *Ammannia rosea* Poir. in Lam., *Encycl., Suppl.* 2: 329. 1810.

Fl. & Fr.: November - April.

Distrib.: West Champaran.

Rotala rotundifolia (Roxb.) Koehne in Engler, *Bot. Jahrb.* 1: 175. 1880. *Ammannia rotundifolia* Roxb., *Fl. Ind.* (Carey & Wallich ed.) 1: 446. 1820; C.B. Clarke in *Hook. f., Fl. Brit. India* 2: 566. 1879, *p.p.*; Haines, *Bot. Bihar Orissa* 377. 1922 (Repr. ed., 2: 394. 1961).

Fl. & Fr.: September - March.

Distrib.: East Champaran, Giridih, Gumla, Hazaribagh, Koderma, Palamau, West Champaran.

Rotala serpyllifolia (Roth) Bremek. in *Acta Bot. Neerland.* 3(1): 149. 1954. *Micranthus serpyllifolius* Roth, *Nov. Pl. Sp.* 282. 1821. *Ammannia tenuis* (Wight) C.B. Clarke in *Hook. f., Fl. Brit. India* 2: 567. 1879; Haines, *Bot. Bihar Orissa* 377. 1922 (Repr. ed., 2: 394. 1961).

Fl. & Fr.: October - February.

Distrib.: Palamau.

WOODFORDIA Salisb.

Woodfordia fruticosa (L.) Kurz in *J. Asiat. Soc. Bengal* 40: 56. 1871; Haines, *Bot. Bihar Orissa* 374. 1922 (Repr. ed., 2: 390. 1961). *Lythrum fruticosum* L., *Syst. Nat.* ed. 10. 1045. 1759. *Woodfordia floribunda* Salisb., *Parad. Lond.* t. 42. 1806; C.B. Clarke in *Hook. f., Fl. Brit. India* 2: 572. 1879.

Fl. & Fr.: January - May.

Distrib.: East Champaran, Giridih, Gumla, Hazaribagh, Palamau, Santal Pargana, Singhbhum, West Champaran.

PUNICACEAE

PUNICA L.

Punica granatum L., *Sp. Pl.* 472. 1753; C.B. Clarke in *Hook. f., Fl. Brit. India* 2: 581. 1879; Haines, *Bot. Bihar Orissa* 380. 1922 (Repr. ed., 2: 397. 1961).- *Anar*.

Fl. & Fr.: March - January.

Distrib.: Cultivated throughout the state.

ONAGRACEAE

LUDWIGIA L.

Ludwigia adscendens (L.) Hara in J. Jap. Bot. 28: 290. 1953. *Jussiaea adscendens* L., Mant. Pl. 69. 1767. *J. repens* L., Sp. Pl. 388. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 2: 587. 1879; Haines, Bot. Bihar Orissa 381. 1922 (Repr. ed., 2: 398. 1961).

Fl. & Fr.: December - March.

Distrib.: Bhagalpur, Palamau, Patna, Purnia, Santal Pargana, West Champaran.

Ludwigia hyssopifolia (G. Don) Exell apud A. & R. Fernandes in Garcia de Orta 5: 471. 1957. *Jussiaea hyssopifolia* G. Don, Gen. Hist. 2: 693. 1832. *J. fissendocarpa* Haines in J. Asiat. Soc. Bengal n.s. 15: 314. 1919 & Bot. Bihar Orissa 382. 1922 (Repr. ed., 2: 399. 1961).

Fl. & Fr.: October - January.

Distrib.: Bhagalpur, Palamau, Purnia, Ranchi.

Ludwigia octovalvis (Jacq.) Raven in Kew Bull. 15: 476. 1962 & in Reinwardtia 6: 362. f. 3. 1963. *Oenothera octovalvis* Jacq., Enum. Syst. Pl. 19. 1760. *Jussiaea suffruticosa* L., Sp. Pl. 388. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 2: 587. 1879; Haines, Bot. Bihar Orissa 381. 1922 (Repr. ed., 2: 398. 1961).

Fl. & Fr.: July - March.

Distrib.: Almost throughout the state.

Ludwigia perennis L., Sp. Pl. 119. 1753. *L. parviflora* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 440. 1820; C.B. Clarke in Hook. f., Fl. Brit. India 2: 588. 1879; Haines, Bot. Bihar Orissa 382. 1922 (Repr. ed., 2: 399. 1961).

Fl. & Fr.: October - December.

Distrib.: East Champaran, Chota Nagpur, Hazaribagh, Patna, West Champaran.

Ludwigia prostrata Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 441. 1820; C.B. Clarke in Hook. f., Fl. Brit. India 2: 588. 1879; Haines, Bot. Bihar Orissa 382. 1922 (Repr. ed., 2: 399. 1961).

Fl. & Fr.: September - April.

Distrib.: East Champaran, Palamau, Patna, Purnia, Singhbhum, West Champaran.

TRAPACEAE

TRAPA L.

Trapa maximowiczii Korsh. in Act. Hort. Petrop. 12: 336. 1892.

Distrib.: Bihar (Naithani, Fl. Pl. India, Nepal & Bhutan 176. 1990).

Trapa natans L. var. **bispinosa** (Roxb.) Makino in Inuma, Somoku-Dzusetsu ed. 3. 1: 137. 1907. *T. bispinosa* Roxb., Pl. Corom. t. 234. 1815; C.B. Clarke in Hook. f., Fl. Brit. India 2: 590. 1879, *p.p.*; Haines, Bot. Bihar Orissa 383. 1922 (Repr. ed., 2: 400. 1961).

Fl. & Fr.: August - December.

Distrib.: East Champaran, Patna, Singhbhum, West Champaran; often cultivated elsewhere.

TURNERACEAE

TURNERA L.

Turnera ulmifolia L., Sp. Pl. 271. 1753; Haines, Bot. Bihar Orissa 384. 1922 (Repr. ed., 2: 401. 1961).

Fl. & Fr.: September - December.

Distrib.: West Champaran.

PASSIFLORACEAE

PASSIFLORA L.

Passiflora caerulea L., Sp. Pl. 959. 1753.

Fl. & Fr.: April - October.

Distrib.: Cultivated in gardens.

Passiflora edulis Sims in Curtis, Bot. Mag. t. 1989. 1818.

Fl. & Fr.: October - December.

Distrib.: Bhagalpur.

Passiflora foetida L., Sp. Pl. 959. 1753; Haines, Bot. Bihar Orissa 384. 1922 (Repr. ed., 2: 402. 1961). - *Bindiram*

Fl. & Fr.: August - December.

Distrib.: Patna, West Champaran.

Passiflora incarnata L., Sp. Pl. 959. 1753.

Fl.: July - September.

Distrib.: Cultivated. Bhagalpur (Varma, Fl. Bhagalpur 168. 1981).

Passiflora suberosa L., Sp. Pl. 958. 1753.

Fl. & Fr.: March - May.

Distrib.: West Champaran.

CARICACEAE

CARICA L.

Carica papaya L., Sp. Pl. 1036. 1753; Hook. f., Fl. Brit. India 2: 599. 1879; Haines, Bot. Bihar Orissa 385. 1922 (Repr. ed., 2: 402. 1961).

Papita

Fl. & Fr.: Almost throughout the year.

Distrib.: Cultivated throughout the state.

CUCURBITACEAE

ACTINOSTEMMA Griff.

Actinostemma tenerus Griff., Pl. Cantor. 24. t. 3. 1837; C.B. Clarke in Hook. f., Fl. Brit. India 2: 633. 1879, *excl. syn.*

Fl. & Fr.: December - February.

Distrib.: West Champaran.

BENINCASA Savi.

Benincasa hispida (Thunb.) Cong. in A. & C. DC., Monogr. Phan. 3: 513. 1881. *Cucurbita hispida* Thunb., Fl. Jap. 322. 1784. *Benincasa cerifera* Savi., Bibl. Ital. 9: 158. 1818; C.B. Clarke in Hook. f., Fl. Brit. India 2: 616. 1879; Haines, Bot. Bihar Orissa 395. 1922 (Repr. ed., 2: 413. 1961). - *Kumra*

Fl. & Fr.: June - October.

Distrib.: Cultivated throughout the state.

BRYONOPSIS Arnott

Bryonopsis laciniosa (L.) Naud. in Ann. Sci. Nat. ser. 4, 12: 141. 1859; Haines, Bot. Bihar Orissa 391. 1922 (Repr. ed., 2: 408. 1961). *Bryonia laciniosa* L., Sp. Pl. 1013. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 2: 622. 1879.

Fl. & Fr.: April - December.

Distrib.: East Champaran, Hazaribagh, Lohardaga, Palamau, Patna.

CITRULLUS Schrad., *nom. cons.*

Citrullus colocynthis (L.) Schrad. in Linnaea 12: 414. 1838; C.B. Clarke in Hook. f., Fl. Brit. India 3: 620. 1879; Haines, Bot. Bihar Orissa 393. 1922 (Repr. ed., 2: 411. 1961). *Cucumis colocynthis* L., Sp. Pl. 1011. 1753.

Fl. & Fr.: November - January.

Distrib.: Bihar (Chakravarty, Fasc. Fl. India 11: 20. 1982).

Citrullus lanatus (Thunb.) Matsumura & Nakai in Cat. Sem. et Spor. Hort. Bot. Univ. Imp. Tokyo 1916: 30. 1916. *Momordica lanata* Thunb., Prodr. Pl. Cap. 13. 1800. *Citrullus vulgaris* (Schrad.) Schrad. in Eckl. & Zeyher, Enum. Pl. Afr. Austr. 279. 1936; Haines, Bot. Bihar Orissa 393. 1922 (Repr. ed., 2: 411. 1961). *Tarbooz*

Fl. & Fr.: March - July.

Distrib.: Cultivated throughout the state.

COCCINIA Wight & Arnott

Coccinia grandis (L.) Voigt., Hort. Suburb. Calc. 59. 1845. *Bryonia grandis* L., Mant. Pl. 126. 1767. *Coccinia indica* Wight & Arnott, Prodr. 1: 347. 1834. *Cephalandra indica* Naud. in Ann. Sci. Nat. ser. 5, 5: 16. 1859; C.B. Clarke in Hook. f., Fl. Brit. India 2: 621. 1879, *excl. syn.*; Haines, Bot. Bihar Orissa 399. 1922 (Repr. ed., 2: 417. 1961).

Fl. & Fr.: March - December.

Distrib.: Bhojpur, Patna, Purnia, West Champaran.

CORALLOCARPUS Welw. ex Hook. f.

Corallocarpus epigaeus (Rottler & Willd.) Hook. f. in Benth. & Hook. f., Gen. Pl. 1: 831. 1862; C.B. Clarke in Hook. f., Fl. Brit. India 2: 628. 1879. *Bryonia epigaea* Rottler & Willd., Neue Schrift. Ges. Naturf. Freunde Berlin 4: 223. 1803.

Fl. & Fr.: June - October.

Distrib.: Bihar (Chakravarty, Fasc. Fl. India 11: 28. 1982).

CUCUMIS L.

Cucumis callosus (Rottler) Cogn. in Engler, Pflanzenr. 4. 275. II (heft 88): 129. 1924. *Bryonia callosa* Rottler, Neue Schrift. Ges. Naturf. Freunde Berlin 4: 210. 1803, '*collosa*' *Cucumis trigonus* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 722. 1824; C.B. Clarke in Hook. f., Fl. Brit. India 2: 619. 1879; Haines, Bot. Bihar Orissa 392. 1922 (Repr. ed., 2: 409. 1961).

Fl. & Fr.: July - October.

Distrib.: Chota Nagpur, West Champaran.

Cucumis melo L., Sp. Pl. 1011. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 2: 620. 1879; Haines, Bot. Bihar Orissa 392. 1922 (Repr. ed., 2: 410. 1961).

var. **agrestis** Naud., Ann. Sci. Nat. ser. 4, 11: 73. 1859 & 12: 110. 1859.

Fl. & Fr.: June - September.

Distrib.: Hazaribagh.

var. **melo** *Kharbooja*.

Fl. & Fr.: March - July.

Distrib.: Champaran, Sahibganj, cultivated elsewhere.

Cucumis sativus L., Sp. Pl. 1012. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 620. 1879; Haines, Bot. Bihar Orissa 392. 1922 (Repr. ed., 2: 410. 1961). - *Khira*

Fl. & Fr.: March - October.

Distrib.: Cultivated almost throughout the state.

CUCURBITA L.

Cucurbita maxima Duch. ex Lam., Encycl. 2: 151. 1786; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 622. 1879; Haines, Bot. Bihar Orissa 399. 1922 (Repr. ed., 2: 417. 1961). - *Lal kumra*

Fl. & Fr.: March - August.

Distrib.: Cultivated.

Cucurbita moschata (Duch. ex Lam.) Duch. ex Poir., Dict. Sci. Nat. 8: 234. 1818; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 622. 1879; Haines, Bot. Bihar Orissa 399. 1922 (Repr. ed., 2: 417. 1961). *C. pepo* DC. var. *moschata* Duch. ex Lam., Encycl. 2: 152. 1786.

Fl. & Fr.: March - December.

Distrib.: Cultivated.

Cucurbita pepo L., Sp. Pl. 1010. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 622. 1879; Haines, Bot. Bihar Orissa 398. 1922 (Repr. ed., 2: 416. 1961). - *Kumra*

Fl. & Fr.: July - October.

Distrib.: Cultivated.

DIPLOCYCLOS (Endl.) Post & Kuntze

Diplocyclos palmatus (L.) Jeffery in Kew Bull. 15(3): 352. 1962.
Bryonia palmata L., Sp. Pl. 1012. 1753, *excl. syn.*

Fl. & Fr.: December - January.

Distrib.: Palamau.

GYMNOPETALUM Amott

Gymnopetalum cochinchinense (Lour.) Kurz in J. Asiat. Soc. Bengal 40: 57. 1871; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 611. 1879; Haines, Bot. Bihar Orissa 389. 1922 (Repr. ed., 2: 406. 1961). *Bryonia cochinchinensis* Lour., Fl. Cochinch. 2: 595. 1790.

Fl. & Fr.: August - November.

Distrib.: Palamau, Ranchi, Singhbhum.

LAGENARIA Ser.

Lagenaria siceraria (Molina) Standl. in Publ. Field Mus. Nat. Hist. Chicago, Bot. ser. 3, 435. 1930. *Cucurbita siceraria* Molina, Sagg. Storia Nat. Chile 133. 1782. *Lagenaria vulgaris* Seringe in Mem. Soc. Phys. Hist. Nat. Geneve 3(1): 25. 1825; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 613. 1879; Haines, Bot. Bihar Orissa 387. 1922 (Repr. ed., 2: 404. 1961).
- *Lauki*

Fl. & Fr.: July - May.

Distrib.: Cultivated throughout the state.

LUFFA Mill.

Luffa acutangula (L.) Roxb., Fl. Ind. 3: 713. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 615. 1879; Haines, Bot. Bihar Orissa 396. 1922 (Repr. ed., 2: 414. 1961). *Cucumis acutangula* L., Sp. Pl. 1011. 1753.
Ara-torui

Fl. & Fr.: July - October.

Distrib.: Cultivated throughout the state.

Luffa cylindrica (L.) M. Roem., Fam. 2: 63. 1846. *Momordica cylindrica* L., Sp. Pl. 1009. 1753. *Luffa aegyptiaca* Mill., Dict. ed. 4. 500. 1785; C.B. Clarke in Hook. f., Fl. Brit. India 2: 614. 1879; Haines, Bot. Bihar Orissa 397. 1922 (Repr. ed., 2: 414. 1961). *Ghia-torui*

Fl. & Fr.: June - December.

Distrib.: Cultivated throughout the state.

Luffa echinata Roxb., Fl. Ind. 3: 716. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 2: 615. 1879; Haines, Bot. Bihar Orissa 396. 1922 (Repr. ed., 2: 413. 1961).

Fl. & Fr.: September - January.

Distrib.: Purnia (Haines, l.c.).

Luffa graveolens Roxb., Fl. Ind. 3: 716. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 2: 614. 1879; Haines, Bot. Bihar Orissa 397. 1922 (Repr. ed., 2: 415. 1961).

Fl. & Fr.: August - September.

Distrib.: Purnia, Sahibganj.

Luffa hermaphrodita Singh & Bhandari in Bailey 11(4): 133. 1963.

Fl. & Fr.: August - November.

Distrib.: Bihar (Chakravarty, Fasc. Fl. India 11: 73. 1982).

MELOTHRIA L.

Melothria heterophylla (Lour.) Cogn. in A. & C. DC., Monogr. Phan. 3: 618. 1881; Haines, Bot. Bihar Orissa 389. 1922 (Repr. ed., 2: 407. 1961). *Solena heterophylla* Lour., Fl. Cochinch. 2: 514. 1790. *Zehmeria umbellata* Thwaites, Enum. Pl. Zeyl. 125. 1853; C.B. Clarke in Hook. f., Fl. Brit. India 2: 625. 1879, p.p.

Fl. & Fr.: June - March.

Distrib.: Gaya, Giridih, Hazaribagh, Palamau, West Champaran.

Melothria leucocarpa (Blume) Cogn. var. **triloba** (C.B. Clarke) Prain, Bengal Pl. 1: 384. 1963 (Repr. ed.), *M. odorata* Hook. f. & Thomson ex C.B. Clarke var. *triloba* C.B. Clarke in Hook. f., Fl. Brit.

India 2: 626. 1879. *M. zehnerioides* Haines in J. Asiat. Soc. Bengal 15(3): 315. 1920 & Bot. Bihar Orissa 390. 1922 (Repr. ed., 2: 408. 1961).

Fl. & Fr.: September - November.

Distrib.: Purnia (Haines, l.c.).

Melothria maderaspatana (L.) Cogn. in A. & C. DC., Monogr. Phan. 3: 623. 1881. *Cucumis maderaspatana* L., Sp. Pl. 1012. 1753. *Bryonia scabrella* L. f., Suppl. Pl. 424. 1782. *Mukia scabrella* (L. f.) Arnott in Hook., J. Bot. 3: 276. 1841; C.B. Clarke in Hook. f., Fl. Brit. India 2: 623. 1879, *excl. syn. M. maderaspatana* Kurz in J. Asiat. Soc. Bengal 2: 104. 1877; Haines, Bot. Bihar Orissa 391. 1922 (Repr. ed., 2: 408. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Muzaffarpur, Palamau, Purnia, West Champaran.

MOMORDICA L.

Momordica charantia L., Sp. Pl. 1009. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 2: 616. 1879; Haines, Bot. Bihar Orissa 394. 1922 (Repr. ed., 2: 412. 1961). - *Karela*

var. charantia

Fl. & Fr.: June - October.

Distrib.: Cultivated throughout the state.

var. muricata (Willd.) Chakravarty, Fasc. Fl. India 11: 92. 1982. *M. muricata* Willd., Sp. Pl. 4: 602. 1805.

Fl. & Fr.: July - October.

Distrib.: Cultivated throughout the state.

Momordica cochinchinensis (Lour.) Spreng., Syst. Veg. 3: 14. 1826; C.B. Clarke in Hook. f., Fl. Brit. India 2: 618. 1879. *Muricia cochinchinensis* Lour., Fl. Cochinch. 2: 596. 1790.

Fl. & Fr.: August - November.

Distrib.: Cultivated.

Momordica dioica Roxb. ex Willd., Sp. Pl. 4: 605. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 2: 617. 1879, *excl. syn.*; Haines, Bot. Bihar Orissa 394. 1922 (Repr. ed., 2: 412. 1961). - *Kaksa*

Fl. & Fr.: June - October.

Distrib.: Palamau, West Champaran.

THLADIANTHA Bunge

Thladiantha cordifolia (Blume) Cogn. in A. & C. DC., Monogr. Phan. 3: 424. 1881. *Luffa cordifolia* Blume, Bijdr. 929. 1826. *Thladiantha calcarata* C.B. Clarke in J. Linn. Soc. London (Bot.) 15: 126. 1876; Haines, Bot. Bihar Orissa 3: 398. 1922 (Repr. ed., 2: 416. 1961). *T. dubia* Hook. f. in Curtis, Bot. Mag. t. 5469. 1864; C.B. Clarke in Hook. f., Fl. Brit. India 2: 631. 1879.

Fl. & Fr.: June - October.

Distrib.: Darbhanga (Haines, *l.c.*).

TRICHOSANTHES L.

Trichosanthes anguina L., Sp. Pl. 1008. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 2: 610. 1879. *T. cucumerina* L. var. *anguina* Haines, Bot. Bihar Orissa 388. 1922 (Repr. ed., 2: 405. 1961). *Cucumis anguina* L., Syst. Nat. ed. 10. 1279. 1759.

Fl. & Fr.: May - August.

Distrib.: Bihar (Chakravarty, Fasc. Fl. India 11: 108. 1982).

Trichosanthes bracteata (Lam.) Voigt, Hort. Suburb. Calc. 58. 1845. *Modecca bracteata* Lam., Encycl. Meth. Bot. 4: 210. 1796. *Trichosanthes palmata* Roxb., Fl. Ind. 3: 704. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 2: 606. 1879; Haines, Bot. Bihar Orissa 387. 1922 (Repr. ed., 2: 405. 1961).

Fl. & Fr.: July - December.

Distrib.: Palamau, Ranchi, Singhbhum.

Trichosanthes cordata Roxb., Fl. Ind. 3: 703. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 2: 608. 1879.

Fl. & Fr.: July - December.

Distrib.: Champaran.

Trichosanthes cucumerina L., Sp. Pl. 1008. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 609. 1879; Haines, Bot. Bihar Orissa 388. 1922 (Repr. ed., 2: 405. 1961).

Fl. & Fr.: August - January.

Distrib.: Chota Nagpur, West Champaran.

Trichosanthes dioica Roxb., Fl. Ind. 3: 701. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 609. 1879; Haines, Bot. Bihar Orissa 388. 1922 (Repr. ed., 2: 406. 1961). - *Palwal*

Fl. & Fr.: March - September.

Distrib.: Cultivated throughout the state.

Trichosanthes tricuspidata Lour. var. **strigosa** Mitra & Bandyop. in J. Bombay Nat. Hist. Soc. 95: 374. 1998.

Fl. & Fr.: September - January.

Distrib.: Champaran.

Trichosanthes wallichiana (Seringe) Wight in Ann. & Mag. Nat. Hist. 8: 270. 1842. *Involucraria wallichiana* Seringe in Mem. Soc. Phys. Hist. Nat. Geneve 3(1): 25. t. 5. 1825. *Trichosanthes multiloba* C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 607. 1879. *T. palmata* Roxb. var. *scotanthus* C.B. Clarke in Hook. *f.*, *l.c.* 607. 1879.

Fl. & Fr.: July - November.

Distrib.: Chota Nagpur.

BEGONIACEAE

BEGONIA L.

Begonia concanensis A. DC. in Ann. Sci. Nat. ser. 4, 11: 126. 1859 & Prodr. 15(1): 314. 1864; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 653. 1879.

Distrib.: Hazaribagh.

Begonia picta Sm., Exot. Bot. 2: 81. t. 101. 1805; C.B. Clarke in Hook. f. Fl. Brit. India 2: 638. 1879; Haines, Bot. Bihar Orissa 400. 1922 (Repr. ed., 2: 418. 1961).

Fl. & Fr.: July - December.

Distrib.: Hazaribagh, Palamau, Patna, West Champaran.

CACTACEAE

CEREUS Mill.

Cereus hexagonus (L.) Mill., Gard. Dict. ed. 8. 1. 1768; Haines, Bot. Bihar Orissa 401. 1922 (Repr. ed., 2: 419. 1961). *Cactus hexagonus* L., Sp. Pl. 466. 1753.

Fl. & Fr.: May - September.

Distrib.: Bhagalpur, Chota Nagpur, Patna, Santal Pargana.

Cereus peruvianus (L.) Mill., Gard. Dict. ed. 8. 4. 1768. *Cactus peruvianus* L., Sp. Pl. 467. 1753.

Fl.: May June.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 76. 1998).

NOPALEA Salm-Dyck

Nopalea cochenillifera (L.) Salm-Dyck, Cact. Hort. Dyck. ed. 2. 64. 1850; Haines, Bot. Bihar Orissa 403. 1922 (Repr. ed., 2: 421. 1961). *Cactus cochenillifera* L., Sp. Pl. 468. 1753.

Fl. & Fr.: April - September.

Distrib.: Bhojpur.

OPUNTIA Mill.

Opuntia elatior Mill., Gard. Dict. ed. 8. n. 4. 1768; Haines, Bot. Bihar Orissa 402. 1922 (Repr. ed., 2: 420. 1961).

Fl. & Fr.: March - September.

Distrib.: Bhagalpur, Patna, Purnia.

Opuntia nigricans Haw., Syn. Pl. Succ. 182. 1812. *O. elatior* Mill. var. *nigricans* (Haw.) Haines, Bot. Bihar Orissa 403. 1922 (Repr. ed., 2: 421. 1961).

Distrib.: Patna.

Opuntia stricta (Haw.) Haw. var. **dillenii** (Ker-Gawl.) Benson, Cact. & Succ. in J. Amer. 41: 126. 1969. *Cactus dillenii* Ker-Gawl. in Bot. Reg. 3: t. 255. 1818. *Opuntia dillenii* (Ker-Gawl.) Haw., Suppl. Pl. Succ. 79. 1819; C.B. Clarke in Hook. f., Fl. Brit. India 2: 657. 1879; Haines, Bot. Bihar Orissa 403. 1922 (Repr. ed., 2: 421. 1961). - *Nagphani*

Fl. & Fr.: June - September.

Distrib.: Bhagalpur, Patna, Santal Pargana, Singhbhum.

Opuntia vulgaris Mill., Gard. Dict. ed. 8. n. 1. 1768. *O. monacantha* Haw., Suppl. Pl. Succ. 81. 1819; Haines, Bot. Bihar Orissa 402. 1922 (Repr. ed., 2: 420. 1961).

Fl. & Fr.: April - February.

Distrib.: Darbhanga, Gaya, Muzaffarpur, Ranchi, Purnia, Singhbhum.

PERESKIA Mill.

Pereskia aculeata Mill., Gard. Dict. ed. 8. 1768; Haines, Bot. Bihar Orissa 404. 1922 (Repr. ed., 2: 422. 1961).

Distrib.: Cultivated in gardens.

Pereskia bleo DC., Prodr. 3: 475. 1828; Haines, Bot. Bihar Orissa 404. 1922 (Repr. ed., 2: 422. 1961).

Distrib.: As hedges in gardens. Bhagalpur, Patna, Ranchi (Haines, *l.c.*).

AIZOACEAE

TRIANTHEMA L.

Trianthema portulacastrum L., Sp. Pl. 223. 1753. *T. monogyna* L., Mant. Pl. 69. 1767; C.B. Clarke in Hook. f., Fl. Brit. India 2: 660. 1879; Haines, Bot. Bihar Orissa 49. 1921 (Repr. ed., 1: 51. 1961).

Fl. & Fr.: July - December.

Distrib.: Bhagalpur, Palamau, Patna, West Champaran.

MOLLUGINACEAE

GLINUS L.

Glinus lotoides L., Sp. Pl. 463. 1753. *Mollugo hirta* Thunb., Prodr. Fl. Cap. 1: 24. 1794; C.B. Clarke in Hook. f., Fl. Brit. India 2: 662. 1879. *M. lotoides* Wight & Arnott, Prodr. 362. 1839; Haines, Bot. Bihar Orissa 48. 1921 (Repr. ed., 1: 50. 1961), 'Kuntze'.

Fl. & Fr.: February - April.

Distrib.: Bhagalpur, Palamau, Patna, West Champaran.

Glinus oppositifolius (L.) A. DC. in Bull. Herb. Boiss. ser. 2, 1: 552. 1901. *Mollugo oppositifolia* L., Sp. Pl. 89. 1753. *M. spergula* L., Syst. Nat. ed. 10. 881. 1759; C.B. Clarke in Hook. f., Fl. Brit. India 2: 662. 1879; Haines, Bot. Bihar Orissa 48. 1921 (Repr. ed., 1: 50. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: Bhagalpur, Darbhanga, Patna, West Champaran.

MOLLUGO L.

Mollugo cerviana (L.) Seringe in DC., Prodr. 1: 392. 1824; C.B. Clarke in Hook. f., Fl. Brit. India 2: 663. 1879. *Pharnaceum cerviana* L., Sp. Pl. 272. 1753.

Fl. & Fr.: November - December.

Distrib.: Saran.

Mollugo nudicaulis Lam., Encycl. Meth. Bot. 4: 234. 1767; C.B. Clarke in Hook. f., Fl. Brit. India 2: 664. 1879.

Fl. & Fr.: March - June.

Distrib.: Palamau, Patna.

Mollugo pentaphylla L., Sp. Pl. 89. 1753. *M. pentaphylla* var. *stricta* (L.) Hochr. in Candollea 2: 356. 1925. *M. stricta* L., Sp. Pl. ed. 2.

131. 1762; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 663. 1879; Haines, Bot. Bihar Orissa 48. 1921 (Repr. ed., 1: 49. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Bhagalpur, Palamau, Patna, Ranchi, West Champaran.

APIACEAE

ANETHUM L.

Anethum graveolens L., Sp. Pl. 263. 1753. *Peucedanum graveolens* (L.) Hiern in Oliver, Fl. Trop. Afr. 3: 19. 1877; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 709. 1879. *P. sowa* (Roxb.) Kurz in J. Asiat. Soc. Bengal 46: 116. 1877; Haines, Bot. Bihar Orissa 412. 1922 (Repr. ed., 2: 431. 1961). - *Sowa*

Fl. & Fr.: January - March.

Distrib.: Cultivated.

BUPLEURUM L.

Bupleurum falcatum L. var. **biharensis** Haines, Bot. Bihar Orissa 406. 1925 (Repr. ed., 2: 425. 1961).

Fl. & Fr.: September - January.

Distrib.: Palamau, Santal Pargana.

Bupleurum mucronatum Wight & Arnott, Prodr. 370. 1834; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 676. 1879; Haines, Bot. Bihar Orissa 406. 1922 (Repr. ed., 2: 424. 1961).

Fl. & Fr.: October - November.

Distrib.: Chota Nagpur.

CARUM L.

Carum villosum Haines in J. Asiat. Soc. Bengal 15: pl. 9. 1920 & Bot. Bihar Orissa 408. 1922 (Repr. ed., 2: 426. 1961).

Fl.: December.

Distrib.: North Champaran. Endemic. Rare.

CENTELLA L., *nom. cons.*

Centella asiatica (L.) Urban in Mart., Fl. Bras. 11: 287. t. 78. f. 1. 1879. *Hydrocotyle asiatica* L., Sp. Pl. 234. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 2: 669. 1879; Haines, Bot. Bihar Orissa 405. 1922 (Repr. ed., 2: 423. 1961).

Fl. & Fr.: February - November.

Distrib.: East Champaran, Muzaffarpur, Palamau, Ranchi, Singhbhum, West Champaran.

CNIDIUM Cusson

Cnidium monnieri (L.) Cusson, Mem. Soc. Med. Paris 280. 1782. *Selinum monnieri* L., Cent. Pl. 1: 9. 1755. *Seseli daucifolium* C.B. Clarke in Hook. f., Fl. Brit. India 2: 693. 1879.

Fl. & Fr.: March - May.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 253. 1998).

CORIANDRUM L.

Coriandrum sativum L., Sp. Pl. 256. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 2: 717. 1879; Haines, Bot. Bihar Orissa 413. 1922 (Repr. ed., 2: 432. 1961). - *Dhania*.

Fl. & Fr.: December - March.

Distrib.: Cultivated throughout the state.

CUMINUM L.

Cuminum cyminum L., Sp. Pl. 254. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 2: 718. 1879. - *Jeera*

Fl. & Fr.: January - March.

Distrib.: Cultivated.

DAUCUS L.

Daucus carota L., Sp. Pl. 242. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 718. 1879; Haines, Bot. Bihar Orissa 413. 1922 (Repr. ed., 2: 432. 1961). *Gajar*

Fl. & Fr.: March - May.

Distrib.: Cultivated.

ERYNGIUM L.

Eryngium foetidum L., Sp. Pl. 232. 1753.

Fl. & Fr.: March - May.

Distrib.: Bhagalpur (Varma and Das in J. Bombay Nat. Hist. Soc. 92: 135-136. 1995).

FOENICULUM Mill.

Foeniculum vulgare Mill., Gard. Dict. ed. 8. Foeniculum No. 1. 1768; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 695. 1879; Haines, Bot. Bihar Orissa 411. 1922 (Repr. ed., 2: 429. 1961). - *Saunf*.

Fl. & Fr.: December - March.

Distrib.: Often cultivated.

HYDROCOTYLE L.

Hydrocotyle sibthorpioides Lam., Encycl. 3: 153. 1789; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 669. 1879. *H. rotundifolia* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 38. 1824; C.B. Clarke in Hook. *f.*, Fl. Brit. India 2: 668. 1879; Haines, Bot. Bihar Orissa 406. 1922 (Repr. ed., 2: 424. 1961).

Fl. & Fr.: March - November.

Distrib.: Palamau, Purnia, West Champaran.

LIGUSTICUM L.

Ligusticum alboalatum Haines in J. Asiat. Soc. Bengal (n.s.) 15: 314. 1920 & Bot. Bihar Orissa 411. 1922 (Repr. ed., 2: 430. 1961).

Fl. & Fr.: May - June.

Distrib.: Palamau, Ranchi. Endemic.

NEOCONOPODIUM Pimenov & Kljuykov

Neoconopodium capnoides (Decne.) Pimenov & Kljuykov in Feddes Repert. 98: 377. 1987. *Butinia capnoides* Decne. in Jacquem., Voy. Bot. Ind. 70. pl. 80. 1844. *Chaerophyllum capnoides* (Decne.) C.B. Clarke in Hook. f., Fl. Brit. India 2: 691. 1879.

Fl. & Fr.: March - April.

Distrib.: Champaran.

OENANTHE L.

Oenanthe javanica (Blume) DC., Prodr. 4: 138. 1830. *Sium javanicum* Blume, Bijdr. 15: 1881. 1826. *Oenanthe stolonifera* (Roxb.) Wallich ex DC., Prodr. 4: 138. 1830; C.B. Clarke in Hook. f., Fl. Brit. India 2: 696. 1879; Haines, Bot. Bihar Orissa 410. 1922 (Repr. ed., 2: 429. 1961). *O. benghalensis* (Roxb.) Kurz in J. Asiat. Soc. Bengal 2: 115. 1877; C.B. Clarke in Hook. f., Fl. Brit. India 2: 696. 1879; Haines, Bot. Bihar Orissa 411. 1922 (Repr. ed., 2: 429. 1961).

Fl. & Fr.: April - June.

Distrib.: Palamau, Purnia, West Champaran.

PASTINACA L.

Pastinaca sativa L., Sp. Pl. 262. 1753. *Peucedanum sativum* (L.) Benth. & Hook. f., Gen. Pl. 1: 920. 1867; Haines, Bot. Bihar Orissa 413. 1922 (Repr. ed., 2: 432. 1961).

Distrib.: Cultivated.

PEUCEDANUM L.

Peucedanum dhana C.B. Clarke var. **dalzelli** C.B. Clarke in Hook. f., Fl. Brit. India 2: 709. 1879; Haines, Bot. Bihar Orissa 412. 1922 (Repr. ed., 2: 431. 1961).

Fl. & Fr.: March - August.

Distrib.: Chota Nagpur.

Peucedanum nagpurensis (C.B. Clarke) Prain, Bengal Pl. 1: 540. 1903; Haines, Bot. Bihar Orissa 413. 1922 (Repr. ed., 2: 431. 1961). *P. glaucum* var. *nagpurensis* C.B. Clarke in Hook. f., Fl. Brit. India 2: 710 1879.

Fl. & Fr.: October - December.

Distrib.: Singhbhum, West Champaran.

PIMPINELLA L.

Pimpinella bracteata Haines in J. Asiat. Soc. Bengal (n.s.) 15: 314. 1920 & Bot. Bihar Orissa 409. 1922 (Repr. ed., 2: 427. 1961).

Fl. & Fr.: August - January.

Distrib.: Palamau, Ranchi.

Pimpinella heyneana (DC.) Kurz in J. Asiat. Soc. Bengal 46: 115. 1877; C.B. Clarke in Hook. f., Fl. Brit. India 2: 684. 1879; Haines, Bot. Bihar Orissa 408. 1922 (Repr. ed., 2: 427. 1961). *Helosciadium heyneanum* DC., Prodr. 4: 106. 1830.

Fl. & Fr.: October - January.

Distrib.: Singhbhum.

Pimpinella wallichiana (Miq. ex Hohen.) Gandhi in Saldanha & Nicolson, Fl. Hassan Distr. 417. 1976. *Helosciadium wallichianum* Miq. ex Hohen., Bot. Zeitg. 7: 775. 1849. *Pimpinella monoica* Dalz. in Hook., J. Bot. 3: 212. 1851; C.B. Clarke in Hook. f., Fl. Brit. India 2: 687. 1879; Haines, Bot. Bihar Orissa 408. 1922 (Repr. ed., 2: 427. 1961).

Fl. & Fr.: November - January.

Distrib.: Palamau, Ranchi.

PYCNOCYCLA Lindl.

Pycnocycla glauca Lindl. in Royle, Ill. Bot. Himal. 232. t. 51. 1835; C.B. Clarke in Hook. f., Fl. Brit. India 2: 694. 1879; Haines, Bot. Bihar Orissa 409. 1922 (Repr. ed., 2: 428. 1961).

Fl. & Fr.: May - November.

Distrib.: Ranchi.

SESELI L.

Seseli diffusum (Roxb. ex Sm.) Sant. & Wagh in Bull. Bot. Surv. India 5: 108. 1963. *Ligusticum diffusum* Roxb. ex Sm. in Rees, Cyclop. 21: 11. 1812. *Seseli indicum* Wight & Arnott, Prodr. 371. 1834; C.B. Clarke in Hook. f., Fl. Brit. India 2: 693. 1879; Haines, Bot. Bihar Orissa 410. 1922 (Repr. ed., 2: 428. 1961).

Fl. & Fr.: February - March.

Distrib.: Bhagalpur, Ranchi, West Champaran.

TRACHYSPERMUM Link, *nom. cons.*

Trachyspermum ammi (L.) Sprague in Bull. Misc. Inform. Kew 1929: 228. 1929. *Sison ammi* L., Sp. Pl. 252. 1753. *Carum copticum* (L.) Hiern in Oliver, Fl. Trop. Afr. 3: 12. 1877; C.B. Clarke in Hook. f., Fl. Brit. India 2: 682. 1879; Haines, Bot. Bihar Orissa 407. 1922 (Repr. ed., 2: 426. 1961).
Ajwain.

Fl. & Fr.: January - May.

Distrib.: Champaran, Sahibganj.

Trachyspermum roxburghianum (DC.) Craib, Fl. Siam. Enum. 1: 788. 1931. *Ptychotis roxburghiana* DC., Prodr. 4: 109. 1830. *Carum roxburghianum* (DC.) Kurz in J. Asiat. Soc. Bengal (n.s.) 46: 114. 1877; C.B. Clarke in Hook. f., Fl. Brit. India 2: 682. 1879; Haines, Bot. Bihar Orissa 407. 1922 (Repr. ed., 2: 426. 1961). - *Ajmad.*

Fl. & Fr.: September - April.

Distrib.: Purnia (Haines, l.c.).

Trachyspermum stictocarpum (C.B. Clarke) H. Wolff in Engler, Pflanzenr. 90: 89. 1927. *Carum stictocarpum* C.B. Clarke in Hook. f., Fl. Brit. India 2: 681. 1879; Haines, Bot. Bihar Orissa 407. 1922 (Repr. ed., 2: 425. 1961)

Fl. & Fr.: February - March.

Distrib.: Muzaffarpur, Patna.

ARALIACEAE

ARALIA L.

Aralia montana Blume, Bijdr. 870. 1826. *A. armata* (Wallich) Seem. in J. Bot. 6: 134. 1868; C.B. Clarke in Hook. f., Fl. Brit. India 2: 723. 1879; Haines, Bot. Bihar Orissa 414. 1922 (Repr. ed., 2: 433. 1961).

Fl. & Fr.: August - December.

Distrib.: Singhbhum.

HEDERA L.

Hedera nepalensis K. Koch, Hort. Dendrol. 284. t. 75. 1853. *H. helix auct. non L.*, 1753; C.B. Clarke in Hook. f., Fl. Brit. India 2: 739. 1879.

Fl. & Fr.: December.

Distrib.: Patna.

HETEROPANAX Seem.

Heteropanax fragrans Seem., Fl. Vit. 114. 1866; C.B. Clarke in Hook. f., Fl. Brit. India 2: 734. 1879; Haines, Bot. Bihar Orissa 417. 1922 (Repr. ed., 2: 436. 1961).

var. **fragrans**

Fl. & Fr.: December - February.

Distrib.: Chota Nagpur (Haines, *l.c.*), West Champaran.

var. **serrata** Haines, Bot. Bihar Orissa 417. 1922 (Repr. ed., 2: 436. 1961).

Fl. & Fr.: December - February.

Distrib.: Palamau (Haines, *l.c.*).

PANAX L.

Panax cochleatum DC., Prodr. 4: 253. 1830; Haines, Bot. Bihar Orissa 415. 1922 (Repr. ed., 2: 434. 1961).

Distrib.: Cultivated in gardens.

POLYSCIAS J.R. Forster & G. Forster

Polyscias fruticosa (L.) Harms in Engler & Prantl, Nat. Pflanzenfam. 3(8): 45. 1894. *Panax fruticosum* L., Sp. Pl. ed. 2. 1513. 1763; Haines, Bot. Bihar Orissa 415. 1922 (Repr. ed., 2: 434. 1961).

Distrib.: Cultivated in gardens.

SCHEFFLERA J.R. Forster & G. Forster

Schefflera venulosa (Wight & Arnott) Harms in Engler & Prantl, Nat. Pflanzenfam. 3(8): 39. 1894. *Paratropis venulosa* Wight & Arnott, Prodr. 1: 377. 1834. *Heptapleurum venulosum* Seem. in J. Bot. 3: 80. 1865; C.B. Clarke in Hook. f., Fl. Brit. India 2: 729. 1879, *p.p.*; Haines, Bot. Bihar Orissa 415. 1922 (Repr. ed., 2: 434. 1961).

var. **roxburghii** (Gamble) K.K. Khanna, *comb. nov.* *Schefflera roxburghii* Gamble, Fl. Madras 570. 1919. *Heptapleurum venulosum* Seem. var. *roxburghii* (Gamble) Haines, Bot. Bihar Orissa 416. 1922 (Repr. ed., 2: 435. 1961).

Fl. & Fr.: May - November.

Distrib.: Hazaribagh.

var. **venulosa**

Fl. & Fr.: May - November.

Distrib.: Chota Nagpur, Hazaribagh, Santal Pargana.

TREVESIA Vis.

Trevesia palmata Vis. in Mem. Acc. Torin. ser. 2. 4: 262. 1842; C.B. Clarke in Hook. f., Fl. Brit. India 2: 732. 1879; Haines, Bot. Bihar Orissa 416. 1922 (Repr. ed., 2: 435. 1961).

Fl. & Fr.: January - June.

Distrib.: Purnia, Singhbhum, West Champaran.

ALANGIACEAE

ALANGIUM Lam., *nom. cons.*

Alangium chinense (Lour.) Harms in Ber. Deutsch. Bot. Ges. 15: 24. 1897. *Stylidium chinense* Lour., Fl. Cochinch. 1: 221. 1790. *Marlea begoniifolia* Roxb., Pl. Corom. 3: 80. t. 283. 1820 & Fl. Ind. 2: 261. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 2: 743. 1879. *Alangium begoniifolium* Baill., Hist. Pl. 6: 270. 1876; Haines, Bot. Bihar Orissa 418. 1922 (Repr. ed., 2: 436. 1961).

Fl. & Fr.: June - August.

Distrib.: Purnia.

Alangium salvifolium (L. f.) Wang in Engler, Pflanzenr. 4. 220b (heft 41): 9. 1910. *Grewia salvifolia* L. f., Suppl. Pl. 409. 1782. *Alangium lamarckii* Thwaites, Enum. Pl. Zeyl. 133. 1859; Hook. f., Fl. Brit. India 2: 741. 1879, *p.p.*; Haines, Bot. Bihar Orissa 418. 1922 (Repr. ed., 2: 437. 1961).

Fl. & Fr.: March - July.

Distrib.: Gumla, West Champaran.

RUBIACEAE

ANTHOCEPHALUS A. Rich. *emend.* Haviland

Anthocephalus chinensis (Lam.) A. Rich. *ex* Walp., Repert. Bot. Syst. 2: 491. 1843. *Cephalanthus chinensis* Lam., Encycl. 1: 678. 1785. *Anthocephalus cadamba* (Roxb.) Miq., Fl. Ind. Bat. 2: 135. 1856; Hook. f., Fl. Brit. India 3: 23. 1880; Haines, Bot. Bihar Orissa 421. 1922 (Repr. ed., 2: 441. 1961). - *Kadamb*.

Fl. & Fr.: May - February.

Distrib.: Bhagalpur, East Champaran, Hazaribagh, Palamau, Purnia, Santal Pargana, West Champaran.

ARGOSTEMMA Wallich

Argostemma sarmentosum Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 324. 1824; Hook. f., Fl. Brit. India 3: 42. 1880.

Fl. & Fr.: August - November.

Distrib.: Palamau, West Champaran.

Argostemma verticillatum Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 325. 1824; Hook. f., Fl. Brit. India 3: 43. 1880.

Fl. & Fr.: August - October.

Distrib.: Hazaribagh.

CANTHIUM Lam.

Canthium dicoccum (Gaertn.) Teysm. & Binn., Cat. Hort. Bogor. 113. 1866. *Psydrax dicoccos* Gaertn., Fruct. Sem. Pl. 1: 125. t. 26. 1788. *Canthium didymum* Gaertn. f., Suppl. Carp. 3: 94. t. 196. 1806; Hook. f., Fl. Brit. India 3: 132. 1880; Haines, Bot. Bihar Orissa 438. 1922 (Repr. ed., 2: 458. 1961).

Fl. & Fr.: October - March.

Distrib.: Chota Nagpur, West Champaran.

Canthium parvifolium Roxb., Fl. Ind. 1: 534. 1832; Hook. f., Fl. Brit. India 3: 135. 1880.

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Munger.

CATUNAREGAM Wolf

Catunaregam malabarica (Lam.) Sivarajan, Fl. Calicut 131. 1982. *Randia malabarica* Lam., Encycl. 3: 25. 1789; Hook. f., Fl. Brit. India 3: 111. 1880; Haines, Bot. Bihar Orissa 433. 1922 (Repr. ed., 2: 454. 1961).

Fl. & Fr.: April - November.

Distrib.: Chota Nagpur.

Catunaregam spinosa (Thunb.) Tirveng. in Taxon 27: 515. 1978. *Gardenia spinosa* Thunb., Diss. Gard. 7: 16. t. 2. f. 4. 1780. *Randia dumetorum* (Retz.) Poir. in Lam., Encycl. Suppl. 2: 829. 1812; Hook. f., Fl. Brit. India 3: 110. 1880; Haines, Bot. Bihar Orissa 432. 1922 (Repr. ed., 2: 453. 1961).

Fl. & Fr.: May - January

Distrib.: Chota Nagpur, Hazaribagh, Purnia, West Champaran.

Catunaregam uliginosa (Retz.) Sivarajan, Fl. Calicut 132. 1982. *Gardenia uliginosa* Retz., Observ. Bot. 2: 14. 1781. *Randia uliginosa* (Retz.) Poir. in Lam., Encycl. Suppl. 2: 829. 1811; Hook. f., Fl. Brit. India 3: 110. 1880; Haines, Bot. Bihar Orissa 432. 1922 (Repr. ed., 2: 452. 1961).

Fl. & Fr.: May - February.

Distrib.: Gumla, Palamau, West Champaran.

CINCHONA L.

Cinchona ledgeriana Moen ex Trimen in J. Bot. 19: 323. 1881.

Fl. & Fr.: March - June.

Distrib.: Palamau.

Cinchona succirubra Pav. ex Klotzsch in Abh. Akad. Berl. 60. 1857 (1858).

Fl. & Fr.: March - May.

Distrib.: Purnia.

COFFEA L.

Coffea arabica L., Sp. Pl. 172. 1753; Hook. f., Fl. Brit. India 3: 153. 1880; Haines, Bot. Bihar Orissa 436. 1922 (Repr. ed., 2: 457. 1961).

Fl. & Fr.: March - December.

Distrib.: Cultivated. Hazaribagh, Ranchi (Haines, l.c.).

Coffea benghalensis Heyne ex Roem. & Schult., Syst. Veg. 5: 200. 1819. *C. bengalensis* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 194. 1824;

Hook. *f.*, Fl. Brit. India 3: 153. 1880; Haines, Bot. Bihar Orissa 436. 1922 (Repr. ed., 2: 457. 1961).

Fl. & Fr.: March - May.

Distrib.: Hazaribagh, Purnia, Singhbhum, West Champaran.

Coffea khasiana Hook. *f.*, Fl. Brit. India 3: 154. 1880.

Fl. & Fr.: March - April.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 354. 1998).

Coffea liberica Hiern in Trans. Linn. Soc. London ser. II, 1: 171. t. 24. 1876.

Fl.: March.

Distrib.: Cultivated (Haines, *l.c.*)

DENTEELLA J.R. Forster & G. Forster

Dentella repens (L.) J.R. Forster & G. Forster, Char. Gen. Plant. Ins. Mar. Austr. 26. t. 13. 1776; Hook. *f.*, Fl. Brit. India 3: 42. 1880, *p.p.*; Haines, Bot. Bihar Orissa 443. 1922 (Repr. ed., 2: 464. 1961). *Oldenlandia repens* L., Mant. Pl. 40. 1767.

Fl. & Fr.: January - July.

Distrib.: Bhagalpur, Gaya, Hazaribagh, Koderma, Munger, Purnia, West Champaran.

Dentella serpyllifolia Wallich *ex* Craib, Fl. Siam. Enum. 2: 27. 1932. *D. repens auct. non* J.R. Forster & G. Forster, 1776; Hook. *f.*, Fl. Brit. India 3: 42. 1880, *p.p.*

Fl. & Fr.: April - October.

Distrib.: Bhagalpur, Chota Nagpur.

FAGERLINDIA Tirveng.

Fagerlindia fasciculata (Roxb.) Tirveng. in Nord. J. Bot. 3: 458. 1983. *Posoqueria fasciculata* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 568.

1824. *Randia fasciculata* (Roxb.) DC., Prodr. 4: 386. 1830; Hook. *f.*, Fl. Brit. India 3: 109. 1880; Haines, Bot. Bihar Orissa 433. 1922 (Repr. ed., 2: 454. 1961).

Fl. & Fr.: December - May.

Distrib.: Purnia, Singhbhum.

GARDENIA J. Ellis, *nom. cons.*

Gardenia angusta (L.) Merr., Interp. Herb. Amb. 485. 1917. *Varneria angusta* L., Amoen. Acad. 4: 136. 1759. *Gardenia florida* L., Sp. Pl. ed. 2. 305. 1762; Hook. *f.*, Fl. Brit. India 3: 115. 1880; Haines, Bot. Bihar Orissa 431. 1922 (Repr. ed., 2: 451. 1961).

Fl. & Fr.: September - April.

Distrib.: Cultivated in gardens. West Champaran.

Gardenia campanulata Roxb., Fl. Ind. 1: 710. 1832; Hook. *f.*, Fl. Brit. India 3: 118. 1880.

Fl. & Fr.: March - November.

Distrib.: Hazaribagh.

Gardenia gummifera L. *f.*, Suppl. Pl. 164. 1782; Hook. *f.*, Fl. Brit. India 3: 116. 1880; Haines, Bot. Bihar Orissa 429. 1922 (Repr. ed., 2: 450. 1961).

Fl. & Fr.: March - December.

Distrib.: Chota Nagpur, Singhbhum.

Gardenia latifolia Aiton, Hortus Kew. 1: 294. 1789; Hook. *f.*, Fl. Brit. India 3: 116. 1880; Haines, Bot. Bihar Orissa 431. 1922 (Repr. ed., 2: 452. 1961).

Fl. & Fr.: March - December.

Distrib.: Bhagalpur, Hazaribagh, Koderma, Palamau, Ranchi.

Gardenia resinifera Roth, Nov. Pl. Sp. 150. 1821. *G. lucida* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 553. 1824; Hook. *f.*, Fl. Brit. India 3: 115. 1880; Haines, Bot. Bihar Orissa 430. 1922 (Repr. ed., 2: 451. 1961).

Fl. & Fr.: March - November.

Distrib.: Singhbhum.

Gardenia turgida Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 557. 1824; Hook. f., Fl. Brit. India 3: 118. 1880; Haines, Bot. Bihar Orissa 429. 1922 (Repr. ed., 2: 449. 1961).

Fl. & Fr.: March - December.

Distrib.: Hazaribagh, West Champaran.

HALDINIA Ridsd.

Haldinia cordifolia (Roxb.) Ridsd. in Blumea 24: 361. 1978. *Nauclea cordifolia* Roxb., Pl. Corom. 1: 40. 1796. *Adina cordifolia* (Roxb.) Hook. f. ex Brandis, For. Fl. 263. t. 33. 1874; Hook. f., Fl. Brit. India 3: 24. 1880; Haines, Bot. Bihar Orissa 421. 1922 (Repr. ed., 2: 441. 1961).

Fl. & Fr.: August - May.

Distrib.: Throughout the state.

HAMELIA Jacq.

Hamelia patens Jacq., Enum. Syst. Pl. 2: 16. 1760.

Fl. & Fr.: Almost throughout the year.

Distrib.: Cultivated. Palamau and elsewhere.

HEDYOTIS L.

Hedyotis costata (Roxb.) Kurz in J. Asiat. Soc. Bengal 45 (2): 135. 1876. *Spermacoce costata* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 376. 1820.

Fl. & Fr.: September - February.

Distrib.: Chota Nagpur.

Hedyotis lineata Roxb., Fl. Ind. 1: 365. 1832; Hook. f., Fl. Brit. India 3: 59. 1880.

Fl.: January.

Distrib.: Singhbhum.

Hedyotis nagporensis (Brace ex Haines) Rao & Hemadri in Indian For. 99: 377. 1973. *Oldenlandia nagporensis* Brace ex Haines, Bot. Bihar Orissa 448. 1922 (Repr. ed., 2: 470. 1961). *O. senegalensis auct. non* Hiern, 1877: Hook. f., Fl. Brit. India 3: 68. 1880.

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Singhbhum.

Hedyotis pinifolia Wallich ex G. Don, Gen. Hist. 3: 525. 1837; Hook. f., Fl. Brit. India 3: 60. 1880; Haines, Bot. Bihar Orissa 445. 1922 (Repr. ed., 2: 467. 1961).

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur, West Champaran.

Hedyotis scandens Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 364. 1820; Hook. f., Fl. Brit. India 3: 57. 1880; Haines, Bot. Bihar Orissa 444. 1922 (Repr. ed., 2: 466. 1961).

Fl. & Fr.: December - February.

Distrib.: Purnia (Haines, l.c.).

Hedyotis verticillata (L.) Lam., Encycl. Meth. 1: 271. 1791. *Oldenlandia verticillata* L., Mant. Pl. 40. 1767. *Hedyotis hispida* Retz., Observ. Bot. 4: 23. 1786; Hook. f., Fl. Brit. India 3: 60. 1880; Haines, Bot. Bihar Orissa 445. 1922 (Repr. ed., 2: 466. 1961).

Fl. & Fr.: November - January.

Distrib.: Palamau, Singhbhum, West Champaran.

Hedyotis vestita R. Br. ex G. Don, Gen. Hist. 3: 526. 1834; Hook. f., Fl. Brit. India 3: 58. 1880; Haines, Bot. Bihar Orissa 444. 1922 (Repr. ed., 2: 466. 1961).

Fl. & Fr.: August - January.

Distrib.: Singhbhum (Haines, l.c.).

HYMENODICTYON Wallich

Hymenodictyon orixense (Roxb.) Mabb. in Taxon 31: 66. 1982.
Cinchona orixensis Roxb., Bot. Descr. Sweietenia 21. 1793.
Hymenodictyon excelsum (Roxb.) Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 149. 1824; Hook. f., Fl. Brit. India 3: 35. 1880; Haines, Bot. Bihar Orissa 425. 1922 (Repr. ed., 2: 446. 1961).

Fl. & Fr.: August - March.

Distrib.: Bhagalpur, Hazaribagh, Koderma, Palamau, Purnia, West Champaran.

HYPTIANTHERA Wight & Arnott

Hyptianthera stricta (Roxb.) Wight & Arnott, Prodr. 399. 1834; Hook. f., Fl. Brit. India 3: 121. 1880; Haines, Bot. Bihar Orissa 427. 1922 (Repr. ed., 2: 447. 1961). *Randia stricta* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 145. 1824.

Fl. & Fr.: April - March.

Distrib.: East Champaran, Chota Nagpur, Santal Pargana.

IXORA L.

Ixora coccinea L., Sp. Pl. 110. 1753; Hook. f., Fl. Brit. India 3: 145. 1880; Haines, Bot. Bihar Orissa 434. 1922 (Repr. ed., 2: 455. 1961).

Fl. & Fr.: February - April.

Distrib.: Cultivated in gardens.

Ixora pavetta Andr. in Bot. Rep. t. 78. 1799. *I. parviflora* Vahl, Symb. Bot. 3: 11. t. 52. 1794; Hook. f., Fl. Brit. India 3: 142. 1880; Haines, Bot. Bihar Orissa 435. 1922 (Repr. ed., 2: 455. 1961). *I. arborea* Roxb. ex Sm. in Rees, Cyclop. 19: 5. 1811.

Fl. & Fr.: January - June.

Distrib.: Bhagalpur, Purnia, Santal Pargana, Singhbhum, West Champaran.

Ixora stricta Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 379. 1820; Hook. f., Fl. Brit. India 3: 145. 1880.

Distrib.: Cultivated in gardens.

Ixora undulata Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 385. 1820; Hook. f., Fl. Brit. India 3: 147. 1880; Haines, Bot. Bihar Orissa 434. 1922 (Repr. ed., 2: 455. 1961).

Fl. & Fr.: April - December.

Distrib.: Hazaribagh, Ranchi, Santal Pargana, Singhbhum.

KNOXIA L.

Knoxia roxburghii (Spreng.) M.A. Rau in Bull. Bot. Surv. India 10, Suppl. 2: 40. 1969. *Spermacoce roxburghii* Spreng., Syst. Veg. 1: 404. 1824. *Knoxia brachycarpa* R. Br. ex Hook. f., Fl. Brit. India 3: 130. 1880; Haines, Bot. Bihar Orissa 452. 1922 (Repr. ed., 2: 474. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Koderma, Palamau, Ranchi, West Champaran.

Knoxia sumatrensis (Retz.) DC., Prodr. 4: 569. 1830. *Spermacoce sumatrensis* Retz., Observ. Bot. 4: 23. 1786. *Knoxia corymbosa auct. non Willd.*, 1798; Hook. f., Fl. Brit. India 3: 128. 1880; Haines, Bot. Bihar Orissa 452. 1922 (Repr. ed., 2: 473. 1961).

Fl. & Fr.: August - December.

Distrib.: Giridih, Hazaribagh, Palamau, West Champaran.

KOHAUTIA Cham. & Schl., *nom. cons.*

Kohautia gracilis (Wallich) DC., Prodr. 4: 430. 1830. *Hedyotis gracilis* Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 371. 1820. *Oldenlandia gracilis* (Wallich) Hook. f., Fl. Brit. India 3: 68. 1880; Haines, Bot. Bihar Orissa 449. 1922 (Repr. ed., 2: 470. 1961).

Fl. & Fr.: February - June.

Distrib.: Bhagalpur, East Champaran, Hazaribagh, Purnia, West Champaran.

LASIANTHUS W. Jack, *nom. cons.*

Lasianthus truncatus Bedd., Icon. Pl. Ind. Or. t. 9. 1868; Hook. *f.*, Fl. Brit. India 3: 189. 1880.

Fl. & Fr.: April - May.

Distrib.: Singhbhum.

MEYNA Roxb. *ex* Link

Meyna laxiflora Robyns in Bull. Jard. Bot. Brux. 11: 228. 1928. *Vangueria spinosa* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 172. 1824, *p.p. excl. typ.*; Hook. *f.*, Fl. Brit. India 3: 136. 1880, *p.p.*

Fl. & Fr.: March - May.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 358. 1998).

Meyna pubescens (Kurz) Robyns in Bull. Jard. Bot. Brux. 11: 235. 1928. *Vangueria pubescens* Kurz in J. Asiat. Soc. Bengal 41(2): 314. 1872; Haines, Bot. Bihar Orissa 439. 1922 (Repr. ed., 2: 460. 1961).

Fl. & Fr.: April - December.

Distrib.: Bhagalpur, Chota Nagpur, Gaya, Santal Pargana, Singhbhum, West Champaran.

Meyna spinosa Roxb. *ex* Link in Jahrb. Gewachsk 1 (3): 32. 1820. *Vangueria spinosa* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 172. 1824, *p.p.*; Hook. *f.*, Fl. Brit. India 3: 136. 1880, *p.p.*; Haines, Bot. Bihar Orissa 439. 1922 (Repr. ed., 2: 460. 1961).

Fl. & Fr.: July - January.

Distrib.: Purnia, Singhbhum, West Champaran.

MITRAGYNA Korth., *nom. cons.*

Mitragyna parvifolia (Roxb.) Korth., Obs. Naocl. Ind. 19. 1839; Haines, Bot. Bihar Orissa 422. 1922 (Repr. ed., 2: 442. 1961). *Nauclea parvifolia* Roxb., Pl. Corom. 1: 40. t. 52. 1796. *Stephegyne parvifolia* Korth., Verh. Nat. Gesch. Bot. Nederl. 161. 1840; Hook. *f.*, Fl. Brit. India 3: 25. 1880.

Fl. & Fr.: May - April.

Distrib.: East Champaran, Hazaribagh, Koderma, Ranchi, West Champaran.

MORINDA L.

Morinda angustifolia Roxb., Pl. Corom. t. 237. 1915 & Fl. Ind. (Carey & Wallich ed.) 1: 547. 1820; Hook. *f.*, Fl. Brit. India 3: 156. 1880; Haines, Bot. Bihar Orissa 424. 1922 (Repr. ed., 2: 444. 1961).

Fl. & Fr.: October - January.

Distrib.: Purnia.

Morinda citrifolia L., Sp. Pl. 176. 1753; Hook. *f.*, Fl. Brit. India 3: 155. 1880.

Distrib.: Cultivated.

Morinda pubescens Sm. in Rees, Cyclop. 24. n. 3. 1813. *M. tinctoria* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 543. 1820; Hook. *f.*, Fl. Brit. India 3: 156. 1880; Haines, Bot. Bihar Orissa 423. 1922 (Repr. ed., 2: 443. 1961).

Fl. & Fr.: May - February.

Distrib.: Hazaribagh, Palamau, Santal Pargana, Singhbhum, West Champaran.

MUSSAENDA L.

Mussaenda flava (Verdc.) Bakh. *f.* in Backer & Bakh. *f.*, Fl. Java 2: 304. 1965. *Pseudomussaenda flava* Verdc. in Kew Bull. 1951: 378. 1952.

Distrib.: Cultivated in gardens.

Mussaenda glabra Vahl, Symb. Bot. 3: 38. 1794; Hook. *f.*, Fl. Brit. India 3: 90. 1880.

Fl.: May.

Distrib.: Cultivated in gardens.

Mussaenda glabrata (Hook. f.) Hutch. ex Gamble, Fl. Madras 2: 610. 1921. *M. frondosa* var. *glabrata* Hook. f., Fl. Brit. India 3: 90. 1880.

Fl.: March - April.

Distrib.: Palamau.

Mussaenda incana Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 229. 1824; Hook. f., Fl. Brit. India 3: 87. 1880; Haines, Bot. Bihar Orissa 423. 1922 (Repr. ed., 2: 445. 1961).

Fl. & Fr.: September - October.

Distrib.: Singhbhum.

Mussaenda luteola Del., Cent. Pl. Meroe 65. 1826; Haines, Bot. Bihar Orissa 425. 1922 (Repr. ed., 2: 445. 1961).

Fl. & Fr.: November - January.

Distrib.: Gumla.

Mussaenda macrophylla Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 228. 1824; Hook. f., Fl. Brit. India 3: 89. 1880; Haines, Bot. Bihar Orissa 425. 1922 (Repr. ed., 2: 445. 1961).

Fl. & Fr.: September - December.

Distrib.: Cultivated in gardens.

Mussaenda roxburghii Hook. f., Fl. Brit. India 3: 87. 1880; Haines, Bot. Bihar Orissa 425. 1922 (Repr. ed., 2: 445. 1961).

Fl. & Fr.: July - December.

Distrib.: Cultivated in gardens.

NEANOTIS Lewis

Neanotis calycina (Hook. f.) Lewis in Ann. Miss. Bot. Gard. 53: 37. 1966. *Anotis calycina* Hook. f., Fl. Brit. India 3: 73. 1880; Haines, Bot. Bihar Orissa 450. 1922 (Repr. ed., 2: 471. 1961).

Fl. & Fr.: August - November.

Distrib.: Hazaribagh.

Neanotis foetida (Hook. f.) Lewis in Ann. Miss. Bot. Gard. 53: 38. 1966. *Anotis foetida* Hook. f., Fl. Brit. India 3: 74. 1880.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh.

NEONAUCLEA Merr.

Neonauclea purpurea (Roxb.) Merr., Int. Rumph. 483. 1917. *Nauclea purpurea* Roxb., Pl. Corom. 1: 41. t. 54. 1795; Hook. f., Fl. Brit. India 3: 26. 1880; Haines, Bot. Bihar Orissa 422. 1922 (Repr. ed., 2: 443. 1961).

Fl. & Fr.: February - April.

Distrib.: Santal Pargana.

OLDENLANDIA L.

Oldenlandia affinis (Roem. & Schult.) DC., Prodr. 4: 428. 1830. *Hedyotis affinis* Roem. & Schult., Syst. Veg. 3: 194. 1819. *Oldenlandia dichotoma* (Koen. ex Roth) Hook. f., Fl. Brit. India 3: 67. 1880; Haines, Bot. Bihar Orissa 448. 1922 (Repr. ed., 2: 470. 1961).

Fl. & Fr.: August - March.

Distrib.: Giridih, Hazaribagh, Koderma, Lohardaga, Ranchi, West Champaran.

Oldenlandia corymbosa L., Sp. Pl. 119. 1753; Hook. f., Fl. Brit. India 3: 64. 1880; Haines, Bot. Bihar Orissa 446. 1922 (Repr. ed., 2: 468. 1961).

var. **corymbosa**

Fl. & Fr.: September - April.

Distrib.: Throughout the state.

var. **linearis** (DC.) Verdc. in Kew Bull. 30: 296. 1975. *Oldenlandia linearis* DC., Prodr. 4: 425. 1830.

Fl. & Fr.: September - March.

Distrib.: Chota Nagpur, Lohardaga, Singhbhum.

Oldenlandia diffusa (Willd.) Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 423. 1820; Hook. f., Fl. Brit. India 3: 65. 1880; Haines, Bot. Bihar Orissa 447. 1922 (Repr. ed., 2: 468. 1961). *Hedyotis diffusa* Willd., Sp. Pl. 1: 566. 1798.

Fl. & Fr.: July - October.

Distrib.: Giridih, Hazaribagh, Koderma, Purnia, West Champaran.

Oldenlandia herbacea (L.) Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 445. 1820; Haines, Bot. Bihar Orissa 447. 1922 (Repr. ed., 2: 469. 1961). *Hedyotis herbacea* L., Sp. Pl. 102. 1753. *Oldenlandia heynii* G. Don, Gen. Hist. 3: 531. 1834; Hook. f., Fl. Brit. India 3: 65. 1880.

Fl. & Fr.: September - January.

Distrib.: Chota Nagpur, West Champaran.

Oldenlandia pumila (L. f.) DC., Prodr. 4: 425. 1830. *Hedyotis pumila* L. f., Suppl. Pl. 119. 1782. *Oldenlandia crystallina* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 443. 1820; Hook. f., Fl. Brit. India 3: 65. 1880; Haines, Bot. Bihar Orissa 447. 1922 (Repr. ed., 2: 468. 1961).

Fl. & Fr.: December - February.

Distrib.: Patna, Purnia, West Champaran.

Oldenlandia pusilla Rottler in Verh. Ges. Naturf. Fr. Neve. Schr. 4: 216. 1803. *O. brachiata* Hook. f., Fl. Brit. India 3: 66. 1880; Haines, Bot. Bihar Orissa 448. 1922 (Repr. ed., 2: 470. 1961).

Fl. & Fr.: September - October.

Distrib.: Patna (Haines, l.c.).

Oldenlandia umbellata L., Sp. Pl. 119. 1753; Hook. f., Fl. Brit. India 3: 66. 1880; Haines, Bot. Bihar Orissa 447. 1922 (Repr. ed., 2: 469. 1961).

Fl. & Fr.: July - September.

Distrib.: Singhbhum.

OPHIORRHIZA L.

Ophiorrhiza fasciculata D. Don, Prodr. Fl. Nepal. 136. 1825; Hook. f., Fl. Brit. India 3: 83. 1880; Haines, Bot. Bihar Orissa 443. 1922 (Repr. ed., 2: 465. 1961).

Fl. & Fr.: May - October.

Distrib.: Palamau (Haines, *l.c.*).

Ophiorrhiza rugosa Wallich var. **prostrata** (D. Don) Deb & Mondal in Bull. Bot. Surv. India 24: 228. 1983. *O. prostrata* D. Don, Prodr. Fl. Nepal. 136. 1825, *p.p.* *O. harrisiana* Heyne ex Hook. *f.*, Fl. Brit. India 3: 78. 1880; Haines, Bot. Bihar Orissa 443. 1922 (Repr. ed., 2: 464. 1961).

Fl. & Fr.: April - June.

Distrib.: Chota Nagpur.

PAEDERIA L., *nom. cons.*

Paederia scandens (Lour.) Merr. in Contr. Arn. Arb. 8: 163. 1934. *Gentiana scandens* Lour., Fl. Cochinch. 1: 171. 1790. *Paederia foetida* auct. non L., 1767: Hook. *f.*, Fl. Brit. India 3: 195. 1881; Haines, Bot. Bihar Orissa 442. 1922 (Repr. ed., 2: 463. 1961).

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, Palamau, Purnia, Ranchi, West Champaran.

PAVETTA L.

Pavetta crassicaulis Bremek. in Fedde Repert. 37: 112. 1934. *P. indica* auct. non L., 1753: Hook. *f.*, Fl. Brit. India 3: 150. 1880; Haines, Bot. Bihar Orissa 435. 1922 (Repr. ed., 2: 456. 1961).

Fl. & Fr.: April - November.

Distrib.: Bhagalpur, Hazaribagh, Purnia, Ranchi, West Champaran.

Pavetta tomentosa Roxb. ex Sm. in Rees, Cyclop. 26: 2. 1819. *P. indica* var. *tomentosa* (Roxb. ex Sm.) Hook. *f.*, Fl. Brit. India 3: 150. 1880; Haines, Bot. Bihar Orissa 435. 1922 (Repr. ed., 2: 456. 1961).

Fl. & Fr.: July - December.

Distrib.: Throughout the state.

PENTAS Benth.

Pentas lanceolata (Forssk.) K. Schum. in Engler & Prantl, Nat. Pflanzenfam. 4(4): 29. 1891. *Ophiorrhiza lanceolata* Forssk., Fl. Aegypt. - Arab. 42. 1775.

Fl. & Fr.: Almost throughout the year.

Distrib.: Cultivated in gardens.

PSYCHOTRIA L., nom. cons.

Psychotria adenophylla Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 166. 1824; Hook. f., Fl. Brit. India 3: 164. 1880; Haines, Bot. Bihar Orissa 440. 1922 (Repr. ed., 2: 461. 1961).

Fl. & Fr.: August - December.

Distrib.: Singhbhum.

Psychotria curviflora Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 167. 1824. *Chasalia curviflora* (Wallich) Thwaites, Enum. Pl. Zeyl. 150, 421. 1864; Hook. f., Fl. Brit. India 3: 176. 1880; Haines, Bot. Bihar Orissa 441. 1922 (Repr. ed., 2: 462. 1961).

Fl. & Fr.: April - August.

Distrib.: Chota Nagpur.

Psychotria denticulata Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 166. 1824; Hook. f., Fl. Brit. India 3: 173. 1880; Haines, Bot. Bihar Orissa 441. 1922 (Repr. ed., 2: 462. 1961).

Fl. & Fr.: May - August.

Distrib.: Chota Nagpur.

RICHARDIA L.

Richardia scabra L., Sp. Pl. 330. 1753. *R. pilosa* Ruiz & Pav., Fl. Peru. 3: 50. t. 279b. 1802. *Richardsonia pilosa* (Ruiz & Pav.) Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. 3: 350. 1820.

Fl. & Fr.: July - November.

Distrib.: Bhagalpur, Palamau.

RUBIA L.

Rubia angustissima Wallich ex G. Don, Gen. Hist. 3: 643. 1834; Hook. f., Fl. Brit. India 3: 203. 1881; Haines, Bot. Bihar Orissa 453. 1922 (Repr. ed., 2: 474. 1961).

Fl. & Fr.: November - January.

Distrib.: West Champaran.

Rubia manjith Roxb. ex Fleming in Asiat. Res. 11: 177. 1810. *R. cordifolia auct. non L.*, 1753: D. Don, Prodr. 133. 1825; Hook. f., Fl. Brit. India 3: 202. 1881; Haines, Bot. Bihar Orissa 452. 1922 (Repr. ed., 2: 474. 1961).

Fl. & Fr.: October - January.

Distrib.: Giridih, Hazaribagh, Palamau

SPERMACOCE L.

Spermacoce articularis L. f., Suppl. Pl. 119. 1782. *S. hispida auct. non L.*, 1753: Hook. f., Fl. Brit. India 3: 200. 1881; Haines, Bot. Bihar Orissa 451. 1922 (Repr. ed., 2: 472. 1961).

Fl. & Fr.: August - February.

Distrib.: Bhagalpur, Giridih, Gumla, Hazaribagh, Lohardaga, Koderma, Munger, Palamau, Ranchi, Sahibganj, West Champaran.

Spermacoce mauritiana Osea Gideon ex Verdc. in Kew Bull. 37: 547. 1983.

Distrib.: Bihar (Naithani, Fl. Pl. India, Nepal & Bhutan 211. 1990).

Spermacoce ramanii Sivarajan & R.V. Nair in Taxon 35: 376. f. 11-18. 1986. *S. stricta auct. non L. f.*, 1782: Hook. f., Fl. Brit. India 3: 200. 1881; Haines, Bot. Bihar Orissa 450. 1922 (Repr. ed., 2: 472. 1961).

Fl. & Fr.: September - December.

Distrib.: Bhagalpur, Giridih, Hazaribagh, Lohardaga, Ranchi, West Champaran.

SPERMADICTYON Roxb.

Spermadietyon suaveolens Roxb., Pl. Corom. 3: 32. t. 236. 1815. *Hamiltonia suaveolens* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 223. 1824; Hook. f., Fl. Brit. India 3: 197. 1880; Haines, Bot. Bihar Orissa 442. 1922 (Repr. ed., 2: 463. 1961).

Fl. & Fr.: March - January.

Distrib.: Hazaribagh, Lohardaga, Santal Pargana, Singhbhum, West Champaran.

TARENNA Gaertn.

Tarenna asiatica (L.) Kuntze ex K. Schum., Bot. Tidsskr. 24: 332. 1902. *Rondeletia asiatica* L., Sp. Pl. 172. 1753. *Webera corymbosa* Willd., Sp. Pl. 1: 1224. 1798; Hook. f., Fl. Brit. India 3: 102. 1880; Haines, Bot. Bihar Orissa 428. 1922 (Repr. ed., 2: 448. 1961).

Fl. & Fr.: March - June.

Distrib.: East Champaran.

THECAGONUM Babu

Thecagonum biflorum (L.) Babu in Bull. Bot. Surv. India 11: 214. 1969. *Oldenlandia biflora* L., Sp. Pl. 119. 1753; Hook. f., Fl. Brit. India 3: 70. 1880. *O. paniculata* L., Sp. Pl. ed. 2. 1667. 1763; Hook. f., Fl. Brit. India 3: 69. 1880; Haines, Bot. Bihar Orissa 449. 1922 (Repr. ed., 2: 470. 1961).

Fl. & Fr.: August - October.

Distrib.: Darbangha, Giridih, Hazaribagh, Palamau, Patna, West Champaran.

Thecagonum ovatifolium (Cav.) Babu in Bull. Bot. Surv. India 11: 214. 1969. *Hedyotis ovatifolia* Cav., Descr. Pl. Ic. 6: 52. 1802. *Oldenlandia nudicaulis* Roth, Nov. Pl. Sp. 95. 1821; Hook. f., Fl. Brit. India 3: 70. 1880; Haines, Bot. Bihar Orissa 449. 1922 (Repr. ed., 2: 471. 1961).

Fl. & Fr.: August - December.

Distrib.: East Champaran, Giridih, Hazaribagh, Palamau, Sahibganj, West Champaran.

WENDLANDIA Bartl. *ex DC., nom. cons.*

Wendlandia heynei (Roem. & Schult.) Sant. & Merch. in Bull. Bot. Surv. India 3: 110. 1961. *Rondeletia heynei* Roem. & Schult., Syst. Veg. 5: 234. 1819. *Wendlandia exserta* DC., Prodr. 4: 411. 1830; Hook. *f.*, Fl. Brit. India 3: 37. 1880; Haines, Bot. Bihar Orissa 426. 1922 (Repr. ed., 2: 446. 1961).

Fl. & Fr.: March - July.

Distrib.: Giridih, Hazaribagh, Muzaffarpur, Palamau, Santal Pargana, Singhbhum, West Champaran.

Wendlandia tinctoria (Roxb.) DC., Prodr. 4: 411. 1830; Hook. *f.*, Fl. Brit. India 3: 38. 1880; Haines, Bot. Bihar Orissa 426. 1922 (Repr. ed., 2: 447. 1961). *Rondeletia tinctoria* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 522. 1820, *non* Blume, 1826.

Fl. & Fr.: December - April.

Distrib.: Gaya, Giridih, Hazaribagh, Singhbhum, West Champaran.

ASTERACEAE**ACANTHOSPERMUM** Schrank

Acanthospermum hispidum DC., Prodr. 5: 522. 1836.

Fl. & Fr.: August - February.

Distrib.: Hazaribagh, Koderma, Palamau, Ranchi.

ADENOSTEMMA J.R. Forster & G. Forster

Adenostemma lavenia (L.) Kuntze, Revis. Gen. Pl. 1: 304. 1891. *Verbesina lavenia* L., Sp. Pl. 902. 1753. *Adenostemma viscosum* J.R. Forster & G. Forster, Char. Gen. Pl. 90. t. 45. 1776; Hook. *f.*, Fl. Brit. India 3: 242. 1881; Haines, Bot. Bihar Orissa 461. 1922 (Repr. ed., 2: 485. 1961).

var. **latifolium** (D. Don) Panigrahi in Kew Bull. 30(4): 651. 1975. *Adenostemma latifolium* D. Don, Prodr. Fl. Nepal. 181. 1825. *A. viscosum* J.R. Forster & G. Forster var. *latifolium* (D. Don) C.B. Clarke,

Comp. Ind. 29. 1876; Hook. *f.*, Fl. Brit. India 3: 242. 1881; Haines, Bot. Bihar Orissa 462. 1922 (Repr. ed., 2: 485. 1961).

Fl. & Fr.: October - January.

Distrib.: Purnia (Haines, *l.c.*).

var. **lavenia**

Fl. & Fr.: October - January.

Distrib.: Champaran, Giridih, Hazaribagh, Singhbhum.

var. **microcephalum** (DC.) Koster in Blumea 1: 474. 1935.
Adenostemma microcephalum DC., Prodr. 5: 111. 1836.

Fl. & Fr.: October - January.

Distrib.: Bihar (Uniyal in Hajra *et al.*(eds.), Fl. India 12: 347. 1995).

AGERATUM L.

Ageratum conyzoides L., Sp. Pl. 839. 1753; Hook. *f.*, Fl. Brit. India 3: 243. 1881; Haines, Bot. Bihar Orissa 462. 1922 (Repr. ed., 2: 485. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: Throughout the state.

Ageratum houstonianum Mill., Gard. Dict. ed. 8. no. 2. 1768.

Fl. & Fr.: November - December.

Distrib.: Chota Nagpur, Patna.

AMBERBOA (Pers.) Less., *nom. cons.*

Amberboa ramosa (Roxb.) Jafri in Scientist 3: 29. 1959. *Carduus ramosus* Roxb., Fl. Ind. 3: 407. 1832. *Volutarella divaricata* (DC.) Benth. & Hook. *f.*, Gen. Pl. 2: 416. 1873; Hook. *f.*, Fl. Brit. India 3: 383. 1881; Haines, Bot. Bihar Orissa 493. 1922 (Repr. ed., 2: 518. 1961). *Microlonchus divaricatus* DC., Prodr. 6: 562. 1838.

Fl. & Fr.: August - January.

Distrib.: Bhagalpur, Gaya, Patna, Ranchi.

ANAPHALIS DC.

Anaphalis adnata DC., Prodr. 6: 274. 1838; Hook. *f.*, Fl. Brit. India 3: 282. 1881.

Fl. & Fr.: August - February.

Distrib.: Chota Nagpur.

Anaphalis busua (Buch.-Ham. ex D. Don) DC., Prodr. 6: 275. 1838. *Gnaphalium busuum* Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 173. 1825. *Anaphalis araneosa* DC., Prodr. 6: 275. 1838; Hook. *f.*, Fl. Brit. India 3: 283. 1881.

Fl. & Fr.: December - March.

Distrib.: Patna.

Anaphalis contorta (D. Don) Hook. *f.*, Fl. Brit. India 3: 284. 1881. *Antennaria contorta* D. Don in Bot. Reg. 7: t. 605. 1825.

Fl. & Fr.: August - December.

Distrib.: Giridih, Hazaribagh.

ARTEMISIA L.

Artemisia capillaris Thunb., Fl. Jap. 309. 1784. *A. scoparia* Waldst. & Kit., Pl. Rar. Hung. 1: 66. t. 65. 1802; Hook. *f.*, Fl. Brit. India 3: 323. 1881. *A. capillaris* Thunb. var. *scoparia* (Waldst. & Kit.) Pamp. in Nuovo Giorn. Botan. Ital. n.s. 34: 642. 1926-1927.

Fl. & Fr.: August - December.

Distrib.: Palamau.

Artemisia caruifolia Buch.-Ham. in Roxb., Fl. Ind. 3: 422. 1832; Hook. *f.*, Fl. Brit. India 3: 324. 1881, '*carnifolia*'; Haines, Bot. Bihar Orissa... 489. 1922 (Repr. ed., 2: 513. 1961).

Fl. & Fr.: March - April.

Distrib.: Hazaribagh, Purnia, Santal Pargana, Sahibganj.

Artemisia indica Willd., Sp. Pl. 3: 1846. 1803. *A. vulgaris auct. non* L., 1753; Hook. *f.*, Fl. Brit. India 3: 325. 1881, *p.p.*

Fl. & Fr.: August - December.

Distrib.: Palamau.

Artemisia japonica Thunb., Fl. Jap. 310. 1784. *A. parviflora* Roxb. ex D. Don, Prodr. Fl. Nepal. 181. 1825; Hook. f., Fl. Brit. India 3: 322. 1881; Haines, Bot. Bihar Orissa 489. 1922 (Repr. ed., 2: 513. 1961). *A. japonica* var. *parviflora* (Roxb. ex D. Don) Pamp. in Nuovo Giorn. Bot. Ital. n.s. 34: 665. 1927.

Fl. & Fr.: April - December.

Distrib.: Hazaribagh, Palamau, Ranchi.

Artemisia nilagirica (C.B. Clarke) Pamp. in Nuovo Giorn. Bot. Ital. n.s. 33: 452. 1926. *A. vulgaris* var. *nilagirica* C.B. Clarke, Comp. Ind. 162. 1876. *A. vulgaris* auct. non L., 1753: Hook. f., Fl. Brit. India 3: 325. 1881, *p.p.*

Fl. & Fr.: October - December.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 374. 1998).

ATHROISMA DC.

Athroisma laciniatum DC., Prodr. 5: 369. 1836; Hook. f., Fl. Brit. India 3: 276. 1881; Haines, Bot. Bihar Orissa 473. 1922 (Repr. ed., 2: 497. 1961).

Fl. & Fr.: April - May.

Distrib.: Sahibganj.

BIDENS L.

Bidens biternata (Lour.) Merr. & Sherff in Bot. Gaz. 88: 293. 1929. *Coreopsis biternata* Lour., Fl. Cochinch. 2: 508. 1790. *Bidens pilosa* auct. non L., 1753: Hook. f., Fl. Brit. India 3: 309. 1881; Haines, Bot. Bihar Orissa 483. 1922 (Repr. ed., 2: 507. 1961).

Fl. & Fr.: April - October.

Distrib.: Hazaribagh, Palamau, Patna, West Champaran.

Bidens pilosa L., Sp. Pl. 832. 1753; Hook. *f.*, Fl. Brit. India 3: 309. 1881.

var. **decomposita** (Wallich) Hook. *f.*, Fl. Brit. India 3: 310. 1881. *B. decomposita* Wallich in DC., Prodr. 5: 602. 1836.

Fl. & Fr.: August - October.

Distrib.: Hazaribagh.

var. **pilosa**

Fl. & Fr.: March - December.

Distrib.: Hazaribagh, Palamau, Santal Pargana.

Bidens sulphurea (Cav.) Sch.-Bip. in Seemann, B. Voy. Herald 308. 1856. *Cosmos sulphureus* Cav., Ic. Descr. Pl. 1: 56. t. 79. 1791; Haines, Bot. Bihar Orissa 484. 1922 (Repr. ed., 2: 508. 1961).

Fl. & Fr.: April - December.

Distrib.: Palamau.

BLAINVILLEA Cass.

Blainvillea acmella (L.) Philipson in Blumea 6: 350. 1950. *Verbesina acmella* L., Sp. Pl. 901. 1753. *Blainvillea latifolia* (L. *f.*) DC. *ex* Wight, Contrib. Bot. Ind. 71. 1834; Hook. *f.*, Fl. Brit. India 3: 305. 1881; Haines, Bot. Bihar Orissa 480. 1922 (Repr. ed., 2: 504. 1961). *B. rhomboidea* Cass. in Dict. Sci. Nat. 29: 494. 1823.

Fl. & Fr.: August - January.

Distrib.: Bhagalpur, Hazaribagh, Palamau, Patna, Ranchi.

BLUMEA DC., *nom. cons.*

Blumea aromatica DC., Prodr. 5: 446. 1836; Hook. *f.*, Fl. Brit. India 3: 270. 1881.

Fl. & Fr.: November - April.

Distrib.: Chota Nagpur.

Blumea atropurpurea Haines, Bot. Bihar Orissa 469. 1922 (Repr. ed., 2: 492. 1961).

Fl. & Fr.: December - January.

Distrib.: Purnia (Haines, l.c.).

Blumea belangeriana DC., Prodr. 5: 555. 1836; Hook. f., Fl. Brit. India 3: 266. 1881.

Fl. & Fr.: November - April.

Distrib.: Patna.

Blumea bifoliata (L.) DC. in Wight, Contrib. Bot. Ind. 14. 1834; Hook. f., Fl. Brit. India 3: 261. 1881. *Conyza bifoliata* L., Sp. Pl. ed. 2. 1207. 1763.

Fl. & Fr.: December - March.

Distrib.: Bhagalpur, Patna, West Champaran.

Blumea eriantha DC. in Wight, Contrib. Bot. Ind. 15. 1834; Hook. f., Fl. Brit. India 3: 266. 1881.

Fl. & Fr.: December - April.

Distrib.: Hazaribagh, Palamau, Patna, Singhbhum.

Blumea fistulosa (Roxb.) Kurz in J. Asiat. Soc. Bengal 46(2): 187. 1877. *Conyza fistulosa* Roxb., Fl. Ind. 3: 429. 1832. *Blumea glomerata* DC. in Wight, Contrib. Bot. Ind. 15. 1834; Hook. f., Fl. Brit. India 3: 262. 1881; Haines, Bot. Bihar Orissa 469. 1922 (Repr. ed., 2: 492. 1961).

Fl. & Fr.: December - April.

Distrib.: Hazaribagh, Palamau, Ranchi, Sahibganj, Singhbhum.

Blumea hieracifolia (D. Don) DC. in Wight, Contrib. Bot. Ind. 15. 1834; Hook. f., Fl. Brit. India 3: 263. 1881. *Erigeron hieracifolium* D. Don, Prodr. Fl. Nepal. 172. 1825.

var. **hamiltoni** (DC.) C.B. Clarke, Comp. Ind. 83. 1876; Hook. f., Fl. Brit. India 3: 263. 1881. *B. hamiltoni* DC., Prodr. 5: 439. 1836; Haines, Bot. Bihar Orissa 468. 1922. (Repr. ed., 2: 492. 1961).

Fl. & Fr.: March - June.

Distrib.: Palamau.

var. hieracifolia

Fl. & Fr.: February - June.

Distrib.: Hazaribagh.

var. macrostachya (DC.) Hook. *f.*, Fl. Brit. India 3: 263. 1881. *B. macrostachya* DC., Prodr. 5: 442. 1836.

Fl. & Fr.: January - March.

Distrib.: West Champaran.

Blumea lacera (Burm. *f.*) DC. in Wight, Contrib. Bot. Ind. 14. 1834; Hook. *f.*, Fl. Brit. India 3: 263. 1881; Haines, Bot. Bihar Orissa 470. 1922 (Repr. ed., 2: 493. 1961). *Conyza lacera* Burm. *f.*, Fl. Ind. 180. t. 59. f. 1. 1768.

Fl. & Fr.: January - April.

Distrib.: Bhagalpur, Hazaribagh, Koderma, Palamau, Patna, Singhbhum, West Champaran.

Blumea laciniata (Roxb.) DC., Prodr. 5: 436. 1836; Hook. *f.*, Fl. Brit. India 3: 264. 1881; Haines, Bot. Bihar Orissa 470. 1922 (Repr. ed., 2: 494. 1961). *Conyza laciniata* Roxb., Fl. Ind. 3: 428. 1832.

Fl. & Fr.: March - April.

Distrib.: Bhagalpur, Champaran, Hazaribagh, Palamau, Patna, Purnia.

Blumea malcolmi (C.B. Clarke) Hook. *f.*, Fl. Brit. India 3: 266. 1881. *Pluchea malcolmi* C.B. Clarke, Comp. Ind. 95. 1876.

Fl. & Fr.: December - March.

Distrib.: Chota Nagpur.

Blumea membranacea DC., Prodr. 5: 440. 1836; Hook. *f.*, Fl. Brit. India 3: 265. 1881.

var. **jacquemontii** (Hook. f.) Randeria in *Blumea* 10: 271. 1960. *B. jacquemontii* Hook. f., *Fl. Brit. India* 3: 265. 1881; Haines, *Bot. Bihar Orissa* 471. 1922 (Repr. ed., 2: 494. 1961).

Fl. & Fr.: December - April.

Distrib.: Hazaribagh, Palamau.

var. **membranacea**

Fl. & Fr.: November - April.

Distrib.: Hazaribagh, Singhbhum.

var. **muralis** (DC.) Hook. f., *Fl. Brit. India* 3: 265. 1881. *B. muralis* DC., *Prodr.* 5: 440. 1836.

Fl. & Fr.: January - April.

Distrib.: Hazaribagh, Palamau.

Blumea mollis (D. Don) Merr. in *Philipp. J. Sci. (Bot.)* 5: 395. 1910. *Erigeron molle* D. Don, *Prodr. Fl. Nepal.* 192. 1825. *Blumea wightiana* DC. in Wight, *Contrib. Bot. Ind.* 14. 1834; Haines, *Bot. Bihar Orissa* 469. 1922 (Repr. ed., 2: 493. 1961).

Fl. & Fr.: December - April.

Distrib.: Bhagalpur, Champaran, Hazaribagh, Palamau, Patna, Purnia.

Blumea obliqua (L.) Druce, *Rep. Bot. Exch. Club. Brit. Isles* 4: 609. 1916 (1917). *Erigeron obliquum* L., *Mant. Pl.* 573. 1771. *Blumea amplexans* DC. in Wight, *Contrib. Bot. Ind.* 13. 1834 & *Prodr.* 5: 483. 1836; Hook. f., *Fl. Brit. India* 3: 260. 1881; Haines, *Bot. Bihar Orissa* 468. 1922 (Repr. ed., 2: 491. 1961).

Fl. & Fr.: February - March.

Distrib.: Muzaffarpur, West Champaran.

Blumea oxyodonta DC. in Wight, *Contrib. Bot. Ind.* 15. 1834; Hook. f., *Fl. Brit. India* 3: 266. 1881; Haines, *Bot. Bihar Orissa* 468. 1922 (Repr. ed., 2: 491. 1961).

Fl. & Fr.: January - April.

Distrib.: Bhagalpur, Hazaribagh, Palamau, Patna, Singhbhum, West Champaran.

Blumea procera DC., Prodr. 5: 445. 1836; Hook. f., Fl. Brit. India 3: 268. 1881.

Fl. & Fr.: December - April.

Distrib.: Sahibganj.

Blumea virens DC. in Wight, Contrib. Bot. Ind. 14. 1834; Hook. f., Fl. Brit. India 3: 264. 1881; Haines, Bot. Bihar Orissa 471. 1922 (Repr. ed., 2: 494. 1961).

Fl. & Fr.: December - March.

Distrib.: Hazaribagh.

BLUMEOPSIS Gagnep.

Blumeopsis flava (DC.) Gagnep. in Bull. Mus. Hist. Nat. Paris 26: 76. 1920. *Blumea flava* DC., Prodr. 5: 439. 1836; Haines, Bot. Bihar Orissa 472. 1922 (Repr. ed., 2: 495. 1961). *Laggera flava* (DC.) C.B. Clarke, Comp. Ind. 90. 1876; Hook. f., Fl. Brit. India 3: 270. 1881.

Fl. & Fr.: November - January.

Distrib.: Champaran, Chota Nagpur, Santal Pargana.

BREEA Less.

Breea arvensis (L.) Less., Syn. Comp. 9. 1832. *Serratula arvensis* L., Sp. Pl. 820. 1753. *Cirsium arvense* (L.) Scop., Fl. Carn. ed. 2, 2: 126. 1772. *Cnicus arvensis* (L.) Roth, Catalecta B. 1: 115. 1797; Haines, Bot. Bihar Orissa 491. 1922 (Repr. ed., 2: 515. 1961).

Fl. & Fr.: December - April.

Distrib.: Bhagalpur, Champaran, Muzaffarpur, Patna, Purnia.

CAESULIA Roxb.

Caesulia axillaris Roxb., Pl. Corom. 1: 64. t. 93. 1798; Hook. *f.*, Fl. Brit. India 3: 291. 1881; Haines, Bot. Bihar Orissa 475. 1922 (Repr. ed., 2: 499. 1961).

Fl. & Fr.: August - February.

Distrib.: Throughout the state.

CALENDULA L.

Calendula officinalis L., Sp. Pl. 921. 1753; Hook. *f.*, Fl. Brit. India 3: 358. 1881; Haines, Bot. Bihar Orissa 490. 1922 (Repr. ed., 2: 514. 1961).

Fl. & Fr.: November - March.

Distrib.: Cultivated in gardens.

CARPESIMUM L.

Carpesium cernuum L., Sp. Pl. 859. 1753; Hook. *f.*, Fl. Brit. India 3: 300. 1881.

Fl. & Fr.: December - February.

Distrib.: Santal Pargana.

CARTHAMUS L.

Carthamus tinctorius L., Sp. Pl. 830. 1753; Hook. *f.*, Fl. Brit. India 3: 386. 1881; Haines, Bot. Bihar Orissa 494. 1922 (Repr. ed., 2: 518. 1961).

Fl. & Fr.: February - April.

Distrib.: Bhagalpur, Hazaribagh, Munger, Palamau, Patna.

CENTIPEDA Lour.

Centipeda minima (L.) A. Br. & Aschers., Ind. Sem. Fl. Berol. App. 6. 1867. *Artemisia minima* L., Sp. Pl. 849. 1753. *Centipeda orbicularis* Lour., Fl. Cochinch. 2: 493. 1790; Hook. *f.*, Fl. Brit. India 3: 317. 1882; Haines, Bot. Bihar Orissa 488. 1922 (Repr. ed., 2: 512. 1961).

Fl. & Fr.: March - January.

Distrib.: Bhagalpur, Hazaribagh, Koderma, Lohardaga, Patna, Purnia, Ranchi, Sahibganj, Singhbhum, West Champaran.

CHRYSANTHELLUM Rich.

Chrysanthellum americanum (L.) Vatke, Abh. Nat. Ver. Brem. 9: 122. 1887. *Artemisia americana* L., Sp. Pl. 895. 1753. *Chrysanthellum indicum* DC., Prodr. 5: 631. 1836; Hook. f., Fl. Brit. India 3: 310. 1881; Haines, Bot. Bihar Orissa 485. 1922 (Repr. ed., 2: 509. 1961).

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, Hazaribagh, Koderma, Palamau, Patna, Purnia, Singhbhum.

CHRYSANTHEMUM L.

Chrysanthemum coronarium L., Sp. Pl. 890. 1753; Hook. f., Fl. Brit. India 3: 314. 1881.

Fl.: December - February.

Distrib.: Cultivated in gardens.

Chrysanthemum indicum L., Sp. Pl. 889. 1753; Hook. f., Fl. Brit. India 3: 314. 1881.

Fl.: November - January.

Distrib.: Cultivated in gardens.

CICHORIUM L.

Cichorium endivia L., Sp. Pl. 813. 1753.

Fl. & Fr.: February - April.

Distrib.: Cultivated.

Cichorium intybus L., Sp. Pl. 813. 1753; Hook. f., Fl. Brit. India 3: 391. 1881; Haines, Bot. Bihar Orissa 1242. 1924 (Repr. ed., 3: 1296. 1961).

Fl. & Fr.: March - August.

Distrib.: Bhagalpur, Bhojpur, Patna.

CONYZA Less., *nom. cons.*

Conyza aegyptiaca (L.) Aiton, Hortus Kew. ed. 1, 3: 183. 1789; Hook. *f.*, Fl. Brit. India 3: 258. 1881; Haines, Bot. Bihar Orissa 465. 1922 (Repr. ed., 2: 489. 1961). *Erigeron aegyptiacus* L., Mant. Pl. 112. 1767, '*aegyptiacum*'.

Fl. & Fr.: August - May.

Distrib.: Palamau.

Conyza bonariensis (L.) Cronq. in Bull. Torrey Bot. Club. 70: 632. 1943. *Erigeron bonariensis* L., Sp. Pl. 863. 1753. *Conyza ambigua* DC., Fl. Fr. Suppl. 468. 1815; Haines, Bot. Bihar Orissa 465. 1922 (Repr. ed., 2: 488. 1961).

Fl. & Fr.: August - February.

Distrib.: Champaran, Palamau, Sahibganj.

Conyza canadensis (L.) Cronq. in Bull. Torrey Bot. Club 70: 632. 1943. *Erigeron canadensis* L., Sp. Pl. 863. 1753; Hook. *f.*, Fl. Brit. India 3: 254. 1881.

Fl. & Fr.: June - August.

Distrib.: Palamau.

Conyza japonica (Thunb.) Less. ex DC., Prodr. 5: 382. 1836; Hook. *f.*, Fl. Brit. India 3: 258. 1881; Haines, Bot. Bihar Orissa 466. 1922 (Repr. ed., 2: 489. 1961). *Erigeron japonicum* Thunb., Fl. Jap. 312. 1784.

Fl. & Fr.: May - October.

Distrib.: Hazaribagh, Palamau, Patna.

Conyza leucantha (D. Don) Ludlow & Ravan in-Kew Bull. 17: 71. 1963. *Erigeron leucanthus* D. Don, Prodr. Fl. Nepal. 171. 1825. *Conyza viscidula* Wallich ex DC., Prodr. 5: 383. 1836; Hook. *f.*, Fl. Brit. India 3: 258. 1881; Haines, Bot. Bihar Orissa 465. 1922 (Repr. ed., 2: 488. 1961).

Fl. & Fr.: December - March.

Distrib.: Hazaribagh, Palamau, Singhbhum.

Conyza stricta Willd., Sp. Pl. 3: 1922. 1803; Hook. *f.*, Fl. Brit. India 3: 258. 1881; Haines, Bot. Bihar Orissa 464. 1922 (Repr. ed., 2: 488. 1961).

var. *pinnatifida* (D. Don) Kitam. in Fl. E. Himal. 337. 1966. *Erigeron pinnatifida* D. Don, Prodr. Fl. Nepal. 172. 1825.

Fl. & Fr.: August - October.

Distrib.: Bihar (Hajra in Hajra *et al.* (eds.), Fl. India 12: 109. 1995).

var. *stricta*

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Palamau, Patna.

COSMOS Cav.

Cosmos bipinnatus Cav., Icon. 1: 10. t. 14. 1791.

Distrib.: Cultivated.

Cosmos caudatus Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. 4: 188. 1820.

Fl. & Fr.: December - February.

Distrib.: Santal Pargana.

COTULA L.

Cotula anthemoides L., Sp. Pl. 891. 1753; Hook. *f.*, Fl. Brit. India 3: 316. 1881; Haines, Bot. Bihar Orissa 487. 1922 (Repr. ed., 2: 511. 1961).

Fl. & Fr.: December - March.

Distrib.: Bhagalpur, Koderma, Patna.

Cotula hemisphaerica (Roxb.) Wallich ex C.B. Clarke, Comp. Ind. 150. 1876; Haines, Bot. Bihar Orissa 487. 1922 (Repr. ed., 2: 511. 1961). *Artemisia hemisphaerica* Roxb., Fl. Ind. 3: 422. 1832; Hook. *f.*, Fl. Brit. India 3: 316. 1881.

Fl. & Fr.: December - April.

Distrib.: Bhagalpur, Purnia.

CRASSOCEPHALUM Moench.

Crassocephalum crepidioides (Benth.) S. Moore in J. Bot. 1: 211. 1912. *Gynura crepidioides* Benth. in Hook., Niger Fl. 438. 1849.

Fl. & Fr.: December - January.

Distrib.: Singhbhum.

CYATHOCLINE Cass.

Cyathocline purpurea (Buch.-Ham. ex D. Don) Kuntze, Revis. Gen. Pl. 333. 1891. *Tanacetum purpureum* Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 181. 1825. *Cyathocline lyrata* Cass. in Ann. Sci. Nat. ser. 1, 17: 420. 1829; Hook. f., Fl. Brit. India 3: 246. 1881; Haines, Bot. Bihar Orissa 463. 1922 (Repr. ed., 2: 486. 1961).

Fl. & Fr.: December - March.

Distrib.: Giridih, Hazaribagh, Lohardaga, Palamau, Santal Pargana, Singhbhum.

CYNARA L.

Cynara scolymus L., Sp. Pl. 827. 1753.

Distrib.: Cultivated.

DICHROCEPHALA L 'Hérit. ex DC.

Dichrocephala chrysanthemifolia (Blume) DC. in Wight, Contrib. Bot. Ind. 11. 1834 & Prodr. 5: 372. 1836; Hook. f., Fl. Brit. India 3: 245. 1881. *Cotula chrysanthemifolia* Blume, Bijdr. 9: 18. 1826.

Fl. & Fr.: December.

Distrib.: Hazaribagh.

ECHINOPS L.

Echinops echinatus Roxb., Fl. Ind. 3: 447. 1832; Hook. f., Fl. Brit. India 3: 358. 1881; Haines, Bot. Bihar Orissa 490. 1922 (Repr. ed., 2: 515. 1961).

Fl. & Fr.: March - July.

Distrib.: Hazaribagh, Koderma, Patna, Sasaram.

ECLIPTA L., nom. cons.

Eclipta prostrata (L.) L., Mant. Pl. 2: 286. 1771. *Verbesina prostrata* L., Sp. Pl. 902. 1753. *Eclipta alba* (L.) Hassk., Pl. Jav. Rar. 528. 1848; Hook. f., Fl. Brit. India 3: 304. 1881; Haines, Bot. Bihar Orissa 480. 1922 (Repr. ed., 2: 503. 1961).

Fl. & Fr.: August - February.

Distrib.: Throughout the state.

ELEPHANTOPUS L.

Elephantopus scaber L., Sp. Pl. 814. 1753; Hook. f., Fl. Brit. India 3: 242. 1881; Haines, Bot. Bihar Orissa 461. 1922 (Repr. ed., 2: 484. 1961).

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, Bhojpur, Champaran, Giridih, Hazaribagh, Munger, Palamau, Patna, Ranchi.

EMILIA Cass.

Emilia javanica (Burm. f.) C. Robinson in Philipp. J. Sci. 3: 217. 1908. *Hieracium javanicum* Burm. f., Fl. Ind. 174. t. 57. f. 1. 1768. *Emilia flammea* Cass., Dict. Sci. Nat. 14: 406. t. 5. 1825; Hook. f., Fl. Brit. India 3: 336. 1881; Haines, Bot. Bihar Orissa 489. 1922 (Repr. ed., 2: 514. 1961).

Fl. & Fr.: January - November.

Distrib.: Chota Nagpur.

Emilia sonchifolia (L.) DC. in Wight, Contrib. Bot. Ind. 24. 1834; Hook. f., Fl. Brit. India 3: 336. 1881; Haines, Bot. Bihar Orissa 489. 1922 (Repr. ed., 2: 513. 1961). *Cacalia sonchifolia* L., Sp. Pl. 835. 1753.

Fl. & Fr.: March - January.

Distrib.: Throughout the state.

ENHYDRA DC.

Enhydra fluctuans Lour., Fl. Cochinch. 2: 511. 1790; Hook. *f.*, Fl. Brit. India 3: 304. 1881; Haines, Bot. Bihar Orissa 479. 1922 (Repr. ed., 2: 503. 1961).

Fl. & Fr.: December - January.

Distrib.: Bhagalpur, Patna, Ranchi, West Champaran.

ERIGERON L.

Erigeron sublyratus DC. in Wight, Contrib. Bot. Ind. 9. 1834. *E. asteroides* Roxb., Fl. Ind. 3: 432. 1832, *non* Andrz. ex Bassel, 1921; Hook. *f.*, Fl. Brit. India 3: 254. 1881; Haines, Bot. Bihar Orissa 462. 1922 (Repr. ed., 2: 486. 1961).

Fl. & Fr.: October - April.

Distrib.: Bhagalpur, Champaran, Patna, Purnia, Singhbhum.

EUPATORIUM L.

Eupatorium foeniculaceum Willd., Sp. Pl. 3: 1750. 1803.

Fl. & Fr.: October - December.

Distrib.: Cultivated. Ranchi.

Eupatorium nodiflorum Wallich *ex* DC., Prodr. 5: 179. 1836. *E. cannabinum auct. non* L., 1753; Hook. *f.*, Fl. Brit. India 3: 243. 1881, *p.p.*

Fl. & Fr.: December - February.

Distrib.: Palamau.

Eupatorium odoratum L., Syst. Nat. ed. 10. 1205. 1759; Hook. *f.*, Fl. Brit. India 3: 244. 1881.

Fl. & Fr.: February - May.

Distrib.: Bhagalpur, Chota Nagpur, Patna, Purnia, West Champaran.

FLAVERIA Juss.

Flaveria trinervia (Spreng.) C. Mohr., Contr. U.S. Nat. Herb. 6: 810. 1901. *Oedera trinervia* Spreng., Bot. Gard. Halle 63. 1800. *Flaveria repanda* Lagasc., Gen. Sp. Nov. 33. 1816; Haines, Bot. Bihar Orissa 486. 1922 (Repr. ed., 2: 510. 1961).

Fl. & Fr.: September - January.

Distrib.: Without specific locality (Haines, *l.c.*)

GALINSOGA Ruiz & Pavon

Galinsoga parviflora Cav., Ic. Descr. Pl. 3: 41. t. 281. 1795; Hook. *f.*, Fl. Brit. India 3: 311. 1881.

Fl. & Fr.: August - February.

Distrib.: Palamau, Ranchi.

GLOSSOCARDIA Cass.

Glossocardia bosvallea (L. *f.*) DC. in Wight, Contrib. Bot. Ind. 19. 1834. *Verbesina bosvallea* L. *f.*, Suppl. Pl. 379. 1782. *Glossocardia linearifolia* Cass., Dict. Sci. Nat. 19: 62. 1821; Hook. *f.*, Fl. Brit. India 3: 308. 1881; Haines, Bot. Bihar Orissa 485. 1922 (Repr. ed., 2: 509. 1961).

Fl. & Fr.: September - October.

Distrib.: Lohardaga, Palamau, Ranchi, Singhbhum.

GLOSSOGYNE Cass.

Glossogyne bidens (Retz.) Alston in Trimen, Handb. Fl. Ceylon 6: 168. 1931. *Zinnia bidens* Retz., Observ. Bot. 5: 28. 1789. *Glossogyne pinnatifida* DC. in Wight, Contrib. Bot. Ind. 19. 1834; Hook. *f.*, Fl. Brit. India 3: 310. 1881; Haines, Bot. Bihar Orissa 484. 1922 (Repr. ed., 2: 508. 1961).

Fl. & Fr.: March - December.

Distrib.: Gumla, Hazaribagh, Koderma, Palamau, Patna, Ranchi.

GNAPHALIUM L.

Gnaphallium flaccidum Kurz in C.B. Clarke, Comp. Ind. 115. 1876; Hook. f., Fl. Brit. India 3: 290. 1881; Haines, Bot. Bihar Orissa 475. 1922 (Repr. ed., 2: 499. 1961).

Fl. & Fr.: February - March.

Distrib.: Patna.

Gnaphallium hypoleucum DC. in Wight, Contrib. Bot. Ind. 21. 1834; Hook. f., Fl. Brit. India 3: 288. 1881.

Fl. & Fr.: May - October.

Distrib.: Gangetic Plain (Pant in Hajra *et al.* (eds.), Fl. India 13: 86. 1995).

Gnaphallium luteo-album L., Sp. Pl. 851. 1753; Hook. f., Fl. Brit. India 3: 288. 1881; Haines, Bot. Bihar Orissa 474. 1922. (Repr. ed., 2: 498. 1961), *incl. var. pallidum*. *G. luteo-album* L. subsp. *pallidum* (Lam.) Maheshw. in J. Bombay Nat. Hist. Soc. 57(2): 377. 1960.

subsp. **affine** (D. Don) Koster in Blumea 4(3): 484. 1941. *G. affine* D. Don, Prodr. Fl. Nepal. 173. 1825. *G. luteo-album* L. var. *multiceps* DC., Prodr. 6: 222. 1838; Hook. f., Fl. Brit. India 3: 288. 1881.

Fl. & Fr.: January - April.

Distrib.: Giridih, Hazaribagh, Patna.

subsp. **luteo-album**

Fl. & Fr.: November - April.

Distrib.: Bhagalpur, Champaran, Giridih, Hazaribagh, Palamau, Patna, Ranchi, Singhbhum.

Gnaphallium pensylvanicum Willd., Enum. Hort. Berol. 867. 1809.

Fl. & Fr.: January - November.

Distrib.: Patna, West Champaran.

Gnaphalium polycaulon Pers., Syn. Pl. 2: 421. 1807. *G. indicum* auct. non L., 1753; Hook. f., Fl. Brit. India 3: 289. 1881; Haines, Bot. Bihar Orissa 474. 1922 (Repr. ed., 2: 498. 1961).

Fl. & Fr.: December - March.

Distrib.: Bhagalpur, Hazaribagh, Muzaffarpur, Palamau, Patna, Saran, Singhbhum, West Champaran.

Gnaphalium pulvinatum Del., Fl. Aegypt. 122. t. 44. f. 1. 1812; Hook. f., Fl. Brit. India 3: 289. 1881; Haines, Bot. Bihar Orissa 475. 1922 (Repr. ed., 2: 498. 1961).

Fl. & Fr.: December - March.

Distrib.: Bhagalpur, Champaran, Palamau, Patna.

Gnaphalium purpureum L., Sp. Pl. 854. 1753; Hook. f., Fl. Brit. India 3: 289. 1881; Haines, Bot. Bihar Orissa 474. 1922 (Repr. ed., 2: 498. 1961).

Fl. & Fr.: August - March.

Distrib.: Bhagalpur, Hazaribagh, Palamau, Patna, Purnia, Singhbhum.

GONIOCAULON Cass.

Goniocaulon glabrum Cass. in Bull. Soc. Philom. 34. 1817; Hook. f., Fl. Brit. India 3: 377. 1881; Haines, Bot. Bihar Orissa 492. 1922 (Repr. ed., 2: 517. 1961).

Fl. & Fr.: January - March.

Distrib.: Bihar (Hajra in Hajra *et al.* (eds.), Fl. India 12: 181. 1995).

GRANGEA Adans.

Grangea maderaspatana (L.) Poir. in Lam., Encycl. (Suppl. 2) 825. 1812; Hook. f., Fl. Brit. India 3: 247. 1881; Haines, Bot. Bihar Orissa 464. 1922 (Repr. ed., 2: 487. 1961). *Artemisia maderaspatana* L., Sp. Pl. 849. 1753.

Fl. & Fr.: November - April.

Distrib.: Bhagalpur, Patna, Purnia, Santal Pargana, Singhbhum, West Champaran.

GUIZOTIA Cass., *nom. cons.*

Guizotia abyssinica (L. f.) Cass. in Dict. Sci. Nat. 59: 248. 1829; Hook. f., Fl. Brit. India 3: 308. 1881; Haines, Bot. Bihar Orissa 483. 1922 (Repr. ed., 2: 507. 1961). *Polymia abyssinica* L. f., Suppl. Pl. 383. 1782. *Verbesina sativa* Roxb. ex Sims. in Curtis, Bot. Mag. 26: t. 1017. 1807.

Fl. & Fr.: October - February.

Distrib.: Giridih, Gumla, Palamau, Ranchi, Singhbhum, West Champaran.

GYNURA Cass., *nom. cons.*

Gynura aurantiaca (Blume) DC., Prodr. 6: 300. 1838. *Cacalia aurantiaca* Blume, Bijdr. 908. 1826.

Fl. & Fr.: April - May.

Distrib.: Palamau.

Gynura bicolor (Roxb. ex Willd.) DC., Prodr. 6: 299. 1838. *Cacalia bicolor* Roxb. ex Willd., Sp. Pl. 3: 1731. 1804. *Gynura angulosa* DC., Prodr. 6: 298. 1834; Hook. f., Fl. Brit. India 3: 334. 1881.

Fl. & Fr.: August - January.

Distrib.: Singhbhum.

Gynura nepalensis DC., Prodr. 6: 300. 1838; Hook. f., Fl. Brit. India 3: 333. 1881.

Fl. & Fr.: December - March.

Distrib.: Chota Nagpur.

HELIANTHUS L.

Helianthus annuus L., Sp. Pl. 904. 1753; Haines, Bot. Bihar Orissa 482. 1922 (Repr. ed., 2: 506. 1961).

Fl. & Fr.: December - March.

Distrib.: Cultivated throughout the state.

Helianthus argophyllus Torr. & Gray, Fl. N. Am. 2: 318. 1842; Haines, Bot. Bihar Orissa 482. 1922 (Repr. ed., 2: 506. 1961), '*argyrophyllus*'.

Distrib.: Cultivated (Haines, *l.c.*).

Helianthus tuberosus L., Sp. Pl. 905. 1753; Haines, Bot. Bihar Orissa 482. 1922 (Repr. ed., 2: 506. 1961).

Fl. & Fr.: November - January.

Distrib.: Cultivated. Bhojpur.

HEMISTEPTA Bunge ex Fischer & Mey.

Hemistepta lyrata Bunge ex Fischer & Mey. in Index Sem. Hort. Bot. Petrop. 2: 38. 1835. *Saussurea affinis* Spreng. ex DC., Prodr. 6: 540. 1838; Hook. *f.*, Fl. Brit. India 3: 373. 1881; Haines, Bot. Bihar Orissa 492. 1922 (Repr. ed., 2: 516. 1961).

Fl. & Fr.: February - April.

Distrib.: Purnia, West Champaran.

INULA L.

Inula cappa DC., Prodr. 5: 469. 1836; Hook. *f.*, Fl. Brit. India 3: 295. 1881; Haines, Bot. Bihar Orissa 476. 1922 (Repr. ed., 2: 499. 1961).

Fl. & Fr.: October -December.

Distrib.: Champaran, Palamau.

Inula eupatorioides DC., Prodr. 5: 469. 1836; Hook. *f.*, Fl. Brit. India 3: 295. 1881.

Fl. & Fr.: November - December.

Distrib.: Chota Nagpur.

Inula nervosa Wallich ex DC., Prodr. 5: 471. 1836; Hook. *f.*, Fl. Brit. India 3: 293. 1881.

Fl. & Fr.: August - October.

Distrib.: Palamau.

Inula obtusifolia Kerner in Ber. Naturw. Ver. Innsbruck. 1: 111. 1870; Hook. *f.*, Fl. Brit. India 3: 293. 1881.

Fl. & Fr.: August - October.

Distrib.: Koderma.

IXERIS Cass.

Ixeris polycephala Cass. in Dict. Sci. Nat. 24: 50. 1822. *Lactuca polycephala* (Cass.) Benth. & Hook. *f.*, Gen. Pl. 2: 526. 1873; Hook. *f.*, Fl. Brit. India 3: 410. 1881; Haines, Bot. Bihar Orissa 496. 1922 (Repr. ed., 2: 520. 1961).

Fl. & Fr.: December - March.

Distrib.: Champaran, Purnia.

LACTUCA L.

Lactuca remotiflora DC. in Wight, Contrib. Bot. Ind. 26. 1834; Hook. *f.*, Fl. Brit. India 3: 403. 1881.

Fl. & Fr.: September - December.

Distrib.: Bihar (Mamgain and Rao in Hajra *et al.* (eds.), Fl. India 12: 283. 1995).

Lactuca sativa L., Sp. Pl. 795. 1753. *L. scariola* L. var. *sativa* Boiss., Fl. Orient. 3: 809. 1875; Hook. *f.*, Fl. Brit. India 3: 404. 1881; Haines, Bot. Bihar Orissa 496. 1922 (Repr. ed., 2: 520. 1961).

Fl. & Fr.: March - November.

Distrib.: Bhagalpur, Patna, Cultivated elsewhere.

Lactuca serriola Tourner in L., Cent. Pl. 2: 29. 1756. *L. scariola* L., Sp. Pl. ed. 2. 1119. 1763; Hook. *f.*, Fl. Brit. India 3: 404. 1881.

Fl. & Fr.: April - October.

Distrib.: Giridih.

LAGASCEA Cav., *orth. et nom. cons.*

Lagascea mollis Cav., Anal. Sci. Nat. 6: 332. t. 44. 1803; Hook. *f.*, Fl. Brit. India 3: 302. 1881.

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, Ranchi.

LAGGERA Sch.-Bip. ex Koch

Laggera alata (D. Don) Sch.-Bip ex Oliver in Trans. Linn. Soc. London 29: 94. 1873; Hook. *f.*, Fl. Brit. India 3: 271. 1881; Haines, Bot. Bihar Orissa 466. 1922 (Repr. ed., 2: 489. 1961). *Erigeron alatum* D. Don, Prodr. Fl. Nepal. 171. 1825. *Blumea alata* (D. Don) DC., Prodr. 5: 448. 1836.

Fl. & Fr.: November - January.

Distrib.: Giridih, Palamau.

Laggera aurita L. *f.*, Suppl. Pl. 367. 1782; Hook. *f.*, Fl. Brit. India 3: 271. 1881; Haines, Bot. Bihar Orissa 467. 1922 (Repr. ed., 2: 490. 1961).

Fl. & Fr.: December - March.

Distrib.: Bhagalpur, Champaran, Koderma, Patna, Singhbhum.

Laggera crispata (Vahl) Hepper & Wood in Kew Bull. 38: 83. 1983. *Conyza crispata* Vahl, Symb. Bot. 1: 71. 1790. *Laggera pterodonta* (DC.) Sch.-Bip. ex Oliver in Trans. Linn. Soc. London 29: 94. 1873; Hook. *f.*, Fl. Brit. India 3: 271. 1881; Haines, Bot. Bihar Orissa 466. 1922 (Repr. ed., 2: 490. 1961).

Fl. & Fr.: December - April.

Distrib.: Palamau, Patna, Ranchi, Singhbhum.

LAUNAEA Cass.

Launaea acaulis (Roxb.) Babcock ex Kerr in Craib, Fl. Siam, Enum. 2: 299. 1936. *Prenanthes acaulis* Roxb., Fl. Ind. 3: 403. 1832. *Crepis acaulis* Hook. *f.*, Fl. Brit. India 3: 396. 1881; Haines, Bot. Bihar Orissa 495. 1922 (Repr. ed., 2: 519. 1961).

Fl. & Fr.: March - June.

Distrib.: Hazaribagh, Singhbhum.

Launaea aspleniifolia (Willd.) Hook. *f.*, Fl. Brit. India 3: 415. 1881; Haines, Bot. Bihar Orissa 497. 1922 (Repr. ed., 2: 521. 1961). *Prenanthes aspleniifolia* Willd., Sp. Pl. 3: 1540. 1803.

Fl. & Fr.: January - April.

Distrib.: Bhagalpur, Hazaribagh, Palamau, Patna.

Launaea procumbens (Roxb.) Ramayya & Rajagopal in Kew Bull. 23(3): 465. t. 1. 1969. *Prenanthes procumbens* Roxb., Fl. Ind. 3: 404. 1832. *Launaea nudicaulis sensu auct. Plur. Ind. non L. nudicaulis* (L.) Hook. *f.*, Fl. Brit. India 3: 416. 1881; Haines, Bot. Bihar Orissa 496. 1922 (Repr. ed., 2: 521. 1961).

Fl. & Fr.: March - September.

Distrib.: Bhagalpur, Champaran, Palamau, Patna, Purnia, Singhbhum.

Launaea sarmentosa (Willd.) Sch.-Bip. ex Kuntze, Revis. Gen. 1: 350. 1891. *Prenanthes sarmentosa* Willd., Phytographia 10. t. 6. f. 2. 1794. *Launaea pinnatifida* Cass. in Ann. Sci. Nat. ser. 1, 23: 85. 1831; Hook. *f.*, Fl. Brit. India 3: 416. 1881; Haines, Bot. Bihar Orissa 496. 1922 (Repr. ed., 2: 521. 1961).

Fl. & Fr.: June - September.

Distrib.: Singhbhum.

MIKANIA Willd., *nom. cons.*

Mikania micrantha Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. 4: 134. 1820. *M. scandens auct. non Willd.*, 1803; Hook. *f.*, Fl. Brit. India 3: 244. 1881.

Fl. & Fr.: December - March.

Distrib.: Bhagalpur, West Champaran.

PARTHENIUM L.

Parthenium hysterophorus L., Sp. Pl. 988. 1753.

Fl. & Fr.: July - March.

Distrib.: Hazaribagh, Palamau, Patna, West Champaran.

PENTANEMA Cass.

Pentanema indica (L.) Ling in Acta Phyt. Sin. 10: 179. 1965. *Inula indica* L., Sp. Pl. ed. 2. 1236. 1763. *Vicoa indica* (L.) DC. in Wight, Contrib. Bot. Ind. 10. 1834; Haines, Bot. Bihar Orissa 476. 1922 (Repr. ed., 2: 500. 1961).

Fl. & Fr.: October - February.

Distrib.: Bhagalpur, Gaya, Hazaribagh, Koderma, Palamau, Patna, Ranchi, Singhbhum, West Champaran.

Pentanema vestitum (Wallich ex DC.) Ling in Acta Phyt. Sin. 10: 180. 1965. *Inula vestitum* Wallich ex DC., Prodr. 5: 470. 1836. *Vicoa vestita* (Wallich ex DC.) Benth. ex Hook. f., Fl. Brit. India 3: 297. 1881; Haines, Bot. Bihar Orissa 477. 1922 (Repr. ed., 2: 500. 1961).

Fl. & Fr.: February - May.

Distrib.: Bhagalpur, Muzaffarpur, Patna, Santal Pargana, West Champaran.

PLUCHEA Cass.

Pluchea lanceolata (DC.) C.B. Clarke, Comp. Ind. 94. 1876. *Berthelotia lanceolata* DC., Prodr. 5: 376. 1836; Hook. f., Fl. Brit. India 3: 272. 1881.

Fl. & Fr.: February - June.

Distrib.: Muzaffarpur.

PSEUDELEPHANTOPUS Rohr.

Pseudelephantopus spicatus (Juss. ex Aubl.) C.E. Baker in Trans. Acad. Sci. St. Ows 12: 55. 1902. *Elephantopus spicatus* Juss. ex Aubl., Hist. Pl. Guire 2: 808. 1775.

Fl. & Fr.: December - April.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 385. 1998).

PULICARIA Gaertn.

Pulicaria angustifolia DC., Prodr. 5: 479. 1836; Hook. *f.*, Fl. Brit. India 3: 299. 1881; Haines, Bot. Bihar Orissa 477. 1922 (Repr. ed., 2: 501. 1961).

Fl. & Fr.: May - October.

Distrib.: Lohardaga, Palamau, Ranchi.

Pulicaria crispa (Forssk.) Benth. in Benth. & Hook. *f.*, Gen. Pl. 2: 336. 1873; Hook. *f.*, Fl. Brit. India 3: 299. 1881; Haines, Bot. Bihar Orissa 478. 1922 (Repr. ed., 2: 501. 1961). *Aster crispus* Forssk., Fl. Aegypt. Arab. 150. 1775.

Fl. & Fr.: January - March.

Distrib.: Bhagalpur, Bhojpur, Gaya, Patna.

Pulicaria foliolosa DC., Prodr. 5: 480. 1834; Hook. *f.*, Fl. Brit. India 3: 298. 1881; Haines, Bot. Bihar Orissa 477. 1922 (Repr. ed., 2: 501. 1961).

Fl. & Fr.: February - May.

Distrib.: Patna, Sasaram.

SAUSSUREA DC., *nom. cons.*

Saussurea heteromalla (D. Don) Hand.-Mazz., Symb. Sin. 7: 1152. 1936. *Cnicus heteromallus* D. Don, Prodr. Fl. Nepal. 166. 1825. *Saussurea candicans* (DC.) Sch.-Bip. in Linnaea 19: 330. 1846; Hook. *f.*, Fl. Brit. India 3: 373. 1881; Haines, Bot. Bihar Orissa 491. 1922 (Repr. ed., 2: 516. 1961). *Aplotaxis candicans* DC., Prodr. 6: 540. 1838.

Fl. & Fr.: March - May.

Distrib.: Palamau, West Champaran.

SCLEROCARPUS Jacq.

Sclerocarpus africanus Jacq., Ic. Pl. Rar. 1: 17. t. 176. 1781-1784; Hook. *f.*, Fl. Brit. India 3: 305. 1881.

Fl. & Fr.: March - July.

Distrib.: Ranchi.

SENECIO L.

Senecio jacobaeaeformis Remy in Gay, Fl. Chil. 4: 182. 1849.

Fl. & Fr.: March - May.

Distrib.: Giridih.

Senecio nudicaulis Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 178. 1825; Hook. f., Fl. Brit. India 3: 340. 1881; Haines, Bot. Bihar Orissa 490. 1922 (Repr. ed., 2: 514. 1961).

Fl. & Fr.: March - June.

Distrib.: Hazaribagh, Palamau.

Senecio wightianus DC. ex Wight, Contrib. Bot. Ind. 22. 1834. *S. scandens* Hook. f., Fl. Brit. India 3: 352. 1881.

Fl. & Fr.: September - December.

Distrib.: Singhbhum.

SIEGESBECKIA L.

Siegesbeckia orientalis L., Sp. Pl. 900. 1753; Hook. f., Fl. Brit. India 3: 304. 1881; Haines, Bot. Bihar Orissa 479. 1922 (Repr. ed., 2: 502. 1961).

Fl. & Fr.: April - December.

Distrib.: Throughout the state.

SONCHUS L.

Sonchus asper (L.) Hill., Herb. Brit. 1: 47. 1769; Hook. f., Fl. Brit. India 3: 414. 1881; Haines, Bot. Bihar Orissa 498. 1922 (Repr. ed., 2: 522. 1961). *S. oleraceus* var. *asper* L., Sp. Pl. 794. 1753.

Fl. & Fr.: April - September.

Distrib.: Bhagalpur, Hazaribagh, Patna, West Champaran.

Sonchus brachyotus DC., Prodr. 7: 186. 1838. *S. arvensis* L. var. *glaber* Haines, Bot. Bihar Orissa 498. 1922 (Repr. ed., 2: 522. 1961).

Fl. & Fr.: March - November.

Distrib.: Palamau, Ranchi.

Sonchus oleraceus L., Sp. Pl. 794. 1753; Hook. *f.*, Fl. Brit. India 3: 414. 1881; Haines, Bot. Bihar Orissa 498. 1922 (Repr. ed., 2: 523. 1961).

Fl. & Fr.: March - June.

Distrib.: Bhagalpur, Patna, Purnia, West Champaran.

Sonchus wightianus DC., Prodr. 7: 187. 1838. *S. arvensis auct. non* L., 1753; Hook. *f.*, Fl. Brit. India 3: 414. 1881, *p.p.*

subsp. **wallichianus** (DC.) Boulos in Bot. Not. 125: 197. 1972. *Sonchus wallichianus* DC., Prodr. 7: 185. 1838.

Fl. & Fr.: April - November.

Distrib.: Bihar (Mangain and Rao in Hajra *et al.* (eds.), Fl. India 12: 323. 1995).

subsp. **wightianus**

Fl. & Fr.: September - December.

Distrib.: Hazaribagh, Palamau, Singhbhum, West Champaran.

SPHAERANTHUS L.

Sphaeranthus indicus L., Sp. Pl. 927. 1753; Hook. *f.*, Fl. Brit. India 3: 275. 1881, *p.p.*; Haines, Bot. Bihar Orissa 473. 1922 (Repr. ed., 2: 496. 1961).

Fl. & Fr.: December - April.

Distrib.: Bhagalpur, Champaran, Gumla, Hazaribagh, Palamau, Patna, Ranchi, Singhbhum.

Sphaeranthus senegalensis DC., Prodr. 5: 370. 1836. *S. indicus auct. non* L., 1753; Hook. *f.*, Fl. Brit. India 3: 275. 1881, *p.p.*

Fl. & Fr.: January - April.

Distrib.: Bihar (Kumar in Hajra *et al.* (eds.), Fl. India 13: 162. 1995).

SPHAEROMORPHEA DC.

Sphaeromorphaea australis (Less.) Kitam. in Acta Phyto. Geobot. 6: 80. 1937. *Epaltes australis* Less. in Linnaea 5: 148. 1831. *Sphaeromorphaea russeltiana* DC., Prodr. 6: 140. 1838; Hook. f., Fl. Brit. India 3: 317. 1881; Haines, Bot. Bihar Orissa 488. 1922 (Repr. ed., 2: 512. 1961).

Fl. & Fr.: April - May.

Distrib.: Giridih, Hazaribagh.

SPILANTHES Jacq.

Spilanthes calva DC. in Wight, Contrib. Bot. Ind. 19. 1834. *S. acmella* var. *calva* (DC.) C.B. Clarke, Comp. Ind. 138. 1876. *S. acmella auct. non* (L.) J.A. Murray, 1774; Hook. f., Fl. Brit. India 3: 307. 1881; Haines, Bot. Bihar Orissa 482. 1922 (Repr. ed., 2: 506. 1961).

Fl. & Fr.: August - February.

Distrib.: Champaran, Palamau, Santal Pargana.

Spilanthes oleracea L., Syst. Nat. ed. 12, 2: 534. 1767. *S. acmella* var. *oleracea* C.B. Clarke, Comp. Ind. 138. 1876; Hook. f., Fl. Brit. India 3: 307. 1881.

Fl. & Fr.: Almost throughout the year.

Distrib.: Throughout the country (Chowdhery in Hajra *et al.* (eds.), Fl. India 12: 410. 1995).

Spilanthes uliginosa Sw., Prodr. 110. 1788.

Fl. & Fr.: March - September.

Distrib.: Ranchi (Singh in J. Bombay Nat. Hist. Soc. 90(3): 541-542. 1993).

TAGETES L.

Tagetes erecta L., Sp. Pl. 887. 1753.

Fl. & Fr.: December - April.

Distrib.: Cultivated in gardens throughout the state.

Tagetes patula L., Sp. Pl. 887. 1753; Haines, Bot. Bihar Orissa 487. 1922 (Repr. ed., 2: 511. 1961). *Genda*.

Fl. & Fr.: September - February.

Distrib.: Cultivated in gardens throughout the state.

TRICHOLEPIS DC.

Tricholepis stictophyllum C.B. Clarke, Comp. Ind. 241. 1876; Hook. *f.*, Fl. Brit. India 3: 382. 1881; Haines, Bot. Bihar Orissa 493. 1922 (Repr. ed., 2: 517. 1961).

Fl. & Fr.: April - July.

Distrib.: Palamau.

TRIDAX L.

Tridax procumbens L., Sp. Pl. 900. 1753; Hook. *f.*, Fl. Brit. India 3: 311. 1881; Haines, Bot. Bihar Orissa 486. 1922 (Repr. ed., 2: 510. 1961).

Fl. & Fr.: July - February.

Distrib.: Throughout the state.

VERNONIA Schreb., *nom. cons.*

Vernonia albicans DC. in Wight, Contrib. Bot. Ind. 6. 1834.

Fl. & Fr.: March - August.

Distrib.: Gumla.

Vernonia anthelmintica (L.) Willd., Sp. Pl. 3: 1634. 1803; Hook. *f.*, Fl. Brit. India 3: 236. 1881; Haines, Bot. Bihar Orissa 460. 1922 (Repr. ed., 2: 483. 1961). *Conyza anthelmintica* L., Sp. Pl. ed. 2. 1207. 1763.

Fl. & Fr.: September - January.

Distrib.: Champaran, Hazaribagh, Lohardaga, Palamau, Singhbhum.

Vernonia cinerea (L.) Less. in Linnaea 4: 291. 1829; Hook. *f.*, Fl. Brit. India 2: 233. 1881; Haines, Bot. Bihar Orissa 460. 1922 (Repr. ed., 2: 483. 1961). *Conyza cinerea* L., Sp. Pl. 862. 1753.

Fl. & Fr.: Almost throughout the year.

Distrib.: Throughout the state.

Vernonia divergens (Roxb.) Edgew. in J. Asiat. Soc. Bengal 21: 172. 1853; Hook. *f.*, Fl. Brit. India 3: 234. 1881; Haines, Bot. Bihar Orissa 460. 1922 (Repr. ed., 2: 483. 1961). *Eupatorium divergens* Roxb., Fl. Ind. 3: 414. 1832.

Fl. & Fr.: December - May.

Distrib.: Hazaribagh, Palamau, Ranchi.

Vernonia patula (Dryand.) Merr. in Philipp. J. Sci. 3: 439. 1908. *Conyza patula* Dryand. in Aiton, Hortus Kew. 3: 184. 1789.

Fl. & Fr.: December - March.

Distrib.: Chota Nagpur.

Vernonia pyramidale (D. Don) S.N. Mitra in Ind. For. 99: 100. 1973. *Eupatorium pyramidale* D. Don, Prodr. Fl. Nepal. 170. 1825. *Vernonia aspera* DC., Prodr. 5: 31. 1836, *non* Buch.-Ham., 1825. *V. roxburghii* Less. in Linnaea 6: 674. 1831; Hook. *f.*, Fl. Brit. India 3: 232. 1881; Haines, Bot. Bihar Orissa 459. 1922 (Repr. ed., 2: 482. 1961).

Fl. & Fr.: September - January.

Distrib.: Champaran, Hazaribagh, Palamau, Ranchi, Santal Pargana.

Vernonia saligna DC., Prodr. 5: 33. 1836; Hook. *f.*, Fl. Brit. India 3: 235. 1881.

Fl. & Fr.: October - December.

Distrib.: Santal Pargana.

Vernonia squarrosa (D. Don) Less. in Linnaea 6: 627. 1831. *Acilepis squarrosa* D. Don, Prodr. Fl. Nepal. 169. 1825. *Vernonia teres* Wallich ex DC., Prodr. 5: 15. 1836; Hook. *f.*, Fl. Brit. India 3: 229. 1881; Haines, Bot. Bihar Orissa 459. 1922 (Repr. ed., 2: 482. 1961).

Fl. & Fr.: October - January.

Distrib.: Champaran, Hazaribagh, Lohardaga, Singhbhum.

WEDELIA Jacq., *nom. cons.*

Wedelia biflora (L.) DC. in Wight, Contrib. Bot. Ind. 18. 1834; Hook. *f.*, Fl. Brit. India 3: 306. 1881. *Verbesina biflora* L., Sp. Pl. ed. 2. 1272. 1763.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh.

Wedelia chinensis (Osbeck.) Merr. in Philipp. J. Sci. 12: 111. 1917. *Solidago chinensis* Osbeck., Dagb. Ostind. Tesa. 241. 1757. *Wedelia calendulacea* (L.) Less., Syn. Gen. Comp. 222. 1832; Hook. *f.*, Fl. Brit. India 3: 306. 1881; Haines, Bot. Bihar Orissa 481. 1922 (Repr. ed., 2: 505. 1961).

Fl. & Fr.: March - September.

Distrib.: Bhagalpur, Hazaribagh, Patna, West Champaran.

Wedelia montana var. **wallichii** (Less.) H. Koyama in Acta Phytotax. Geobot. 34: 171. 1985. *W. wallichii* Less. in Linnaea 6: 162. 1831; Hook. *f.*, Fl. Brit. India 3: 307. 1881; Haines, Bot. Bihar Orissa 481. 1922 (Repr. ed., 2: 505. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh.

Wedelia urticaefolia DC. in Wight, Contrib. Bot. Ind. 18. 1834; Hook. *f.*, Fl. Brit. India 3: 306. 1881.

Fl. & Fr.: Almost throughout the year.

Distrib.: Major parts of India (Chowdhery in Hajra *et al.* (eds.), Fl. India 12: 426. 1995).

XANTHIUM L.

Xanthium indicum Koenig in Roxb., Fl. Ind. 3: 601. 1832. *X. strumarium* L., Sp. Pl. 987. 1753, *p.p.*; Hook. *f.*, Fl. Brit. India 3: 303. 1881, *excl. syn.* *X. strumarium* Boiss.; Haines, Bot. Bihar Orissa 478. 1922 (Repr. ed., 2: 502. 1961).

Fl. & Fr.: March - December.

Distrib.: Bhagalpur, Champaran, Muzaffarpur, Palamau, Patna.

YOUNGIA Cass.

Youngia japonica (L.) DC., Prodr. 7: 194. 1838. *Prenanthes japonica* L., Mant. Pl. 107. 1767.

Fl. & Fr.: October - April.

Distrib.: Bhagalpur, Champaran, Giridih, Hazaribagh, Palamau, Purnia, Singhbhum.

ZINNIA L., *nom. cons.*

Zinnia elegans Jacq., Collectanea 3: 152. 1789.

Distrib.: Cultivated. Champaran.

Zinnia violacea Cav., Icon. 1: 57. 1791.

Distrib.: Cultivated. Palamau.

STYLIDIACEAE

STYLIDIUM Sw. ex Willd., *nom. cons.*

Stylidium kunthii Wallich ex DC., Prodr. 7: 335. 1839; C.B. Clarke in Hook. f., Fl. Brit. India 3: 420. 1881; Haines, Bot. Bihar Orissa 499. 1922 (Repr. ed., 2: 523. 1961).

Fl. & Fr.: October - January.

Distrib.: Purnia.

Stylidium tenellum Sw. ex Willd., Sp. Pl. 4: 146. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 3: 420. 1881, *incl. var. minima* C.B. Clarke; Haines, Bot. Bihar Orissa 499. 1922 (Repr. ed., 2: 523. 1961).

Fl. & Fr.: September - January.

Distrib.: Chota Nagpur.

CAMPANULACEAE**CAMPANULA L.**

Campanula benthamii Wallich ex DC., Prodr. 7: 473. 1839. *C. canescens* Wallich ex DC., Mon. Camp. 292. 1830; C.B. Clarke in Hook. f., Fl. Brit. India 3: 439. 1881; Haines, Bot. Bihar Orissa 503. 1922 (Repr. ed., 2: 528. 1961).

Fl. & Fr.: November - April.

Distrib.: Bhagalpur, Bhojpur, Hazaribagh, Ranchi.

Campanula pallida Wallich in Asiat. Res. 13: 375. 1820. *C. colorata* Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 98. 1824; C.B. Clarke in Hook. f., Fl. Brit. India 3: 440. 1881.

Fl. & Fr.: March - May.

Distrib.: Hazaribagh, Singhbhum.

LOBELIACEAE**LOBELIA L.**

Lobelia alsinoides Lam., Encycl. 3: 588. 1791. *L. trigona* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 111. 1824; C.B. Clarke in Hook. f., Fl. Brit. India 3: 423. 1881; Haines, Bot. Bihar Orissa 500. 1922 (Repr. ed., 2: 524. 1961). *L. terminalis* C.B. Clarke in Hook. f., Fl. Brit. India 3: 424. 1881; Haines, Bot. Bihar Orissa 500. 1922 (Repr. ed., 2: 525. 1961).

Fl. & Fr.: October - January.

Distrib.: Bhagalpur, Hazaribagh, Lohardaga, Purnia, Singhbhum, West Champaran.

Lobelia chinensis Lour., Fl. Cochinch. 2: 514. 1790. *L. radicans* Thunb. in Trans. Linn. Soc. London 2: 330. 1794; C.B. Clarke in Hook. f., Fl. Brit. India 3: 425. 1881; Haines, Bot. Bihar Orissa 501. 1922 (Repr. ed., 2: 526. 1961).

Fl. & Fr.: September - October.

Distrib.: Ranchi.

Lobelia dichotoma Miq. var. **aligera** (Haines) Wimm. in Ann. Naturh. Mus. Wien 56: 345. 1948. *L. aligera* Haines in J. Asiat. Soc. Bengal n.s. 15: 316. 1920. *L. zeylanica* L. var. **aligera** (Haines) Haines, Bot. Bihar Orissa 501. 1922 (Repr. ed., 2: 525. 1961).

Fl. & Fr.: April - June.

Distrib.: Palamau.

Lobelia heyneana Roem. & Schult., Syst. Veg. 5: 50. 1819, non Spreng., 1825. *L. zeylanica* Moon., Cat. 14. 1824, non L., 1753; C.B. Clarke in Hook. f., Fl. Brit. India 3: 425. 1881, incl. var. *walkeri*. *L. trialata* Buch. - Ham. ex D. Don, Prodr. Fl. Nepal. 157. 1825; C.B. Clarke in Hook. f., Fl. Brit. India 3: 425. 1881; Haines, Bot. Bihar Orissa 501. 1922 (Repr. ed. 2: 525. 1961).

Fl. & Fr.: September - January.

Distrib.: Hazaribagh, Ranchi, Singhbhum.

Lobelia nicotianaefolia Roth ex Roem. & Schult., Syst. Veg. 5: 47. 1820; C.B. Clarke in Hook. f., Fl. Brit. India 3: 427. 1881.

Fl.: March.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 348. 1998).

Lobelia zeylanica L., Sp. Pl. 932. 1753. *L. affinis* Wallich ex G. Don, Gen. Hist. 3: 709. 1834, non Mirbach, 1805; C.B. Clarke in Hook. f., Fl. Brit. India 3: 424. 1881; Haines, Bot. Bihar Orissa 500. 1922 (Repr. ed., 2: 525. 1961).

Fl. & Fr.: October - January.

Distrib.: Purnia.

SPHENOCLEACEAE

SPHENOCLEA Gaertn., *nom. cons.*

Sphenoclea zeylanica Gaertn., Fruct. Sem. Pl. 1: 113. t. 24. f. 5. 1788; Haines, Bot. Bihar Orissa 503. 1922 (Repr. ed., 2: 528. 1961).

Fl. & Fr.: October - December.

Distrib.: Bhagalpur, Purnia, West Champaran.

WAHLENBERGIA Schrad. *ex* Roth, *nom. cons.*

Wahlenbergia erecta (Roth *ex* Roem. & Schult.) Tuyn in Fl. Males. ser. 1, 6: 113. 1960. *Dentella erecta* Roth *ex* Roem. & Schult., Syst. Veg. 5: 25. 1819, *excl. descr.* *Cephalostigma schimperi* Hochest. *ex* Rich., Tent. Fl. Abyss. 2: 2. 1851; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 428. 1881; Haines, Bot. Bihar Orissa 502. 1922 (Repr. ed., 2: 526. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum.

Wahlenbergia hirsuta (Edgew.) Tuyn in Steenis, Fl. Males. ser. 1, 6: 113. 1960. *Cephalostigma hirsuta* Edgew. in Trans. Linn. Soc. London 20: 81. 1846; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 429. 1881; Haines, Bot. Bihar Orissa 502. 1922 (Repr. ed., 2: 527. 1961).

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Ranchi, Singhbhum.

Wahlenbergia hookeri (C.B. Clarke) Tuyn in Steenis, Fl. Males. ser. 1, 6: 114. 1960. *Cephalostigma hookeri* C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 429. 1881; Haines, Bot. Bihar Orissa 502. 1922 (Repr. ed., 2: 527. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh.

Wahlenbergia marginata (Thunb.) DC., Mon. Camp. 143. 1830. *Campanula marginata* Thunb., Fl. Jap. 89. 1784. *Wahlenbergia gracilis* DC., Mon. Camp. 142. 1830; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 429. 1881; Haines, Bot. Bihar Orissa 503. 1922 (Repr. ed., 2: 527. 1961).

Fl. & Fr.: January - April.

Distrib.: Bhagalpur, Palamau, Patna, Purnia, West Champaran.

VACCINIACEAE

VACCINIUM L.

Vaccinium bracteatum Thunb., Fl. Jap. 156. 1784. *V. malaccense* Wight in Calc. J. Nat. Hist. 8: 172. 1847 & Icon. Pl. 4: t. 1186. 1848; C.B. Clarke in Hook. f., Fl. Brit. India 3: 454. 1882.

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur.

PLUMBAGINACEAE

AEGIALITIS R. Br.

Aegialitis rotundifolia Roxb., Fl. Ind. 2: 111. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 3: 479. 1882; Haines, Bot. Bihar Orissa 504. 1922 (Repr. ed., 2: 529. 1961).

Fl. & Fr.: December - January.

Distrib.: Singhbhum.

PLUMBAGO L.

Plumbago capensis Thunb., Prodr. Pl. Cap. 33. 1794; Haines, Bot. Bihar Orissa 505. 1922 (Repr. ed., 2: 530. 1961).

Fl. & Fr.: July - October.

Distrib.: Cultivated in gardens. Bhagalpur.

Plumbago indica L., Diss. Stickman 24. 1754. *P. rosea* L., Sp. Pl. ed. 2. 215. 1762; C.B. Clarke in Hook. f., Fl. Brit. India 3: 481. 1882; Haines, Bot. Bihar Orissa 505. 1922 (Repr. ed., 2. 530. 1961).

Fl. & Fr.: February - April.

Distrib.: Cultivated.

Plumbago zeylanica L., Sp. Pl. 151. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 3: 480. 1882; Haines, Bot. Bihar Orissa 505. 1922 (Repr. ed., 2: 529. 1961). - *Chitrak*.

Fl. & Fr.: August - November.

Distrib.: Bhagalpur, Hazaribagh, Palamau, Patna, Ranchi, Singhbhum, West Champaran.

PRIMULACEAE

ANAGALLIS L.

Anagallis arvensis L., Sp. Pl. 148. 1753; Hook. *f.*, Fl. Brit. India 3: 506. 1882; Haines, Bot. Bihar Orissa 506. 1922 (Repr. ed., 2: 531. 1961).

Fl. & Fr.: November - April.

Distrib.: Champaran, Hazaribagh, Ranchi.

Anagallis pumila Sw., Prodr. 40. 1788; P. Taylor in Kew Bull. 1955: 342. 1955. *Centunculus tenellus* Duby in DC., Prodr. 8: 72. 1844; Hook. *f.*, Fl. Brit. India 3: 506. 1882; Haines, Bot. Bihar Orissa 507. 1922 (Repr. ed., 2: 532. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Santal Pargana, Singhbhum.

LYSIMACHIA L.

Lysimachia candida Lindl. subsp. *obovata* (Buch.-Ham. ex Hook. *f.*) Kunth in Engler, Pflanzenr. 22: 301. 1905. *L. obovata* Buch.-Ham. ex Hook. *f.*, Fl. Brit. India 3: 502. 1882; Haines, Bot. Bihar Orissa 506. 1922 (Repr. ed., 2: 531. 1961).

Fl. & Fr.: May - July.

Distrib.: Chota Nagpur (Haines, *l.c.*).

Lysimachia peduncularis Wallich ex Hook. *f.*, Fl. Brit. India 3: 504. 1882; Haines, Bot. Bihar Orissa 506. 1922 (Repr. ed., 2: 531. 1961).

Fl. & Fr.: December - January.

Distrib.: Singhbhum.

PRIMULA L.

Primula umbellata (Lour.) Bentvelzen, Fl. Males. ser. 1, 6: 191. 1962. *Drosera umbellata* Lour., Fl. Cochinch. 1: 186. 1790. *Androsace saxifragaefolia* Bunge, Enum. Pl. China Bor. 53. 1831 & in Mem. Sav. Etr. Acad. Pétersb. 2: 127. 1835; Hook. f., Fl. Brit. India 3: 496. 1882; Haines, Bot. Bihar Orissa 505. 1922. (Repr. ed., 2: 530. 1961). *A. umbellata* (Lour.) Merr. in Philipp. J. Sci. 15: 237. 1919.

Fl. & Fr.: January - April.

Distrib.: Champaran, Muzaffarpur, Purnia, Singhbhum.

MYRSINACEAE**ARDISIA Sw., nom. cons.**

Ardisia depressa C.B. Clarke in Hook. f., Fl. Brit. India 3: 522. 1882; Haines, Bot. Bihar Orissa 509. 1922 (Repr. ed., 2: 534. 1961).

Fl. & Fr.: March - June.

Distrib.: Singhbhum.

Ardisia solanacea Roxb., Pl. Corom. 1: 27. t. 27. 1795; Haines, Bot. Bihar Orissa 509. 1922 (Repr. ed., 2: 534. 1961). *A. humilis auct. non* Vahl, 1794: C.B. Clarke in Hook. f., Fl. Brit. India 3: 529. 1882, *p.p. excl. syn.*

Fl. & Fr.: April - October.

Distrib.: Champaran, Palamau, Singhbhum.

EMBELIA Burm. f., nom. cons.

Embellia basaal (Roem. & Schult.) A. DC. in Trans. Linn. Soc. London 17: 131. 1837; Panigrahi & S.M. Almeida in J. Bombay Nat. Hist. Soc. 84: 472. 1987. *Ardisia basaal* Roem. & Schult., Syst. Veg. 4: 517. 1819. *Embellia robusta auct. non* Roxb., 1820: C.B. Clarke in Hook. f., Fl. Brit. India 3: 515. 1882, *p.p. quoad E. basaal in syn.*; Haines, Bot. Bihar Orissa 508. 1922 (Repr. ed., 2: 533. 1961). *E. tsjeriam-cottam auct. non* (Roem. & Schult.) A. DC., 1834: Santapau, Fl. Khandala ed. 3. 141. 1967, *p.p. quoad syn. E. basaal. E. acutipetalum* S.M. Almeida & M.R. Almeida in J. Bombay Nat. Hist. Soc. 81: 741. 1984, *nom. superfl. illeg.*

Fl. & Fr.: June - January.

Distrib.: Hazaribagh, Koderma, Palamau, Singhbhum.

***Embella robusta* var. *ferruginea* (Wallich) C.B. Clarke** in Hook. *f.*, Fl. Brit. India 3: 515. 1882. *Embelia ferruginea* Wallich, Numer. List. n. 2310. 1830.

Fl. & Fr.: November - January.

Distrib.: Banka.

MAESA Forssk.

***Maesa indica* (Roxb.) DC.** in Trans. Linn. Soc. London 17: 134. 1834; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 509. 1882; Haines, Bot. Bihar Orissa 507. 1922 (Repr. ed., 2: 532. 1961). *Baeobotrys indica* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 230. 1824.

Fl. & Fr.: March - January.

Distrib.: Ranchi (Haines, *l.c.*)

THEOPHRASTACEAE

JACQUINIA L., *nom. cons.*

***Jacquinia ruscifolia* Jacq.**, Enum. Syst. Pl. 15. 1760.

Fl. & Fr.: April - June.

Distrib.: Cultivated in gardens.

SAPOTACEAE

DIPLOKNEMA Pierre

***Diploknema butyracea* (Roxb.) Lam.** in Bull. Jard. Bot. Butzg. ser. 3, 7: 187. 1925 & 8: 465. 1927. *Bassia butyracea* Roxb. in Asiat. Res. 8: 499. 1808; Haines, Bot. Bihar Orissa 512. 1922 (Repr. ed., 2: 537. 1961).

Fl. & Fr.: October - July.

Distrib.: West Champaran.

MADHUCA Buch.-Ham. ex J.F. Gmelin

Madhuca longifolia (J. Koenig) Macbr. var. **latifolia** (Roxb.) Chevalier in Rev. Int. Bot. Appl. 23: 149. 1943. *Bassia latifolia* Roxb., Pl. Corom 1: 20. t. 19. 1795; C.B. Clarke in Hook. f., Fl. Brit. India 3: 544. 1882; Haines, Bot. Bihar Orissa 511. 1922 (Repr. ed., 2: 536. 1961). *Madhuca latifolia* (Roxb.) Macbr. in Contr. Gray Herb. Harv. Univ. N.S. 53: 17. 1918. *M. indica* J.F. Gmelin, Syst. Nat. 799. 1791. *Bassia longifolia* J. Koenig in L., Mant. Pl. App. 563. 1771; C.B. Clarke in Hook. f., Fl. Brit. India 3: 544. 1882. - *Mahua*.

Fl. & Fr.: February - July.

Distrib.: In most parts of the state. Bhagalpur, Gumla, Hazaribagh, Palamau, Patna, Singhbhum, West Champaran.

MANILKARA Adans., *nom. cons.*

Manilkara hexandra (Roxb.) Dubard in Ann. Mus. Col. Marseille (ser. 3) 23: 9. t. 2. 1915. *Mimusops hexandra* Roxb., Pl. Corom. 1: 16. t. 15. 1795 & Fl. Ind. 2: 238. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 3: 549. 1882; Haines, Bot. Bihar Orissa 513. 1922 (Repr. ed., 2: 538. 1961). *M. indica* A. DC. in DC., Prodr. 8: 205. 1844 - *Khirmi*.

Fl. & Fr.: November - June.

Distrib.: Patna, Purnia, West Champaran.

Manilkara zapota (L.) P. Royen in Blumea 7: 410. 1953. *Achras zapota* L., Sp. Pl. App. 1190. 1753, *quoad typum excl. syn. Sloanei et Plukenetii*. *Manilkara achras* (Mill.) Fosberg in Taxon 13: 255. 1964. *Sapota achras* Mill., Gard. Dict. ed. 8. n. 1. 1768. *Achras sapota* L., Syst. Nat. ed. 10. 2: 988. 1759; C.B. Clarke in Hook. f., Fl. Brit. India 3: 534. 1882; Haines, Bot. Bihar Orissa 514. 1922 (Repr. ed., 2: 539. 1961).

Fl. & Fr.: November - March.

Distrib.: Cultivated. Muzaffarpur, West Champaran.

MIMUSOPS L.

Mimusops elengi L., Sp. Pl. 349. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 3: 548. 1882; Haines, Bot. Bihar Orissa 513. 1922 (Repr. ed., 2: 538. 1961). *Molsuri*.

Fl. & Fr.: April - September.

Distrib.: Planted throughout the state.

XANTOLIS Raf.

Xantolis tomentosa (Roxb.) Raf., *Sylva Tellur.* 35. 1838. *Sideroxylon tomentosum* Roxb., *Pl. Corom.* 1: 28. t. 28. 1795 & *Fl. Ind.* 1: 602. 1832; C.B. Clarke in *Hook. f.*, *Fl. Brit. India* 3: 538. 1882; Haines, *Bot. Bihar Orissa* 511. 1922 (Repr. ed., 2: 536. 1961).

Fl. & Fr.: April - March.

Distrib.: Santal Pargana, Singhbhum, West Champaran.

EBENACEAE

DIOSPYROS L.

Diospyros chloroxylon Roxb., *Pl. Corom.* 1: 38. t. 49. 1795; C.B. Clarke in *Hook. f.*, *Fl. Brit. India* 3: 560. 1882; Haines, *Bot. Bihar Orissa* 519. 1922 (Repr. ed., 2: 544. 1961). *D. capitulata* Wight, *Icon. Pl. Ind. Orient.* 4: t. 1224. 1848 & t. 1588. 1850.

Fl. & Fr.: June - April.

Distrib.: Champaran.

Diospyros cordifolia Roxb., *Pl. Corom.* 1: 38. t. 50. 1795; Haines, *Bot. Bihar Orissa* 516. 1922 (Repr. ed., 2: 541. 1961). *D. montana auct. non* Roxb., 1795; C.B. Clarke in *Hook. f.*, *Fl. Brit. India* 3: 555. 1882, *p.p.* *D. montana* Roxb. var. *cordifolia* (Roxb.) Hiern, *Monogr. Eben.* in *Trans. Camb. Phil. Soc.* 12(1): 222. 1873. - *Bis-tendu*.

Fl. & Fr.: April - February.

Distrib.: Munger.

Diospyros discolor Willd., *Sp. Pl.* 4(2): 1108. 1806; Haines, *Bot. Bihar Orissa* 520. 1922 (Repr. ed., 2: 546. 1961).

Fl. & Fr.: April - December.

Distrib.: Ranchi (Haines, *l.c.*).

Diospyros ebenum Koen. in Phys. Salsk. Handl. 1: 176. 1776, *non* Poir., 1804; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 558. 1882; Haines, Bot. Bihar Orissa 518. 1922 (Repr. ed., 2: 544. 1961).

Fl. & Fr.: March - June.

Distrib.: Lohardaga.

Diospyros exsculpta Buch.-Ham. in Trans. Linn. Soc. London 15: 110. 1827, *excl. syn., non* Dalz., 1861, *nec* Bedd., 1870. *D. tomentosa* Roxb., Fl. Ind. 2: 532. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 564. 1882.

Fl. & Fr.: August - January.

Distrib.: Hazaribagh, Palamau.

Diospyros kaki L. *f.*, Suppl. Pl. 439. 1782; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 555. 1882; Haines, Bot. Bihar Orissa 520. 1922 (Repr. ed., 2: 546. 1961).

Distrib.: Cultivated (Haines, *l.c.*).

Diospyros malabarica (Desr.) Kostel., Allg. Med. - Pharm. Fl. 3: 1099. 1834. *Garcinia malabarica* Desr. in Lam., Encycl. 3: 701. 1792. *Diospyros embryopteris* Pers., Syn. Pl. 2: 624. 1807, *p.p.*; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 556. 1882, *p.p. excl. syn. Embryopteris peregrina* Gaertn., 1788; Haines, Bot. Bihar Orissa 517. 1922 (Repr. ed., 2: 543. 1961). *D. peregrina* Guerke in Engler & Prantl, Nat. Pflanzenfam. 4(1): 164. 1891, *p.p. majore excl. ref. Gaertn., 1788. - Kala-tendu, Maka-tendu.*

Fl. & Fr.: April - following April.

Distrib.: Chota Nagpur.

Diospyros melanoxylon Roxb., Pl. Corom. 1: 36. t. 46. 1795; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 564. 1882; Haines, Bot. Bihar Orissa 519. 1922 (Repr. ed., 2: 545. 1961). - *Biripatta, Tendu.*

Fl. & Fr.: March - April.

Distrib.: Hazaribagh, Palamau, Singhbhum.

Diospyros montana Roxb., Pl. Corom. 1: 37. t. 48. 1795; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 555. 1882, *p.p.*; Haines, Bot. Bihar Orissa 516. 1922 (Repr. ed., 2: 542. 1961). - *Bis-tendu.*

Fl. & Fr.: April - February.

Distrib.: East Champaran, Purnia, Santal Pargana, Sasaram, West Champaran.

Diospyros neilgerrensis (Wight) Kost. in Ceylon J. Sci. 12(2): 106. 1977. *Maba neilgerrensis* Wight, Icon. Pl. Ind. Orient. 4: 10. t. 1228 & 1229 (*sphalm. M. ebenum*). 1848. *M. buxifolia* sensu C.B. Clarke in Hook. f., Fl. Brit. India 3: 551. 1882, *p.p.*; Haines, Bot. Bihar Orissa 515. 1922 (Repr. ed., 2: 540. 1961).

Fl. & Fr.: March - July.

Distrib.: Singhbhum.

Diospyros sylvatica Roxb., Pl. Corom. 1: 37. t. 47. 1795; C.B. Clarke in Hook. f., Fl. Brit. India 3: 559. 1882; Haines, Bot. Bihar Orissa 518. 1922 (Repr. ed., 2: 543. 1961).

Fl. & Fr.: April - March.

Distrib.: Santal Pargana, Singhbhum.

Diospyros variegata Kurz in J. Asiat. Soc. Bengal 40: 73. 1871; C.B. Clarke in Hook. f., Fl. Brit. India 3: 557. 1882; Haines, Bot. Bihar Orissa 520. 1922 (Repr. ed., 2: 545. 1961).

Distrib.: Sahibganj (Haines, *l.c.*).

SYMPLOCACEAE

SYMPLOCOS Jacq.

Symplocos cochinchinensis (Lour.) Moore, J. Bot. 52: 148. 1914.
Dicalix cochinchinensis Lour., Fl. Cochinch. 1: 663. 1790.

subsp. **cochinchinensis**

Fl. & Fr.: August - December.

Distrib.: Palamau.

Symplocos laurina (Retz.) Wallich, Numer. List No. 4416. 1831.
Myrtus laurinus Retz., Observ. Bot. 4: 26. 1786. *Symplocos spicata* Roxb., Fl. Ind. 2: 541. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 3: 573. 1882;

Haines, Bot. Bihar Orissa 522. 1922 (Repr. ed., 2: 547. 1961). *S. cochinchinensis* (Lour.) S. Moore subsp. *laurina* (Retz.) Noot., Rev. Sympl. Old World 156. 1975.

Fl. & Fr.: August - April.

Distrib.: Palamau, Purnia, Singhbhum.

Symplocos ophirensis C.B. Clarke subsp. ***cumingiana*** (Brand) Noot., Rev. Sympl. Old World 253. 1975. *S. cumingiana* Brand, Pfl. R. Heft 6: 58. 1901.

Fl. & Fr.: December - April.

Distrib.: Chota Nagpur.

Symplocos racemosa Roxb., Fl. Ind. 2: 539. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 3: 576. 1882; Haines, Bot. Bihar Orissa 521. 1922 (Repr. ed., 2: 547. 1961). *S. beddomei* C.B. Clarke in Hook. f., Fl. Brit. India 3: 582. 1882.

Fl. & Fr.: October - April.

Distrib.: Throughout the state.

OLEACEAE

CHIONANTHUS L.

Chionanthus mala-elengi (Dennst.) Green in Bull. Bot. Surv. India 26: 124. (1984) 1985. *Forsythia mala-elengi* Dennst., Schluessel Hortus Malab. 12: 21 & 31. 1818. *Linociera malabarica* Wallich ex G. Don, Gen. Hist. 4: 53. 1837-1838; C.B. Clarke in Hook. f., Fl. Brit. India 3: 607. 1882; Haines, Bot. Bihar Orissa 528. 1922 (Repr. ed., 2: 554. 1961).

Fl. & Fr.: March - April (next year).

Distrib.: Chota Nagpur.

Chionanthus ramiflorus Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 106. 1820, "*ramiflora*". *Linociera ramiflora* (Roxb.) Wallich ex G. Don, Gen. Hist. 4: 54. 1837-1838. *L. macrophylla* Wallich ex G. Don, Gen. Hist. 4: 53. 1837-1838; C.B. Clarke in Hook. f., Fl. Brit. India 3: 610. 1882. *L. macrophylla* var. *attenuata* (Wallich ex G. Don) C.B. Clarke in Hook. f., Fl. Brit. India 3: 611. 1882.

Fl. & Fr.: February - April.

Distrib.: Singhbhum.

Chionanthus roxburghii (Spreng.) Srivastava & Kapoor in Geophytology 11(2): 262. 1981. *Olea roxburghii* Spreng., Neue Entdeck 5(3): 78. 1822. *Linociera intermedia* Wight var. *roxburghii* (Spreng.) C.B. Clarke in Hook. f., Fl. Brit. India 3: 609. 1882; Haines, Bot. Bihar Orissa 528. 1922 (Repr. ed., 2: 554. 1961).

var. **intermedius** (Wight) Srivastava & Kapoor in Geophytology 11(2): 262. 1981. *Linociera intermedia* Wight, Icon. Pl. Ind. Orient. t. 1245. 1848, p.p.; C.B. Clarke in Hook. f., Fl. Brit. India 3: 609. 1882, *excl.* var. *roxburghii*; Haines, Bot. Bihar Orissa 528. 1922, *excl.* var. *roxburghiana* (Repr. ed., 2: 554. 1961).

Fl. & Fr.: February - March (next year).

Distrib.: Hazaribagh, Palamau, Santal Pargana, Singhbhum.

var. **roxburghii**

Fl. & Fr.: February - March (next year).

Distrib.: Hazaribagh, Singhbhum.

JASMINUM L.

Jasminum arborescens Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 94. 1820; C.B. Clarke in Hook. f., Fl. Brit. India 3: 594. 1882; Haines, Bot. Bihar Orissa 525. 1922 (Repr. ed., 2: 551. 1961). *J. arborescens* Schult., Mant. 1: 90. 1822, *nom. illegit.* *J. arborescens* var. *montana* (Roth) C.B. Clarke in Hook. f., Fl. Brit. India 3: 594. 1882.

Fl. & Fr.: March - October.

Distrib.: East Champaran, Gaya, Hazaribagh, Koderma, Palamau, Santal Pargana, Singhbhum, West Champaran.

Jasminum auriculatum Vahl, Symb. Bot. 3: 1. 1794; C.B. Clarke in Hook. f., Fl. Brit. India 3: 600. 1882; Haines, Bot. Bihar Orissa 525. 1922 (Repr. ed., 2: 551. 1961). - *Chameli*.

Fl. & Fr.: April - February.

Distrib.: Cultivated. Purnia.

Jasminum caudatum Wallich ex Lindl. in Bot. Reg. t. 26. 1842; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 601. 1882; Haines, Bot. Bihar Orissa 526. 1922 (Repr. ed., 2: 552. 1961).

Fl. & Fr.: August - February.

Distrib.: West Champaran.

Jasminum flexile Vahl, Symb. Bot. 3: 1. 1794; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 601. 1882; Haines, Bot. Bihar Orissa 526. 1922 (Repr. ed., 2: 552. 1961).

Fl. & Fr.: October - March.

Distrib.: Chota Nagpur.

Jasminum grandiflorum L., Sp. Pl. ed. 2. 9. 1762; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 603. 1882. *J. aureum* D. Don, Prodr. Fl. Nepal. 106. 1825. - *Chameli*.

Fl. & Fr.: August - January.

Distrib.: Hazaribagh. Often cultivated elsewhere.

Jasminum humile L., Sp. Pl. 7. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 602. 1882, *p.p. excl. syn. J. bignoniaceum* Wallich ex G. Don. *J. chrysanthemum* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 98. 1820.

Fl. & Fr.: October - December.

Distrib.: Bhagalpur, Palamau.

Jasminum multiflorum (Burm. *f.*) Andr., Bot. Repos. 8. t. 496. 1807. *Nyctanthes multiflora* Burm. *f.*, Fl. Ind. 5. t. 3. f. 1. 1768. *N. pubescens* Retz., Observ. Bot. 5: 9. 1788. *Jasminum pubescens* (Retz.) Willd., Sp. Pl. 1: 37. 1797; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 592. 1882; Haines, Bot. Bihar Orissa 524. 1922 (Repr. ed., 2: 550. 1961). *Chameli*, *Mogra*.

Fl. & Fr.: December - April.

Distrib.: East Champaran, Purnia, Ranchi, Santal Pargana, West Champaran.

Jasminum officinale L., Sp. Pl. 7. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 603. 1882. *Chameli, Motia*.

Fl. & Fr.: June - October.

Distrib.: Cultivated.

Jasminum roxburghianum Wallich ex C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 595. 1882. *J. arborescens* Roxb. var. *roxburghianum* (Wallich ex C.B. Clarke) Haines, Bot. Bihar Orissa 525. 1922 (Repr. ed., 2: 551. 1961). *Chameli, Mutabela*.

Fl. & Fr.: August- December.

Distrib.: Hazaribagh, Singhbhum.

Jasminum sambac (L.) Aiton, Hortus Kew. 1: 8. 1789; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 591. 1882; Haines, Bot. Bihar Orissa 523. 1922 (Repr. ed., 2: 549. 1961). *Nyctanthes sambac* L., Sp. Pl. 6. 1753. *Jasminum sambac* var. *heyneana* Wallich ex C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 592. 1882. - *Mallika*.

Fl. & Fr.: April - October.

Distrib.: Palamau, West Champaran.

Jasminum scandens (Retz.) Vahl, Symb. Bot. 3: 2. 1794; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 595. 1882; Haines, Bot. Bihar Orissa 524. 1922 (Repr. ed., 2: 550. 1961). *Nyctanthes scandens* Retz., Observ. Bot. 5: 9. 1788.

Fl. & Fr.: January - May.

Distrib.: Champaran (Haines, *l.c.*).

Jasminum strictum Haines in Bull. Misc. Inform. Kew 1921: 310. 1921 & Bot. Bihar Orissa 525. 1922 (Repr. ed., 2: 551. 1961).

Fl. & Fr.: May - June.

Distrib.: Hazaribagh, Palamau.

Jasminum wightii C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 598. 1882.

Fl. & Fr.: May - September.

Distrib.: Palamau.

LIGUSTRUM L.

Ligustrum robustum Blume, Mus. Bot. 1: 313. 1851; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 614. 1882; Haines, Bot. Bihar Orissa 529. 1922 (Repr. ed., 2: 555. 1961).

Fl. & Fr.: June - January.

Distrib.: Santal Pargana, Sahibganj.

NYCTANTHES L.

Nyctanthes arbor-tristis L., Sp. Pl. 6. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 603. 1882; Haines, Bot. Bihar Orissa 526. 1922 (Repr. ed., 2: 552. 1961).

Fl. & Fr.: September - January.

Distrib.: East Champaran, Palamau, Sahibganj, West Champaran.

OLEA L.

Olea dioica Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 105. 1820; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 612. 1882; Haines, Bot. Bihar Orissa 529. 1922 (Repr. ed., 2: 555. 1961).

Fl. & Fr.: January - March.

Distrib.: Champaran.

SCHREBERA Roxb., *nom. cons.*

Schrebera swietenoides Roxb., Pl. Corom. 2: 1. t. 101. 1799; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 604. 1882; Haines, Bot. Bihar Orissa 527. 1922 (Repr. ed., 2: 553. 1961).

Fl. & Fr.: May - March.

Distrib.: Hazaribagh, Lohardaga, Palamau.

SALVADORACEAE**SALVADORA L.**

Salvadora persica L., Sp. Pl. 122. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 3: 619. 1882; Haines, Bot. Bihar Orissa 530. 1922 (Repr. ed., 2: 556. 1961).

Fl. & Fr.: December - March.

Distrib.: Chota Nagpur.

APOCYNACEAE**AGANOSMA (Blume) G. Don**

Aganosma dichotoma (Roth) K. Schum. in Engler & Prantl, Nat. Pflanzenfam. 4(2): 173. 1895. *Echites dichotoma* Roth, Nov. Pl. Sp. 136. 1821. *Aganosma caryophyllata* G. Don, Gen. Hist. 4: 77. 1837-1838; Hook. *f.*, Fl. Brit. India 3: 664. 1882; Haines, Bot. Bihar Orissa 545. 1922 (Repr. ed., 2: 571. 1961).

Fl. & Fr.: August - April.

Distrib.: Munger, Santal Pargana, West Champaran.

ALLAMANDA L.

Allamanda cathartica L., Mant. Pl. 214. 1771; Haines, Bot. Bihar Orissa 532. 1922 (Repr. ed., 2: 559. 1961).

Fl. & Fr.: February - August.

Distrib.: Cultivated in gardens.

ALSTONIA R. Br., nom. cons.

Alstonia macrophylla G. Don, Gen. Hist. 4: 87. 1837-1838; Hook. *f.*, Fl. Brit. India 3: 643. 1882; Haines, Bot. Bihar Orissa 532. 1922 (Repr. ed., 2: 567. 1961).

Distrib.: Cultivated in gardens.

Alstonia scholaris (L.) R. Br. in Mem. Werner. Soc. 1: 76. 1811; Hook. f., Fl. Brit. India 3: 642. 1882; Haines, Bot. Bihar Orissa 539. 1922 (Repr. ed., 2: 566. 1961). *Echites scholaris* L., Mant. Pl. 53. 1767. - *Saptaparni*.

Fl. & Fr.: December - March.

Distrib.: Throughout the state.

Alstonia venenata R. Br. in Mem. Werner. Soc. 1: 75. 1811; Hook. f., Fl. Brit. India 3: 642. 1882; Haines, Bot. Bihar Orissa 540. 1922 (Repr. ed., 2: 566. 1961), "*venenatus*"

Fl. & Fr.: April - February.

Distrib.: Chota Nagpur.

ANODENDRON A. DC.

Anodendron paniculatum (Roxb.) A. DC. in DC., Prodr. 8: 444. 1844; Hook. f., Fl. Brit. India 3: 668. 1882; Haines, Bot. Bihar Orissa 545. 1922 (Repr. ed., 2: 572. 1961). *Echites paniculata* Roxb., Fl. Ind. 2: 17. 1832, non Poir., 1812.

Fl. & Fr.: March - February.

Distrib.: Singhbhum.

CARISSA L., *nom. cons.*

Carissa carandas L., Mant. Pl. 52. 1767; Hook. f., Fl. Brit. India 3: 630. 1882; Haines, Bot. Bihar Orissa 535. 1922 (Repr. ed., 2: 561. 1961).

Fl. & Fr.: May - October.

Distrib.: Cultivated throughout the state.

Carissa congesta Wight, Icon. Pl. Ind. Orient. t. 1284. 1848. *C. carandas* L. var. *congesta* Beddome, Fl. Sylv. 156. 1871; Hook. f., Fl. Brit. India 3: 630. 1882 - *Karonda*.

Fl. & Fr.: May - October.

Distrib.: Chota Nagpur, also cultivated.

Carissa inermis Vahl, Symb. Bot. 3: 43. 1794; Haines, Bot. Bihar Orissa 534. 1922 (Repr. ed., 2: 561. 1961). *C. macrophylla* Wallich ex A. DC. in DC., Prodr. 8: 332. 1844; Hook. f., Fl. Brit. India 3: 631. 1882.

Fl. & Fr.: March - May.

Distrib.: Singhbhum.

Carissa opaca Stapf ex Haines in Indian For. 47: 378. 1921. *C. spinarum* auct. non L., 1771; Hook. f., Fl. Brit. India 3: 631. 1882, *p.p.* *C. paucinervia* A. DC. var. *opaca* Stapf ex Haines, Bot. Bihar Orissa 534. 1922 (Repr. ed., 2: 560. 1961).- *Karaunda*.

Fl. & Fr.: March - August.

Distrib.: Chota Nagpur.

Carissa paucinervia A. DC. in DC., Prodr. 8: 333. 1844; Hook. f., Fl. Brit. India 3: 631. 1882; Haines, Bot. Bihar Orissa 533. 1922 (Repr. ed., 2: 559. 1961).

Fl. & Fr.: January - March.

Distrib.: Chota Nagpur, Munger.

Carissa spinarum L., Mant. Pl. 559. 1771; Hook. f., Fl. Brit. India 3: 631. 1882, *p.p.*; Haines, Bot. Bihar Orissa 534. 1922 (Repr. ed., 2: 560. 1961). - *Jangli karonda*.

Fl. & Fr.: January - April.

Distrib.: Chota Nagpur.

CATHARANTHUS G. Don

Catharanthus pusillus (Murr.) G. Don, Gen. Hist. 4: 95. 1837-1838. *Vinca pusilla* Murr. in Comment. Soc. Regiae Sci. Gotting. 3: 66. 1773; Hook. f., Fl. Brit. India 3: 640. 1882; Haines, Bot. Bihar Orissa 537. 1922 (Repr. ed., 2: 563. 1961). *Lochnera pusilla* K. Schum. in Engler & Prantl, Nat. Pflanzenfam. 4(2): 145. 1895.

Fl. & Fr.: July - September.

Distrib.: Chota Nagpur, West Champaran.

Catharanthus roseus (L.) G. Don, Gen. Hist. 4: 95. 1837-1838; Stearn in Lloydia 29: 196. 1966. *Vinca rosea* L., Syst. Nat. ed. 10: 944. 1759; Hook. f., Fl. Brit. India 3: 640. 1882; Haines, Bot. Bihar Orissa 537. 1922 (Repr. ed., 2: 563. 1961). *Lochnera rosea* Rchb., Consp. Regn. Veg. 134. 1828. - *Sada-bahar*, *Sada-suhagi*.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated in gardens.

CHONEMORPHA G. Don, *nom. cons.*

Chonemorpha fragrans (Moon) Alston in Ann. Roy. Bot. Gard. (Peradeniya) 11: 203. 1929. *Echites fragrans* Moon, Cat. Pl. Ceylon 20. 1824. *Chonemorpha macrophylla* (Roxb.) G. Don, Gen. Hist. 4: 76. 1837; Hook. f., Fl. Brit. India 3: 661. 1882; Haines, Bot. Bihar Orissa 544. 1922 (Repr. ed., 2: 571. 1961).

Fl. & Fr.: May - January.

Distrib.: West Champaran.

HOLARRHENA R. Br.

Holarrhena pubescens (Buch.-Ham.) Wallich ex G. Don, Gen. Hist. 4: 78. 1837-1838. *Echites pubescens* Buch.-Ham. in Trans. Linn. Soc. Bot. 13: 524. 1822. *Holarrhena antidysenterica* Wallich, Numer. List No. 1672. 1829, *non* (L.) Wallich, 1829; Hook. f., Fl. Brit. India 3: 644. 1882; Haines, Bot. Bihar Orissa 538. 1922 (Repr. ed., 2: 564. 1961). *Dudhi*, *Kura*, *Kuruchi*.

Fl. & Fr.: May - February.

Distrib.: Throughout the state.

ICHNOCARPUS R. Br., *nom. cons.*

Ichnocarpus frutescens (L.) R. Br. in Mem. Werner. Soc. 1: 62. 1811 & in Aiton f., Hortus Kew. ed. 2. 2: 69. 1811; Hook. f., Fl. Brit. India 3: 669. 1882; Haines, Bot. Bihar Orissa 546. 1922 (Repr. ed., 2: 573. 1961). *Apocynum frutescens* L., Sp. Pl. 213. 1753. *Dhimarbel*, *Kalidudhi*, *Siamlata*.

Fl. & Fr.: September - April.

Distrib.: Hazaribagh, Lohardaga, Purnia, Ranchi, Singhbhum, West Champaran.

KOPSIA Blume

Kopsia fruticosa (Ker-Gawl.) A. DC. in DC., Prodr. 8: 352. 1844; Hook. *f.*, Fl. Brit. India 3: 639. 1882; Haines, Bot. Bihar Orissa 536. 1922 (Repr. ed., 2: 562. 1961). *Cerbera fruticosa* Ker-Gawl. in Bot. Reg. 5: t. 391. 1819.

Fl. & Fr.: May - December.

Distrib.: Cultivated.

MELODINUS J.R. Forster & G. Forster

Melodinus monogynus Roxb., Fl. Ind. 2: 56. 1832; Hook. *f.*, Fl. Brit. India 3: 629. 1882; Haines, Bot. Bihar Orissa 535. 1922 (Repr. ed., 2: 562. 1961).

Fl. & Fr.: May - January.

Distrib.: Cultivated in gardens.

NERIUM L.

Nerium indicum Mill., Gard. Dict. ed. 8. no. 2. 1768; Santapau in Rec. Bot. Surv. India 16(1): 170. 1953. *N. odorum* Soland. in Aiton, Hortus Kew. ed. 1. 1: 297. 1789; Hook. *f.*, Fl. Brit. India 3: 655. 1882; Haines, Bot. Bihar Orissa 541. 1922 (Repr. ed., 2: 567. 1961). - *Kaner*.

Fl. & Fr.: April - February.

Distrib.: Cultivated in gardens throughout the state.

PARSONSIA R. Br.

Parsonsia alboflavescens (Dennst.) Mabberley in Taxon 26: 532. 1977. *Periploca alboflavescens* Dennst., Schluessel Hortus Malab. 12: 23 & 35. 1818. *Parsonsia spiralis* Wallich ex G. Don, Gen. Hist. 4: 80. 1837-1838; Hook. *f.*, Fl. Brit. India 3: 650. 1882; Haines, Bot. Bihar Orissa 543. 1922 (Repr. ed., 2: 569. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: Chota Nagpur.

PLUMERIA L.

Plumeria acuminata Aiton *f.*, Hortus Kew. ed. 2. 2: 70. 1811. *P. acutifolia* Poir. in Lam., Encycl. Suppl. 2: 667. 1812; Hook. *f.*, Fl. Brit. India 3: 641. 1882; Haines, Bot. Bihar Orissa 536. 1922 (Repr. ed., 2: 563. 1961).

Fl. & Fr.: April - October.

Distrib.: Cultivated in gardens.

Plumeria alba L., Sp. Pl. 210. 1753; Haines, Bot. Bihar Orissa 536. 1922 (Repr. ed., 2: 563. 1961).

Fl. & Fr.: March - June.

Distrib.: Cultivated in gardens.

Plumeria rubra L., Sp. Pl. 209. 1753; Haines, Bot. Bihar Orissa 537. 1922 (Repr. ed., 2: 563. 1961).

Fl. & Fr.: November - June.

Distrib.: Cultivated in gardens.

RAUVOLFIA L.

Rauvolfia serpentina (L.) Benth. *ex* Kurz, Forest Fl. Burma 2: 171. 1877; Hook. *f.*, Fl. Brit. India 3: 632. 1882; Haines, Bot. Bihar Orissa 539. 1922 (Repr. ed., 2: 565. 1961). *Ophioxylon serpentinum* L., Sp. Pl. 1043. 1753. - *Bhuin kurwa*, *Bhuin - kural*, *Chhotachand*, *Sarpagandha*.

Fl. & Fr.: May - September.

Distrib.: Singhbhum, West Champaran.

Rauvolfia tetraphylla L., Sp. Pl. 208. 1753. *R. canescens* L., Sp. Pl. ed. 2. 303. 1762; Haines, Bot. Bihar Orissa 539. 1922 (Repr. ed., 2: 565. 1961).

Fl. & Fr.: April - June.

Distrib.: West Champaran.

STROPHANTHUS DC.

Strophanthus wallichii A. DC., Prodr. 8: 418. 1844; Hook. *f.*, Fl. Brit. India 3: 655. 1882; Haines, Bot. Bihar Orissa 542. 1922 (Repr. ed., 2: 569. 1961).

Fl. & Fr.: May - October.

Distrib.: Singhbhum.

TABERNAEMONTANA L.

Tabernaemontana divaricata (L.) R. Br. in Roem. & Schult., Syst. Veg. 4: 427. 1819. *Nerium divaricatum* L., Sp. Pl. 209. 1753. *Tabernaemontana coronarium* (Jacq.) Willd., Enum. Pl. 275. 1809; Hook. *f.*, Fl. Brit. India 3: 646. 1882; Haines, Bot. Bihar Orissa 537. 1922 (Repr. ed., 2: 564. 1961). *Ervatamia divaricata* (L.) Burkill in Rec. Bot. Surv. India 10: 320. 1925. *Tagar*.

Fl. & Fr.: Throughout the year.

Distrib.: Commonly cultivated throughout the state.

THEVETIA L., nom. cons.

Thevetia peruviana (Pers.) K. Schum. in Engler & Prantl, Nat. Pflanzenfam. 4(2): 159. 1895. *Cerbera peruviana* Pers., Syn. Pl. 1: 267. 1805. *Thevetia neriifolia* Juss. ex Steud., Nomencl. Bot. ed. 2. 2: 680. 1841; Haines, Bot. Bihar Orissa 535. 1922 (Repr. ed., 2: 562. 1961). - *Pila Kaner*.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated.

VALLARIS Burm. f.

Vallaris solanacea (Roth) Kuntze, Revis. Gen. Pl. 417. 1891. *Peltanthera solanacea* Roth, Nov. Pl. Sp. 132. 1821. *Vallaris heynei* Spreng., Syst. Veg. 1: 635. 1824; Hook. *f.*, Fl. Brit. India 3: 650. 1882; Haines, Bot. Bihar Orissa 543. 1922 (Repr. ed., 2: 570. 1961).

Fl. & Fr.: April - January.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

WRIGHTIA R. Br.

Wrightia arborea (Dennst.) Mabberley in Taxon 26: 533. 1977.
Periploca arborea Dennst., Schluessel Hortus Malab. 13, 23, 25. 1818.
Wrightia tomentosa Roem. & Schult., Syst. Veg. 4: 414. 1819; Hook. f.,
 Fl. Brit. India 3: 653. 1882; Haines, Bot. Bihar Orissa 541. 1922 (Repr.
 ed., 2: 568. 1961). - *Dudhi*.

Fl. & Fr.: March - February.

Distrib.: Champaran, Gaya, Hazaribagh, Munger, Palamau, Singhbhum.

Wrightia tinctoria R. Br. in Mem. Werner. Soc. 1: 73. 1811; Hook. f.,
 Fl. Brit. India 3: 653. 1882; Haines, Bot. Bihar Orissa 541. 1922 (Repr.
 ed., 2: 568. 1961). - *Kali dudhi*.

Fl. & Fr.: March - October.

Distrib.: Gaya, Hazaribagh, Munger, Palamau, West Champaran.

ASCLEPIADACEAE**ASCLEPIAS L.**

Asclepias curassavica L., Sp. Pl. 215. 1753; Hook. f., Fl. Brit. India
 4: 18. 1883; Haines, Bot. Bihar Orissa 551. 1922 (Repr. ed., 2: 578. 1961).

Fl. & Fr.: April - October.

Distrib.: West Champaran.

BIDARIA (Endl.) Decne.

Bidaria tingens (Roxb.) Decne. in DC., Prodr. 8: 623. 1844. *Asclepias*
tingens Roxb., Fl. Ind. 2: 53. 1832. *Gymnema tingens* (Roxb.) Wight &
 Arnott in Wight, Contrib. Bot. India 45. 1834; Hook. f., Fl. Brit. India 4:
 31. 1883; Haines, Bot. Bihar Orissa 556. 1922 (Repr. ed., 2: 584. 1961).

Fl. & Fr.: July - March.

Distrib.: Munger (Haines, l.c.). Bihar, s.l. (Jagtap and Singh, Fasc. Fl.
 India 24: 69. 1999).

CALOTROPIS R. Br.

Calotropis acia Buch.-Ham. in Trans. Linn. Soc. London 14: 247. 1824; Hook. *f.*, Fl. Brit. India 4: 18. 1883; Haines, Bot. Bihar Orissa 551. 1922 (Repr. ed., 2: 578. 1961).

Fl. & Fr.: April - June.

Distrib.: West Champaran.

Calotropis gigantea (L.) R. Br. in Aiton *f.*, Hortus Kew. ed. 2. 2: 78. 1811; Hook. *f.*, Fl. Brit. India 4: 17. 1883; Haines, Bot. Bihar Orissa 550. 1922 (Repr. ed., 2: 577. 1961). *Asclepias gigantea* L., Sp. Pl. 214. 1753. *Madar*.

Fl. & Fr.: December - June.

Distrib.: Throughout the state.

Calotropis procera (Aiton) R. Br. in Aiton *f.*, Hortus Kew. ed. 2. 2: 78. 1811; Hook. *f.*, Fl. Brit. India 4: 18. 1883; Haines, Bot. Bihar Orissa 551. 1922 (Repr. ed., 2: 578. 1961). *Asclepias procera* Aiton, Hortus Kew. ed. 1. 1: 3-5. 1789. - *Aak, Akawan, Akohwa, Madar*.

Fl. & Fr.: March - June.

Distrib.: Throughout the state.

CARALLUMA R. Br.

Caralluma adscendens (Roxb.) R. Br. in Mem. Werner. Soc. 1: 25. 1811; Hook. *f.*, Fl. Brit. India 4: 76. 1883. *Stapelia adscendens* Roxb., Pl. Corom. 1: 28. t. 30. 1795.

Fl. & Fr.: March - September.

Distrib.: Bihar (Jagtap and Singh, Fasc. Fl. India 24: 193. 1999).

CEROPEGIA L.

Ceropegia bulbosa Roxb., Pl. Corom. 1: 11. t. 7. 1795; Hook. *f.*, Fl. Brit. India 4: 67. 1883.

Fl. & Fr.: July - September.

Distrib.: Throughout India (Jagtap and Singh, Fasc. Fl. India 24: 217. 1999).

Ceropegia hirsuta Wight & Arnott in Wight, Contrib. Bot. India 30. 1834; Hook. *f.*, Fl. Brit. India 4: 71. 1883; Haines, Bot. Bihar Orissa 562. 1922 (Repr. ed., 2: 590. 1961). - *Bosia kand.*

Fl. & Fr.: August - September.

Distrib.: Ranchi, Sahibganj.

CRYPTOLEPIS R. Br.

Cryptolepis buchanani Roem. & Schult., Syst. Veg. 4: 409. 1819; Hook. *f.*, Fl. Brit. India 4: 5. 1883; Haines, Bot. Bihar Orissa 549. 1922 (Repr. ed., 2: 576. 1961). - *Dudhi, Karanta, Nagbel, Nangar dudhibel.*

Fl. & Fr.: May - February.

Distrib.: Throughout the state.

Cryptolepis grandiflora Wight, Icon. Pl. Ind. Orient. t. 831. 1844-1845; Hook. *f.*, Fl. Brit. India 4: 5. 1883.

Fl. & Fr.: October - February.

Distrib.: Bihar (Jagtap and Singh, Fasc. Fl. India 24: 291. 1999).

Cryptolepis sinensis (Lour.) Merr. in Philipp. J. Sci. 15: 254. 1919. *Pergularia sinensis* Lour., Fl. Cochinch. 1: 169. 1790. *Cryptolepis elegans* Wallich ex G. Don, Gen. Hist. 4: 82. 1838; Hook. *f.*, Fl. Brit. India 4: 6. 1883.

Fl. & Fr.: July - February.

Distrib.: Bihar (Jagtap and Singh, Fasc. Fl. India 24: 292. 1999).

CRYPTOSTEGIA R. Br.

Cryptostegia grandiflora R. Br. in Bot. Reg. 5: t. 435. 1820; Hook. *f.*, Fl. Brit. India 4: 6. 1883; Haines, Bot. Bihar Orissa 549. 1922 (Repr. ed., 2: 576. 1961).

Fl. & Fr.: June - September.

Distrib.: Cultivated in gardens.

CYNANCHUM L.

Cynanchum callialata Buch.-Ham. ex Wight, Contrib. Bot. India 56. 1834; Hook. f., Fl. Brit. India 4: 24. 1883; Haines, Bot. Bihar Orissa 554. 1922 (Repr. ed., 2: 581. 1961).

Fl. & Fr.: September - January.

Distrib.: Hazaribagh, Purnia.

GYMNEMA R. Br.

Gymnema hirsutum Wight & Arnott in Wight, Contrib. Bot. India 44. 1834; Hook. f., Fl. Brit. India 4: 29. 1883; Haines, Bot. Bihar Orissa 556. 1922 (Repr. ed., 2: 583. 1961).

Fl. & Fr.: April - July.

Distrib.: Rohtas.

Gymnema sylvestre (Retz.) R. Br. ex Schult. in Roem. & Schult., Syst. Veg. 6: 57. 1820; Hook. f., Fl. Brit. India 4: 29. 1883; Haines, Bot. Bihar Orissa 556. 1922 (Repr. ed., 2: 583. 1961). *Periploca sylvestris* Retz., Observ. Bot. 2: 15. 1781. *Gurmar*, *Merasingi*.

Fl. & Fr.: August - May.

Distrib.: Gaya, Hazaribagh, Palamau, West Champaran.

HEMIDESMUS R. Br.

Hemidesmus indicus (L.) R. Br. in Aiton f., Hortus Kew. ed. 2. 2: 75. 1811; Hook. f., Fl. Brit. India 4: 5. 1883; Haines, Bot. Bihar Orissa 548. 1922 (Repr. ed., 2: 575. 1961). *Periploca indica* L., Sp. Pl. 211. 1753. *Amendmal*, *Anantamul*, *Kapuri*, *Hindi - salsa*.

var. **indicus**

Fl. & Fr.: August - January.

Distrib.: Throughout the state.

var. **pubescens** (Wight & Arnott) Hook. f., Fl. Brit. India 4: 5. 1883; Haines, Bot. Bihar Orissa 548. 1922 (Repr. ed., 2: 575. 1961). *Hemidesmus pubescens* Wight & Arnott in Wight, Contrib. Bot. India 63. 1834.

Fl. & Fr.: August - December.

Distrib.: Throughout the state

HOLOSTEMMA R. Br.

Holostemma ada-kodien Schult. in Roem. & Schult., Syst. Veg. 6: 95. 1820. *H. rheedei* Wallich, Pl. Asiat. Rar. 2: 51. 1831; Hook. f., Fl. Brit. India 4: 21. 1883; Haines, Bot. Bihar Orissa 554. 1922 (Repr. ed., 2: 581. 1961). *H. annulare* (Roth) K. Schum. in Engler & Prantl, Nat. Pflanzenfam. 4(2): 250. 1895. *Sarcostemma annulare* Roth, Nov. Pl. Sp. 178. 1821.-*Chhirvel*.

Fl. & Fr.: July - January.

Distrib.: Singhbhum.

HOYA R. Br.

Hoya alexicaca (N.J. Jacq.) Moon, Cat. Pl. Ceylon 21. 1824. *Asclepias alexicaca* N.J. Jacq., Coll. Bot. 2: 101. 1789. *Hoya pendula* (Roxb.) Wight, Icon. Pl. Ind. Orient. t. 474. 1840-1843; Hook. f., Fl. Brit. India 4: 61. 1883. *Asclepias pendula* Roxb., Fl. Ind. 2: 36. 1832.

Fl. & Fr.: May - September.

Distrib.: Bihar (Jagtap and Singh, Fasc. Fl. India 24: 95. 1999).

LEPTADENIA R. Br.

Leptadenia pyrotechnica (Forssk.) Decne. in Ann. Sci. Nat. ser. 2, 9: 269. 1838. *Cynanchum pyrotechnicum* Forssk., Fl. Aegypt.-Arab. 53. 1775. *Leptadenia spartium* Wight & Arnott in Wight, Contr. Bot. India 48. 1834; Hook. f., Fl. Brit. India 4: 64. 1883.

Fl. & Fr.: October - January.

Distrib.: Santal Pargana.

Leptadenia reticulata (Retz.) Wight & Arnott in Wight, Contrib. Bot. India 47. 1834; Hook. f., Fl. Brit. India 4: 63. 1883; Haines, Bot. Bihar Orissa 561. 1922 (Repr. ed., 2: 589. 1961). *Cynanchum reticulatum* Retz., Observ. Bot. 2: 15. 1781.

Fl. & Fr.: July - April.

Distrib.: West Champaran.

MARSDENIA R. Br., nom. cons.

Marsdenia hamiltonii Wight & Arnott in Wight, Contrib. Bot. India 41. 1834; Hook. *f.*, Fl. Brit. India 4: 36. 1883; Haines, Bot. Bihar Orissa 558. 1922 (Repr. ed., 2: 585. 1961).

Fl. & Fr.: April - June.

Distrib.: Palamau.

Marsdenia tenacissima (Roxb.) Moon, Cat. Pl. Ceylon 21. 1824; Hook. *f.*, Fl. Brit. India 4: 35. 1883; Haines, Bot. Bihar Orissa 558. 1922 (Repr. ed., 2: 585. 1961). *Asclepias tenacissima* Roxb., Pl. Corom. 3: 35. t. 240. 1815.

Fl. & Fr.: April - March.

Distrib.: Champaran, Hazaribagh, Palamau, Santal Pargana, Singhbhum.

OXYSTELMA R. Br.

Oxystelma esculentum (L. *f.*) Sm. in Rees, Cyclop. 25. No. 1. 1813; Hook. *f.*, Fl. Brit. India 4: 17. 1883; Haines, Bot. Bihar Orissa 552. 1922. (Repr. ed., 2: 579. 1961). *Periploca esculenta* L. *f.*, Suppl. Pl. 168. 1782. *Sarcostemma esculentum (L. *f.*) R. Holm in Ann. Miss. Bot. Gard, 37: 482. 1950, in *adnota*. *Oxystelma secamone auct. non* (L.) Karst., 1880-83: Santapau & Irani in Univ. Bombay Bot. Mem. 4: 67. 1960. - *Dudhialata*.*

Fl. & Fr.: July - December.

Distrib.: Champaran, Patna, Purnia.

PENTATROPIS Wight & Arnott

Pentatropis capensis (L. *f.*) Bullock in Kew Bull. 9: 284. 1955. *Cynanchum capense* L. *f.*, Suppl. Pl. 168. 1782. *Pentatropis microphylla* (Roth) Wight & Arnott in Wight, Contrib. Bot. India 52. 1834; Hook. *f.*, Fl. Brit. India 4: 20. 1883.

Fl. & Fr.: August - December.

Distrib.: Bihar (Jagtap and Singh, Fasc. Fl. India 24: 38. 1999).

PERGULARIA L.

Pergularia daemia (Forssk.) Chiov. in Result. Sc. Miss. Stefan. - Paoll. Somal. Ital. 1: 115. 1916. *Asclepias daemia* Forssk., Fl. Aegypt.-Arab. 51. 1775. *Cynanchum extensum* Jacq., Misc. Austriac. 2: 353. 1782. *Daemia extensa* (Jacq.) R. Br. in Aiton f., Hortus Kew. ed. 2, 2: 76. 1811; Hook. f., Fl. Brit. India 4: 20. 1883. *Pergularia extensa* (Jacq.) N.E. Brown in Dyer, Fl. Cap. 4: 758. 1908; Haines, Bot. Bihar Orissa 552. 1922 (Repr. ed., 2: 579. 1961). - *Dudhibel, Sadowani*.

Fl. & Fr.: October - January.

Distrib.: Palamau, West Champaran.

PHILIBERTIA Humb., Bonpl. & Kunth

Philibertia viminalis (Sw.) A. Gray in Proc. Am. Acad. 12: 64. 1877. *Asclepias viminalis* Sw., Prodr. 53. 1788.

Fl.: September.

Distrib.: Chota Nagpur.

RAPHISTEMMA Wallich

Raphistemma pulchellum (Roxb.) Wallich, Pl. Asiat. Rar. 2: 50. t. 163. 1831 & Cat. 8221 A. 1847; Hook. f., Fl. Brit. India 4: 19. 1883; Haines, Bot. Bihar Orissa 553. 1922 (Repr. ed., 2: 580. 1961). *Asclepias pulchella* Roxb., Fl. Ind. 2: 54. 1832.

Fl. & Fr.: August - September.

Distrib.: Singhbhum (Haines, l.c.).

SARCOLOBUS R. Br.

Sarcolobus carinatus Wallich in Asiat. Res. 12: 570. 1818 & Cat. 4467. 1831; Hook. f., Fl. Brit. India 4: 28. 1883; Haines, Bot. Bihar Orissa 555. 1922 (Repr. ed., 2: 582. 1961).

Fl. & Fr.: April - August.

Distrib.: Bihar (Jagtap and Singh, Fasc. Fl. India 24: 137. 1999).

SARCOSTEMMA R. Br.

Sarcostemma viminale (L.) R. Br. in Mem. Werner. Soc. 1: 51. 1809 & Prodr. 464. 1810. *Euphorbia viminalis* L., Sp. Pl. 452. 1753. *Sarcostemma brevistigma* Wight & Arnott in Wight, Contrib. Bot. India 59. 1834; Hook. *f.*, Fl. Brit. India 4: 26. 1883; Haines, Bot. Bihar Orissa 555. 1922. (Repr. ed., 2: 582. 1961).

Fl. & Fr.: September - January.

Distrib.: Ranchi, Singhbhum.

STREPTOCAULON Wight & Arnott

Streptocaulon extensum Wight, Contrib. Bot. India 65. 1834. *Myriopteron paniculatum* Griff. in Calc. J. Nat. Hist. 4: 385. & Notul. 4: 71. 1844; Hook. *f.*, Fl. Brit. India 4: 11. 1883.

Fl. & Fr.: June - August.

Distrib.: Bihar (Jagtap and Singh, Fasc. Fl. India 24: 313. 1999).

Streptocaulon sylvestre Wight, Contrib. Bot. India 65. 1834; Hook. *f.*, Fl. Brit. India 4: 10. 1883; Haines, Bot. Bihar Orissa 550. 1922 (Repr. ed., 2: 577. 1961).

Fl. & Fr.: April - May.

Distrib.: Purnia.

TELOSMA Coville

Telosma cordata (Burm. *f.*) Merr. in Philipp. J. Sci. 19: 372. 1921. *Asclepias cordata* Burm. *f.*, Fl. Ind. 72. t. 27. 1768. *Pergularia minor* Andrews, Bot. Repos. 3: t. 184. 1801; Hook. *f.*, Fl. Brit. India 4: 38. 1883.

Fl. & Fr.: July - September.

Distrib.: Chota Nagpur.

Telosma pallida (Roxb.) Craib in Bull. Misc. Inform. Kew. 1911: 418. 1911; Haines, Bot. Bihar Orissa 557. 1922 (Repr. ed., 2: 584. 1961). *Asclepias pallida* Roxb., Fl. Ind. 2: 48. 1832. *Pergularia pallida* Wight & Arnott in Wight, Contrib. Bot. India 42. 1834; Hook. f., Fl. Brit. India 4: 38. 1883.

Fl. & Fr.: May - January.

Distrib.: Champaran, Palamau, Santal Pargana.

TYLOPHORA R. Br.

Tylophora fasciculata Buch.-Ham. ex Wight, Contrib. Bot. India 50. 1834; Hook. f., Fl. Brit. India 4: 40. 1883; Haines, Bot. Bihar Orissa 559. 1922 (Repr. ed., 2: 587. 1961).

Fl. & Fr.: May - October.

Distrib.: Palamau.

Tylophora hirsuta (Wallich) Wight, Contrib. Bot. India 49. 1834; Hook. f., Fl. Brit. India 4: 43. 1883. *Gymnema hirsutum* Wallich, Tent. Fl. Nep. 50. 1826, non Wight & Arnott, 1834; Haines, Bot. Bihar Orissa 556. 1922 (Repr. ed., 2: 583. 1961).

Fl. & Fr.: July - January.

Distrib.: Rohtas.

Tylophora indica (Burm. f.) Merr. in Philipp. J. Sci. 19: 373. 1921. *Cynanchum indicum* Burm. f., Fl. Ind. 70. 1768. *Tylophora asthamatica* (L. f.) Wight & Arnott in Wight, Contrib. Bot. India 51. 1834; Hook. f., Fl. Brit. India 4: 44. 1883; Haines, Bot. Bihar Orissa 560. 1922 (Repr. ed., 2: 587. 1961).

Fl. & Fr.: June - September.

Distrib.: Bihar (Jagtap and Singh, Fasc. Fl. India 24: 159. 1999).

Tylophora longifolia Wight, Contrib. Bot. India 50. 1834; Hook. f., Fl. Brit. India 4: 42. 1883; Haines, Bot. Bihar Orissa 560. 1922 (Repr. ed., 2: 587. 1961).

Fl. & Fr.: May - September.

Distrib.: Bihar (Jagtap and Singh, Fasc. Fl. India 24: 162. 1999).

Tylophora rotundifolia Buch.-Ham. ex Wight, Contrib. Bot. India 50. 1834; Hook. f., Fl. Brit. India 4: 43. 1883; Haines, Bot. Bihar Orissa 560. 1922 (Repr. ed., 2: 588. 1961).

Fl. & Fr.: May - December.

Distrib.: West Champaran.

Tylophora tenerrima Wight, Contrib. Bot. India 50. 1834; Hook. f., Fl. Brit. India 4: 44. 1883.

Fl. & Fr.: June - August.

Distrib.: Bihar (Jagtap and Singh, Fasc. Fl. India 24: 170. 1999).

Tylophora tetrapetala (Dennst.) Suresh in Nicolson *et al.*, An Interpret. of Van Rheede's Hortus Malab. 64. 1988. *Asclepias tetrapetala* Dennst., Schluessel 14, 18, 35. 1818. *Tylophora tenuis* Blume, Bijdr. 1062. 1826-1827; Hook. f., Fl. Brit. India 4: 42. 1883.

Fl. & Fr.: May - August.

Distrib.: Bihar (Jagtap and Singh, Fasc. Fl. India 24: 171. 1999).

WATTAKAKA Hassk.

Wattakaka volubilis (L. f.) Stapf in Curtis, Bot. Mag. 148. sub t. 8976. 1923. *Asclepias volubilis* L. f., Suppl. Pl. 170. 1782. *Hoya viridiflora* R. Br. in Mem. Werner. Soc. 1: 27. 1811. *Dregea volubilis* (L. f.) Benth. ex Hook. f., Fl. Brit. India 4: 46. 1883. *incl. var. lacuna*; Haines, Bot. Bihar Orissa 559. 1922 (Repr. ed., 2: 586. 1961). *Marsdenia volubilis* (L. f.) Cooke, Fl. Bombay 2: 166. 1904. - *Nakchhikni*.

Fl. & Fr.: May - February.

Distrib.: Champaran, Hazaribagh, Palamau, Singhbhum.

LOGANIACEAE

MITRASACME Labill.

Mitrasacme indica Wight, Icon. Pl. Ind. Orient. t. 1601. 1850. *M. alsinoides auct. non* R. Br., 1810: C.B. Clarke in Hook. f., Fl. Brit. India 4: 80. 1883; Haines, Bot. Bihar Orissa 566. 1922 (Repr. ed., 2: 593. 1961).

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Singhbhum.

Mitrasacme pygmaea R. Br. var. **malaccensis** (Wight) Hara in J. Jap. Bot. 30: 24. 1955. *M. malaccensis* Wight, Icon. Pl. Ind. Orient. 1601. 1850. *M. polymorpha auct. non* R. Br., 1810: C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 80. 1883, *p.p.*

Fl. & Fr.: September - October.

Distrib.: Chota Nagpur.

MITREOLA L.

Mitreola petiolata (J.F. Gmelin) Torr. & A. Gray, Fl. N. Amer. 2: 45. 1841. *Cynoctonum petiolatum* J.F. Gmelin, Syst. Nat. 2: 443. 1791. *Mitreola oldenlandioides* Wallich ex DC., Prodr. 9: 9. 1845; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 79. 1883; Haines, Bot. Bihar Orissa 565. 1922 (Repr. ed., 2: 593. 1961).

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Sahibganj, Singhbhum.

STRYCHNOS L.

Strychnos nux-vomica L., Sp. Pl. 189. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 90. 1883; Haines, Bot. Bihar Orissa 564. 1922 (Repr. ed., 2: 592. 1961). - *Kuchla*.

Fl. & Fr.: March - January.

Distrib.: Planted, Chota Nagpur.

Strychnos potatorum L. *f.*, Suppl. Pl. 148. 1782; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 90. 1883; Haines, Bot. Bihar Orissa 564. 1922 (Repr. ed., 2: 592. 1961). - *Nirmali*.

Fl. & Fr.: May - February.

Distrib.: Hazaribagh.

BUDDLEJACEAE**BUDDLEJA L.**

Buddleja asiatica Lour. Fl. Cochinch. 1: 72. 1790; C.B. Clarke in Hook. f., Fl. Brit. India 4: 82. 1883; Haines, Bot. Bihar Orissa 563. 1922 (Repr. ed., 2: 591. 1961). - *Neemda*.

Fl. & Fr.: December - March.

Distrib.: Throughout the state.

Buddleja madagascariensis Lam., Encycl. 1: 513. 1785; Haines, Bot. Bihar Orissa 564. 1922 (Repr. ed., 2: 591. 1961).

Fl. & Fr.: January - March.

Distrib.: Cultivated in gardens (Haines, l.c.).

GENTIANACEAE**CANSCORA Lam.**

Canscora decurrens Dalzell in Hook., J. Bot. Kew Gard. Misc. 2: 136. 1850; C.B. Clarke in Hook. f., Fl. Brit. India 4: 103. 1883; Haines, Bot. Bihar Orissa 569. 1922 (Repr. ed., 2: 597. 1961).

Fl. & Fr.: September - November.

Distrib.: Singhbhum (Haines, l.c.).

Canscora decussata (Roxb.) Roem. & Schult., Syst. Veg. 1: 229. 1822; C.B. Clarke in Hook. f., Fl. Brit. India 4: 104. 1883; Haines, Bot. Bihar Orissa 569. 1922 (Repr. ed., 2: 597. 1961). *Pladera decussata* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 418. 1820 & Fl. Ind. 1: 402. 1832.

Fl. & Fr.: September - March.

Distrib.: Hazaribagh, Patna, Ranchi, Sahibganj, Saran, Singhbhum.

Canscora diffusa (Vahl) R. Br. ex Roem. & Schult., Syst. Veg. 3: 301. 1818; C.B. Clarke in Hook. f., Fl. Brit. India 4: 103. 1883; Haines, Bot. Bihar Orissa 569. 1922 (Repr. ed., 2: 597. 1961). *Gentiana diffusa* Vahl, Symb. Bot. 3: 47. 1794.

var. **diffusa**

Fl. & Fr.: Almost throughout the year.

Distrib.: Throughout the state.

var. **tenella** (Wight) C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 103. 1883; Haines, Bot. Bihar Orissa 569. 1922 (Repr. ed., 2: 597. 1961). *C. tenella* Wight, Icon. Pl. Ind. Orient. t. 1327. 1848.

Fl. & Fr.: Almost throughout the year.

Distrib.: Bihar (Haines *l.c.*)

Canscora heteroclita (L.) Gilg in Engler & Prantl, Nat. Pflanzenfam. 4(2): 76. 1875. *Gentiana heteroclita* L., Mant. Pl. 560. 1771. *Canscora sessiliflora* Roem. & Schult., Syst. Veg. Mant. 3: 230. 1827; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 104. 1883.

Fl. & Fr.: October - March.

Distrib.: Chota Nagpur.

CENTAURIUM J. Hill.

Centaurium meyeri (Bunge) Druce in Rep. Bot. Exch. Club Brit. Isles 1916: 613. 1919. *Erythraea meyeri* Bunge in Ledeb. Fl. Altaica 1: 220. 1829; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 102. 1883. *E. roxburghii* G. Don, Gen. Hist. 4: 206. 1837-1838; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 102. 1883; Haines, Bot. Bihar Orissa 568. 1922 (Repr. ed., 2: 596. 1961).

Fl. & Fr.: March - August.

Distrib.: Sahibganj, West Champaran.

Centaurium pulchellum (Sw.) Druce, Fl. Berks. 342. 1897. *Gentiana pulchella* Sw. in Vet. Akad. Handl. Stockh. 85. t. 3. f. 8 & 9. 1783.

var. **caspica** (Fischer ex Griseb.) Stewart in Kew Bull. 29(2): 444. 1974. *Erythraea caspica* Fischer ex Griseb., Gen. Sp. Gentian. 145. 1839.

Fl. & Fr.: August - September.

Distrib.: Throughout tropical and subtropical regions of India (Garg, Indian Gent. 3. 1988).

var. pulchellum

Fl. & Fr.: August - September.

Distrib.: Throughout tropical and subtropical regions of India (Garg, Indian Gent. 4. 1988).

ENICOSTEMA Blume, *nom. cons.*

Enicostema axillare (Lam.) A. Raynal in *Adansonia* 9: 75. 1969. *Gentiana axillaris* Lam., *Tabl. Encycl.* 1(2): 487. 1793. *Enicostema littorale auct. non* Blume, 1826: C.B. Clarke in *Hook. f., Fl. Brit. India* 4: 101. 1883.

Fl. & Fr.: August - October.

Distrib.: Palamau.

EXACUM L.

Exacum pedunculatum L., *Sp. Pl.* 112. 1753; C.B. Clarke in *Hook. f., Fl. Brit. India* 4: 97. 1883; Haines, *Bot. Bihar Orissa* 567. 1922 (Repr. ed., 2: 595. 1961).

Fl. & Fr.: October - April.

Distrib.: Hazaribagh, Palamau, Ranchi.

Exacum petiolare Griseb. in *DC., Prodr.* 9: 46. 1845; C.B. Clarke in *Hook. f., Fl. Brit. India* 4: 98. 1883; Haines, *Bot. Bihar Orissa* 567. 1922 (Repr. ed., 2: 595. 1961).

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Singhbhum.

Exacum teres Wallich in *Roxb., Fl. Ind. (Carey & Wallich ed.)* 1: 414. 1820; C.B. Clarke in *Hook. f., Fl. Brit. India* 4: 95. 1883.

Fl. & Fr.: September - November.

Distrib.: Bihar (Garg, Indian Gent. 7. 1988).

Exacum tetragonum Roxb., *Fl. Ind. (Carey & Wallich ed.)* 1: 413. 1820; C.B. Clarke in *Hook. f., Fl. Brit. India* 4: 95. 1883; Haines, *Bot. Bihar Orissa* 567. 1922 (Repr. ed., 2: 594. 1961).

Fl. & Fr.: August - January.

Distrib.: Palamau, Purnia, Santal Pargana.

HOPPEA Heyne *ex* Willd.

Hoppea dichotoma Heyne *ex* Willd. in Ges. Naturf. Fr. Neue Schrift. 3: 435. 1801; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 100. 1883; Haines, Bot. Bihar Orissa 570. 1922 (Repr. ed., 2: 598. 1961).

forma dichotoma

Fl. & Fr.: October - February.

Distrib.: Lohardaga, Muzaffarpur, Palamau, Purnia, Saran.

forma pedicellata Paul in Acta Bot. India 5: 183. 1977.

Fl. & Fr.: December - February.

Distrib.: Palamau. Endemic.

SWERTIA L.

Swertia angustifolia Buch.-Ham. *ex* D. Don, Prodr. Fl. Nepal. 127. 1825; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 125. 1883; Haines, Bot. Bihar Orissa 568. 1922 (Repr. ed., 2: 598. 1961).

var. angustifolia

Fl. & Fr.: October - December.

Distrib.: Champaran, Purnia.

var. pulchella Burkill in J. Proc. Asiat. Soc. Bengal 2: 375. 1906; Haines, Bot. Bihar Orissa 568. 1922 (Repr. ed., 2: 596. 1961). *S. pulchella* Buch.-Ham. *ex* C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 125. 1883.

Fl. & Fr.: September - November.

Distrib.: Purnia, Singhbhum.

var. pyramidalls Haines, Bot. Bihar Orissa 568. 1922 (Repr. ed., 2: 596. 1961).

Fl. & Fr.: September - November.

Distrib.: Palamau. Endemic.

MENYANTHACEAE

NYMPHOIDES J. Hill.

Nymphoides hydrophylla (Lour.) Kuntze, Revis. Gen. Pl. 2: 429. 1891. *Menyanthes hydrophylla* Lour., Fl. Cochinch. 1: 129. 1790. *M. cristata* Roxb., Pl. Corom. 2: 3, t. 105. 1799. *Limnanthemum cristatum* (Roxb.) Griseb., Gen. Sp. Gent. 342. 1839; C.B. Clarke in Hook. f., Fl. Brit. India 4: 131. 1883; Haines, Bot. Bihar Orissa 571. 1922 (Repr. ed., 2: 599. 1961).

Fl. & Fr.: April - November.

Distrib.: East Champaran, Palamau, West Champaran.

Nymphoides indica (L.) Kuntze, Revis. Gen. Pl. 2: 429. 1891. *Menyanthes indica* L., Sp. Pl. 145. 1753. *Limnanthemum indicum* (L.) Griseb., Gen. Sp. Gent. 343. 1839, *emend.* Thwaites, Enum. Pl. Zeyl. 205. 1860; C.B. Clarke in Hook. f., Fl. Brit. India 4: 131. 1883; Haines, Bot. Bihar Orissa 570. 1922 (Repr. ed., 2: 598. 1961).

Fl. & Fr.: March - November.

Distrib.: East Champaran, Muzaffarpur, Palamau, Patna, Purnia, West Champaran.

POLEMONIACEAE

PHLOX L.

Phlox divaricata L., Sp. Pl. 152. 1753.

Fl. & Fr.: November - February.

Distrib.: Cultivated in gardens.

Phlox drummondii Hook. in Curtis, Bot. Mag. 62. t. 3441. 1835; Haines, Bot. Bihar Orissa 572. 1922 (Repr. ed., 2: 600. 1961).

Fl. & Fr.: December - May.

Distrib.: Cultivated in gardens.

HYDROPHYLLACEAE

HYDROLEA L., *nom. cons.*

Hydrolea zeylanica (L.) Vahl, *Symb. Bot.* 2: 46. 1791; C.B. Clarke in Hook. *f.*, *Fl. Brit. India* 4: 133. 1883; Haines, *Bot. Bihar Orissa* 571. 1922 (Repr. ed., 2: 599. 1961). *Nama zeylanica* L., *Sp. Pl.* 226. 1753.

Fl. & Fr.: November - February.

Distrib.: Champaran, Gaya, Hazaribagh, Palamau, Patna, Purnia, Singhbhum.

BORAGINACEAE

ARNEBIA Forssk.

Arnebia hispidissima DC., *Prodr.* 10: 94. 1846; C.B. Clarke in Hook. *f.*, *Fl. Brit. India* 4: 176. 1883.

Fl. & Fr.: March - May.

Distrib.: West Champaran.

BOTHRIOSPERMUM Bunge

Bothriospermum tenellum (Hornem.) Fisch. & C.A. Mey., *Index Sem. Hort. Petrop.* 1: 24. 1835; C.B. Clarke in Hook. *f.*, *Fl. Brit. India* 4: 167. 1883; Haines, *Bot. Bihar Orissa* 582. 1922 (Repr. ed., 2: 611. 1961). *Anchusa tenella* Hornem., *Hort. Bot. Hafn.* 1: 176. 1813.

Fl. & Fr.: February - May.

Distrib.: Hazaribagh, West Champaran.

CARMONA Cav.

Carmona retusa (Vahl) Masamune in *Trans. Nat. Hist. Soc. Taiwan* 30: 61. 1940. *Cordia retusa* Vahl, *Symb. Bot.* 2: 42. 1791. *Ehretia*

microphylla Lam., Illustr. 1: 425. 1792. *E. buxifolia* Roxb., Pl. Corom. 1: 42. t. 57. 1795; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 144. 1883; Haines, Bot. Bihar Orissa 577. 1922 (Repr. ed., 2: 605. 1961).

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

COLDENIA L.

Coldenia procumbens L., Sp. Pl. 125. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 144. 1883; Haines, Bot. Bihar Orissa 577. 1922 (Repr. ed., 2: 606. 1961).

Fl. & Fr.: August - May.

Distrib.: Muzaffarpur.

CORDIA L.

Cordia dichotoma G. Forster, Fl. Ins. Austr. 18. 1786. *C. indica* Lam., Encycl. 7: 49. 1806. *C. myxa auct. non L.*, 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 136. 1883; Haines, Bot. Bihar Orissa 574. 1922 (Repr. ed., 2: 602. 1961). - *Lasura*.

Fl. & Fr.: March - August.

Distrib.: East Champaran, Hazaribagh, Santal Pargana, West Champaran.

Cordia gharaf (Forssk.) Ehrenb. ex Asch., Sitzungber. Ges. Naturf. Freunde 1879: 46. 1879. *Cornus gharaf* Forssk., Fl. Aegypt.-Arab. 95. 1775. *Cordia rothii* Roem. & Schult., Syst. Veg. 4: 798. 1819; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 138. 1883; Haines, Bot. Bihar Orissa 573. 1922 (Repr. ed., 2: 602. 1961).

Fl. & Fr.: April - October.

Distrib.: Bihar (Haines, *l.c.*).

Cordia macleodii Hook. *f.* & Thoms. in J. Linn. Soc. London (Bot.) 2: 128. 1858; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 139. 1883.

Fl. & Fr.: March - June.

Distrib.: Singhbhum.

Cordia monoica Roxb., Pl. Corom. 1: 43. t. 58. 1796 & Fl. Ind. (Carey & Wallich ed.) 2: 334. 1824; C.B. Clarke in Hook. f., Fl. Brit. India 4: 137. 1883; Haines, Bot. Bihar Orissa 574. 1922 (Repr. ed., 2: 602. 1961).

Fl. & Fr.: May - November.

Distrib.: Hazaribagh, Palamau.

Cordia obliqua Willd., Phytographia 1(4): t. 4. f. 1. 1794 & Sp. Pl. 1: 1072. 1798; C.B. Clarke in Hook. f., Fl. Brit. India 4: 137. 1883.

var. ***obliqua***

Fl. & Fr.: January - June.

Distrib.: Hazaribagh, Koderma, Palamau.

var. ***tomentosa*** (Wallich) Kazmi in J. Arnold Arb. 51: 143. 1970. *C. tomentosa* Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 339. 1824, *non* Roem. & Schult., 1819. *C. obliqua* Willd. var. *wallichii* (G. Don) C.B. Clarke in Hook. f., Fl. Brit. India 4: 137. 1883.

Fl. & Fr.: January - May.

Distrib.: Singhbhum.

CYNOGLOSSUM L.

Cynoglossum lanceolatum Forssk., Fl. Aegypt.-Arab. 41. 1775; C.B. Clarke in Hook. f., Fl. Brit. India 4: 156. 1883; Haines, Bot. Bihar Orissa 581. 1922 (Repr. ed., 2: 610. 1961). *C. micranthum* Desf., Tabl. Ecole Bot. ed. 1. 220. 1804; C.B. Clarke in Hook. f., Fl. Brit. India 4: 156. 1883.

Fl. & Fr.: September - May.

Distrib.: East Champaran, Darbhanga, Hazaribagh, Palamau, Purnia, West Champaran.

Cynoglossum wallichii G. Don, Gen. Hist. 4: 354. 1837-1838; C.B. Clarke in Hook. f., Fl. Brit. India 4: 157. 1883.

var. ***glochidiatum*** (Wallich ex Benth.) Kazmi in J. Arnold Arb. 52: 347. 1971. *Cynoglossum glochidiatum* Wallich ex Benth. in Royle, Ill. Bot. Himal. Mts. 1: 306. 1839; C.B. Clarke in Hook. f., Fl. Brit. India 4: 156.

1883. *C. denticulatum* A. DC. in DC., Prodr. 10: 150. 1846; C.B. Clarke in Hook. f., Fl. Brit. India 4: 157. 1883; Haines, Bot. Bihar Orissa 581. 1922 (Repr. ed., 2: 610. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Palamau, Singhbhum.

var. wallichii

Fl. & Fr.: July - December.

Distrib.: Palamau.

Cynoglossum zeylanicum (Vahl ex Hornem.) Thunb. ex Lehm. in Neue Schriften. Naturf. Ges. Pl. Hort. Halle 3(2): 20. 1817 & Pl. Asperif. Nucif. 116. 1818. *Anchusa zeylanica* Vahl ex Hornem., Enum. Pl. Hort. Hafn. 3. 1807. *Cynoglossum furcatum* Wallich ex Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 6. 1824; C.B. Clarke in Hook. f., Fl. Brit. India 4: 155. 1883. *C. denticulatum* A. DC. var. *zeylanica* (Vahl ex Hornem.) C.B. Clarke in Hook. f., Fl. Brit. India 4: 157. 1883.

Fl. & Fr.: August - December .

Distrib.: Bhagalpur, Hazaribagh, Palamau.

EHRETIA R. Br.

Ehretia acuminata R. Br., Prodr. 497. 1810; C.B. Clarke in Hook. f., Fl. Brit. India 4: 141. 1883; Haines, Bot. Bihar Orissa 576. 1922 (Repr. ed., 2: 604. 1961). - *Dantranga*.

Fl. & Fr.: March - July.

Distrib.: Hazaribagh, Purnia, West Champaran.

Ehretia laevis Roxb., Pl. Corom. 1: 42. t. 56. 1796; C.B. Clarke in Hook. f., Fl. Brit. India 4: 141. 1883; Haines, Bot. Bihar Orissa 576. 1922 (Repr. ed., 2: 605. 1961). *E. laevis* var. *floribunda* (Benth.) Brandis, Forest Fl. N. W. India 340. 1874; C.B. Clarke in Hook. f., Fl. Brit. India 4: 142. 1883. - *Datranga*.

Fl. & Fr.: March - June.

Distrib.: Bhagalpur, East Champaran, Gaya, Hazaribagh, Palamau, Purnia, Singhbhum, West Champaran.

Ehretia wallichiana Hook. f. & Thomson ex C.B. Clarke in Hook. f., Fl. Brit. India 4: 143. 1883.

Distrib.: Bihar (s.l. CAL).

HELIOTROPIUM L.

Heliotropium indicum L., Sp. Pl. 130. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 4: 152. 1883; Haines, Bot. Bihar Orissa 578. 1922 (Repr. ed., 2: 607. 1961). - *Hathisund*.

Fl. & Fr.: Throughout the year.

Distrib.: East Champaran, Palamau, Patna, Purnia, Santal Pargana, West Champaran.

Heliotropium marifolium Retz., Observ. Bot. 2: 8. 1781; C.B. Clarke in Hook. f., Fl. Brit. India 4: 152. 1883; Haines, Bot. Bihar Orissa 579. 1922 (Repr. ed., 2: 608. 1961). *H. scabrum* Retz., Observ. Bot. 2: 8. 1781; C.B. Clarke in Hook. f., Fl. Brit. India 4: 152. 1883.

Fl. & Fr.: August - January.

Distrib.: Hazaribagh.

Heliotropium ovalifolium Forssk., Fl. Aegypt.-Arab. 38. 1775; C.B. Clarke in Hook. f., Fl. Brit. India 4: 150. 1883; Haines, Bot. Bihar Orissa 579. 1922 (Repr. ed., 2: 607. 1961). *H. coromandelianum* Raddi ex DC., Prodr. 9: 533. 1845, *non* Retz., 1781.

Fl. & Fr.: February - August.

Distrib.: Darbhanga, Patna, West Champaran.

Heliotropium strigosum Willd., Sp. Pl. 1: 743. 1798; C.B. Clarke in Hook. f., Fl. Brit. India 4: 151. 1883; Haines, Bot. Bihar Orissa 579. 1922 (Repr. ed., 2: 608. 1961).

subsp. **brevifolium** (Wallich) Kazmi in J. Arnold. Arb. 51: 153. 1970. *H. brevifolium* Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 2. 1824. *H. strigosum* Willd. var. *brevifolia* (Wallich) C.B. Clarke in Hook. f., Fl. Brit. India 4: 151. 1883.

Fl. & Fr.: December - March.

Distrib.: North Bihar.

subsp. **strigosum**

Fl. & Fr.: April - December.

Distrib.: Darbhanga, Munger, Purnia, Ranchi.

Heliotropium subulatum (Hochst. ex DC.) Vatke, Osterr. Bot. Z. 25: 166. 1875. *Tournefortia subulata* Hochst. ex DC., Prodr. 9: 528. 1845. *Heliotropium zeylanicum auct. non Lam.*, 1789: C.B. Clarke in Hook. f., Fl. Brit. India 4: 148. 1883.

Fl. & Fr.: August - December.

Distrib.: Purnia.

Heliotropium supinum L., Sp. Pl. 130. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 4: 149. 1883; Haines, Bot. Bihar Orissa 578. 1922 (Repr. ed., 2: 607. 1961). *H. malabaricum* Retz., Observ. Bot. 4: 24. 1786. *H. supinum* L. var. *malabarica* (Retz.) C.B. Clarke in Hook. f., Fl. Brit. India 4: 149. 1883; Haines, Bot. Bihar Orissa 1922 (Repr. ed., 2: 607. 1961).

Fl. & Fr.: March - December.

Distrib.: Patna.

ROTULA Lour.

Rotula aquatica Lour., Fl. Cochinch. 1: 121. 1790. *Rhabdia lycioides auct. non Mart.*, 1827: C.B. Clarke in Hook. f., Fl. Brit. India 4: 145. 1883; Haines, Bot. Bihar Orissa 577. 1922 (Repr. ed., 2: 606. 1961).

Fl. & Fr.: October - February.

Distrib.: Singhbhum.

TRICHODESMA R. Br., *nom. cons.*

Trichodesma indicum (L.) R. Br. ex Lehm., Pl. Asperif. Nucif. 193. 1818; "*indica*"; C.B. Clarke in Hook. f., Fl. Brit. India 4: 153. 1883; Haines, Bot. Bihar Orissa 580. 1922 (Repr. ed., 2: 608. 1961). *Borago indica* L., Sp. Pl. 137. 1753.

var. **amplexicaule** (Roth) Cooke, Fl. Bombay 2: 215. 1905. *T. amplexicaule* Roth, Nov. Pl. Sp. 104. 1821, *non DC.*, 1846; C.B. Clarke in Hook. f., Fl. Brit. India 4: 153. 1883, *p.p.*

Fl. & Fr.: July - November.

Distrib.: Chota Nagpur.

var. **indicum**

Fl. & Fr.: September - January.

Distrib.: East Champaran, Darbhanga, Palamau, Santal Pargana, West Champaran.

var. **subsessilis** C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 153. 1883.
Trichodesma subsessilis Wallich, Numer. List n. 933. 1829, *nom. nud.*

Fl. & Fr.: July - November.

Distrib.: Chota Nagpur.

Trichodesma zeylanicum (Burm. *f.*) R. Br., Prodr. 496. 1810, "zeylanica"; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 154. 1883; Haines, Bot. Bihar Orissa 580. 1922 (Repr. ed., 2: 609. 1961). *Borago zeylanica* Burm. *f.*, Fl. Ind. 41. 1768.

Fl. & Fr.: Throughout the year.

Distrib.: Ranchi, Singhbhum.

CONVOLVULACEAE

ANISEIA Choisy

Aniseia martinicensis (Jacq.) Choisy in Mem. Soc. Phys. Geneve 8: 66. 1838. *Convolvulus martinicensis* Jacq., Select. Stirp. Amer. 26. 1763. *Ipomoea uniflora* (Burm. *f.*) Roem. & Schult., Syst. Veg. 4: 247. 1819; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 210. 1883; Haines, Bot. Bihar Orissa 594. 1922 (Repr. ed., 2: 623. 1961).

Distrib.: Chota Nagpur (Haines, *l.c.*).

ARGYREIA Lour.

Argyreia bella (C.B. Clarke) Raizada in Indian For. 84: 472. 1958 & 93: 754. 1967. *Lettsomia bella* C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 192. 1883; Haines, Bot. Bihar Orissa 588. 1922 (Repr. ed., 2: 617. 1961).

Fl. & Fr.: November - March.

Distrib.: Champaran, Palamau, Ranchi, Singhbhum.

Argyreia capitata (Vahl) Choisy in Convolv. Orient. 41. 1834. *Convolvulus capitatus* Vahl, Symb. Bot. 3: 28. 1794. *Lettsomia strigosa* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 80. 1824; C.B. Clarke in Hook. f., Fl. Brit. India 4: 193. 1883; Haines, Bot. Bihar Orissa 589. 1922 (Repr. ed., 2: 618. 1961).

Fl. & Fr.: August - December.

Distrib.: Purnia.

Argyreia cymosa Sweet, Hort. Brit. ed. 2. 373. 1830; C.B. Clarke in Hook. f., Fl. Brit. India 4: 190. 1883; Haines, Bot. Bihar Orissa 587. 1922 (Repr. ed., 2: 615. 1961).

Fl. & Fr.: November - February.

Distrib.: North Bihar.

Argyreia daltoni C.B. Clarke in Hook. f., Fl. Brit. India 4: 190. 1883; Haines, Bot. Bihar Orissa 587. 1922 (Repr. ed., 2: 616. 1961).

Fl. & Fr.: September - February.

Distrib.: Champaran, Singhbhum.

Argyreia imbricata (Roth) Sant. & Patel in Trans. Bose Res. Inst. 22: 40. 1958. *Ipomoea imbricata* Roth, Nov. Pl. Sp. 112. 1821. *Lettsomia aggregata* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 76. 1824; C.B. Clarke in Hook. f., Fl. Brit. India 4: 191. 1883; Haines, Bot. Bihar Orissa 588. 1922 (Repr. ed., 2: 617. 1961).

Fl. & Fr.: September - March.

Distrib.: Palamau.

Argyreia involucrata C.B. Clarke in Hook. f., Fl. Brit. India 4: 187. 1883.

Fl. & Fr.: September - December.

Distrib.: West Champaran.

Argyreia nasirii Austin in Fl. W. Pakist. 126. 4. 1979. *Lettsomia thomsonii* C.B. Clarke in Hook. f., Fl. Brit. India 4: 193. 1883; Haines, Bot. Bihar Orissa 589. 1922 (Repr. ed., 2: 617. 1961).

Fl. & Fr.: October - January.

Distrib.: West Champaran.

Argyreia nervosa (Burm. f.) Bojer, Hortus Maurit. 224. 1837. *Convolvulus nervosus* Burm. f., Fl. Ind. 48. t. 201. 1768. *Lettsomia nervosa* (Burm. f.) Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 78. 1824. *Argyreia speciosa* Sweet, Hort. Brit. ed. 2. 373. 1830; C.B. Clarke in Hook. f., Fl. Brit. India 4: 185. 1883; Haines, Bot. Bihar Orissa 586. 1922 (Repr. ed., 2: 615. 1961).

Fl. & Fr.: August - April.

Distrib.: Bhagalpur, Palamau.

Argyreia roxburghii Choisy in Mem. Soc. Phys. Hist. Nat. Geneve 6: 419. 1834; C.B. Clarke in Hook. f., Fl. Brit. India 4: 185. 1883; Haines, Bot. Bihar Orissa 587. 1922 (Repr. ed., 2: 616. 1961).

Fl. & Fr.: August - December.

Distrib.: Purnia.

Argyreia strigosa (Roth) Roberty in Candollea 14: 44. 1952. *Ipomoea strigosa* Roth, Nov. Pl. Sp. 113. 1821. *Lettsomia setosa* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 80. 1824; C.B. Clarke in Hook. f., Fl. Brit. India 4: 194. 1883; Haines, Bot. Bihar Orissa 589. 1922 (Repr. ed., 2: 618. 1961).

Fl. & Fr.: October - January.

Distrib.: Palamau, Ranchi, Santal Pargana, Singhbhum, West Champaran.

CALYSTEGIA R. Br., *nom. cons.*

Calystegia hederacea Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 94. 1824; C.B. Clarke in Hook. f., Fl. Brit. India 4: 217. 1883; Haines, Bot. Bihar Orissa 604. 1922 (Repr. ed., 2: 634. 1961).

Fl. & Fr.: December - February.

Distrib.: Purnia.

CONVOLVULUS L.

Convolvulus arvensis L., Sp. Pl. 153. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 219. 1883; Haines, Bot. Bihar Orissa 604. 1922 (Repr. ed., 2: 633. 1961).

Fl. & Fr.: August - February.

Distrib.: East Champaran, Muzaffarpur, Palamau, Patna, West Champaran.

Convolvulus prostratus Forssk., Fl. Aegypt.-Arab. 203. 1775. *C. microphyllus* Sieber ex Spreng., Syst. Veg. 1: 611. 1825. *C. pluricaulis* Choisy, Convolv. Orient. 95. 1834; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 218. 1883; Haines, Bot. Bihar Orissa 604. 1922 (Repr. ed., 2: 633. 1961). *C. pluricaulis* var. *macra* C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 218. 1883.

Fl. & Fr.: May - December.

Distrib.: Bhagalpur, Palamau, Patna.

CRESSA L.

Cressa cretica L., Sp. Pl. 223. 1753; C. B. Clarke in Hook. *f.*, Fl. Brit. India 4: 225. 1883; Haines, Bot. Bihar Orissa 584. 1922 (Repr. ed., 2: 613. 1961).

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

DICHONDRA J.R. Forster & G. Forster

Dichondra repens J.R. Forster & G. Forster, Char. Gen. 39: t. 20. 1776; Haines, Bot. Bihar Orissa 584. 1922 (Repr. ed., 2: 613. 1961).

Fl. & Fr.: August - November.

Distrib.: Cultivated in gardens. Ranchi.

ERYCIBE Roxb.

Erycibe paniculata Roxb., Pl. Corom. 2: 31. t. 159. 1798; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 180. 1883; Haines, Bot. Bihar Orissa 605. 1922 (Repr. ed., 2: 634. 1961).

Fl. & Fr.: May - December.

Distrib.: Champaran, Gaya, Hazaribagh, Palamau, Santal Pargana, Singhbhum.

EVOLVULUS L.

Evolvulus alsinoides (L.) L., Sp. Pl. ed. 2. 392. 1762; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 220. 1883; Haines, Bot. Bihar Orissa 585. 1922 (Repr. ed., 2: 614. 1961). *Convolvulus alsinoides* L., Sp. Pl. 157. 1753.

Fl. & Fr.: July - January.

Distrib.: Throughout the state.

Evolvulus nummularius (L.) L., Sp. Pl. ed. 2. 391. 1762. *Convolvulus nummularius* L., Sp. Pl. 157. 1753. *Volvulopsis nummularia* (L.) Roberty in Candollea 14: 28. 1952.

Fl. & Fr.: July - February.

Distrib.: Throughout the state.

HEWITTIA Wight & Arnott

Hewittia scandens (Milne) Mabberley in Bot. Hist. Hort. Malab. 84. 1980. *Convolvulus scandens* Milne, Descr. Cat. 2. 1773. *Hewittia bicolor* Wight & Arnott in Madr. J. Sci. 1(5): 22. 1837; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 216. 1883; Haines, Bot. Bihar Orissa 603. 1922 (Repr. ed., 2: 632. 1961).

Fl. & Fr.: January - February.

Distrib.: Singhbhum.

IPOMOEA L.

Ipomoea aquatica Forssk., Fl. Aegypt.-Arab. 44. 1775; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 210. 1883. *I. reptans* Poir. in Lam., Encycl. Suppl. 3: 460. 1814; Haines, Bot. Bihar Orissa 597. 1922 (Repr. ed., 2: 626. 1961).

Fl. & Fr.: November - April.

Distrib.: East Champaran, Palamau, Patna, Singhbhum. West Champaran.

Ipomoea barlerioides (Choisy) Benth. ex C.B. Clarke in Hook. f., Fl. Brit. India 4: 201. 1883; Haines, Bot. Bihar Orissa 594. 1922 (Repr. ed., 2: 623. 1961). *Aniseia barlerioides* Choisy in Mem. Soc. Phys. Hist. Nat. Geneve 6: 484. 1834.

Fl. & Fr.: May - November.

Distrib.: Hazaribagh, Lohardaga, Palamau, Ranchi.

Ipomoea batatas (L.) Lam., Tabl. Encycl. 1: 465. 1793; C.B. Clarke in Hook. f., Fl. Brit. India 4: 202. 1883; Haines, Bot. Bihar Orissa 602. 1922 (Repr. ed., 2: 632. 1961). *Convolvulus batatas* L., Sp. Pl. 154. 1753. - *Sakarkand*.

Fl. & Fr.: October - December.

Distrib.: Cultivated throughout the state.

Ipomoea cairica (L.) Sweet, Hort. Brit. 287. 1826. *Convolvulus cairicus* L., Syst. Nat. ed. 10. 922. 1759. *Ipomoea palmata* Forssk., Fl. Aegypt. Arab. 43. 1775; C.B. Clarke in Hook. f., Fl. Brit. India 4: 214. 1883; Haines, Bot. Bihar Orissa 601. 1922 (Repr. ed., 2: 630. 1961). *Railway creeper*.

Fl. & Fr.: June - December.

Distrib.: Palamau, Ranchi.

Ipomoea carnea Jacq., Enum. Syst. Pl. 13. 1760; Haines, Bot. Bihar Orissa 600. 1922 (Repr. ed., 2: 630. 1961). *I. fistulosa* Mart. ex Choisy in DC., Prodr. 9: 349. 1845. *I. carnea* Jacq. subsp. *fistulosa* (Mart. ex Choisy) Austin in Taxon 26: 237. 1977.

Fl. & Fr.: Throughout the year.

Distrib.: Darbhanga, Hazaribagh, Palamau, Ranchi, West Champaran.

Ipomoea dichroa (Roem. & Schult.) Choisy in DC., Prodr. 9: 364. 1845. *Convolvulus dichrous* Roem. & Schult., Syst. Veg. 4: 263. 1819, *nom. illegit.* *Ipomoea pilosa* Sweet, Hort. Brit. ed. 1. 289. 1826 & ed. 2. 372. 1830, *non* Houtt., 1777, *nom. illegit.*; C.B. Clarke in Hook. f., Fl. Brit. India 4: 213. 1883; Haines, Bot. Bihar Orissa 595. 1922 (Repr. ed., 2: 624. 1961).

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

Ipomoea eriocarpa R. Br., Prodr. 484. 1810; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 204. 1883. *I. hispida* (Vahl) Roem. & Schult., Syst. Veg. 4: 238. 1819, *non* Zuccagni, 1806; Haines, Bot. Bihar Orissa 594. 1922 (Repr. ed., 2: 624. 1961).

Fl. & Fr. : September - November.

Distrib. : Hazaribagh, Lohardaga, Palamau, Singhbhum.

Ipomoea fastigiata Sweet, Hort. Brit. ed. 2. 372. 1830; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 209. 1883.

Fl. & Fr. : March - June.

Distrib. : Singhbhum.

Ipomoea hederifolia L., Syst. Nat. ed. 10. 925. 1759. *I. coccinea* auct. *non* L., 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 199. 1883. *Quamoclit coccinea* auct. *non* Moench, 1794; Haines, Bot. Bihar Orissa 4: 591. 1922 (Repr. ed., 2: 620. 1961).

Fl. & Fr. : September - March.

Distrib. : Chota Nagpur, Hazaribagh.

Ipomoea indica (Burm.) Merr., Interp. Rumph. Herb. Amb. 445. 1917. *Convolvulus indicus* Burm., Ind. Univ. Herb. Amb. 7: 6. 1755.

Fl. & Fr. : September - December.

Distrib. : Munger.

Ipomoea macrantha Roem. & Schult., Syst. Veg. 4: 251. 1819. *I. grandiflora* auct. *non* Lam., 1791; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 198. 1883. *Calonyction bona-nox* Boj. var *grandiflora* Haines, Bot. Bihar Orissa 590. 1922 (Repr. ed., 2: 619. 1961).

Fl. & Fr. : August - December

Distrib. : Purnia.

Ipomoea mauritiana Jacq., Collect. 4: 216. 1791. *I. digitata* auct. *non* L., 1759; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 202. 1883; Haines, Bot. Bihar Orissa 602. 1922 (Repr. ed., 2: 631. 1961).

Fl. & Fr. : August - October.

Distrib. : Purnia.

Ipomoea nil (L.) Roth, Catal. Bot. 1: 36. 1797. *Convolvulus nil* L., Sp. Pl. ed. 2. 219. 1762. *Ipomoea hederacea auct. non Jacq.*, 1787: C.B. Clarke in Hook. f., Fl. Brit. India 4: 199. 1883; Haines, Bot. Bihar Orissa 602. 1922 (Repr. ed., 2: 631. 1961).

Fl. & Fr. : August - December.

Distrib. : East Champaran, Hazaribagh, Palamau, West Champaran.

Ipomoea obscura (L.) Ker-Gawl., Bot. Reg. 3: t. 239. 1817; C.B. Clarke in Hook. f., Fl. Brit. India 4: 207. 1883; Haines, Bot. Bihar Orissa 597. 1922 (Repr. ed., 2: 626. 1961). *Convolvulus obscurus* L., Sp. Pl. ed. 2. 220. 1762.

Fl. & Fr. : September - December.

Distrib. : Palamau, Patna, Ranchi, Sahibganj.

Ipomoea pes-caprae (L.) R. Br. in Tukey, Narrat. Exped. Zaire 477. 1818; Haines, Bot. Bihar Orissa 597. 1922 (Repr. ed., 2: 627. 1961). *Convolvulus pes-caprae* L., Sp. Pl. 159. 1753. *Ipomoea biloba* Forssk., Fl. Aegypt.-Arab. 44. 1775; C.B. Clarke in Hook. f., Fl. Brit. India 4: 212. 1883, p.p.

Fl. & Fr. : November - February.

Distrib. : Bihar (s.l., CAL).

Ipomoea pes-tigridis L., Sp. Pl. 162. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 4: 204. 1883; Haines, Bot. Bihar Orissa 595. 1922 (Repr. ed., 2: 624. 1961). *I. hepaticifolia* L., Sp. Pl. 161. 1753. *I. pes-tigridis* var. *hepaticifolia* (L.) C.B. Clarke in Hook. f., Fl. Brit. India 4: 204. 1883.

var. **capitellata** C.B. Clarke in Hook. f., Fl. Brit. India 4: 204. 1883; Haines, Bot. Bihar Orissa 595. 1922 (Repr. ed., 2: 624. 1961).

Fl. & Fr. : September - November

Distrib. : Hazaribagh.

var. **pes-tigridis**

Fl. & Fr. : August - December.

Distrib. : Champaran, Singhbhum.

Ipomoea quamoclit L., Sp. Pl. 159. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 199. 1883. *Quamoclit vulgaris* Choisy, Convolv. Orient. 52. 1834; Haines, Bot. Bihar Orissa 591. 1922 (Repr. ed., 2: 620. 1961).

Fl. & Fr. : August - November.

Distrib. : Palamau, West Champaran.

Ipomoea quinata R. Br., Prodr. 486. 1810; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 214. 1883; Haines, Bot. Bihar Orissa 601. 1922 (Repr. ed., 2: 631. 1961).

Fl. & Fr. : August - October.

Distrib. : Hazaribagh, Ranchi, Singhbhum.

Ipomoea sepiaria Koenig ex Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 90. 1824; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 209. 1883; Haines, Bot. Bihar Orissa 598. 1922 (Repr. ed., 2: 627. 1961).

Fl. & Fr. : November - April.

Distrib. : Hazaribagh, Singhbhum.

Ipomoea sinensis (Desr.) Choisy in Mem. Soc. Phys. Hist. Nat. Geneve 6: 459. 1834. *Convolvulus sinensis* Desr. in Lam., Encycl. 3: 557. 1792. *C. calycinus* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 51. 1824. *Ipomoea calycina* (Roxb.) Benth. ex C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 201. 1883; Haines, Bot. Bihar Orissa 594. 1922 (Repr. ed., 2: 623. 1961).

Fl. & Fr. : August - October.

Distrib. : Lohardaga, Ranchi.

Ipomoea turbinata Lag., Gen. Sp. Pl. 10. 1816. *Convolvulus muricatus* L., Mant. Pl. 44. 1767. *Ipomoea muricata* (L.) Jacq., Pl. Hort. Schoenbr. 3: 40. t. 323. 1798 (1803), non Cav., 1799; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 197. 1883. *Calonyction muricatum* (L.) G. Don, Gen. Hist. 4: 264. 1837-1838; Haines, Bot. Bihar Orissa 591. 1922 (Repr. ed., 2: 620. 1961).

Fl. & Fr. : September - December.

Distrib. : Hazaribagh, Palamau, West Champaran.

JACQUEMONTIA Choisy

Jacquemontia coerulea Choisy in Mem. Soc. Phys. Hist. Nat. Geneve 6: 476. 1834; Haines, Bot. Bihar Orissa 603. 1922 (Repr. ed., 2: 633. 1961).

Distrib. : Cultivated in gardens.

Jacquemontia paniculata (Burm. f.) Hall. f. in Engler, Bot. Jahrb. Syst. 16: 541. 1839. *Ipomoea paniculata* Burm. f., Fl. Ind. 50. t. 21. f. 3. 1768, non Desr., 1792. *Convolvulus paniculatus* Haines, Bot. Bihar Orissa 604. 1922 (Repr. ed., 2: 633. 1961).

Fl. & Fr. : August - January.

Distrib. : Munger.

MERREMIA Dennst. ex Endl., *nom. cons.*

Merremia dissecta (Jacq.) Hall. f. in Engler, Bot. Jahrb. 16: 552. 1893. *Convolvulus dissectus* Jacq., Obs. 2: 4. 1767. *Ipomoea sinuata* Ortega, Hort. Matr. Dec. 7: 84. 1798; C.B. Clarke in Hook. f., Fl. Brit. India 4: 214. 1883; Haines, Bot. Bihar Orissa 601. 1922 (Repr. ed., 2: 631. 1961).

Fl. & Fr. : August - November.

Distrib. : Bihar (Haines, l.c.).

Merremia gangetica (L.) Cufod. in Bull. Jard. Bot. Etat. Suppl. 31: 743. 1961. *Convolvulus gangeticus* L. Cent. Pl. 2: 9. 1756. *Ipomoea reniformis* Choisy in Mem. Soc. Phys. Geneve 6: 446. 1834; C.B. Clarke in Hook. f., Fl. Brit. India 4: 206. 1883; Haines, Bot. Bihar Orissa 596. 1922 (Repr. ed., 2: 625. 1961).

Fl. & Fr. : September - April.

Distrib. : Patna, Singhbhum.

Merremia hederacea (Burm. f.) Hall. f. in Engler, Bot. Jahrb. Syst. 18: 118. 1894. *Evolvulus hederaceus* Burm. f., Fl. Ind. 77. t. 30. f. 2. 1768. *Ipomoea chryseides* Ker-Gawl., Bot. Reg. t. 270. 1818; C.B. Clarke in Hook. f., Fl. Brit. India 4: 206. 1883; Haines, Bot. Bihar Orissa 597. 1922 (Repr. ed., 2: 626. 1961).

Fl. & Fr.: September - December.

Distrib.: Palamau, Purnia, Ranchi, Singhbhum.

Merremia hirta (L.) Merr. in Philipp. J. Sci. Bot. 7: 244. 1912. *Convolvulus hirtus* L., Sp. Pl. 159. 1753. *Ipomoea linifolia* Blume, Bijdr. 721. 1825; C.B. Clarke in Hook. f., Fl. Brit. India 4: 205, 1883. *I. caespitosa* Haines, Bot. Bihar Orissa 596. 1922 (Repr. ed., 2: 625. 1961).

Fl. & Fr.: September - November.

Distrib.: Purnia.

Merremia tridentata (L.) Hall. f. in Engler, Bot. Jahrb. Syst. 16: 552. 1893. *Convolvulus tridentatus* L., Sp. Pl. 157. 1753. *Ipomoea tridentata* (L.) Roth in Roem., Arch. Bot. 1(2): 38. 1798; C.B. Clarke in Hook. f., Fl. Brit. India 4: 205. 1883; Haines, Bot. Bihar Orissa 595. 1922 (Repr. ed., 2: 625. 1961).

Fl. & Fr.: September - December.

Distrib.: Gaya, Giridih, Palamau, Singhbhum.

Merremia umbellata (L.) Hall. f. in Engler, Bot. Jahrb. Syst. 16: 552. 1893. *Convolvulus umbellatus* L., Sp. Pl. 155. 1753. *Ipomoea cymosa* (Desr.) Roem. & Schult., Syst. Veg. 4: 241. 1819; C.B. Clarke in Hook. f., Fl. Brit. India 4: 211. 1883; Haines, Bot. Bihar Orissa 598. 1922 (Repr. ed., 2: 627. 1961).

var. **cochleata** (Haines) K.K. Khanna, *comb. nov.* *Ipomoea cymosa* (Desr.) Roem. & Schult. var. *cochleata* Haines, Bot. Bihar Orissa 599. 1922 (Repr., ed. 2: 628. 1961).

Fl. & Fr.: February - May.

Distrib.: Palamau (Haines, *l.c.*).

var. **umbellata**

Fl. & Fr.: January - March.

Distrib.: Singhbhum.

Merremia vitifolia (Burm. f.) Hall. f. in Engler, Bot. Jahrb. Syst. 16: 552. 1893. *Convolvulus vitifolius* Burm. f., Fl. Ind. 45. t. 18. f. 1.

1768. *Ipomoea vitifolia* (Burm. f.) Blume, Bijdr. 709. 1826; C.B. Clarke in Hook. f., Fl. Brit. India 4: 213. 1883; Haines, Bot. Bihar Orissa 601. 1922 (Repr. ed., 2: 630. 1961).

Fl. & Fr.: October - March.

Distrib.: East Champaran, Hazaribagh, Palamau, Purnia, Santal Pargana, West Champaran.

MINA Llave & Lexarza

Mina lobata Llave & Lexarza, Nov. Veg. Desc. 1: 3. 1824; Haines, Bot. Bihar Orissa 590. 1922 (Repr. ed., 2: 619. 1961).

Distrib.: Cultivated in gardens.

OPERCULINA Manso

Operculina petaloidea (Choisy) Ooststroom in Blumea 3: 369. 1939. *Ipomoea petaloidea* Choisy in Mem. Soc. Phys. Hist. Nat. Geneve 6: 451. 1834; C.B. Clarke in Hook. f., Fl. Brit. India 4: 212. 1883; Haines, Bot. Bihar Orissa 599. 1922 (Repr. ed., 2: 628. 1961).

var. **pauciflora** (C.B. Clarke) Parmar in J. Econ. Tax. Bot. 18(2): 251. 1994. *Ipomoea petaloidea* Choisy var. *pauciflora* C.B. Clarke in Hook. f., Fl. Brit. India 4: 212. 1883; Haines, Bot. Bihar Orissa 599. 1922 (Repr. ed., 2: 629. 1961).

Fl.: May.

Distrib.: Bihar plateau (Haines, *l.c.*)

var. **petaloidea**

Fl. & Fr.: March - September.

Distrib.: Patna, Ranchi.

Operculina turpethum (L.) Manso, Enum. Subst. Braz. 16: 49. 1836. *Convolvulus turpethum* L., Sp. Pl. 155. 1753. *Ipomoea turpethum* (L.) R. Br., Prodr. 485. 1810; C.B. Clarke in Hook. f., Fl. Brit. India 4: 212. 1883; Haines, Bot. Bihar Orissa 600. 1922 (Repr. ed., 2: 629. 1961).

var. **humilior** (Haines) K.K. Khanna, *comb. nov.* *Ipomoea turpethum* (L.) R. Br. var. *humilior* Haines, Bot. Bihar Orissa 600. 1922 (Repr. ed., 2: 629. 1961).

Fl.: December.

Distrib.: Santal Pargana (Haines, *l.c.*)

var. **turpethum**

Fl. & Fr.: October - March.

Distrib.: Bhagalpur, Palamau, Purnia, Singhbhum, West Champaran.

PORANA Burm. f.

Porana paniculata Roxb., Pl. Corom. 3: 31. t. 235. 1815; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 222. 1883; Haines, Bot. Bihar Orissa 590. 1922 (Repr. ed., 2: 619. 1961).

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Muzaffarpur, Singhbhum, West Champaran.

Porana racemosa Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 41. 1824. *P. malabarica* C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 223. 1883.

Fl. & Fr.: September - January.

Distrib.: Singhbhum.

RIVEA Choisy

Rivea hypocrateriformis (Desr.) Choisy in Mem. Soc. Phys. Hist. Nat. Geneve 6: 408. 1834; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 184. 1883; Haines, Bot. Bihar Orissa 586. 1922 (Repr. ed., 2: 614. 1961). *Convolvulus hypocrateriformis* Desr. in Lam., Encycl. 3: 561. 1792.

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Koderma, Palamau, Ranchi, Singhbhum, West Champaran.

Rivea ornata Choisy in Mem. Soc. Phys. Hist. Nat. Geneve 6: 409. 1834; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 183. 1883. *R. ornata* var.

griffithii C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 183. 1883; Haines, Bot. Bihar Orissa 585. 1922 (Repr. ed., 2: 614. 1961).

Fl. & Fr.: August - January.

Distrib.: West Champaran.

CUSCUTACEAE

CUSCUTA L.

Cuscuta australis R. Br., Prodr. 491. 1810; Yunck. in Mem. Torrey Bot. Club 18: 124. 1932.

Fl. & Fr.: December - March.

Distrib.: Chota Nagpur.

Cuscuta campestris Yunck. in Mem. Torrey Bot. Club 18: 138. 1932.

Fl. & Fr.: October - March.

Distrib.: West Champaran.

Cuscuta chinensis Lam., Encycl. 2: 229. 1786; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 226. 1883; Haines, Bot. Bihar Orissa 606. 1922 (Repr. ed., 2: 635. 1961).

Fl. & Fr.: July - December.

Distrib.: Koderma, Lohardaga, Singhbhum.

Cuscuta monogyna Vahl, Symb. Bot. 2: 32. 1791.

Fl. & Fr.: September - February.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 293. 1998).

Cuscuta reflexa Roxb., Pl. Corom. 2: 3. t. 104. 1799; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 225. 1883; Haines, Bot. Bihar Orissa 605. 1922 (Repr. ed., 2: 635. 1961).

Fl. & Fr.: October - January.

Distrib.: Throughout the state.

SOLANACEAE**CAPSICUM L.**

Capsicum annum L., Sp. Pl. 188. 1753; Haines, Bot. Bihar Orissa 609. 1922 (Repr. ed., 2: 639. 1961). - *Mirch*.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated throughout the state.

Capsicum frutescens L., Sp. Pl. 189. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 239. 1883; Haines, Bot. Bihar Orissa 609. 1922 (Repr. ed., 2: 639. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated in gardens.

Capsicum minimum Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 201. 1824; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 239. 1883, *p.p.*

Fl. & Fr.: October - December.

Distrib.: Cultivated.

CESTRUM L.

Cestrum diurnum L., Sp. Pl. 191. 1753, *p.p.*; Francey in Candollea 6: 234. 1935.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated. West Champaran.

Cestrum hirsutum Jacq., Pl. Hort. Schoenb. 3: 41. t. 324. 1798; Haines, Bot. Bihar Orissa 615. 1922 (Repr. ed., 2: 645. 1961).

Distrib.: Cultivated in gardens.

Cestrum nocturnum L., Sp. Pl. 191. 1753. *Rat-ki-rani*.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated throughout the state.

Cestrum parqui L' Hérít., Stirp. Nov. 73, 1788. - *Rat-ki-rani*.

Fl. & Fr.: August - November.

Distrib.: Cultivated.

DATURA L.

Datura innoxia Mill., Gard. Dict. ed. 8. n. 5. 1768. *D. metel auct. non* L., 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 243. 1883.

Fl. & Fr.: July - January.

Distrib.: Chota Nagpur.

Datura metel L., Sp. Pl. 179. 1753. *D. fastuosa* L., Syst. Nat. ed. 10: 932. 1759; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 242. 1883; Haines, Bot. Bihar Orissa 615. 1922 (Repr. ed., 2: 645. 1961). - *Dhutura*.

Fl. & Fr.: August - November.

Distrib.: Bhojpur, East Champaran, Palamau, Purnia, Santal Pargana, West Champaran.

Datura stramonium L., Sp. Pl. 179. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 242. 1883; Haines, Bot. Bihar Orissa 614. 1922 (Repr. ed., 2: 644. 1961). *D. stramonium* var. *tatula* C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 242. 1883; Haines, Bot. Bihar Orissa 614. 1922 (Repr. ed., 2: 644. 1961). - *Dhutura*.

Fl. & Fr.: August - December.

Distrib.: Ranchi, Santal Pargana, West Champaran.

Datura suaveolens Humb. & Bonpl. ex Willd., Enum. Hort. Berol. 227. 1809; Haines, Bot. Bihar Orissa 615. 1922 (Repr. ed., 2: 645. 1961).

Fl. & Fr.: November - January.

Distrib.: Chota Nagpur.

LYCIANTHES (Dunal) Hassl., *nbm. cons.*

Lycianthes laevis (Dunal) Bitter subsp. **subtruncata** (Wallich ex Dunal) Deb in Bot. J. Linn. Soc. 76: 293. 1978. *Solanum subtruncata*

Wallich ex Dunal in DC., Prodr. 13: 180. 1852; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 231. 1883.

Fl. & Fr.: November - January.

Distrib.: Sahibganj.

LYCOPERSICON Mill.

Lycopersicon esculentum Mill., Gard. Dict. ed. 8. n. 2. 1768, *nom. sp. cons.*; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 237. 1883; Haines, Bot. Bihar Orissa 614. 1922 (Repr. ed., 2: 644. 1961). *Tamatar*.

Fl. & Fr.: September - April.

Distrib.: Cultivated throughout the state.

NICANDRA Adans., *nom. cons.*

Nicandra physalodes (L.) Scop., Intr. Hist. Nat. 182. 1777. *Atropa physalodes* L., Sp. Pl. 181. 1753. *Nicandra physaloides* (L.) Gaertn., Fruct. Sem. Pl. 2: 237. t. 131. f. 2. 1791; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 240. 1883; Haines, Bot. Bihar Orissa 607. 1922 (Repr. ed., 2: 637. 1961).

Fl. & Fr.: October - January.

Distrib.: Chota Nagpur.

NICOTIANA L.

Nicotiana glauca Link & Otto, Icon. Pl. Par. Hort. Reg. Bot. Berol. 1: 63. t. 32. 1828; Haines, Bot. Bihar Orissa 617. 1922 (Repr. ed., 2: 647. 1961).

Distrib.: Cultivated in gardens.

Nicotiana glauca Viv., Elench. Pl. 26. t. 5. 1802; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 246. 1883; Haines, Bot. Bihar Orissa 616. 1922 (Repr. ed., 2: 647. 1961).

Fl. & Fr.: September - May.

Distrib.: Palamau, Patna, Purnia, West Champaran.

Nicotiana rustica L., Sp. Pl. 180. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 245. 1883; Haines, Bot. Bihar Orissa 616. 1922 (Repr. ed., 2: 646. 1961). *Kolkatiya tamaku*.

Fl. & Fr.: November - March.

Distrib.: Purnia, West Champaran.

Nicotiana tabacum L., Sp. Pl. 180. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 245. 1883; Haines, Bot. Bihar Orissa 616. 1922 (Repr. ed., 2: 646. 1961). -*Tamaku*.

Fl. & Fr.: December - April.

Distrib.: Cultivated throughout the state.

PETUNIA Juss.

Petunia hybrida x Hort. ex Vilm., Fl. Pleine Terre ed. 1. 615. 1863.

Fl. & Fr.: January - March.

Distrib.: Cultivated in gardens. Palamau.

PHYSALIS L.

Physalis minima L., Sp. Pl. 183. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 238. 1883; Haines, Bot. Bihar Orissa 607. 1922 (Repr. ed., 2: 637. 1961). *P. indica* Lam., Encycl. 2: 102. 1786. *P. minima* L. var. *indica* (Lam.) C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 238. 1883; Haines, Bot. Bihar Orissa 608. 1922 (Repr. ed., 2: 637. 1961).

Fl. & Fr.: August - December.

Distrib.: Palamau, West Champaran.

Physalis peruviana L., Sp. Pl. ed. 2. 1670. 1763; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 238. 1883; Haines, Bot. Bihar Orissa 608. 1922 (Repr. ed., 2: 637. 1961).

Fl. & Fr.: December - March.

Distrib.: Palamau, Patna, West Champaran.

Physalis virgiana Milli var. *sonorae* (Torr.) Waterfall in Rhodora 60: 154. 1958. *P. pumila* Nutt. var. *sonorae* Torr., Bot. Mexican Boundary 153. 1859. *P. longifolia* Nutt. in Trans. Am. Phil. Soc. II. 5: 193. 1836.

Distrib.: South Bihar (CAL).

SOLANUM L.

Solanum barbisetum Nees in Trans. Linn. Soc. London 17: 51. 1837; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 233. 1883.

Fl. & Fr.: November - January.

Distrib.: Santal Pargana.

Solanum erianthum D. Don, Prodr. Fl. Nepal. 96. 1825. *S. verbascifolium auct. non L.*, 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 230. 1883; Haines, Bot. Bihar Orissa 611. 1922 (Repr. ed., 2: 641. 1961).

Fl. & Fr.: August - April.

Distrib.: Purnia, Ranchi, West Champaran.

Solanum ferox L., Sp. Pl. ed. 2. 267. 1762; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 233. 1883; Haines, Bot. Bihar Orissa 611. 1922 (Repr. ed., 2: 641. 1961).

Fl. & Fr.: November - January.

Distrib.: Purnia (Haines, *l.c.*)

Solanum hispidum Pers., Syn. Pl. 1: 228. 1805.

Fl. & Fr.: January - April.

Distrib.: Purnia.

Solanum macranthum Dun. in DC., Prodr. 13(1): 315. 1852.

Fl.: November.

Distrib.: Cultivated.

Solanum malacoxylon Sendt. in Mart., Fl. Bras. 10: 52. 1846.

Fl. & Fr.: May - June.

Distrib.: Cultivated. Santal Pargana.

Solanum melongena L., Sp. Pl. 186. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 235. 1883; Deb in J. Econ. Tax. Bot. 1: 48. 1980; Haines, Bot. Bihar Orissa 612. 1922 (Repr. ed., 2: 642. 1961). - *Baigan, Bhanta.*

var. **incanum** (L.) Kuntze, Revis. Gen. Pl. 454. 1891. *S. incanum* L., Sp. Pl. 188. 1753. *S. coagulans* Forssk., Fl. Aegypt.-Arab. 47. 1775; C.B. Clarke in Hook. f., Fl. Brit. India 4: 236. 1883.

Fl. & Fr.: January - May.

Distrib.: West Champaran.

var. **melongena**

Fl. & Fr.: Almost throughout the year.

Distrib.: Cultivated throughout the state.

Solanum nigrum L., Sp. Pl. 186. 1753; C.B. Clarke in Hook., Fl. Brit. India 4: 229. 1883; Haines, Bot. Bihar Orissa 610. 1922 (Repr. ed., 2: 640. 1961). - *Makoi*.

Fl. & Fr.: Almost throughout the year.

Distrib.: Bhagalpur, Hazaribagh, Palamau, Patna, Sahibganj, Singhbhum.

Solanum pubescens Willd., Phytographia 5. t. 3. 1794; C.B. Clarke in Hook. f., Fl. Brit. India 4: 230. 1883.

Fl. & Fr.: December - September.

Distrib.: Purnia.

Solanum seforthianum Andr., Bot. Repos. 8. t. 504. 1808; Haines, Bot. Bihar Orissa 611. 1922 (Repr. ed., 2: 640. 1961).

Fl. & Fr.: January - October.

Distrib.: Chota Nagpur.

Solanum torvum Sw., Prodr. 47. 1788; C.B. Clarke in Hook. f., Fl. Brit. India 4: 234. 1883; Haines, Bot. Bihar Orissa 612. 1922 (Repr. ed., 2: 642. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: Palamau, Purnia, West Champaran.

Solanum tuberosum L., Sp. Pl. 185. 1753; Haines, Bot. Bihar Orissa 610. 1922 (Repr. ed., 2: 640. 1961). - *Alu*.

Fl. & Fr.: December - March.

Distrib.: Cultivated throughout the state.

Solanum viarum Dunal in DC., Prodr. 13: 240. 1852. *S. khasianum* C.B. Clarke var. *chatterjeeanum* Gupta in Bull. Bot. Surv. India 3: 412. 1961.

Fl. & Fr.: October - May.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 281. 1998).

Solanum violaceum Ortega, Nov. Pl. Descr. Dec. 56. 1798; Nicolson *et al.* in Regnum Vegetabile 119: 252. 1988. *S. anguivi auct. non* Lam., 1794; Hara *et al.*, Enum. Pl. Nepal 3: 111. 1982. *S. indicum auct. non* L., 1753 (*nom. rej. vide* App. IV, ICBN, 1994): C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 234. 1883; Haines, Bot. Bihar Orissa 612. 1922 (Repr. ed., 2: 642. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: Throughout the state.

Solanum virginianum L., Sp. Pl. 187. 1753; Hepper & Jaeger in Kew Bull. 41(2): 434. 1986. *S. surattense* Burm. *f.*, Fl. Ind. 57. 1768; Deb in J. Econ. Tax. Bot. 1: 51. 1980. *S. xanthocarpum* Schrad. & Wendl. in Schrad., Sert. Hannov. 1: 8. t. 2. 1795; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 236. 1883; Haines, Bot. Bihar Orissa 613. 1922 (Repr. ed., 2: 643. 1961).

Fl. & Fr.: August - June.

Distrib.: Giridih, Hazaribagh, Palamau, Singhbhum, West Champaran.

Solanum wendlandii Hook. *f.* in Curtis, Bot. Mag. t. 6914. 1887; Haines, Bot. Bihar Orissa 611. 1922 (Repr. ed., 2: 641. 1961).

Distrib.: Bihar (*s.l.*, CAL)

WITHANIA Pauquy, *nom. cons.*

Withania somnifera (L.) Dunal in DC., Prodr. 13(1): 453. 1852; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 239. 1883; Haines, Bot. Bihar Orissa 608. 1922 (Repr. ed., 2: 638. 1961). *Physalis somnifera* L., Sp. Pl. 182. 1753. - *Asgand*.

Fl. & Fr.: October - May.

Distrib.: Gaya, Patna, Purnia.

SCROPHULARIACEAE

ADENOSMA R. Br.

Adenosma indianum (Lour.) Merr. in Trans. Amer. Phil. Soc. n.s. 24(2): 351. 1935. *Manulea indiana* Lour., Fl. Cochinch. 2: 386. 1790. *Adenosma capitatum* Benth. ex Hance in J. Linn. Soc. London (Bot.) 13: 114. 1873; Hook. f., Fl. Brit. India 4: 264. 1884; Haines, Bot. Bihar Orissa 625. 1922 (Repr. ed., 2: 655. 1961).

Fl. & Fr.: August - February.

Distrib.: Purnia, Ranchi, West Champaran.

ALECTRA Thunb.

Alectra sessiliflora (Vahl) Kuntze, Revis. Gen. Pl. 2: 458. 1891. *Gerardia sessiliflora* Vahl, Symb. Bot. 3: 79. 1794. *Alectra indica* Benth. in DC., Prodr. 10: 339. 1846; Hook. f., Fl. Brit. India 4: 297. 1884; Haines, Bot. Bihar Orissa 639. 1922 (Repr. ed., 2: 670. 1961).

Fl. & Fr.: October - November.

Distrib.: Giridih, Hazaribagh, Singhbhum.

Alectra thompsoni Hook. f., Fl. Brit. India 4: 297. 1884; Haines, Bot. Bihar Orissa 639. 1922 (Repr. ed., 2: 670. 1961). *Melasma thompsoni* (Hook. f.) Wettst. in Engler & Prantl, Nat. Pflanzenfam. IV. 3b: 91. 1891.

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Sahibganj, Singhbhum.

ANTIRRHINUM L.

Antirrhinum majus L., Sp. Pl. 617. 1753; Hook. f., Fl. Brit. India 4: 253. 1883; Haines, Bot. Bihar Orissa 620. 1922 (Repr. ed., 2: 650. 1961).

Fl. & Fr.: December - February.

Distrib.: Cultivated in gardens.

Antirrhinum orontium L., Sp. Pl. 617. 1753; Hook. *f.*, Fl. Brit. India 4: 253. 1883.

Fl. & Fr.: December - March.

Distrib.: Muzaffarpur, West Champaran.

BACOPA Aubl., *nom. cons.*

Bacopa hamiltoniana (Benth.) Wettst. in Engler & Prantl, Nat. Pflanzenfam. IV. 3b: 77. 1891. *Herpestis hamiltoniana* Benth., Scroph. Ind. 30. 1835; Hook. *f.*, Fl. Brit. India 4: 272. 1884; Haines, Bot. Bihar Orissa 622. 1922 (Repr. ed., 2: 652. 1961).

Fl. & Fr.: September - December.

Distrib.: Purnia, Ranchi, Singhbhum.

Bacopa monnieri (L.) Wettst. in Engler & Prantl, Nat. Pflanzenfam. IV. 3b: 77. 1891. *Lysimachia monnieri* L., Cent. Pl. 2: 9. 1756. *Herpestis monnieri* (L.) Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. 2: 366. 1818, *nom. illeg.*; Benth., Scroph. Ind. 30. 1835; Hook. *f.*, Fl. Brit. India 4: 272. 1884; Haines, Bot. Bihar Orissa 622. 1922 (Repr. ed., 2: 652. 1961), '*monniera*'.

Fl. & Fr.: July - March.

Distrib.: Patna, Singhbhum, West Champaran.

Bacopa procumbens (Mill.) Greenm., Field Columb. Mus. Bot. ser. 2, 261. 1907. *Erinus procumbens* Mill., Gard. Dict. ed. 8. n. 6. 1768. *Lindernia dianthera* Sw., Prodr. 92. 1788. *Mecardonia dianthera* (Sw.) Pennell in Proc. Acad. Nat. Sci. Philadelphia 98: 87. 1946.

Fl. & Fr.: August - September.

Distrib.: Palamau, Ranchi, Singhbhum, West Champaran.

BUCHNERA L.

Buchnera hispida Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 91. 1825; Hook. *f.*, Fl. Brit. India 4: 298. 1884; Haines, Bot. Bihar Orissa 640. 1922 (Repr. ed., 2: 671. 1961).

Fl. & Fr.: August - December.

Distrib.: Giridih, Hazaribagh, Palamau, Singhbhum.

CENTRANTHERA R. Br.

Centranthera nepalensis D. Don, Prodr. Fl. Nepal. 88. 1825. *C. hispida auct. non* R. Br., 1810: Hook. f., Fl. Brit. India 4: 301. 1884; Haines, Bot. Bihar Orissa 637. 1922 (Repr. ed., 2: 668. 1961).

Fl. & Fr.: July - October.

Distrib.: Hazaribagh, Palamau, Purnia, Ranchi, Singhbhum, West Champaran.

Centranthera tranquebarica (Spreng.) Merr. in 150th Anniv. Vol. Royal Bot. Gard. Calcutta 55. 1942. *Razumovia tranquebarica* Spreng., Mant. Prim. Fl. Hal. 45. 1807. *Centranthera humifusa* Wallich ex Benth., Scroph. Ind. 50. 1835; Hook. f., Fl. Brit. India 4: 301. 1884; Haines, Bot. Bihar Orissa 638. 1922 (Repr. ed., 2: 668. 1961).

Fl. & Fr.: August - October.

Distrib.: Giridih, Hazaribagh, Ranchi, Singhbhum.

DOPATRIUM Buch.-Ham. ex Benth.

Dopatrium junceum (Roxb.) Buch.-Ham. ex Benth., Scroph. Ind. 31. 1835; Hook. f., Fl. Brit. India 4: 274. 1884; Haines, Bot. Bihar Orissa 623. 1922 (Repr. ed., 2: 653. 1961). *Gratiola juncea* Roxb., Pl. Corom. 2: 16. t. 129. 1800.

Fl. & Fr.: August - November.

Distrib.: Ranchi, Singhbhum.

GLOSSOSTIGMA Wight & Arnott ex Arnott, nom. cons.

Glossostigma diandra (L.) Kuntze, Revis. Gen. Pl. 2: 461. 1891. *Limosella diandra* L., Mant. Pl. 252. 1771. *Microcarpaea spathulata* Hook., Bot. Misc. 2: 101. Suppl. t. 4. 1830. *Glossostigma spathulatum* (Hook.) Wight & Arnott ex Arnott, Nova Acta Acad. Leop. Nat. Cur. 18: 355. 1836; Hook. f., Fl. Brit. India 4: 288. 1884; Haines, Bot. Bihar Orissa 636. 1922 (Repr. ed., 2: 667. 1961).

Fl. & Fr.: August - March.

Distrib.: Palamau, Patna.

KICKXIA Dumort.

Kickxia incana (Wallich) Pennell in Acad. Nat. Sci. Philadelphia Monogr. 5 (Scroph. W. Himal.): 59. 1943. *Linaria incana* Wallich, Pl. Asiat. Rar. 2: 43. 1831; Hook. *f.*, Fl. Brit. India 4: 252. 1883. *L. cabulica* Benth. in DC., Prodr. 10: 270. 1846; Hook. *f.*, Fl. Brit. India 4: 251. 1883; Haines, Bot. Bihar Orissa 620. 1922 (Repr. ed., 2: 650. 1961).

Fl. & Fr.: September - December.

Distrib.: Chota Nagpur.

Kickxia ramosissima (Wallich) Janchen in Oesterr., Bot. Zeitschr. 82: 152. 1933. *Linaria ramosissima* Wallich, Pl. Asiat. Rar. 2: 43. t. 153. 1831; Hook. *f.*, Fl. Brit. India 4: 251. 1883; Haines, Bot. Bihar Orissa 620. 1922 (Repr. ed., 2: 650. 1961)

Fl. & Fr.: October - June.

Distrib.: Patna.

LIMNOPHILA R. Br., *nom. cons.*

Limnophila aquatica (Roxb.) Alston in Ann. Roy. Bot. Gard. Perad. 11: 205. 1929. *Cyrilla aquatica* Roxb., Pl. Corom. 2: 47. t. 189. 1798. *Limnophila racemosa* Benth., Scroph. Ind. 26. 1835; Hook. *f.*, Fl. Brit. India 4: 271. 1884; Haines, Bot. Bihar Orissa 628. 1922 (Repr. ed., 2: 658. 1961).

Fl. & Fr.: October - January.

Distrib.: Purnia, West Champaran.

Limnophila aromatica (Lam.) Merr., Interpr. Herb. Amboin. 466. 1917; Philcox in Kew Bull. 24: 145. 1970. *Ambulia aromatica* Lam., Encycl. 1: 128. 1783. *Limnophila gratissima* Blume, Bijdr. 749. 1826; Hook. *f.*, Fl. Brit. India 4: 268. 1884; Haines, Bot. Bihar Orissa 627. 1922 (Repr. ed., 2: 657. 1961).

Fl. & Fr.: October - February.

Distrib.: Hazaribagh.

Limnophila chinensis (Osb.) Merr. in Amer. J. Bot. 3: 581. 1916. *Columnea chinensis* Osb., Dagb. Ostind. Resa 230. 1757. *Stemodia hirsuta* Heyne ex Benth. in Lindl., Bot. Reg. 17, sub t. 1470. sp. 15. 1832. *Limnophila hirsuta* (Heyne ex Benth.) Benth. in DC., Prodr. 10: 388. 1846; Hook. f., Fl. Brit. India 4: 268. 1884; Haines, Bot. Bihar Orissa 627. 1922 (Repr. ed., 2: 658. 1961).

var. **chinensis**

Fl. & Fr.: September - December.

Distrib.: Purnia, Ranchi.

var. **clarkei** (Haines) Murti in Bangladesh J. Bot. 10(1): 34. 1981. *Limnophila hirsuta* var. *clarkei* Haines, Bot. Bihar Orissa 628. 1922 (Repr. ed., 2: 658. 1961).

Fl. & Fr.: September - November.

Distrib.: Ranchi.

Limnophila connata (Buch.-Ham. ex D. Don) Hand.-Mazz., Symb. Sin. 7: 837. 1936. *Cybbanthera connata* Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 87. 1825. *Stemodia hypericifolia* Benth. in Lindl., Bot. Reg. 17, sub. t. 1470, 6. 1832 & Scroph. Ind. 23. 1835. *Limnophila hypericifolia* (Benth.) Benth. in DC., Prodr. 10: 386. 1846; Hook. f., Fl. Brit. India 4: 269. 1884; Haines, Bot. Bihar Orissa 627. 1922 (Repr. ed., 2: 657. 1961).

Fl. & Fr.: September - November.

Distrib.: Palamau.

Limnophila heterophylla (Roxb.) Benth., Scroph. Ind. 25. 1835; Hook. f., Fl. Brit. India 4: 270. 1884; Haines, Bot. Bihar Orissa 629. 1922 (Repr. ed., 2: 659. 1961). *Columnea heterophylla* Roxb., Fl. Ind. 3: 97. 1832.

Fl. & Fr.: October - December.

Distrib.: Purnia, Santal Pargana.

Limnophila indica (L.) Druce in Rep. Bot. Exch. Club Brit. Isles 1913(3): 420. 1914. *Hottonia indica* L., Syst. Nat. ed. 10. 919. 1759. *Limnophila gratioloides* R. Br., Prodr. 442. 1810; Hook. f., Fl. Brit. India

4: 271. 1884, *incl. vars. elongata and intermedia*; Haines, Bot. Bihar Orissa 628. 1922 (Repr. ed., 2: 658. 1961).

Fl. & Fr.: September - February.

Distrib.: Gaya, Hazaribagh, Purnia, Singhbhum, West Champaran.

Limnophila pulcherrima (Griff.) Hook. *f.*, Fl. Brit. India 4: 267. 1884, *excl. descr. Herpestis pulcherrima* Griff., Notul. 4: 104. 1854. *Limnophila diffusa* Benth. in DC., Prodr. 10: 387. 1846; Hook. *f.*, Fl. Brit. India 4: 266. 1884; Haines, Bot. Bihar Orissa 627. 1922 (Repr. ed., 2: 657. 1961).

Fl. & Fr.: November - February.

Distrib.: Purnia, Singhbhum.

Limnophila repens (Benth.) Benth. in DC., Prodr. 10: 387. 1846. *Stemodia repens* Benth. in Lindl., Bot. Reg. 17. sub t. 1470. sp. 11. 1832. *Limnophila conferta* Benth. in DC., Prodr. 10: 387. 1846; Hook. *f.*, Fl. Brit. India 4: 266. 1884; Haines, Bot. Bihar Orissa 626. 1922 (Repr. ed., 2: 657. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Lohardaga, Purnia, Singhbhum.

Limnophila rugosa (Roth) Merr., Interpr. Herb. Amboin. 466. 1917. *Herpestis rugosa* Roth, Nov. Pl. Sp. 290. 1821. *Limnophila roxburghii auct. non G. Don*, 1837-1838; Hook. *f.*, Fl. Brit. India 4: 265. 1884; Haines, Bot. Bihar Orissa 626. 1922 (Repr. ed., 2: 656. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Munger, Ranchi, West Champaran.

Limnophila sessiliflora (Vahl) Blume, Bijdr. 750. 1826; Hook. *f.*, Fl. Brit. India 4: 270. 1884; Haines, Bot. Bihar Orissa 628. 1922 (Repr. ed., 2: 659. 1961). *Hottonia sessiliflora* Vahl, Symb. Bot. 2: 36. 1791.

Fl. & Fr.: September - November.

Distrib.: Purnia, West Champaran.

LINARIA Mill.

Linaria bipartita Willd., Enum. Hort. Berol. 640. 1809.

Distrib.: Cultivated.

LINDENBERGIA Lehm.

Lindenbergia indica (L.) Vatke in Osterr. Bot. Z. 25: 10. 1875. *Dodartia indica* L., Sp. Pl. 633. 1753. *Lindenbergia polyantha* Royle ex Benth., Scroph. Ind. 22. 1835; Hook. f., Fl. Brit. India 4: 262. 1884; Haines, Bot. Bihar Orissa 624. 1922 (Repr. ed., 2: 654. 1961).

Fl. & Fr.: October - March.

Distrib.: Hazaribagh, Palamau, Purnia.

Lindenbergia macrostachya (Benth.) Benth., Scroph. Ind. 22. 1835; Hook. f., Fl. Brit. India 4: 262. 1884. *Stemodia macrostachya* Benth. in Bot. Reg. 17. no. 1470. 1832.

Fl. & Fr.: March - May.

Distrib.: West Champaran.

Lindenbergia muraria (Roxb. ex D. Don) Bruehl in J. Dept. Sci. Cal. Univ. (Bot.) 2: 27. 1920. *Stemodia muraria* Roxb. ex D. Don, Prodr. Fl. Nepal. 89. 1825. *Lindenbergia urticaefolia* Lehm. in Link & Otto, Icon. Pl. Rar. 95. t. 48. 1828; Hook. f., Fl. Brit. India 4: 262. 1884; Haines, Bot. Bihar Orissa 624. 1922 (Repr. ed., 2: 654. 1961).

Fl. & Fr.: October - May.

Distrib.: Hazaribagh, Ranchi, West Champaran.

LINDERNIA All.

Lindernia anagallis (Burm. f.) Pennell in J. Arnold Arb. 24: 252. 1943. *Ruellia anagallis* Burm. f., Fl. Ind. 135. 1768. *Gratiola cordifolia* Colsm., Prodr. Descr. Gratiol. 15. 1793. *Lindernia cordifolia* (Colsm.) Merr., Enum. Philipp. Fl. Pl. 3: 437. 1923. *Vandellia pedunculata* Benth., Scroph. Ind. 37. 1835; Hook. f., Fl. Brit. India 4: 282. 1884. *V. angustifolia* Benth., Scroph. Ind. 37. 1835; Hook. f., Fl. Brit. India 4:

282. 1884. *V. cordifolia* (Colsm.) G. Don, Gen. Hist. 4: 549. 1837-1838; Haines, Bot. Bihar Orissa 633. 1922 (Repr. ed., 2: 663. 1961).

Fl. & Fr.: March - December.

Distrib.: Purnia, West Champaran.

Lindernia angustifolia Wettst. in Engler & Prantl, Nat. Pflanzenfam. 4. 3b: 37. 1891.

Fl. & Fr.: April - November.

Distrib.: Chota Nagpur

Lindernia antipoda (L.) Alston in Trimen, Handb. Fl. Ceylon Suppl. 6. 214. 1931. *Ruellia antipoda* L., Sp. Pl. 635. 1753. *Gratiola veronicifolia* Retz., Observ. Bot. 4: 8. 1786. *Bonnaya veronicifolia* (Retz.) Spreng., Syst. Veg. 1: 41. 1824; Hook. f., Fl. Brit. India 4: 285. 1884. *Vandellia veronicifolia* (Retz.) Haines, Bot. Bihar Orissa 633. 1922 (Repr. ed., 2: 664. 1961), '*veronicaefolia*'. *Gratiola verbenifolia* Colsm., Prodr. Descr. Gratiol. 9. 1793. *Bonnaya verbenifolia* (Colsm.) Spreng., Syst. Veg. 1: 42. 1824. *Vandellia verbenifolia* (Colsm.) Haines, Bot. Bihar Orissa 634. 1922 (Repr. ed., 2: 664. 1961), '*verbenaefolia*'. *Bonnaya veronicifolia* (Retz.) Spreng. var. *verbenifolia* (Colsm.) Hook. f., Fl. Brit. India 4: 285. 1884.

Fl. & Fr.: August - February.

Distrib.: Purnia, Ranchi, Santal Pargana, West Champaran.

Lindernia caespitosa (Blume) Panigrahi in Taxon 33: 320. 1984. *Diceros caespitosus* Blume, Bijdr. 753. 1826. *Vandellia scabra* Benth., Scroph. Ind. 36. 1835; Hook. f., Fl. Brit. India 4: 281. 1884; Haines, Bot. Bihar Orissa 632. 1922 (Repr. ed., 2: 662. 1961). *Lindernia pusilla* (Thunb.) Merr., Philipp. J. Sci. Bot. 11: 312. 1916.

Fl. & Fr.: August - April.

Distrib.: Champaran, Palamau, Purnia, Ranchi.

Lindernia ciliata (Colsm.) Pennell in Brittonia 2: 182. 1936. *Gratiola ciliata* Colsm., Prodr. Descr. Gratiol. 14. 1793. *G. serrata* Roxb., Fl. Ind. (Carey & Willich ed.) 1: 139. 1820. *Bonnaya brachiata* Link & Otto, Icon. Pl. Select. 2: 25. t. 11. 1820; Hook. f., Fl. Brit. India 4: 284. 1884.

Vandellia brachiata (Link & Otto) Haines, Bot. Bihar Orissa 632. 1922 (Repr. ed., 2: 663. 1961).

Fl. & Fr.: August - February.

Distrib.: Begusarai, Gaya, Giridih, Hazaribagh, Palamau, Purnia, Ranchi, Singhbhum, West Champaran.

Lindernia crustacea (L.) F.v. Muell., Syst. Census Austral. Pl. 97. 1882. *Capraria crustacea* L., Mant. Pl. 87. 1767. *Vandellia crustacea* (L.) Benth., Scroph. Ind. 35. 1835; Hook. f., Fl. Brit. India 4: 279. 1884; Haines, Bot. Bihar Orissa 631. 1922 (Repr. ed., 2: 661. 1961).

var. ***crustacea***

Fl. & Fr.: July - December.

Distrib.: Bhagalpur, Darbhanga, Muzaffarpur, Palamau, Purnia, Ranchi, West Champaran.

var. ***verticillata*** (Haines) K.K. Khanna, *comb. nov.* *Vandellia crustacea* (L.) Benth. var. *verticillata* Haines, Bot. Bihar Orissa 631. 1922 (Repr. ed., 2: 662. 1961).

Fl. & Fr.: July - December.

Distrib.: Purnia (Haines, *l.c.*)

Lindernia hookeri (C.B. Clarke ex Hook. f.) Wettst. in Engler & Prantl, Nat. Pflanzenfam. 4. 3b: 80. 1891. *Vandellia hookeri* C.B. Clarke ex Hook. f., Fl. Brit. India 4: 280. 1884. *V. stemonoides* Miq., Fl. Ind. Bat. Suppl. 563. 1861; Haines, Bot. Bihar Orissa 631. 1922 (Repr. ed., 2: 661. 1961).

Fl. & Fr.: September - December.

Distrib.: Hazaribagh, Palamau.

Lindernia hyssopioides (L.) Haines, Bot. Bihar Orissa 635. 1922 (Repr. ed., 2: 666. 1961). *Gratiola hyssopioides* L., Mant. Pl. 174. 1771. *Ilysanthes hyssopioides* (L.) Benth. in DC., Prodr. 10: 419. 1846; Hook. f., Fl. Brit. India 4: 283. 1884.

Fl. & Fr.: November - April.

Distrib.: Chota Nagpur.

Lindernia multiflora (Roxb.) Mukerjee in J. Indian Bot. Soc. 24: 131. 1945. *Torenia multiflora* Roxb., Fl. Ind. 3: 96. 1832. *Vandellia multiflora* (Roxb.) G. Don, Gen. Hist. 4: 549. 1837-1838; Hook. f., Fl. Brit. India 4: 280. 1884; Haines, Bot. Bihar Orissa 632. 1922 (Repr. ed., 2: 662. 1961).

Fl. & Fr.: July - October.

Distrib.: Munger, Sahibganj, West Champaran.

Lindernia nummulariifolia (D. Don) Wettst. in Engler & Prantl, Nat. Pflanzenfam. 4. 3b: 79. 1891, "*nummularifolia*". *Vandellia nummulariifolia* D. Don, Prodr. Fl. Nepal. 86. 1825, "*nummularifolia*"; Hook. f., Fl. Brit. India 4: 282. 1884.

Fl. & Fr.: August - November

Distrib.: Giridih, Hazaribagh, Palamau.

Lindernia oppositifolia (Retz.) Mukerjee in J. Indian Bot. Soc. 24: 134. 1945. *Gratiola oppositifolia* Retz., Observ. Bot. 4: 8. 1786. *Bonnaya oppositifolia* Spreng., Syst. Veg. 1: 41. 1825; Hook. f., Fl. Brit. India 4: 286. 1884. *Vandellia oppositifolia* (Retz.) Haines, Bot. Bihar Orissa 634. 1922 (Repr. ed., 2: 664. 1961).

Fl. & Fr.: June - September.

Distrib.: West Champaran.

Lindernia parviflora (Roxb.) Haines, Bot. Bihar Orissa 635. 1922 (Repr. ed., 2: 665. 1961). *Gratiola parviflora* Roxb., Pl. Corom. 3: 3. t. 203. 1811. *Ilysanthes parviflora* (Roxb.) Benth. in DC., Prodr. 10: 419. 1846; Hook. f., Fl. Brit. India 4: 283. 1884.

Fl. & Fr.: August - October.

Distrib.: Palamau, Singhbhum, West Champaran.

Lindernia procumbens (Krock.) Borbas, Bekesm. Fl. 80. 1881. *Anagaloides procumbens* Krock., Fl. Siles. 2(1): 398. t. 26. 1790. *Lindernia pyxidaria* L., Mant. Pl. 252. 1771, *p.p.* (*quoad spec. excl. syn.*); Haines, Bot. Bihar Orissa 634. 1922 (Repr. ed., 2: 665. 1961).

Fl. & Fr.: October - April.

Distrib.: Purnia, Ranchi.

Lindernia sessiliflora (Benth.) Wettst. in Engler & Prantl, Nat. Pflanzenfam. 4. 3b: 79. 1891. *Vandellia sessiliflora* Benth., Scroph. Ind. 37. 1835; Hook. f., Fl. Brit. India 4: 282. 1884; Haines, Bot. Bihar Orissa 632. 1922 (Repr. ed., 2: 663. 1961).

Fl. & Fr.: July - November.

Distrib.: Hazaribagh, Ranchi.

Lindernia tenuifolia (Colsm.) Alston in Trimen, Handb. Fl. Ceylon suppl. 6: 214. 1931. *Gratiola tenuifolia* Colsm., Prodr. Descr. Gratiol. 8. 1793. *Bonnaya tenuifolia* (Colsm.) Spreng., Syst. Veg. 1: 42. 1824; Hook. f., Fl. Brit. India 4: 286. 1884. *Vandellia tenuifolia* (Colsm.) Haines, Bot. Bihar Orissa 634. 1922 (Repr. ed., 2: 665. 1961).

Fl. & Fr.: July - October.

Distrib.: Koderma.

Lindernia viscosa (Hornem.) Boldingh, Zakfl. Java 165. 1916. *Gratiola viscosa* Hornem., Enum. Pl. Hort. Hafn. (rev. ed.) 19. 1807. *Vandellia hirsuta* Benth., Scroph. Ind. 36. 1835; Hook. f., Fl. Brit. India 4: 280. 1884; Haines, Bot. Bihar Orissa 632. 1922 (Repr. ed., 2: 662. 1961). *Lindernia hirsuta* (Benth.) Wettst. in Engler & Prantl, Nat. Pflanzenfam. 4. 3b: 79. 1891.

Fl. & Fr.: September - November.

Distrib.: Gaya.

MAZUS Lour.

Mazus pumilus (Burm. f.) Steenis in Nova Guinea (n.s.) 9: 31. 1958. *Lobelia pumila* Burm. f., Fl. Ind. 186. t. 60. f. 3. 1768. *Lindernia japonica* Thunb., Fl. Jap. 253. 1784. *Mazus japonicus* (Thunb.) Kuntze, Revis. Gen. Pl. 462. 1891. *M. rugosus* Lour., Fl. Cochinch. 2: 385. 1790; Hook. f., Fl. Brit. India 4: 259. 1884; Haines, Bot. Bihar Orissa 621. 1922 (Repr. ed., 2: 651. 1961).

Fl. & Fr.: July - December.

Distrib.: Giridih, Hazaribagh, Palamau, Purnia, Singhbhum, West Champaran.

MICROCARPAEA R. Br.

Microcarpaea minima (J. Koenig ex Retz.) Merr. in Philipp. J. Sci. 7: 100. 1912. *Paederota minima* J. Koenig ex Retz., Observ. Bot. 5: 10. 1788. *Microcarpaea muscosa* R. Br., Prodr. 436. 1810; Hook. f., Fl. Brit. India 4: 287. 1884; Haines, Bot. Bihar Orissa 635. 1922 (Repr. ed., 2: 666. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Purnia.

MIMULUS L.

Mimulus orbicularis Wallich ex Benth., Scroph. Ind. 29. 1835 & in DC., Prodr. 10: 373. 1846; Hook. f., Fl. Brit. India 4: 259. 1884; Haines, Bot. Bihar Orissa 623. 1922 (Repr. ed., 2: 653. 1961).

Distrib.: Cultivated.

Mimulus strictus Benth., Scroph. Ind. 28. 1835. *M. gracilis auct. non* R. Br., 1810; Hook. f., Fl. Brit. India 4: 259. 1884; Haines, Bot. Bihar Orissa 623. 1922 (Repr. ed., 2: 653. 1961).

Fl. & Fr.: April - January.

Distrib.: Palamau, Purnia, Ranchi, Singhbhum.

RUSSELLIA Jacq.

Russelia coccinea Wettst. in Engler & Prantl, Nat. Pflanzenfam. 4. 3b: 63. 1891. *R. sarmentosa* Jacq., Enum. Syst. Pl. 25. 1760.

Fl. & Fr.: Most part of the year.

Distrib.: Cultivated in gardens.

Russelia equisetiformis Schlechtend. & Cham. in Linnaea 6: 377. 1831. *R. juncea* Zucc. in Flora 15(2): Beibl. 99. 1832; Haines, Bot. Bihar Orissa 620. 1922 (Repr. ed., 2: 651. 1961). *R. floribunda* Woodrow in J. Bombay Nat. Hist. Soc. 12: 174. 1898, *non* Humb., Bonpl. & Kunth, 1818.

Fl. & Fr.: Most part of the year.

Distrib.: Cultivated in gardens.

Russelia rotundifolia Cav., Icon. 5: 9. t. 415. 1799; Haines, Bot. Bihar Orissa 621. 1922 (Repr. ed., 2: 651. 1961).

Fl. & Fr.: Most part of the year.

Distrib.: Cultivated in gardens.

SCOPARIA L.

Scoparia dulcis L., Sp. Pl. 116. 1753; Hook. *f.*, Fl. Brit. India 4: 289. 1884; Haines, Bot. Bihar Orissa 637. 1922 (Repr. ed., 2: 668. 1961).

Fl. & Fr.: July - December.

Distrib.: Throughout the state.

SOPUBIA Buch.-Ham. ex D. Don

Sopubia delphinifolia (L.) G. Don, Gen. Hist. 4: 560. 1837-1838, "*delphinifolia*"; Hook. *f.*, Fl. Brit. India 4: 302. 1884; Haines, Bot. Bihar Orissa 638. 1922 (Repr. ed., 2: 669. 1961). *Gerardia delphiniifolia* L., Cent. Pl. 2: 21. 1756.

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum.

Sopubia stricta G. Don, Gen. Hist. 4: 559. 1837-1838; Hook. *f.*, Fl. Brit. India 4: 302. 1884; Haines, Bot. Bihar Orissa 638. 1922 (Repr. ed., 2: 669. 1961).

Fl. & Fr.: October - December.

Distrib.: Palamau.

Sopubia trifida Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 88. 1825; Hook. *f.*, Fl. Brit. India 4: 302. 1884; Haines, Bot. Bihar Orissa 639. 1922 (Repr. ed., 2: 669. 1961).

Fl. & Fr.: October - November

Distrib.: Chota Nagpur.

STEMODIA L., *nom. cons.*

Stemodia viscosa Roxb., Pl. Corom. 2: 33. t. 163. 1802 & Fl. Ind. 3: 94. 1832; Hook. *f.*, Fl. Brit. India 4: 265. 1884; Haines, Bot. Bihar Orissa 625. 1922 (Repr. ed., 2: 655. 1961).

Fl. & Fr.: November - April.

Distrib.: Hazaribagh.

STRIGA Lour.

Striga angustifolia (D. Don) Saldanha in Bull. Bot. Surv. India 5: 70. 1963. *Buchnera angustifolia* D. Don, Prodr. Fl. Nepal. 91. 1825. *B. euphrasioides* Benth., Scroph. Ind. 41. 1835, *non* Vahl, 1794. *Striga euphrasioides* Benth. in Hook., Comp. Bot. Mag. 1. 364. 1836, *excl. basionym* *Buchnera euphrasioides* Vahl; Hook. *f.*, Fl. Brit. India 4: 299. 1884; Haines, Bot. Bihar Orissa 640. 1922 (Repr. ed., 2: 671. 1961).

Fl. & Fr.: July - November.

Distrib.: Giridih, Hazaribagh, Lohardaga, Palamau, Purnia, West Champaran.

Striga asiatica (L.) Kuntze, Revis. Gen. Pl. 2: 466. 1891. *Buchnera asiatica* L., Sp. Pl. 630. 1753. *Striga lutea* Lour., Fl. Cochinch. 1: 22. 1790; Hook. *f.*, Fl. Brit. India 4: 299. 1884; Haines, Bot. Bihar Orissa 641. 1922 (Repr. ed., 2: 671. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Palamau, Patna, Purnia, Ranchi, West Champaran.

Striga densiflora (Benth.) Benth. in Hook., Comp. Bot. Mag. 1: 363. 1836; Hook. *f.*, Fl. Brit. India 4: 299. 1884; Haines, Bot. Bihar Orissa 641. 1922 (Repr. ed., 2: 672. 1961). *Buchnera densiflora* Benth., Scroph. Ind. 41. 1835.

Fl. & Fr.: August - October.

Distrib.: Purnia.

Striga gesnerioides (Willd.) Vatke, Oesterr. Bot. 25: 11. 1875. *Buchnera gesnerioides* Willd., Sp. Pl. 3: 338. 1800. *B. orobanchoides*

R. Br. ex Endl. in Flora 15: 388. t. 2. 1832. *Striga orobanchoides* (R. Br. ex Endl.) Benth. in Hook., Comp. Bot. Mag. 1: 361. t. 19. 1836; Hook. f., Fl. Brit. India 4: 299. 1884.

Fl. & Fr.: September - November.

Distrib.: Chota Nagpur.

SUTERA Roth

Sutera dissecta (Delile) Walp., Repert. Bot. Syst. 3: 271. 1844. *Capraria dissecta* Delile, Descr. Egypte, Hist. Nat. (Fl. Egypte) 239. t. 32. f. 2. 1812. *Sutera glandulosa* Roth, Nov. Pl. Sp. 291. 1821; Hook. f., Fl. Brit. India 4: 258. 1884; Haines, Bot. Bihar Orissa 621. 1922 (Repr. ed., 2: 651. 1961).

Fl. & Fr.: December - March.

Distrib.: Patna.

TORENIA L.

Torenia bicolor Dalz. in Hook., J. Bot. Kew Gard. Misc. 3: 38. 1851; Hook. f., Fl. Brit. India 4: 278. 1884.

Fl. & Fr.: October - November.

Distrib.: Bhagalpur.

Torenia fournieri Linden ex Fourn. in Illustr. Hortic. 23: 129. t. 249. 1876; Haines, Bot. Bihar Orissa 630. 1922 (Repr. ed., 2: 660. 1961).

Fl.: August

Distrib.: Cultivated in gardens.

Torenia indica Saldanha in Bull. Bot. Surv. India 8(2): 126. 1966. *T. cordifolia* auct. non Roxb., 1802; Hook. f., Fl. Brit. India 4: 276. 1884, p.p.; Haines, Bot. Bihar Orissa 629. 1922 (Repr. ed., 2: 660. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Palamau.

Torenia violacea (Azaolo ex Blanco) Pennell in J. Arnold Arb. 24: 255. 1943. *Mimulus violaceus* Azaolo ex Blanco, Fl. Filip. ed. 2. 357. 1845. *Torenia peduncularis* Benth. ex Hook. f., Fl. Brit. India 4: 276. 1884; Haines, Bot. Bihar Orissa 629. 1922 (Repr. ed., 2: 659. 1961).

Fl. & Fr.: August - November.

Distrib.: Singhbhum.

VERBASCUM L.

Verbascum chinense (L.) Santapau, Fl. Purandhar 90. 1958 & in Rec. Bot. Surv. India 16: 177. 1967. *Scrophularia chinensis* L., Mant. Pl. 250. 1771. *Celsia coromandeliana* Vahl, Symb. Bot. 3: 79. 1794; Hook. f., Fl. Brit. India 4: 251. 1883; Haines, Bot. Bihar Orissa 619. 1922 (Repr. ed., 2: 649. 1961).

Fl. & Fr.: September - May.

Distrib.: Chota Nagpur, Darbhanga, West Champaran.

VERONICA L.

Veronica agrestis L., Sp. Pl. 13. 1753; Hook. f., Fl. Brit. India 4: 294. 1884.

Fl. & Fr.: November - February.

Distrib.: Champaran.

Veronica anagallis-aquatica L., Sp. Pl. 12. 1753; Hook. f., Fl. Brit. India 4: 293. 1884.

Fl. & Fr.: October - April.

Distrib.: Bhagalpur, Giridih, Hazaribagh, Palamau, Patna, Purnia, Ranchi, Singhbhum, West Champaran.

OROBANCHACEAE

AEGINETIA L.

Aeginetia acaulis (Roxb.) Walp., Repert. 3: 481. 1844-1845. *Orobanche acaulis* Roxb., Pl. Corom. t. 292. 1819 & Fl. Ind. 3: 28. 1832.

Aeginetia pedunculata auct. non Wallich, 1832: Hook. f., Fl. Brit. India 4: 320. 1884; Haines, Bot. Bihar Orissa 642. 1922 (Repr. ed., 2: 673. 1961).

Fl. & Fr.: August - October.

Distrib.: Purnia.

Aeginetia indica L., Sp. Pl. 632. 1753; Hook. f., Fl. Brit. India 4: 320. 1884; Haines, Bot. Bihar Orissa 642. 1922 (Repr. ed., 2: 673. 1961).

Fl. & Fr.: July - November.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

Aeginetia pedunculata (Roxb.) Wallich, Pl. Asiat. Rar. 3: 13. t. 219. 1832; Haines, Bot. Bihar Orissa 642. 1922 (Repr. ed., 2: 673. 1961).
Orobanche pedunculata Roxb., Fl. Ind. 3: 29. 1832.

Fl.: July - October.

Distrib.: Katihar (Varma and Kumar in J. Bombay Nat. Hist. Soc. 96(2): 354-355. 1999).

OROBANCHE L.

Orobanche aegyptiaca Pers., Syn. Pl. 2: 181. 1806; Haines, Bot. Bihar Orissa 643. 1922 (Repr. ed., 2: 673. 1961). *O. indica* Buch.-Ham. ex Roxb., Fl. Ind. 3: 27. 1832, non Spreng., 1825; Hook. f., Fl. Brit. India 4: 326. 1884. *O. ramosa* auct. non L., 1753: Hook. f., Fl. Brit. India 4: 326. 1884.

Fl. & Fr.: November - February.

Distrib.: Hazaribagh, Palamau, West Champaran.

Orobanche cernua Loefl., Iter Hispan. 152. 1758; Haines, Bot. Bihar Orissa 643. 1922 (Repr. ed., 2: 674. 1961). *O. nicotianae* Wight, Ill. Ind. Bot. 2: 179. t. 158. 1850; Hook. f., Fl. Brit. India 4: 326. 1884.

Fl. & Fr.: September - October.

Distrib.: Munger, Patna.

LENTIBULARIACEAE

UTRICULARIA L.

Utricularia aurea Lour., Fl. Cochinch. 1: 26. 1790. *U. flexuosa* Vahl, Enum. Pl. 1: 198. 1804; C.B. Clarke in Hook. f., Fl. Brit. India 4: 329. 1884, *p.p.*, *excl. syn. U. australis* R. Br.; Haines, Bot. Bihar Orissa 644. 1922 (Repr. ed., 2: 676. 1961). *U. fasciculata* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 143. 1820.

Fl. & Fr.: October - February.

Distrib.: Purnia, Singhbhum, West Champaran.

Utricularia australis R. Br., Prodr. 430. 1810. *U. flexuosa auct. non Vahl*, 1804; C.B. Clarke in Hook. f., Fl. Brit. India 4: 329. 1884, *p.p. et quoad syn. U. australis* R. Br.

Fl. & Fr.: February - April.

Distrib.: Purnia.

Utricularia bifida L., Sp. Pl. 18. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 4: 332. 1884; Haines, Bot. Bihar Orissa 646. 1922 (Repr. ed., 2: 677. 1961). *U. ramosa* Vahl, Enum. Pl. 1: 204. 1804; C.B. Clarke in Hook. f., Fl. Brit. India 4: 335. 1884.

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Palamau, Singhbhum.

Utricularia caerulea L. *emend.* Burm. f., Fl. Ind. 11. 1768; Haines, Bot. Bihar Orissa 645. 1922 (Repr. ed., 2: 676. 1961). *U. racemosa* Wallich *ex Walp.* in Meyen, Observ. Bot. 19: 401. 1843; C.B. Clarke in Hook. f., Fl. Brit. India 4: 333. 1884. *incl. var. filicaulis* C.B. Clarke.

var. caerulea

Fl. & Fr.: September - December.

Distrib.: Hazaribagh, Palamau, Singhbhum.

var. graminifolia (Vahl) Bhattacharyya in Bull. Bot. Soc. Bengal 30: 73-87. 1976. *U. graminifolia* Vahl, Enum. Pl. 1: 195. 1804.

Fl. & Fr.: September - December.

Distrib.: Chota Nagpur.

Utricularia exoleta R. Br., Prodr. 430. 1810; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 329. 1884; Haines, Bot. Bihar Orissa 645. 1922 (Repr. ed., 2: 676. 1961). *U. gibba* subsp. *exoleta* (R. Br.) Taylor in Mitt. Bot. Staat. Munch. 4: 101. 1961 & in Kew Bull. 18: 204. 1964.

Fl. & Fr.: September - December.

Distrib.: East & West Champaran.

Utricularia foveolata Edgew. in Proc. Linn. Soc. 1: 351. 1847. *U. scandens* auct. non Benj., 1847; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 332. 1884; Haines, Bot. Bihar Orissa 646. 1922 (Repr. ed., 2: 677. 1961).

Fl. & Fr.: August - December.

Distrib.: Singhbhum.

Utricularia hirta Klein ex Link in Jahrb. 1. 3: 55. 1820; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 332. 1884; Haines, Bot. Bihar Orissa 645. 1922 (Repr. ed., 2: 676. 1961).

Fl. & Fr.: October - December.

Distrib.: Giridih, Hazaribagh.

Utricularia polygaloides Edgew. in Proc. Linn. Soc. 1: 351. 1847; Basak in Taxon 25: 189. 1976. *U. reticulata* Sm. var. *uliginosa* C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 331. 1884, *excl. syn. U. uliginosa* Vahl, 1804; Haines, Bot. Bihar Orissa 645. 1922 (Repr. ed., 2: 677. 1961).

Fl. & Fr.: August - September.

Distrib.: Singhbhum.

Utricularia scandens Benj. in Linnaea 20: 309. 1847. *U. wallichiana* auct. non Benj., 1845; Wight, Icon. Pl. Ind. Orient. 4: t. 1572. 1850; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 332. 1884; Haines, Bot. Bihar Orissa 646. 1922 (Repr. ed., 2: 677. 1961).

Fl. & Fr.: September - November.

Distrib.: Palamau.

Utricularia stellaris L. *f.*, Suppl. Pl. 86. 1782, *non* Benth., 1869; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 328. 1884; Haines, Bot. Bihar Orissa 644. 1922 (Repr. ed., 2: 675. 1961).

Fl. & Fr.: November - February.

Distrib.: Purnia.

Utricularia striatula Sm. in Rees, Cyclop. 37. n. 17. 1819. *U. orbiculata* Wallich *ex* A. DC. in DC., Prodr. 8: 18. 1844; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 334. 1884.

Fl. & Fr.: August - October.

Distrib.: Palamau.

GESNERIACEAE

ACHIMENES Pers., *nom. cons.*

Achimenes longiflora DC., Prodr. 7: 536. 1839.

Distrib.: Cultivated. Santal Pargana.

CORALLODISCUS Batalin

Corallodiscus lanuginosus (Wallich *ex* DC.) Burttt var. *minuta* (Haines) K.K. Khanna, *comb. nov.* *Didissandra lanuginosa* (Wallich *ex* DC.) C.B. Clarke var. *minuta* Haines, Bot. Bihar Orissa 648. 1922 (Repr. ed., 2: 679. 1961).

Fl. & Fr.: June - December.

Distrib.: Palamau (Haines, *l.c.*).

DIDYMOCARPUS Wallich, *nom. cons.*

Didymocarpus pedicellata R. Br. in Benn., R. Br. & Horsf., Pl. Jav. Rar. 118. 1840; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 345. 1884.

Fl. & Fr.: March - October.

Distrib.: West Champaran.

Didymocarpus pygmaea C.B. Clarke in A. & C. DC., Monogr. Phan. 5: 82. 1883 & in Hook. f., Fl. Brit. India 4: 345. 1884; Haines, Bot. Bihar Orissa 648. 1922 (Repr. ed., 2: 679. 1961).

Fl. & Fr.: August - October.

Distrib.: Ranchi.

GLOXINIA L'Hérit.

Gloxinia maculata L'Hérit., Stirp. Nov. 149. 1791.

Fl.: October.

Distrib.: Cultivated. Buxar.

Gloxinia speciosa Lodd., Bot. Cab. t. 28. 1817.

Fl.: October.

Distrib.: Cultivated. Santal Pargana.

RHYNCHOGLOSSUM Blume

Rhynchoglossum obliquum Blume var. **parviflorum** C.B. Clarke in Hook. f., Fl. Brit. India 4: 367. 1884; Haines, Bot. Bihar Orissa 647. 1922 (Repr. ed., 2: 678. 1961).

Fl. & Fr.: October - November.

Distrib.: Hazaribagh.

BIGNONIACEAE

ANEMOPAEGMA Mart. ex Meisn., *nom. cons.*

Anemopaegma chamberlaynii (Sims) Bur. & K. Schum. in Mart., Fl. Bras. 8(2): 128. 1896. *Bignonia chamberlaynii* Sims in Curtis, Bot. Mag. t. 2148. 1820; Haines, Bot. Bihar Orissa 653. 1922 (Repr. ed., 2: 684. 1961).

Distrib.: Cultivated in gardens.

BIGNONIA L.

Bignonia magnifica Bull. in Gard. Chron. 12: 72. 1879; Haines, Bot. Bihar Orissa 653. 1922 (Repr. ed., 2: 684. 1961).

Fl.: September.

Distrib.: Cultivated in gardens.

CAMPSIS Lour., *nom. cons.*

Campsis grandiflora (Thunb.) K. Schum. in Engler & Prantl, Nat. Pflanzenfam. 4. 3b: 230. 1894. *Bignonia grandiflora* Thunb., Fl. Jap. 253. 1784. *Tecoma grandiflora* Loisel., Herb. Gen. Amat. 5: t. 286. 1821; Haines, Bot. Bihar Orissa 654. 1922 (Repr. ed., 2: 686. 1961).

Distrib.: Cultivated in gardens.

Campsis radicans Seem. in J. Bot. 5: 372. 1867. *Tecoma radicans* Juss., Gen. Pl. 139. 1789; Haines, Bot. Bihar Orissa 654. 1922 (Repr. ed., 2: 686. 1961).

Fl.: March - October.

Distrib.: Cultivated in gardens.

CLYTOSTOMA Miers *ex* Bur.

Clytostoma callistegioides (Cham.) Bur. in Adansonia 8: 353. 1868. *Bignonia callistegioides* Cham. in Linnæa 7: 712. 1832; Haines, Bot. Bihar Orissa 652. 1922 (Repr. ed., 2: 683. 1961).

Distrib.: Cultivated in gardens.

Clytostoma noterophila Bur. & K. Schum. in Mart., Fl. Bras. 8(2): 153. 1896. *Bignonia noterophila* DC., Prodr. 9: 148. 1845; Haines, Bot. Bihar Orissa 652. 1922 (Repr. ed., 2: 683. 1961).

Distrib.: Cultivated in gardens.

CRESCENTIA L.

Crescentia alata Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. 3: 158. 1819.

Fl. & Fr.: November - February.

Distrib.: Cultivated in gardens.

Crescentia cujete L., Sp. Pl. 626. 1753; Haines, Bot. Bihar Orissa 660. 1922 (Repr. ed., 2: 692. 1961).

Fl. & Fr.: March - July.

Distrib.: Cultivated in gardens.

CYDISTA Miers

Cydista aequinoctialis (L.) Miers, Proc. Roy. Hort. Soc. 3: 191. 1863. *Bignonia aequinoctialis* L., Sp. Pl. 623. 1753; Haines, Bot. Bihar Orissa 652. 1922 (Repr. ed., 2: 684. 1961).

Fl. & Fr.: November - March.

Distrib.: Cultivated in gardens.

DOLICHANDRONE (Fenzl) Seem., *nom. cons.*

Dolichandrone falcata (Wallich ex DC.) Seem. in J. Bot. 8: 381. 1870; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 380. 1884, *excl. syn.* *Bignonia atrovirens* Heyne ex Roth; Haines, Bot. Bihar Orissa 658. 1922 (Repr. ed., 2: 690. 1961). *Spathodea falcata* Wallich ex DC., Prodr. 9: 206. 1845. *Dolichandrone lawii* Seem. in J. Bot. 8: 380. 1870; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 380. 1884. *D. falcata* var. *lawii* Haines, Bot. Bihar Orissa 658. 1922 (Repr. ed., 2: 690. 1961).

Fl. & Fr.: April - February.

Distrib.: Chota Nagpur.

Dolichandrone spathacea (L. *f.*) K. Schum., Fl. Kais Wilh. Land 123. 1889; Haines, Bot. Bihar Orissa 658. 1922 (Repr. ed., 2: 690. 1961). *Bignonia spathacea* L. *f.*, Suppl. Pl. 283. 1782. *Dolichandrone rheedii* Seem. in J. Bot. 8: 380. 1870; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 379. 1884.

Fl.: June - July.

Distrib.: Planted in gardens. Patna (Singh, Fl. Patna 261. 1986).

Dolichandrone stipulata Benth. & Hook. *f.*, Gen. Pl. 2: 1046. 1876; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 379. 1884.

Fl.: November - January.

Distrib.: Planted in gardens and on roadsides. Patna (Singh, Fl. Patna 261. 1986).

JACARANDA Juss.

Jacaranda mimosaeifolia D. Don in Bot. Reg. 8. t. 631. 1822; Haines, Bot. Bihar Orissa 659. 1922 (Repr. ed., 2: 691. 1961). *J. ovalifolia* R. Br. in Curtis, Bot. Mag. 49. t. 2327. 1822. - *Niligulmohar*.

Fl. & Fr.: March - June.

Distrib.: Planted in gardens.

KIGELIA DC.

Kigelia africana (Lam.) Benth. in Hook. *f.*, Niger Fl. 463. 1849. *Bignonia africana* Lam., Encycl. 1: 424. 1785. *Crescentia pinnata* Jacq., Collectanea 3: 203. t. 18. 1789. *Kigelia pinnata* (Jacq.) DC., Prodr. 9: 247. 1845; Haines, Bot. Bihar Orissa 660. 1922 (Repr. ed., 2: 692. 1961).

Fl. & Fr.: March - December.

Distrib.: Planted in gardens.

MACFADYENA A. DC.

Macfadyena unguis-cati (L.) A.H. Gentry in Brittonia 25: 236. 1973 & Ann. Miss. Bot. Gard. 60: 874. 1973. *Bignonia unguis-cati* L., Sp. Pl. 623. 1753; Haines, Bot. Bihar Orissa 651. 1922 (Repr. ed., 2: 683. 1961).

Fl. & Fr.: October - May.

Distrib.: Planted in gardens.

MILLINGTONIA L. *f.*

Millingtonia hortensis L. *f.*, Suppl. Pl. 291. 1782; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 377. 1884; Haines, Bot. Bihar Orissa 650. 1922 (Repr. ed., 2: 682. 1961). - *Akas-nim*.

Fl. & Fr.: October - May.

Distrib.: Planted in gardens and on roadsides.

OROXYLUM Venten.

Oroxylum indicum (L.) Venten., Dec. Gen. Nov. 8. 1808; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 378. 1884. *Bignonia indica* L., Sp. Pl. 625. 1753; Haines, Bot. Bihar Orissa 650. 1922 (Repr. ed., 2: 681. 1961). *Sona*.

Fl. & Fr.: July - March.

Distrib.: Bhagalpur, Chota Nagpur, Patna, West Champaran.

PANDOREA (Endl.) Spach

Pandorea jasminoides (Lindl.) K. Schum. in Engler & Prantl, Nat. Pflanzenfam. IV. 3b: 230. 1894. *Tecoma jasminoides* Lindl. in Edward's Bot. Reg. 23: 2002. 1837; Haines, Bot. Bihar Orissa 655. 1924 (Repr. ed., 2: 686. 1961).

Distrib.: Planted in gardens.

PARMENTIERA DC.

Parmentiera cereifera Seem., Bot. Voy. Herald 182. t. 32. 1853; Haines, Bot. Bihar Orissa 659. 1922 (Repr. ed., 2: 691. 1961).

Fl. & Fr.: June - March.

Distrib.: Planted in gardens.

PYROSTEGIA K. Presl

Pyrostegia venusta (Ker-Gawl.) Miers in Proc. Roy. Hort. Soc. 3: 188. 1863. *Bignonia venusta* Ker-Gawl., Bot. Reg. 3: t. 249. 1818; Haines, Bot. Bihar Orissa 652. 1922 (Repr. ed., 2: 683. 1961).

Fl.: January - February.

Distrib.: Cultivated in gardens.

RADERMACHERA Zoll. & Moritzi

Radermachera xylocarpa (Roxb.) K. Schum. in Engler & Prantl, Nat. Pflanzenfam. IV. 3b: 243. 1895; Haines, Bot. Bihar Orissa 657. 1922 (Repr. ed., 2: 689. 1961). *Bignonia xylocarpa* Roxb., Fl. Ind. 3: 108. 1832. *Stereospermum xylocarpum* Wight, Icon. Pl. Ind. Orient. t. 1335-36. 1848; C.B. Clarke in Hook. f., Fl. Brit. India 4: 383. 1884.

Fl. & Fr.: April - March.

Distrib.: Singhbhum (Haines, l.c.).

SPATHODEA P. Beauv.

Spathodea campanulata P. Beauv., Fl. Oware 1: 47. t. 27-28. 1805; Haines, Bot. Bihar Orissa 659. 1922 (Repr. ed., 2: 691. 1961).

Fl. & Fr.: July - December.

Distrib.: Singhbhum.

STEREOSPERMUM Cham.

Stereospermum chelonoides (L. f.) DC. in Bibl. Univ. Geneve II. 17: 124. 1838, *p.p. excl. ref.* Rheede t. 26 & DC., Prodr. 9: 210. 1845; Haines, Bot. Bihar Orissa 657. 1922 (Repr. ed., 2: 688. 1961). *Bignonia chelonoides* L. f., Suppl. Pl. 282. 1782, *p.p. excl. ref.* Rheede, 1786. *B. suaveolens* Roxb., Fl. Ind. 3: 104. 1832. *Tecoma suaveolens* (Roxb.) G. Don, Gen. Hist. 4: 224. 1837-1838. *Stereospermum suaveolens* (Roxb.) DC., Prodr. 9: 211. 1845; C.B. Clarke in Hook. f., Fl. Brit. India 4: 382. 1884; Haines, Bot. Bihar Orissa 656. 1922 (Repr. ed., 2: 688. 1961).

Fl. & Fr.: April - February.

Distrib.: Hazaribagh, Palamau, Patna, Singhbhum, West Champaran.

Stereospermum colais (Dillwyn) Mabblerley in Taxon 27: 553. 1978. *Bignonia colais* Dillwyn, Rev. Hortus Malab. 28. 1839. *Stereospermum chelonoides* DC., Bibl. Univ. Geneve II. 17: 124. 1838, *p.p. quoad ref.* Rheede, t. 26 & DC., Prodr. 9: 210. 1845; C.B. Clarke in Hook. f., Fl. Brit. India 4: 382. 1884. *S. tetragonum* DC., Prodr. 9: 210. 1845; Haines, Bot. Bihar Orissa 655. 1922 (Repr. ed., 2: 687. 1961).

var. **angustifolium** (Haines) Bennet & Raizada in Ind. J. For. 4: 67. 1981. *Stereospermum chelonoides* var. *angustifolium* Haines, Descr. List Trees South Circle C.P. 169. 1916. *S. angustifolium* (Haines) Haines in Bull. Misc. Inform. Kew 1922: 121. 1922 & Bot. Bihar Orissa 656. 1922 (Repr. ed., 2: 687. 1961).

Fl. & Fr.: April - December.

Distrib.: Chota Nagpur.

var. **colais**

Fl. & Fr.: April - February.

Distrib.: Hazaribagh, Purnia, Singhbhum, West Champaran.

TABEBUIA Gomes ex DC.

Tabebuia rosea (Bertol.) DC., Prodr. 9: 215. 1845. *Tecoma rosea* Bertol., Fl. Guatimal. 25. 1840. *Tabebuia pentaphylla* (L.) Hemsl., Biol. Cent.-Amer., Bot. 2: 495. 1882.

Fl.: December - March.

Distrib.: Cultivated in gardens.

TECOMA Juss.

Tecoma australis R. Br., Prodr. 471. 1810; Haines, Bot. Bihar Orissa 655. 1922 (Repr. ed., 2: 686. 1961).

Distrib.: Planted in gardens.

Tecoma stans (L.) Juss. ex Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. 3: 144. 1819; Haines, Bot. Bihar Orissa 654. 1922 (Repr. ed., 2: 685. 1961). *Bignonia stans* L., Sp. Pl. ed. 2. 871. 1762.

var. **apilifolia** Haines, Bot. Bihar Orissa 654. 1922 (Repr. ed., 2: 686. 1961).

Distrib.: Cultivated in gardens (Haines, *l.c.*).

var. **stans**

Fl. & Fr.: August - March.

Distrib.: Bhagalpur, Hazaribagh, Palamau, Patna, Singhbhum.

TECOMARIA (Endl.) Spach

Tecomaria capensis (Thunb.) Spach, Hist. Nat. Veg. 9: 137. 1838. *Bignonia capensis* Thunb., Prodr. Pl. Cap. 105. 1800. *Tecoma capensis* (Thunb.) Lindl., Bot. Reg. 13: t. 1117. 1827; Haines, Bot. Bihar Orissa 654. 1922 (Repr. ed., 2: 686. 1961).

Fl. & Fr.: July - September.

Distrib.: Cultivated.

TECOMELLA Seem.

Tecomella undulata (Sm.) Seem. in Ann. Mag. Nat. Hist. ser. 3, 10: 30. 1862 & in J. Bot. 1: 18. 1863. *Bignonia undulata* Sm., Exot. Bot. 1: 35. t. 19. 1804. *Tecoma undulata* (Sm.) G. Don, Gen. Hist. 4: 233. 1837-1838; C.B. Clarke in Hook. f., Fl. Brit. India 4: 378. 1884; Haines, Bot. Bihar Orissa 654. 1922 (Repr. ed., 2: 685. 1961).

Fl. & Fr.: April onwards.

Distrib.: Bhagalpur, Palamau, Santal Pargana.

PEDALIACEAE**MARTYNIA** L.

Martynia annua L., Sp. Pl. 618. 1753. *M. diandra* Gloxin, Observ. Bot. 14. t. 1. 1785; C.B. Clarke in Hook. f., Fl. Brit. India 4: 386. 1884; Haines, Bot. Bihar Orissa 662. 1922 (Repr. ed., 2: 694. 1961).

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, East Champaran, Hazaribagh, Palamau, Patna, West Champaran.

SESAMUM L.

Sesamum indicum L., Sp. Pl. 634. 1753; Haines, Bot. Bihar Orissa 661. 1922 (Repr. ed., 2: 693. 1961). *S. orientale* L., Sp. Pl. 634. 1753; Backer & Bakh. f., Fl. Java 2: 544. 1965. *S. mulayanum* Nair in Bull. Bot. Surv. India 5: 252-253. 1963. *S. indicum* var. *subindivisum* DC., Pl. Rar. Jard. Genev. 18. 1825. - *Til*.

Fl. & Fr.: September - October.

Distrib.: Cultivated throughout the state.

ACANTHACEAE

ADHATODA Mill.

Adhatoda zeylanica Medik. in Hist. Comment. Acad. Theod.-Palat. 6: 393. 1790. *Justicia adhatoda* L., Sp. Pl. 15. 1753. *Adhatoda vasica* Nees in Wallich, Pl. Asiat. Rar. 3: 103. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 540. 1885; Haines, Bot. Bihar Orissa 694. 1922 (Repr. ed., 2: 728. 1961). - *Arusha*.

Fl. & Fr.: December - March.

Distrib.: Bhagalpur, Bhojpur, Champaran, Palamau, Sahibganj, Singhbhum.

AECHMANTHERA Nees

Aechmanthera gossypina (Nees) Nees in Wallich, Pl. Asiat. Rar. 3: 87. 1832. *Ruellia gossypina* Nees in Wallich, Pl. Asiat. Rar. 1: 38. t. 42. 1830. *Aechmanthera tomentosa* Nees in Wallich, Pl. Asiat. Rar. 3: 87. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 428. 1884.

Fl. & Fr.: December - May.

Distrib.: Purnia.

ANDROGRAPHIS Wallich ex Nees

Andrographis paniculata (Burm. f.) Wallich ex Nees in Wallich, Pl. Asiat. Rar. 3: 116. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 501. 1884; Haines, Bot. Bihar Orissa 699. 1922 (Repr. ed., 2: 733. 1961). *Justicia paniculata* Burm. f., Fl. Ind. 9. 1768. - *Kalmeg*.

Fl. & Fr.: September - May.

Distrib.: Hazaribagh, Munger, Patna, Ranchi, Santal Pargana, Singhbhum, West Champaran.

APHELANDRA R. Br.

Aphelandra cristata R. Br., Prodr. 475. 1810; Haines, Bot. Bihar Orissa 689. 1922 (Repr. ed., 2: 723. 1961).

Distrib.: Cultivated in gardens (Haines, *l.c.*).

Aphelandra pectinata Willd. ex Nees in DC., Prodr. 11: 297. 1847; Haines, Bot. Bihar Orissa 689. 1922 (Repr. ed., 2: 722. 1961).

Fl. & Fr.: August - October.

Distrib.: Cultivated in gardens (Haines, *l.c.*).

Aphelandra tetragona Nees in DC., Prodr. 11: 295. 1847; Haines, Bot. Bihar Orissa 689. 1922 (Repr. ed., 2: 723. 1961).

Distrib.: Cultivated in gardens (Haines, *l.c.*).

ASYSTASIA Blume

Asystasia gangetica (L.) T. Anderson in Thwaites, Enum. Pl. Zeyl. 235. 1860; Haines, Bot. Bihar Orissa 684. 1922 (Repr. ed., 2: 717. 1961).
Justicia gangetica L., Cent. Pl. 2: 3. 1756 & Amoen. Acad. 4: 299. 1759.
Asystasia coromandeliana Nees in Wallich, Pl. Asiat. Rar. 3: 89. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 493. 1884.

Fl. & Fr.: October - May.

Distrib.: Bhagalpur, Giridih, Hazaribagh.

Asystasia macrocarpa Nees in Wallich, Pl. Asiat. Rar. 3: 89. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 495. 1884; Haines, Bot. Bihar Orissa 684. 1922 (Repr. ed., 2: 717. 1961).

Fl. & Fr.: December - February.

Distrib.: Purnia (Haines, *l.c.*).

BARLERIA L.

Barleria cristata L., Sp. Pl. 636. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 488. 1884; Haines, Bot. Bihar Orissa 683. 1922 (Repr. ed., 2: 716. 1961).

var. **albida** Haines, Bot. Bihar Orissa 683. 1922 (Repr. ed., 2: 716. 1961).

Fl.: October.

Distrib.: Palamau.

var. **cristata**

Fl. & Fr.: September - March.

Distrib.: Throughout the state.

Barleria lupulina Lindl. in Edward's Bot. Reg. 18: t. 1483. 1832-1833; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 482. 1884; Haines, Bot. Bihar Orissa 682. 1922 (Repr. ed., 2: 715. 1961).

Fl. & Fr.: October - December.

Distrib.: Cultivated in gardens.

Barleria montana Nees in Wallich, Pl. Asiat. Rar. 3: 92. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 487. 1884; Haines, Bot. Bihar Orissa 682. 1922 (Repr. ed., 2: 715. 1961).

Fl. & Fr.: October - January.

Distrib.: Chota Nagpur.

Barleria nutans Nees in DC., Prodr. 11: 227. 1847; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 488. 1884.

Fl. & Fr.: October - November.

Distrib.: Bhagalpur.

Barleria prionitis L., Sp. Pl. 636. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 482. 1884; Haines, Bot. Bihar Orissa 681. 1922 (Repr. ed., 2: 714. 1961).

Fl. & Fr.: September - April.

Distrib.: Bhagalpur, Patna, Santal Pargana, West Champaran.

Barleria strigosa Willd., Sp. Pl. 3: 379. 1800; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 489. 1884; Haines, Bot. Bihar Orissa 682. 1922 (Repr. ed., 2: 715. 1961). *B. caerulea* Roxb., Fl. Ind. 3: 39. 1832.

Fl. & Fr.: September - May.

Distrib.: Gaya, Hazaribagh, Purnia, Sahibganj, Singhbhum, West Champaran.

BELOPERONE Nees

Beloperone guttata T.S. Brandegee in Univ. Calif. Publ. Bot. 4: 278. 1912.

Fl. & Fr.: July - December.

Distrib.: Cultivated in gardens.

Beloperone pringlei S. Wats. in Proc. Am. Acad. 25: 160. 1890.

Fl. & Fr.: June - October.

Distrib.: Ranchi.

BLEPHARIS Juss.

Blepharis maderaspatensis (L.) Heyne ex Roth, Nov. Pl. Sp. 320. 1821. *Acanthus maderaspatensis* L., Sp. Pl. 639. 1753. *Blepharis boerhaviaefolia* Pers., Syn. Pl. 2: 180. 1806, *non* Roth, 1821; C.B. Clarke in Hook. f., Fl. Brit. India 4: 478. 1884; Haines, Bot. Bihar Orissa 702. 1922 (Repr. ed., 2: 736. 1961).

Fl. & Fr.: August - March.

Distrib.: Munger, Palamau, Singhbhum.

Blepharis repens (Vahl) Roth, Nov. Pl. Sp. 321. 1821. *Acanthus repens* Vahl, Symb. Bot. 2: 76. 1791. *Blepharis molluginifolia* Pers., Syn. Pl. 2: 180. 1806; C.B. Clarke in Hook. f., Fl. Brit. India 4: 479. 1884; Haines, Bot. Bihar Orissa 702. 1922 (Repr. ed., 2: 736. 1961).

Fl. & Fr.: September - December.

Distrib.: Palamau, West Champaran.

CROSSANDRA Salisb.

Crossandra infundibuliformis (L.) Nees in Wallich, Pl. Asiat. Rar. 3: 98. 1832. *Justicia infundibuliformis* L., Syst. Nat. ed. 10. 850. 1759.

Crossandra undulaefolia Salisb. in W. Hook., Parad. Lond. t. 12. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 4: 492. 1884; Haines, Bot. Bihar Orissa 685. 1922 (Repr. ed., 2: 718. 1961).

Fl. & Fr.: August - March.

Distrib.: Cultivated in gardens.

DICLIPTERA Juss., *nom. cons.*

Dicliptera bupleuroides Nees in Wallich, Pl. Asiat. Rar. 3: 111. 1832; Haines, Bot. Bihar Orissa 698. 1922 (Repr. ed., 2: 732. 1961). *D. roxburghiana* Nees var. *bupleuroides* (Nees) C.B. Clarke in Hook. f., Fl. Brit. India 4: 554. 1885.

Fl. & Fr.: February - June.

Distrib.: Hazaribagh, Singhbhum, West Champaran.

Dicliptera roxburghiana Nees in Wallich, Pl. Asiat. Rar. 3: 111. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 553. 1885; Haines, Bot. Bihar Orissa 697. 1922 (Repr. ed., 2: 731. 1961).

Fl. & Fr.: February - June.

Distrib.: Giridih, Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

Dicliptera verticillata (Forssk.) C. Christensen in Dansk. Bot. Arkiv. 4(3): 11. 1922. *Dianthera verticillata* Forssk., Fl. Aegypt.-Arab. 9. 1775. *Dicliptera micranthes* Nees in Wallich, Pl. Asiat. Rar. 3: 112. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 553. 1885; Haines, Bot. Bihar Orissa 698. 1922 (Repr. ed., 2: 732. 1961).

Fl. & Fr.: October - March.

Distrib.: Hazaribagh, Lohardaga, Palamau, Patna, Ranchi, Singhbhum.

DIPTERACANTHUS Nees

Dipteracanthus beddomei (C.B. Clarke) Santapau in Indian For. 79: 322. 1953. *Ruellia beddomei* C.B. Clarke in Hook. f., Fl. Brit. India 4: 413. 1884; Haines, Bot. Bihar Orissa 674. 1922 (Repr. ed., 2: 707. 1961).

Fl. & Fr.: August - December.

Distrib.: Singhbhum.

Dipteracanthus cernuus (Roxb.) Santapau in Indian For. 79: 322. 1953. *Ruellia cernua* Roxb., Fl. Ind. 3: 45. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 413. 1884; Haines, Bot. Bihar Orissa 673. 1922 (Repr. ed., 2: 706. 1961).

Fl. & Fr.: August - December.

Distrib.: Giridih, Hazaribagh.

Dipteracanthus prostratus (Poir.) Nees in Wallich, Pl. Asiat. Rar. 3: 81. 1832. *Ruellia prostrata* Poir. in Lam., Encycl. 6: 349. 1804; C.B. Clarke in Hook. f., Fl. Brit. India 4: 411. 1884, *incl. var. dejecta* C.B. Clarke in Hook. f., Fl. Brit. India 4: 412. 1884; Haines, Bot. Bihar Orissa 673. 1922 (Repr. ed., 2: 706. 1961). *Dipteracanthus dejectus* Nees in Wallich, Pl. Asiat. Rar. 3: 82. 1832.

Fl. & Fr.: July - December.

Distrib.: Darbhanga, Hazaribagh, Koderma, Muzaffarpur, Palamau.

Dipteracanthus suffruticosus (Roxb.) Voigt, Hort. Suburb. Calcutt. 483. 1845. *Ruellia suffruticosa* Roxb., Fl. Ind. 3: 53. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 413. 1884; Haines, Bot. Bihar Orissa 674. 1922 (Repr. ed., 2: 707. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Palamau, Sahibganj, Santal Pargana.

DYSCHORISTE Nees

Dyschoriste nagchana (Nees) Bennet in Indian For. 109: 220. 1983. *Dipteracanthus nagchana* Nees in Wallich, Pl. Asiat. Rar. 3: 82. 1832. *Dyschoriste depressa* Nees in Wallich, Pl. Asiat. Rar. 3: 81. 1832; Haines, Bot. Bihar Orissa 676. 1922 (Repr. ed., 2: 709. 1961). *Calophanes nagchana* (Nees) Nees in DC., Prodr. 11: 109. 1847; C.B. Clarke in Hook. f., Fl. Brit. India 4: 410. 1884.

Fl. & Fr.: March - December.

Distrib.: Patna.

ECBOLIUM Kurz

Ecbolium viride (Forssk.) Alston var. **dentata** (Klein ex Link) Raizada ex Santapau, Fl. Khandala ed. 3. 208. 1967. *Justicia dentata* Klein ex Link, Jahrb. 1(3): 48. 1820. *Ecbolium linnaeanum* Kurz var. **dentata** (Klein ex Link) C.B. Clarke in Hook. f., Fl. Brit. India 4: 545. 1885; Haines, Bot. Bihar Orissa 695. 1922 (Repr. ed., 2: 728. 1961).

Fl. & Fr.: September - March.

Distrib.: Bhagalpur.

ECHINACANTHUS Nees

Echinacanthus attenuatus Wallich ex Nees in Wallich, Pl. Asiat. Rar. 3: 107. 1832; Haines, Bot. Bihar Orissa 675. 1922 (Repr. ed., 2: 708. 1961).

Fl. & Fr.: October - March.

Distrib.: West Champaran.

ELYTRARIA Michx., *nom. cons.*

Elytraria acaulis (L. f.) Lindau in Engler & Prantl, Nat. Pflanzenfam. Nachtr. I. 304. 1897. *Justicia acaulis* L. f., Suppl. Pl. 84. 1782. *Tubiflora acaulis* (L. f.) Kuntze, Revis. Gen. Pl. 1: 500. 1891. *Elytraria crenata* Vahl, Enum. Pl. 1: 106. 1804; C.B. Clarke in Hook. f., Fl. Brit. India 4: 394. 1884; Haines, Bot. Bihar Orissa 667. 1922 (Repr. ed., 2: 699. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh.

ERANTHEMUM L.

Eranthemum capense L., Sp. Pl. 9. 1753. *Daedalacanthus montanus* (Roxb.) Anderson in Thwaites, Enum. Pl. Zeyl. 229. 1860; C.B. Clarke in Hook. f., Fl. Brit. India 4: 421. 1885; Haines, Bot. Bihar Orissa 680. 1922 (Repr. ed., 2: 713. 1961).

Fl. & Fr.: October - March.

Distrib.: Deoghar, Ranchi.

Eranthemum nervosum (Vahl) R. Br., Prodr. 477. 1810. *Justicia nervosa* Vahl, Enum. Pl. 1: 164. 1804. *Eranthemum pulchellum* Andr., Bot. Repos. t. 88. 1800, non Roxb., 1832. *Daedalacanthus nervosus* T. Anderson in J. Linn. Soc. London (Bot.) 9: 487. 1867; C.B. Clarke in Hook. f., Fl. Brit. India 4: 418. 1884; Haines, Bot. Bihar Orissa 679. 1922 (Repr. ed., 2: 712. 1961).

Fl. & Fr.: January - May.

Distrib.: Palamau, Patna, Ranchi, Singhbhum, West Champaran.

Eranthemum purpurascens Wight ex Nees in Wallich, Pl. Asiat. Rar. 3: 106. 1832. *Daedalacanthus purpurascens* (Wight ex Nees) T. Anderson in J. Linn. Soc. London (Bot.) 9: 488. 1867; C.B. Clarke in Hook. f., Fl. Brit. India 4: 420. 1884; Haines, Bot. Bihar Orissa 680. 1922 (Repr. ed., 2: 713. 1961).

Fl. & Fr.: October - April.

Distrib.: Giridih, Hazaribagh, Munger, Palamau, Patna, Singhbhum, West Champaran.

Eranthemum roseum (Vahl) R. Br., Prodr. 477. 1810. *Justicia rosea* Vahl, Enum. Pl. 1: 165. 1804. *Daedalacanthus roseus* (Vahl) T. Anderson in J. Linn. Soc. London (Bot.) 9: 487. 1867; C.B. Clarke in Hook. f., Fl. Brit. India 4: 419. 1884.

Fl. & Fr.: November - December.

Distrib.: Chota Nagpur.

GENDARUSSA Nees

Gendarussa vulgaris Nees in Wallich, Pl. Asiat. Rar. 3: 104. 1832. *Justicia gendarussa* Burm. f., Fl. Ind. 10. 1768; C.B. Clarke in Hook. f., Fl. Brit. India 4: 532. 1885; Haines, Bot. Bihar Orissa 692. 1922 (Repr. ed., 2: 725. 1961).

Fl. & Fr.: March - May.

Distrib.: Purnia, West Champaran.

GRAPTOPHYLLUM Nees

Graptophyllum hortense Nees in Wallich, Pl. Asiat. Rar. 3: 102. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 545. 1885. *G. pictum* Griff., Notul. Pl. Asiat. 4: 139. 1854; Haines, Bot. Bihar Orissa 695. 1922 (Repr. ed., 2: 729. 1961).

Distrib.: Cultivated in gardens.

HEMIGRAPHIS Nees

Hemigraphis hirta (Vahl) T. Anderson in J. Linn. Soc. London (Bot.) 9: 462. 1867; C.B. Clarke in Hook. f., Fl. Brit. India 4: 422. 1884; Haines, Bot. Bihar Orissa 672. 1922 (Repr. ed., 2: 704. 1961). *Ruellia hirta* Vahl, Symb. Bot. 3: 84. t. 67. 1794.

Fl. & Fr.: January - July.

Distrib.: Patna, Purnia, West Champaran.

Hemigraphis latebrosa (Heyne ex Roth) Nees in DC., Prodr. 11: 723. 1847; C.B. Clarke in Hook. f., Fl. Brit. India 4: 423. 1884; Haines, Bot. Bihar Orissa 672. 1922 (Repr. ed., 2: 705. 1961). *Ruellia latebrosa* Heyne ex Roth, Nov. Pl. Sp. 307. 1821.

Fl. & Fr.: September - April.

Distrib.: Hazaribagh, Palamau, Singhbhum.

Hemigraphis rupestris Heyne ex T. Anderson in J. Linn. Soc. London (Bot.) 9: 462. 1867. *H. latebrosa* (Heyne ex Roth) Nees var. *rupestris* (Heyne ex T. Anderson) C.B. Clarke in Hook. f., Fl. Brit. India 4: 424. 1884; Haines, Bot. Bihar Orissa 672. 1922 (Repr. ed., 2: 705. 1961).

Fl. & Fr.: November - March.

Distrib.: Chota Nagpur.

HYGROPHILA R. Br.

Hygrophila auriculata (Schumach.) Heine in Kew Bull. 16: 172. 1962. *Barleria auriculata* Schumach. in Schumach. & Thonn., Beskr. Guin. Pl. 285. 1827. *B. longifolia* L., Cent. Pl. 2: 22. 1756. *Asteracantha longifolia* (L.) Nees in Wallich, Pl. Asiat. Rar. 3: 90. 1832; Haines, Bot.

Bihar Orissa 671. 1922 (Repr. ed., 2: 704. 1961). *Hygrophila spinosa* T. Anderson in Thwaites, Enum. Pl. Zeyl. 225. 1860; C.B. Clarke in Hook. f., Fl. Brit. India 4: 408. 1884. *H. longifolia* (L.) Kurz in J. Asiat. Soc. Bengal 39: 78. 1870, *non* Nees, 1847. *Oont-katela*.

Fl. & Fr.: October - March.

Distrib.: Hazaribagh, Palamau, Patna, Sahibganj, Singhbhum, West Champaran.

Hygrophila difformis (L. f.) Blume, Bijdr. 804. 1826. *Ruellia difformis* L. f., Suppl. Pl. 289. 1782. *Cardanthera triflora* Buch.-Ham. ex Benth. in Benth. & Hook. f., Gen. Pl. 2: 1074. 1876; C.B. Clarke in Hook. f., Fl. Brit. India 4: 405. 1884; Haines, Bot. Bihar Orissa 669. 1922 (Repr. ed., 2: 701. 1961).

Fl. & Fr.: August - January.

Distrib.: Purnia, West Champaran.

Hygrophila erecta (Burm. f.) Hochr. in Candollea 5: 230. 1934. *Ruellia erecta* Burm. f., Fl. Ind. 135. 1768. *Hygrophila quadrivalvis* (Buch.-Ham.) Nees in Wallich, Pl. Asiat. Rar. 3: 80. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 408. 1884; Haines, Bot. Bihar Orissa 671. 1922 (Repr. ed., 2: 703. 1961). *Ruellia quadrivalvis* Buch.-Ham. in Trans. Linn. Soc. London 14: 291. 1824.

Fl. & Fr.: September - December.

Distrib.: Hazaribagh.

Hygrophila helnei Sreemadh. in Bull. Bot. Surv. India 10: 223. 1969. *Ruellia uliginosa* L. f., Suppl. Pl. 290. 1782. *Adenosma uliginosa* (L. f.) Nees in R. Br., Verm. Bot. Schr. 3: 298. 1827. *Cardanthera uliginosa* (L. f.) Benth. ex C.B. Clarke in Hook. f., Fl. Brit. India 4: 403. 1884.

Fl. & Fr.: December - March.

Distrib.: Santal Pargana.

Hygrophila phlomoides Nees in Wallich, Pl. Asiat. Rar. 3: 80. 1832 & in DC., Prodr. 11: 90. 1847; C.B. Clarke in Hook. f., Fl. Brit. India 4: 408. 1884; Haines, Bot. Bihar Orissa 671. 1922 (Repr. ed., 2: 703. 1961).

Fl. & Fr.: October - December.

Distrib.: Purnia.

Hygrophila polysperma (Roxb.) T. Anderson in J. Linn. Soc. London (Bot.) 9: 456. 1867; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 406. 1884; Haines, Bot. Bihar Orissa 670. 1922 (Repr. ed., 2: 702. 1961). *Justicia polysperma* Roxb., Fl. Ind. 1: 119. 1832.

Fl. & Fr.: October - April.

Distrib.: Patna, West Champaran.

Hygrophila salicifolia (Vahl) Nees in Wallich, Pl. Asiat. Rar. 3: 81. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 407. 1884. *Ruellia salicifolia* Vahl, Symb. Bot. 3: 84. 1794. *Hygrophila angustifolia* auct. non R. Br., 1810; Haines, Bot. Bihar Orissa 670. 1922 (Repr. ed., 2: 703. 1961).

Fl. & Fr.: September - December.

Distrib.: Hazaribagh, Singhbhum.

Hygrophila serpyllum (Nees) T. Anderson in J. Linn. Soc. London (Bot.) 9: 456. 1867; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 406. 1884; Haines, Bot. Bihar Orissa 670. 1922 (Repr. ed., 2: 703. 1961). *Physichilus serpyllum* Nees in Hook., Comp. Bot. Mag. 2: 311. 1837.

Fl. & Fr.: December - April.

Distrib.: Palamau, Purnia.

INDONEESIELLA Sreemadh.

Indoneesiella echioides (L.) Sreemadh. in Phytologia 16: 466. 1968. *Justicia echioides* L., Sp. Pl. 16. 1753. *Andrographis echioides* (L.) Nees in Wallich, Pl. Asiat. Rar. 3: 117. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 505. 1884; Haines, Bot. Bihar Orissa 700. 1922 (Repr. ed., 2: 734. 1961). *Neesiella echioides* (L.) Sreemadh. in Phytologia 15: 271. 1967, *nom. illeg.*

Fl. & Fr.: September - February.

Distrib.: Giridih, Hazaribagh, Lohardaga, Palamau, Patna, Ranchi, Singhbhum.

JACOBINIA Nees

Jacobinia gheisbreghtiana Benth. & Hook. *f.*, Gen. Pl. 2: 1115. 1876.

Distrib.: Cultivated in gardens.

Jacobinia tinctoria Hemsl., Biol. Centr. Am. Bot. 2: 522. 1882.

Distrib.: Muzaffarpur.

JUSTICIA L.

Justicia betonica L., Sp. Pl. 15. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 525. 1885; Haines, Bot. Bihar Orissa 691. 1922 (Repr. ed., 2: 724. 1961). *J. ramosissima* Roxb., Fl. Ind. 1: 129. 1832. *Adhatoda betonica* (L.) Nees in Wallich, Pl. Asiat. Rar. 3: 103. 1832. *Justicia betonica* L. var. *ramosissima* (Roxb.) C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 525. 1885. - *Mokandar*.

Fl. & Fr.: August - April.

Distrib.: Hazaribagh, Koderma, Palamau.

Justicia collina T. Anderson in J. Linn. Soc. London (Bot.) 9: 515. 1867. *Dianthera collina* (T. Anderson) C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 543. 1885.

Fl. & Fr.: November - February.

Distrib.: Santal Pargana.

Justicia diffusa Willd., Sp. Pl. 1: 87. 1797; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 538. 1885; Haines, Bot. Bihar Orissa 693. 1922 (Repr. ed., 2: 726. 1961).

var. **diffusa**

Fl. & Fr.: July - March.

Distrib.: Bhojpur, Gaya, Hazaribagh, Koderma, Palamau, Purnia, Ranchi, Singhbhum.

var. **orbiculata** C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 538. 1885; Haines, Bot. Bihar Orissa 693. 1922 (Repr. ed., 2: 727. 1961). *J. orbiculata* Wallich, Numer. List n. 2489. 1830, *non* T. Anderson, 1867.

Fl. & Fr.: November - February.

Distrib.: Hazaribagh.

Justicia glauca Rottler in Ges. Naturf. Fr. Neue Schr. 4: 219. 1802; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 529. 1885; Haines, Bot. Bihar Orissa 692. 1922 (Repr. ed., 2: 725. 1961).

Fl. & Fr.: October - December.

Distrib.: Chota Nagpur.

Justicia peploides (Nees) T. Anderson in J. Linn. Soc. London (Bot.) 9: 511. 1867; Haines, Bot. Bihar Orissa 693. 1922 (Repr. ed., 2: 726. 1961). *Rostellaria peploides* Nees in Wallich, Pl. Asiat. Rar. 3: 101. 1832. *Justicia quinqueangularis* Koenig *ex* Roxb. var. *peploides* (Nees) C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 537. 1885.

Fl. & Fr.: August - October.

Distrib.: Darbhanga, Munger, Purnia, Santal Pargana, West Champaran.

Justicia procumbens L., Sp. Pl. 15. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 539. 1885.

Fl. & Fr.: September - December.

Distrib.: Hazaribagh, Singhbhum.

Justicia prostrata (C.B. Clarke) Gamble, Fl. Madras 2: 1081. 1924. *J. diffusa* Willd. var. *prostrata* C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 538. 1885.

Fl. & Fr.: February - April.

Distrib.: Ranchi.

Justicia quinqueangularis Koenig *ex* Roxb., Fl. Ind. 1: 133. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 536. 1885; Haines, Bot. Bihar Orissa 692. 1922 (Repr. ed., 2: 726. 1961).

Fl. & Fr.: August - November.

Distrib.: Palamau, Patna, Ranchi, Santal Pargana, Saran.

Justicia simplex D. Don, Prodr. Fl. Nepal. 118. 1825; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 539. 1885. *Rostellularia mollissima* (Nees) Nees in DC., Prodr. 11: 373. 1847. *R. japonica* (Thunb.) Ellis in Bull. Bot. Surv. India 22: 196. 1980 (1982). *Justicia japonica* Thunb., Fl. Jap. 20. 1784.

var. **serpyllifolia** Benth. ex C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 539. 1885; Haines, Bot. Bihar Orissa 694. 1922 (Repr. ed., 2: 727. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh.

var. **simplex**

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Koderma, Palamau, Purnia, Ranchi, Sahibganj, Singhbhum, West Champaran.

Justicia vahlii Roth, Nov. Pl. Sp. 14. 1821. *J. diffusa* Willd. var. *vahlii* (Roth) C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 538. 1885; Haines, Bot. Bihar Orissa 693. 1922 (Repr. ed., 2: 727. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Koderma.

LEPIDAGATHIS Willd.

Lepidagathis cristata Willd., Sp. Pl. 3: 400. 1800; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 516. 1885.

Fl. & Fr.: September - March.

Distrib.: Ranchi.

Lepidagathis fasciculata (Retz.) Nees in Wallich, Pl. Asiat. Rar. 3: 95. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 522. 1885; Haines, Bot. Bihar Orissa 688. 1922 (Repr. ed., 2: 722. 1961). *Ruellia fasciculata* Retz., Observ. Bot. 4: 28. 1786-1787.

Fl. & Fr.: January - April.

Distrib.: Singhbhum.

Lepidagathis hamiltoniana Wallich *ex* Nees in Wallich, Pl. Asiat. Rar. 3: 96. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 516. 1885; Haines, Bot. Bihar Orissa 687. 1922 (Repr. ed., 2: 720. 1961).

Fl. & Fr.: November - February.

Distrib.: Bhagalpur, Ranchi, Singhbhum.

Lepidagathis incurva Buch.-Ham. *ex* D. Don, Prodr. Fl. Nepal. 119. 1825. *L. hyalina* Nees in Wallich, Pl. Asiat. Rar. 3: 95. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 521. 1885; Haines, Bot. Bihar Orissa 688. 1922 (Repr. ed., 2: 721. 1961).

Fl. & Fr.: November - April.

Distrib.: Hazaribagh, Singhbhum, West Champaran.

Lepidagathis purpuricaulis Nees in Wallich, Pl. Asiat. Rar. 3: 96. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 519. 1885; Haines, Bot. Bihar Orissa 687. 1922 (Repr. ed., 2: 721. 1961).

Fl. & Fr.: January - March.

Distrib.: Hazaribagh, Singhbhum.

Lepidagathis trinervis Wallich *ex* Nees in Wallich, Pl. Asiat. Rar. 3: 96. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 517. 1885; Haines, Bot. Bihar Orissa 687. 1922 (Repr. ed., 2: 720. 1961).

Fl. & Fr.: January - April.

Distrib.: Chota Nagpur.

NELSONIA R. Br.

Nelsonia canescens (Lam.) Spreng., Syst. Veg. 1: 42. 1825. *Justicia canescens* Lam., Tabl. Encycl. 1: 41. 1791. *Nelsonia campestris* R. Br., Prodr. 481. 1810; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 394. 1884; Haines, Bot. Bihar Orissa 667. 1922 (Repr. ed., 2: 700. 1961).

Fl. & Fr.: November - March.

Distrib.: Hazaribagh, Koderma, Palamau, West Champaran.

NEURACANTHUS Wallich

Neuracanthus tetragonostachys Nees in Wallich, Pl. Asiat. Rar. 3: 97. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 491. 1884.

Fl. & Fr.: January - February.

Distrib.: Sahibganj.

PERILEPTA Bremek.

Perilepta auriculata (Nees) Bremek. in Verh. Acad. Wet. Afd. Natuurk. sect. 2. 41(1): 194. 1944. *Strobilanthes auriculatus* Nees in Wallich, Pl. Asiat. Rar. 3: 86. t. 195. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 453. 1884, *incl. var. edgeworthiana* (Nees) C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 453. 1884; Haines, Bot. Bihar Orissa 678. 1922 (Repr. ed., 2: 711. 1961).

Fl. & Fr.: August - April.

Distrib.: Gaya, Hazaribagh, Palamau, Singhbhum, West Champaran.

Perilepta dyeriana (Masters) Bremek. in Verh. Acad. Wet. Afd. Natuurk. sect. 2. 41(1): 193. 1944. *Strobilanthes dyerianus* Masters in Gard. Chrom. 1: 442. 1893.

Distrib.: Cultivated.

PERISTROPHE Nees

Peristrophe paniculata (Forssk.) Brummitt in Kew Bull. 38: 451. 1983. *Dianthera paniculata* Forssk., Fl. Aegypt.-Arab. 7. 1775. *D. bicalyculata* Retz. in Vet. Acad. Handl. 297. t. 9. 1775. *Peristrophe bicalyculata* (Retz.) Nees in Wallich, Pl. Asiat. Rar. 3: 113. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 554. 1885; Haines, Bot. Bihar Orissa 696. 1922 (Repr. ed., 2: 730. 1961).

Fl. & Fr.: August - March.

Distrib.: Throughout the state.

PETALIDIUM Nees

Petalidium barlerioides (Roth) Nees in Wallich, Pl. Asiat. Rar. 3: 82. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 416. 1884; Haines,

Bot. Bihar Orissa 677. 1922 (Repr. ed., 2: 710. 1961). *Ruellia barlerioides* Roth, Nov. Pl. Sp. 310. 1821.

Fl. & Fr.: September - May.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

PHAULOPSIS Willd., *orth. et nom. cons.*

Phaulopsis dorsiflora (Retz.) Santapau in Kew Bull. 1948: 276. 1948. *Ruellia dorsiflora* Retz., Observ. Bot. 6: 31. 1791. *Micranthus oppositifolius* J.C. Wendl., Bot. Beob. 39. 1798; Haines, Bot. Bihar Orissa 680. 1922. *Phaulopsis parviflora* Willd., Sp. Pl. 3: 342. 1800, "Phaylopsis"; C.B. Clarke in Hook. f., Fl. Brit. India 4: 417. 1884; Haines, Bot. Bihar Orissa (Repr. ed., 2: 714. 1961).

Fl. & Fr.: December - March.

Distrib.: Purnia.

PHLOGACANTHUS Nees

Phlogacanthus curviflorus Nees in Wallich, Pl. Asiat. Rar. 3: 99. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 511. 1884; Haines, Bot. Bihar Orissa 701. 1922 (Repr. ed., 2: 735. 1961).

Distrib.: Cultivated in gardens.

Phlogacanthus thyrsoformis (Hardw.) Mabblerley in Bot. Hist. Hort. Malab. 83. 1980. *Justicia thyrsoformis* Hardw. in Asiat. Res. 6: 349. 1799. *Phlogacanthus thyrsoformis* (Roxb.) Nees in Wallich, Pl. Asiat. Rar. 3: 99. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 512. 1885; Haines, Bot. Bihar Orissa 701. 1922 (Repr. ed., 2: 735. 1961).

Fl. & Fr.: January - April.

Distrib.: West Champaran.

PSEUDERANTHEMUM Radlk.

Pseuderanthemum palatiferum (Wallich) Radlk. ex Lindau in Engler & Prantl, Nat. Pflanzenfam. 4. 3b: 330. 1895. *Justicia palatifera* Wallich, Pl. Asiat. Rar. 1: 80. t. 92. 1830. *Eranthemum palatiferum* (Wallich) Nees in Wallich, Pl. Asiat. Rar. 3: 108. 1832; C.B. Clarke in

Hook. *f.*, Fl. Brit. India 4: 498. 1884; Haines, Bot. Bihar Orissa 685. 1922 (Repr. ed., 2: 718. 1961).

Fl. & Fr.: April - July.

Distrib.: Purnia.

RHINACANTHUS Nees

Rhinacanthus nasuta (L.) Kurz in J. Asiat. Soc. Bengal 39: 79. 1870. *Justicia nasuta* L., Sp. Pl. 16. 1753. *Rhinacanthus communis* Nees in Wallich, Pl. Asiat. Rar. 3: 109. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 541. 1885; Haines, Bot. Bihar Orissa 696. 1922 (Repr. ed., 2: 729. 1961).

Fl. & Fr.: December - April.

Distrib.: Hazaribagh, Koderma, Ranchi, Singhbhum, West Champaran.

RUELLIA L.

Ruellia tuberosa L., Sp. Pl. 635. 1753; Haines, Bot. Bihar Orissa 675. 1922 (Repr. ed., 2: 707. 1961).

Fl. & Fr.: August - March.

Distrib.: Patna, West Champaran.

RUNGIA Nees

Rungia elegans Dalzell in Dalzell & Gibson, Bombay Fl. 196. 1861; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 549. 1885.

Fl. & Fr.: August - November.

Distrib.: Muzaffarpur.

Rungia pectinata (L.) Nees in DC., Prodr. 11: 470. 1847. *Justicia pectinata* L., Cent. Pl. 2: 3. 1756 & Amoen. Acad. 4: 299. 1759. *Rungia parviflora* (Retz.) Nees var. *pectinata* (L.) C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 550. 1885; Haines, Bot. Bihar Orissa 690. 1922 (Repr. ed., 2: 723. 1961). *R. parviflora* (Retz.) Nees var. *muralis* C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 550. 1885.

Fl. & Fr.: November - April.

Distrib.: Giridih, Hazaribagh, Muzaffarpur, Palamau, Patna, Ranchi, Singhbhum, West Champaran.

Rungia repens (L.) Nees in Wallich, Pl. Asiat. Rar. 3: 110. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 549. 1885; Haines, Bot. Bihar Orissa 690. 1922 (Repr. ed., 2: 724. 1961). *Justicia repens* L., Sp. Pl. 15. 1753.

Fl. & Fr.: August - February.

Distrib.: Bhagalpur, Palamau, Sahibganj, West Champaran.

SANCHEZIA Ruiz & Pavon

Sanchezia nobilis Hook., J. Bot. Mag. t. 5594. 1866; Haines, Bot. Bihar Orissa 672. 1922 (Repr. ed., 2: 704. 1961).

Distrib.: Cultivated in gardens.

STAUROGYNE Wallich

Staurogyne glauca (Nees) Kuntze, Revis. Gen. Pl. 497. 1891; Haines, Bot. Bihar Orissa 669. 1922 (Repr. ed., 2: 701. 1961). *Ebermaiera glauca* Nees in Hook., Comp. Bot. Mag. 2: 310. 1837; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 395. 1884.

Fl. & Fr.: December - February.

Distrib.: Santal Pargana.

Staurogyne glutinosa (Wallich ex C.B. Clarke) Kuntze, Revis. Gen. Pl. 499. 1891; Haines, Bot. Bihar Orissa 668. 1922 (Repr. ed., 2: 700. 1961). *Ebermaiera glutinosa* Wallich ex C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 396. 1884.

Fl. & Fr.: September - December.

Distrib.: Gaya, West Champaran.

Staurogyne polybotrya (Nees) Kuntze, Revis. Gen. Pl. 497. 1891; Haines, Bot. Bihar Orissa 668. 1922 (Repr. ed., 2: 701. 1961). *Ebermaiera polybotrya* Nees in DC., Prodr. 11: 74. 1847; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 396. 1884.

Fl. & Fr.: November - January.

Distrib.: Singhbhum.

STROBILANTHES Blume

Strobilanthes glutinosus Nees in Wallich, Pl. Asiat. Rar. 3: 86. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 458. 1884.

Fl. & Fr.: December - March.

Distrib.: Hazaribagh.

Strobilanthes jeyporensis Bedd., Icon. Pl. Ind. Or. t. 214. 1874; C.B. Clarke in Hook. f., Fl. Brit. India 4: 436. 1884; Haines, Bot. Bihar Orissa 678. 1922 (Repr. ed., 2: 711. 1961).

Fl. & Fr.: February - April.

Distrib.: Hazaribagh.

Strobilanthes scaber Nees in Wallich, Pl. Asiat. Rar. 3: 84. 1832, p.p.; C.B. Clarke in Hook. f., Fl. Brit. India 4: 446. 1884; Haines, Bot. Bihar Orissa 678. 1922 (Repr. ed., 2: 710. 1961).

Fl. & Fr.: September - January.

Distrib.: Hazaribagh, Santal Pargana.

THUNBERGIA Retz., *nom. cons.*

Thunbergia alata Bojer ex Sims in Curtis, Bot. Mag. t. 2591. 1825; C.B. Clarke in Hook. f., Fl. Brit. India 4: 391. 1884; Haines, Bot. Bihar Orissa 666. 1922 (Repr. ed., 2: 699. 1961).

Fl. & Fr.: September - February.

Distrib.: Cultivated.

Thunbergia coccinea Wallich, Tent. Fl. Nepal. 49, 58. t. 37. 1826; C.B. Clarke in Hook. f., Fl. Brit. India 4: 393. 1884; Haines, Bot. Bihar Orissa 666. 1922 (Repr. ed., 2: 698. 1961).

Fl. & Fr.: August - March.

Distrib.: West Champaran.

Thunbergia erecta (Benth.) T. Anderson in J. Linn. Soc. London (Bot.) 7: 18. 1864; Haines, Bot. Bihar Orissa 666. 1922 (Repr. ed., 2: 699. 1961). *Meyenia erecta* Benth. in Hook., Niger Fl. 476. 1849.

Fl. & Fr.: September - February.

Distrib.: Palamau.

Thunbergia fragrans Roxb., Pl. Corom. 1: 47. t. 67. 1796; C.B. Clarke in Hook. f., Fl. Brit. India 4: 390. 1884; Haines, Bot. Bihar Orissa 665. 1922 (Repr. ed., 2: 697. 1961).

Fl. & Fr.: November - February.

Distrib.: Santal Pargana.

Thunbergia grandiflora (Roxb. ex Rottler) Roxb. in Lodd. Bot. Cab. t. 324. 1819 & Fl. Ind. 3: 34. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 392. 1884; Haines, Bot. Bihar Orissa 666. 1922 (Repr. ed., 2: 698. 1961). *Flemingia grandiflora* Roxb. ex Rottler in Ges. Naturf. Fr. Neue Schr. 4: 202. 1803.

Fl. & Fr.: September - December.

Distrib.: Purnia, West Champaran.

Thunbergia laurifolia Lindl. in Gard. Chron. 260. 1856; C.B. Clarke in Hook. f., Fl. Brit. India 4: 392. 1884; Haines, Bot. Bihar Orissa 666. 1922 (Repr. ed., 2: 699. 1961).

Distrib.: Cultivated in gardens.

VERBENACEAE

ALOYSIA Juss.

Aloysia triphylla Britton in Sc. Surv. Porto Rico & Virgin Islands 6: 140. 1925; Haines, Bot. Bihar Orissa 706. 1922 (Repr. ed., 2: 741. 1961).

Distrib.: Cultivated.

CALLICARPA L.

Callicarpa arborea Roxb., Fl. Ind. 1: 390. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 4: 567. 1885; Haines, Bot. Bihar Orissa 709. 1922 (Repr. ed., 2: 743. 1961).

Fl. & Fr.: April - January.

Distrib.: Chota Nagpur, Hazaribagh, Purnia, Santal Pargana.

Callicarpa macrophylla Vahl, *Symb. Bot.* 3: 13. t. 53. 1794; C.B. Clarke in *Hook. f.*, *Fl. Brit. India* 4: 568. 1885; Haines, *Bot. Bihar Orissa* 709. 1922 (Repr. ed., 2: 744. 1961).

Fl. & Fr.: July - March.

Distrib.: Chota Nagpur, Hazaribagh, Purnia, West Champaran.

CARYOPTERIS Bunge

Caryopteris bicolor (Hardw.) Mabblerley in *Bot. Hist. Hort. Malab.* 83. 1980. *Volkameria bicolor* Hardw. in *Asiat. Res.* 6: 366. 1799. *Caryopteris odorata* (D. Don) B.L. Robinson in *Proc. Amer. Acad. Arts Sci.* 40: 531. 1916. *C. wallichiana* Schauer in *DC., Prodr.* 11: 625. 1847, *nom. illeg.*; C.B. Clarke in *Hook. f.*, *Fl. Brit. India* 4: 597. 1885; Haines, *Bot. Bihar Orissa* 723. 1922 (Repr. ed., 2: 758. 1961).

Fl. & Fr.: December - April.

Distrib.: Palamau, West Champaran.

CITHAREXYLUM L.

Citharexylum subserratum Sw., *Prodr.* 91. 1788; Haines, *Bot. Bihar Orissa* 708. 1922 (Repr. ed., 2: 743. 1961).

Fl. & Fr.: August - October.

Distrib.: Planted.

CLERODENDRUM L.

Clerodendrum indicum (L.) Kuntze, *Revis. Gen. Pl.* 2. 586. 1891. *Siphonanthus indica* L., *Sp. Pl.* 109. 1753. *Clerodendrum siphonanthus* R. Br. in *Aiton f.*, *Hortus Kew.* ed. 2. 4: 65. 1812; C.B. Clarke in *Hook. f.*, *Fl. Brit. India* 4: 595. 1885; Haines, *Bot. Bihar Orissa* 722. 1922 (Repr. ed., 2: 757. 1961). - *Bharangi*.

Fl. & Fr.: June - December.

Distrib.: Palamau, Purnia, Santal Pargana, Singhbhum.

Clerodendrum inerme (L.) Gaertn., Fruct. Sem. Pl. 1: 271. t. 57. 1788; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 589. 1885; Haines, Bot. Bihar Orissa 720. 1922 (Repr. ed., 2: 755. 1961). *Volkameria inermis* L., Sp. Pl. 637. 1753.

Fl. & Fr.: December - April.

Distrib.: West Champaran.

Clerodendrum kaempferi (Jacq.) Sieb. ex Steud., Nom. Bot. 1: 208. 1821. *Volkameria kaempferi* Jacq., Collect. 3: 207. 1789. *Clerodendrum squamatum* Vahl, Symb. Bot. 2: 74. 1791; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 593. 1885; Haines, Bot. Bihar Orissa 721. 1922 (Repr. ed., 2: 756. 1961).

Fl. & Fr.: April - August.

Distrib.: Terai (Haines, *l.c.*).

Clerodendrum multiflorum (Burm. *f.*) Kuntze, Revis. Gen. Pl. 3: 526. 1891. *Volkameria multiflora* Burm. *f.*, Fl. Ind. 137. t. 45. f. 1. 1768. *Clerodendrum phlomidis* L. *f.*, Suppl. Pl. 292. 1782; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 590. 1885; Haines, Bot. Bihar Orissa 721. 1922 (Repr. ed., 2: 756. 1961).

Fl. & Fr.: September - March.

Distrib.: Palamau, Santal Pargana.

Clerodendrum philippinum Schauer in DC., Prodr. 11: 667. 1847. *C. fragrans* Willd., Enum. Pl. 659. 1809, *nom. illeg.*; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 589. 1885. *C. japonicum* (Thunb.) Sweet var. *pleniflorum* (Schauer) Maheshwari in Taxon 15: 43. 1966.

Fl. & Fr.: March - April.

Distrib.: Chota Nagpur.

Clerodendrum serratum (L.) Moon, Cat. Pl. Ceylon 1: 46. 1824; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 592. 1885; Haines, Bot. Bihar Orissa 722. 1922 (Repr. ed., 2: 757. 1961). *Volkameria serrata* L., Mant. Pl. 90. 1767. *Barangi*.

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Koderma, Palamau, Purnia, Santal Pargana, West Champaran.

Clerodendrum splendens G. Don *ex* James, Edinburgh New Philos. J. 11: 349. 1824.

Fl. & Fr.: January - March.

Distrib.: Bhagalpur.

Clerodendrum viscosum Venten., Jard. Malmaison 1: t. 25. 1803; Santapau in Bull. Bot. Surv. India 3: 14. 1961. *C. infortunatum auct. non* L., 1753, *nec* Gaertn., 1788: C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 594. 1885; Haines, Bot. Bihar Orissa 721. 1922 (Repr. ed., 2: 756. 1961).

Fl. & Fr.: February - July.

Distrib.: Bhojpur, Giridih, Gumla, Hazaribagh, Muzaffarpur, Palamau, Purnia, Santal Pargana, West Champaran.

DURANTA L.

Duranta repens L., Sp. Pl. 637. 1753; Moldenke in Ann. Missouri Bot. Gard. 60: 90. 1973. *D. erecta* L., Sp. Pl. 637. 1753. *D. plumieri* Jacq., Select. Stirp. Amer. Hist. 186. t. 176. 1763; Haines, Bot. Bihar Orissa 709. 1922 (Repr. ed., 2: 743. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: Planted. Palamau, Singhbhum, West Champaran.

GMELINA L.

Gmelina arborea Roxb., Pl. Corom. 3: 41-42. t. 246. 1815 & Fl. Ind. 3: 84. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 581. 1885; Haines, Bot. Bihar Orissa 719. 1922 (Repr. ed., 2: 754. 1961). *Premna tomentosa* Miq. *apud* C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 581. 1885. - *Gambhar*.

var. **arborea**

Fl. & Fr.: February - June.

Distrib.: Throughout the state.

var. **canescens** Haines, For. Fl. Chota Nagpur 487. 1910 & Bot. Bihar Orissa 719. 1922 (Repr. ed., 2: 754. 1961).

Fl. & Fr.: February - June.

Distrib.: Santal Pargana.

var. **glaucescens** C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 582. 1885; Haines, Bot. Bihar Orissa 719. 1922 (Repr. ed., 2: 754. 1961).

Fl. & Fr.: February - June.

Distrib.: Throughout the state.

Gmelina asiatica L., Sp. Pl. 626. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 582. 1885; Haines, Bot. Bihar Orissa 720. 1922 (Repr. ed., 2: 755. 1961).

Fl. & Fr.: October - November.

Distrib.: Bhagalpur.

HOLMSKIOLDIA Retz.

Holmskioldia sanguinea Retz., Observ. Bot. 6: 31. 1791; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 596. 1885; Haines, Bot. Bihar Orissa 723. 1922 (Repr. ed., 2: 758. 1961).

Fl. & Fr.: October - June.

Distrib.: Munger, Palamau, Purnia, West Champaran.

LANTANA L.

Lantana camara L. var. **aculeata** (L.) Moldenke in Torrey 34: 9. 1934. *L. aculeata* L., Sp. Pl. 627. 1753. *L. camara auct. non L.*, 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 562. 1885; Haines, Bot. Bihar Orissa 705. 1922 (Repr. ed., 2: 739. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: Gumla, Hazaribagh, Palamau, Patna, Ranchi, West Champaran.

Lantana crenulata Otto & Dietr. in Berlin Gartenzeit. 9: 363. 1841; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 563. 1885.

Fl. & Fr.: August - April.

Distrib.: West Champaran.

Lantana indica Roxb., Fl. Ind. 3: 89. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 562. 1885; Haines, Bot. Bihar Orissa 705. 1922 (Repr. ed., 2: 739. 1961).

Fl. & Fr.: September - January.

Distrib.: Purnia, West Champaran.

Lantana trifolia L., Sp. Pl. 626. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 563. 1885.

Distrib.: Hazaribagh.

PETREA L.

Petrea volubilis L., Sp. Pl. 626. 1753; Haines, Bot. Bihar Orissa 708. 1922 (Repr. ed., 2: 742. 1961).

Fl. & Fr.: February - April.

Distrib.: Cultivated in gardens.

PHYLA Lour.

Phyla nodiflora (L.) E. Greene, Pittonia 4: 46. 1899. *Verbena nodiflora* L., Sp. Pl. 20. 1753. *Lippia nodiflora* (L.) Rich. in Michx., Fl. Bor.-Amer. 2: 15. 1803; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 563. 1885; Haines, Bot. Bihar Orissa 706. 1922 (Repr. ed., 2: 740. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: Koderma, Palamau, Patna, Purnia, West Champaran.

PREMNA L., *nom. cons.*

Premna barbata Wallich ex Schauer in DC., Prodr. 11: 636. 1847; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 579. 1885; Haines, Bot. Bihar Orissa 716. 1922 (Repr. ed., 2: 751. 1961).

Fl. & Fr.: May - August.

Distrib.: Palamau, Santal Pargana.

Premna bengalensis C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 577. 1885; Haines, Bot. Bihar Orissa 718. 1922 (Repr. ed., 2: 753. 1961).

Fl. & Fr.: May - July.

Distrib.: Santal Pargana.

Premna calycina Haines in Bull. Misc. Inform. Kew 1922: 122. 1922 & Bot. Bihar Orissa 716. 1922 (Repr. ed., 2: 751. 1961).

Fl. & Fr.: April - June.

Distrib.: Sahibganj, Singhbhum.

Premna hamiltonii Ellis in Bull. Bot. Surv. India 22: 193. 1982. *P. flavescens* Buch.-Ham. ex C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 578. 1885, non Juss., 1806.

var. **gmelinoides** (Haines) K.K. Khanna, *comb. nov.* *Premna flavescens* Buch.-Ham. ex C.B. Clarke var. *gmelinoides* Haines, Bot. Bihar Orissa 715. 1922 (Repr. ed., 2: 750. 1961).

Fl. & Fr.: July - January.

Distrib.: Palamau, Sahibganj (Haines, *l.c.*).

var. **hamiltonii**

Fl. & Fr.: July - January.

Distrib.: Hazaribagh, Palamau, Ranchi, Santal Pargana, Singhbhum.

Premna latifolia Roxb., Fl. Ind. 3: 76. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 577. 1885; Haines, Bot. Bihar Orissa 717. 1922 (Repr. ed., 2: 751. 1961).

var. **gamblei** Haines, Bot. Bihar Orissa 717. 1922 (Repr. ed., 2: 752. 1961).

Fr.: December.

Distrib.: Purnia (Haines, *l.c.*).

var. **latifolia**

Fl. & Fr.: December - March.

Distrib.: Palamau, Santal Pargana.

var. **mucronata** (Roxb.) C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 578. 1885; Haines, Bot. Bihar Orissa 717. 1922 (Repr. ed., 2: 752. 1961).
P. mucronata Roxb., Fl. Ind. 3: 80. 1832.

Fl. & Fr.: March - June.

Distrib.: Chota Nagpur, West Champaran.

Premna scandens Roxb., Fl. Ind. 3: 82. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 573. 1885; Haines, Bot. Bihar Orissa 714. 1922 (Repr. ed., 2: 749. 1961).

Fl. & Fr.: May - July.

Distrib.: Purnia.

Premna tomentosa Willd., Sp. Pl. 3: 314. 1800; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 576. 1885; Haines, Bot. Bihar Orissa 718. 1922 (Repr. ed., 2: 753. 1961).

Fl. & Fr.: March - May.

Distrib.: Palamau, Singhbhum.

PYGMAEOPREMNA Merr.

Pygmaeopremna herbacea (Roxb.) Moldenke in Phytologia 2: 54. 1941. *Premna herbacea* Roxb., Fl. Ind. 3: 80. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 581. 1885; Haines, Bot. Bihar Orissa 718. 1922 (Repr. ed., 2: 753. 1961).

Fl. & Fr.: May - August.

Distrib.: Hazaribagh, Koderma, Palamau.

STACHYTARPHETA Vahl, *nom. cons.*

Stachytarpheta indica Vahl, Enum. Pl. 1: 206. 1804; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 564. 1885.

Fl. & Fr.: September - November.

Distrib.: Palamau.

Stachytarpheta jamaicensis (L.) Vahl, Enum. Pl. 1: 206. 1804.
Verbena jamaicensis L., Sp. Pl. 19. 1753. *Stachytarpheta indica* auct.

non Vahl, 1804: C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 564. 1885, *p.p.*;
Roman Haines, Bot. Bihar Orissa 707. 1922 (Repr. ed., 2: 741. 1961)

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Palamau, Singhbhum.

Stachytarpheta mutabilis Vahl, Enum. Pl. 1: 208. 1804; Haines, Bot. Bihar Orissa 707. 1922 (Repr. ed., 2: 741. 1961).

Distrib.: Cultivated in gardens.

SYMPHOREMA Roxb.

Symphorema involucratum Roxb., Pl. Corom. 2: 46. t. 186. 1805 & Fl. Ind. 2: 262. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 599. 1885; Haines, Bot. Bihar Orissa 724. 1922 (Repr. ed., 2: 759. 1961).

Fl. & Fr.: March - June.

Distrib.: Munger (Haines, *l.c.*).

Symphorema polyandrum Wight, Icon. Pl. Ind. Orient. 2: t. 363. 1840; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 599. 1885; Haines, Bot. Bihar Orissa 724. 1922 (Repr. ed., 2: 759. 1961).

Fl. & Fr.: March - June.

Distrib.: Hazaribagh, Singhbhum.

TECTONA L. *f.*, *nom. cons.*

Tectona grandis L. *f.*, Suppl. Pl. 151. 1782; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 570. 1885; Haines, Bot. Bihar Orissa 710. 1922 (Repr. ed., 2: 744. 1961). *Sagun.*

Fl. & Fr.: July - January.

Distrib.: Planted. West Champaran.

VERBENA L.

Verbena bipinnatifida Schauer in DC., Prodr. 11: 553. 1847.

Fl. & Fr.: October - February.

Distrib.: Bhagalpur, West Champaran.

Verbena officinalis L., Sp. Pl. 20. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 565. 1885; Haines, Bot. Bihar Orissa 707. 1922 (Repr. ed., 2: 742. 1961).

Fl. & Fr.: October - February.

Distrib.: Santal Pargana, West Champaran.

VITEX L.

Vitex glabrata R. Br., Prodr. 512. 1810; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 588. 1885; Haines, Bot. Bihar Orissa 713. 1922 (Repr. ed., 2: 747. 1961).

Fl. & Fr.: May - July.

Distrib.: Santal Pargana.

Vitex leucoxyton L. *f.*, Suppl. Pl: 293. 1782; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 587. 1885; Haines, Bot. Bihar Orissa 712. 1922 (Repr. ed., 2: 747. 1961).

Fl. & Fr.: May - February.

Distrib.: Hazaribagh (Haines, *l.c.*).

Vitex negundo L., Sp. Pl. 638. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 583. 1885; Haines, Bot. Bihar Orissa 711. 1922 (Repr. ed., 2: 746. 1961). *Sambhalu, Shivari.*

var. **densiflora** Haines, Bot. Bihar Orissa 712. 1922 (Repr. ed., 2: 746. 1961).

Fl. & Fr.: Most of the year.

Distrib.: Palamau (Haines, *l.c.*).

var. **incisa** (Lam.) C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 584. 1885; Haines, Bot. Bihar Orissa 712. 1922 (Repr. ed., 2: 746. 1961). *Vitex incisa* Lam., Encycl. 2: 612. 1788.

Fl. & Fr.: Most of the year.

Distrib.: Bihar (Haines, *l.c.*).

var. negundo*Fl. & Fr.*: June - December.*Distrib.*: Palamau, Ranchi, West Champaran.

Vitex peduncularis Wallich ex Schauer in DC., Prodr. 11: 687. 1847; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 587. 1885; Haines, Bot. Bihar Orissa 712. 1922 (Repr. ed., 2: 746. 1961).

var. peduncularis*Fl. & Fr.*: April - September.*Distrib.*: Gaya, Hazaribagh, Santal Pargana, Singhbhum.

var. roxburghiana C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 587. 1885; Haines, Bot. Bihar Orissa 712. 1922 (Repr. ed., 2: 747. 1961).

Fl. & Fr.: August - September.*Distrib.*: Singhbhum.

Vitex pinnata L., Sp. Pl. 638. 1753. *V. pubescens* Vahl, Symb. Bot. 3: 85. 1794, *non* Heyne, 1829; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 585. 1885; Haines, Bot. Bihar Orissa 711. 1922 (Repr. ed., 2: 745. 1961).

Fl. & Fr.: October - December.*Distrib.*: Palamau.

Vitex trifolia L., Sp. Pl. 638. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 4: 583. 1885; Haines, Bot. Bihar Orissa 712. 1922 (Repr. ed., 2: 746. 1961).

Distrib.: Throughout the country (C.B. Clarke, *l.c.*).**LAMIACEAE****ACROCEPHALUS** Benth.

Acrocephalus hispidus (L.) Nicolson & Sivadasan in Taxon 29: 324. 1980. *Gomphrena hispida* L., Sp. Pl. ed. 2. 326. 1762. *Ocimum capitatum* Roth, Nov. Pl. Sp. 276. 1821. *Acrocephalus capitatus* (Roth) Benth. in Edward's Bot. Reg. 15: sub t. 1300. 1830; Hook. *f.*, Fl. Brit.

India 4: 611. 1885; Haines, Bot. Bihar Orissa 733. 1922 (Repr. ed., 2: 768. 1961).

Fl. & Fr.: September - December.

Distrib.: Giridih, Hazaribagh, Ranchi, Santal Pargana, West Champaran.

AJUGA L.

Ajuga densiflora Wallich ex Benth. in Wallich, Pl. Asiat. Rar. 1: 59. 1830; Haines, Bot. Bihar Orissa 753. 1922 (Repr. ed., 3: 790. 1961). *A. bracteosa* Wallich ex Benth. var. *densiflora* Hook. f., Fl. Brit. India 4: 703. 1885.

Fl. & Fr.: May - October.

Distrib.: Palamau (Haines, l.c.).

Ajuga macrosperma Wallich ex Benth. in Wallich, Pl. Asiat. Rar. 1: 58. 1830; Hook. f., Fl. Brit. India 4: 704. 1885; Haines, Bot. Bihar Orissa 753. 1922 (Repr. ed., 2: 790. 1961).

var. **breviflora** Hook. f., Fl. Brit. India 4: 704. 1885.

Fl. & Fr.: March - April.

Distrib.: Hazaribagh, Singhbhum.

var. **macrosperma**

Fl. & Fr.: January - March.

Distrib.: Hazaribagh, West Champaran.

ANISOCHILUS Wallich ex Benth.

Anisochilus carnosus (L. f.) Wallich ex Benth. in Wallich, Pl. Asiat. Rar. 2: 18. 1830; Hook. f., Fl. Brit. India 4: 627. 1885; Haines, Bot. Bihar Orissa 733. 1922 (Repr. ed., 2: 769. 1961). *Lavandula carnosus* L. f., Suppl. Pl. 273. 1782.

Fl. & Fr.: October - November.

Distrib.: Giridih, Hazaribagh, Lohardaga, Munger, Palamau, Ranchi.

Anisochilus eriocephalus Benth. in DC., Prodr. 12: 81. 1848; Hook. f., Fl. Brit. India 4: 627. 1885; Haines, Bot. Bihar Orissa 734. 1922 (Repr. ed., 2: 769. 1961).

Fl. & Fr.: October - December.

Distrib.: Ranchi.

ANISOMELES R. Br.

Anisomeles heyneana Benth. in Wallich, Pl. Asiat. Rar. 1: 59. 1830; Hook. f., Fl. Brit. India 4: 672. 1885.

Fl. & Fr.: September - November.

Distrib.: Hazaribagh.

Anisomeles indica (L.) Kuntze, Revis. Gen. Pl. 2: 512. 1891; Haines, Bot. Bihar Orissa 745. 1922 (Repr. ed., 2: 782. 1961). *Nepeta indica* L., Sp. Pl. 571. 1753. *Anisomeles ovata* R. Br. in Aiton f., Hortus Kew. ed. 2. 3: 364. 1811; Hook. f., Fl. Brit. India 4: 672. 1885.

Fl. & Fr.: September - March.

Distrib.: Giridih, Hazaribagh, Palamau, Patna, Purnia, Ranchi, Singhbhum, West Champaran.

CLINOPODIUM L.

Clinopodium umbrosum (Bieb.) Koch. in Linnaea 21: 673. 1848. *Melissa umbrosa* Bieb., Fl. Taur. Cauc. 2: 63. 1808. *Calamintha umbrosa* (Bieb.) Benth. in DC., Prodr. 12: 232. 1848; Hook. f., Fl. Brit. India 4: 650. 1885; Haines, Bot. Bihar Orissa 743. 1922 (Repr. ed., 2: 780. 1961).

Fl. & Fr.: December - January.

Distrib.: Palamau.

COLEBROOKEA Sm.

Colebrookea oppositifolia Sm., Exot. Bot. 2: 111. t. 115. 1805; Hook. f., Fl. Brit. India 4: 642. 1885; Haines, Bot. Bihar Orissa 741. 1922 (Repr. ed., 2: 777. 1961).

Fl. & Fr.: November - April.

Distrib.: Giridih, Hazaribagh, Koderma, Palamau, Purnia, Ranchi, West Champaran.

COLEUS Lour.

Coleus amboinicus Lour., Fl. Cochinch. 2: 372. 1790; Haines, Bot. Bihar Orissa 736. 1922 (Repr. ed., 2: 771. 1961). *C. aromaticus* Benth. in Wallich, Pl. Asiat. Rar. 2: 16. 1830; Hook. f., Fl. Brit. India 4: 625. 1885. - *Patherchor*.

Fl. & Fr.: May - June.

Distrib.: Cultivated in gardens.

Coleus barbatus (Andr.) Benth. in Wallich, Pl. Asiat. Rar. 2: 15. 1830; Hook. f., Fl. Brit. India 4: 625. 1885, *excl. syn.* *Germanea forskohlei* Poir., 1788 & *Plectranthus forskohlei* Willd., 1800, *non* Vahl, 1790. *Plectranthus barbatus* Andr., Bot. Repos. 10: t. 594. 1810. *Coleus forskohlii* Briq. in Engler & Prantl, Nat. Pflanzenfam. 4. 3a: 359. 1897; Haines, Bot. Bihar Orissa 735. 1922 (Repr. ed., 2: 771. 1961).

Fl. & Fr.: November - February.

Distrib.: Hazaribagh.

Coleus scutellarioides (L.) Benth. in Wallich, Pl. Asiat. Rar. 2: 16. 1830; Hook. f., Fl. Brit. India 4: 626. 1885. *Ocimum scutellarioides* L., Sp. Pl. ed. 2. 833. 1763. *Coleus blumei* Benth., Labiat. Gen. Spec. 56. 1832; Haines, Bot. Bihar Orissa 736. 1922 (Repr. ed., 2: 772. 1961).

Fl. & Fr.: November - February.

Distrib.: Cultivated in gardens.

ELSHOLTZIA Willd.

Elsholtzia blanda (Benth.) Benth., Labiat. Gen. Spec. 162. 1833; Hook. f., Fl. Brit. India 4: 643. 1885; Haines, Bot. Bihar Orissa 1247. 1924 (Repr. ed., 2: 778, 1301. 1961). *Aphanochilus blandus* Benth. in Wallich, Pl. Asiat. Rar. 1: 19. 1829.

Fl. & Fr.: October - November.

Distrib.: Sahibganj.

Elsholtzia stachyodia (Link) Raizada & Saxena in Indian For. 92: 309. 1966. *Hyptis stachyodia* Link, Enum. Pl. 2: 106. 1822. *Elsholtzia incisa* Benth. in Bot. Reg. t. 1282. 1829; Hook. f., Fl. Brit. India 4: 644. 1885.

Fl. & Fr.: October - December.

Distrib.: Palamau.

GENIOSPORUM Wallich ex Benth.

Geniosporum coloratum (D. Don) Kuntze, Revis. Gen. Pl. 2: 517. 1891. *Plectranthus coloratus* D. Don, Prodr. Fl. Nepal. 116. 1825. *Geniosporum strobiliferum* Wallich, Pl. Asiat. Rar. 2: 18. 1831; Hook. f., Fl. Brit. India 4: 610. 1885; Haines, Bot. Bihar Orissa 731. 1922 (Repr. ed., 2: 767. 1961).

Fl. & Fr.: August - November.

Distrib.: West Champaran.

Geniosporum elongatum Benth., Labiat. Gen. Spec. 21. 1833; Hook. f., Fl. Brit. India 4: 610. 1885; Haines, Bot. Bihar Orissa 732. 1922 (Repr. ed., 2: 767. 1961).

Fl. & Fr.: September - November.

Distrib.: Palamau.

HYPTIS Jacq., *nom. cons.*

Hyptis suaveolens (L.) Poit. in Ann. Mus. Hist. Nat. 7: 472. t. 29. f. 2. 1806; Hook. f., Fl. Brit. India 4: 630. 1885; Haines, Bot. Bihar Orissa 736. 1922 (Repr. ed., 2: 772. 1961). *Ballota suaveolens* L., Syst. Nat. ed. 10. 1100. 1759.

Fl. & Fr.: October - January.

Distrib.: Bhojpur, East Champaran, Hazaribagh, Palamau, Patna, Purnia, Ranchi, Singhbhum, West Champaran.

LAVANDULA L.

Lavandula bipinnata (Roth) Kuntze, Revis. Gen. Pl. 521. 1891; Haines, Bot. Bihar Orissa 737. 1922 (Repr. ed., 2: 773. 1961).

Bysteropogon bipinnatus Roth, Nov. Pl. Sp. 255. 1821. *Lavandula burmanni* Benth., Labiat. Gen. Spec. 157. 1833; Hook. f., Fl. Brit. India 4: 631. 1885.

Fl. & Fr.: November - January.

Distrib.: Palamau, Ranchi (Haines, l.c.).

LEONOTIS (Pers.) R. Br.

Leonotis nepetifolia (L.) R. Br., Prodr. 504. 1810 & in Aiton f., Hortus Kew. ed. 2. 3: 409. 1811; Hook. f., Fl. Brit. India 4: 691. 1885; Haines, Bot. Bihar Orissa 752. 1922 (Repr. ed., 2: 789. 1961). *Phlomis nepetifolia* L., Sp. Pl. 586. 1753, "*nepetaefolia*".

Fl. & Fr.: October - March.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

LEONURUS L.

Leonurus japonicus Houtt., Nat. Hist. Pl. 9: 366. t. 57. f. 1. 1788. *L. sibiricus auct. non L.*, 1753; Hook. f., Fl. Brit. India 4: 678. 1885; Haines, Bot. Bihar Orissa 746. 1922 (Repr. ed., 2: 783. 1961).

Fl. & Fr.: December - March.

Distrib.: West Champaran.

LEUCAS R. Br.

Leucas aspera (Willd.) Link, Enum. Hort. Berol. Alt. 2: 113. 1822; Hook. f., Fl. Brit. India 4: 690. 1885; Haines, Bot. Bihar Orissa 751. 1922 (Repr. ed., 2: 788. 1961). *Phlomis aspera* Willd., Enum. Pl. Hort. Berol. 2: 621. 1809.

Fl. & Fr.: July - March.

Distrib.: Lohardaga, Patna, West Champaran.

Leucas biflora (Vahl) R. Br., Prodr. 504. 1810; Hook. f., Fl. Brit. India 4: 683. 1885, *excl. syn. L. procumbens* Thwaites. *Phlomis biflora* Vahl, Symb. Bot. 3: 77. 1794.

Fl. & Fr.: October - December.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 311. 1998).

Leucas cephalotes (Koenig ex Roth) Spreng., Syst. Veg. 2: 743. 1825; Hook. f., Fl. Brit. India 4: 689. 1885; Haines, Bot. Bihar Orissa 750. 1922 (Repr. ed., 2: 787. 1961). *Phlomis cephalotes* Koenig ex Roth, Nov. Pl. Sp. 262. 1821.

Fl. & Fr.: August - March.

Distrib.: Darbhanga, Hazaribagh, Muzaffarpur, Palamau, Patna, Sahibganj, Singhbhum, West Champaran.

Leucas clarkei Hook. f., Fl. Brit. India 4: 688. 1885; Haines, Bot. Bihar Orissa 750. 1922 (Repr. ed., 2: 787. 1961).

Fl. & Fr.: September - December.

Distrib.: Hazaribagh.

Leucas hamiltoniana Wallich ex Benth. in Wallich, Pl. Asiat. Rar. 1: 62. 1830. *L. montana* (Roth) Spreng var. *hamiltoniana* (Wallich ex Benth.) Haines, Bot. Bihar Orissa 749. 1922 (Repr. ed., 2: 786. 1961).

Fl. & Fr.: August - March.

Distrib.: Munger (Haines, l.c.).

Leucas helicterifolia Haines in Bull. Misc. Inform. Kew 1922: 188. 1922 & Bot. Bihar Orissa 748. 1922 (Repr. ed., 2: 784. 1961).

Fl. & Fr.: November - December.

Distrib.: West Champaran. Endemic.

Leucas hyssopifolia Wallich ex Benth. in Wallich, Pl. Asiat. Rar. 1: 60. 1830; Hook. f., Fl. Brit. India 4: 690. 1885; Haines, Bot. Bihar Orissa 751. 1922 (Repr. ed., 2: 788. 1961).

Fl. & Fr.: May - July.

Distrib.: Chota Nagpur.

Leucas indica (L.) R. Br. ex Vatke in Oesterr. Bot. Zeits. 25: 95. 1875. *Leonurus indicus* L., Syst. Nat. ed. 10. 1101. 1759. *Leucas linifolia*

(Roth) Spreng., Syst. Veg. 2: 743. 1825; Hook. *f.*, Fl. Brit. India 4: 690. 1885; Haines, Bot. Bihar Orissa 751. 1922 (Repr. ed., 2: 788. 1961).

var. **deciplens** (Hook. *f.*) Bennet in J. Econ. Tax. Bot. 5: 452. 1984. *Leucas linifolia* (Roth) Spreng. var. *deciplens* Hook. *f.*, Fl. Brit. India 4: 691. 1885.

Fl. & Fr.: November - December.

Distrib.: Sahibganj.

var. **indica**

Fl. & Fr.: July - January.

Distrib.: Darbhanga, Palamau, Purnia, West Champaran.

Leucas lanata Wallich ex Benth. in Wallich, Pl. Asiat. Rar. 1: 61. 1830; Hook. *f.*, Fl. Brit. India 4: 681. 1885; Haines, Bot. Bihar Orissa 747. 1922 (Repr. ed., 2: 784. 1961).

var. **lanata**

Fl. & Fr.: October - December.

Distrib.: Hazaribagh.

var. **nagpurensis** C.B. Clarke ex Haines, Bot. Bihar Orissa 747. 1922 (Repr. ed., 2: 784. 1961).

Fl. & Fr.: October - December.

Distrib.: Parasnath. Endemic.

Leucas martinicensis (Jacq.) R. Br., Prodr. 504. 1810; Hook. *f.*, Fl. Brit. India 4: 688. 1885; Haines, Bot. Bihar Orissa 750. 1922 (Repr. ed., 2: 787. 1961). *Clinopodium martinicense* Jacq., Enum. Syst. Pl. 25. 1760.

Fl. & Fr.: October - November.

Distrib.: Hazaribagh.

Leucas mollissima Wallich ex Benth. in Wallich, Pl. Asiat. Rar. 1: 62. 1830; Hook. *f.*, Fl. Brit. India 4: 682. 1885. *L. montana* (Roth) Spreng.

var. *mollissima* Haines, Bot. Bihar Orissa 748. 1922 (Repr. ed., 2: 785. 1961).

var. mollissima

Fl. & Fr.: September - March.

Distrib.: Giridih, Hazaribagh, Koderma, Palamau, Ranchi, Singhbhum.

var. *scaberula* Hook. f., Fl. Brit. India 4: 682. 1885. *L. montana* (Roth) Spreng. var. *scaberula* Haines, Bot. Bihar Orissa 749. 1922 (Repr. ed., 2: 786. 1961).

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Singhbhum.

Leucas montana (Roth) Spreng., Syst. Veg. 2: 742. 1825; Hook. f., Fl. Brit. India 4: 682. 1885; Haines, Bot. Bihar Orissa 748. 1922 (Repr. ed., 2: 785. 1961). *Phlomis montana* Roth, Nov. Pl. Sp. 263. 1821.

Fl. & Fr.: August - March.

Distrib.: Giridih, Hazaribagh, Palamau, Patna, Purnia.

Leucas nutans (Roth) Spreng., Syst. Veg. 2: 743. 1825; Hook. f., Fl. Brit. India 4: 688. 1885; Haines, Bot. Bihar Orissa 750. 1922 (Repr. ed., 2: 787. 1961). *Phlomis nutans* Roth, Nov. Pl. Sp. 263. 1821.

Fl. & Fr.: August - November.

Distrib.: Hazaribagh.

Leucas pilosa Wallich ex Benth. in Wallich, Pl. Asiat. Rar. 1: 62. 1830; Hook. f., Fl. Brit. India 4: 683. 1885. *L. montana* (Roth) Spreng. var. *pilosa* Haines, Bot. Bihar Orissa 749. 1922 (Repr. ed., 2: 786. 1961).

Fl. & Fr.: November - February.

Distrib.: Sahibganj (Haines, l.c.).

Leucas procumbens Desf. in Mem. Mus. Hist. Nat. Paris 11: 7. t. 3. f. 2. 1824; Hook. f., Fl. Brit. India 4: 683. 1885; Haines, Bot. Bihar Orissa 749. 1922 (Repr. ed., 2: 786. 1961).

Fl. & Fr.: October - December.

Distrib.: Palamau.

Leucas stricta Heyne *ex* Benth. in Wallich, Pl. Asiat. Rar. 1: 61. 1830; Hook. *f.*, Fl. Brit. India 4: 688. 1885; Haines, Bot. Bihar Orissa 750. 1922 (Repr. ed., 2: 786. 1961).

Fl. & Fr.: August - November.

Distrib.: Singhbhum.

Leucas urticaefolia (Vahl) R. Br., Prodr. 504. 1810; Hook. *f.*, Fl. Brit. India 4: 680. 1885; Haines, Bot. Bihar Orissa 747. 1922 (Repr. ed., 2: 784. 1961). *Phlomis urticaefolia* Vahl, Symb. Bot. 3: 76. 1794.

Fl. & Fr.: November - March.

Distrib.: Bhagalpur, Patna.

MENTHA L.

Mentha piperita L., Sp. Pl. 576. 1753; Hook. *f.*, Fl. Brit. India 4: 647. 1885.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh.

Mentha spicata L., Sp. Pl. 576. 1753. - *Pudina*.

Fl. & Fr.: July - June.

Distrib.: Cultivated.

Mentha viridis L., Sp. Pl. 576. 1753; Hook. *f.*, Fl. Brit. India 4: 647. 1885; Haines, Bot. Bihar Orissa 741. 1922 (Repr. ed., 2: 778. 1961).

Fl. & Fr.: August - November.

Distrib.: Darbhanga.

MICROMERIA Benth., *nom. cons.*

Micromeria biflora (Buch.-Ham. *ex* D. Don) Benth., Labiat. Gen. Spec. 378. 1834; Hook. *f.*, Fl. Brit. India 4: 650. 1885; Haines, Bot. Bihar

Orissa 743. 1922 (Repr. ed., 2: 779. 1961). *Thymus biflorus* Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 112. 1825.

Fl. & Fr.: April - June.

Distrib.: Palamau.

Micromeria capitellata Benth. in DC., Prodr. 12: 218. 1848; Hook. f., Fl. Brit. India 4: 649. 1885; Haines, Bot. Bihar Orissa 742. 1922 (Repr. ed., 2: 779. 1961).

Fl. & Fr.: March - April.

Distrib.: Hazaribagh.

NEPETA L.

Nepeta graciliflora Benth. in Wallich, Pl. Asiat. Rar. 1: 65. 1830; Hook. f., Fl. Brit. India 4: 663. 1885.

Fl. & Fr.: January - March.

Distrib.: Chota Nagpur.

Nepeta hindostana (Heyne ex Roth) Haines, Bot. Bihar Orissa 744. 1922 (Repr. ed., 2: 781. 1961). *Glechoma hindostana* Heyne ex Roth, Nov. Pl. Sp. 258. 1821. *Nepeta ruderalis* Buch.-Ham. ex Benth. in Wallich, Pl. Asiat. Rar. 1: 64. 1830; Hook. f., Fl. Brit. India 4: 661. 1885.

Fl. & Fr.: August - March.

Distrib.: Darbhanga, Hazaribagh, West Champaran.

OCIMUM L.

Ocimum basilicum L., Sp. Pl. 597. 1753; Hook. f., Fl. Brit. India 4: 608. 1885; Haines, Bot. Bihar Orissa 728. 1922 (Repr. ed., 2: 763. 1961). *O. americanum* L., Cent. Pl. 1: 15. 1755. *O. thyrsoiflorum* L., Mant. Pl. 84. 1767. *O. basilicum* L. var. *thyrsoiflorum* (L.) Benth. in Wallich, Pl. Asiat. Rar. 2: 13. 1830. - *Ban tulsī*, *Ram tulsī*.

Fl. & Fr.: August - February.

Distrib.: East Champaran, Gaya, Palamau, Muzaffarpur, Sahibganj, West Champaran.

Ocimum canum Sims in Curtis, Bot. Mag. 51. t. 2452. 1824; Hook. f., Fl. Brit. India 4: 607. 1885. *O. americanum auct. plur. non L.*, 1755. *Ban tulsí.*

Fl. & Fr.: August - March.

Distrib.: Bhagalpur, Hazaribagh, Koderma, Muzaffarpur, Palamau, Patna, Singhbhum, West Champaran.

Ocimum gratissimum L., Sp. Pl. 1197. 1753; Hook. f., Fl. Brit. India 4: 608. 1885; Haines, Bot. Bihar Orissa 728. 1922 (Repr. ed., 2: 763. 1961).

Fl. & Fr.: August - March.

Distrib.: Hazaribagh, Koderma, Palamau, Santal Pargana.

Ocimum tenuiflorum L., Sp. Pl. 597. 1753; Keng in Steenis, Fl. Malesiana ser. 1, 8: 378. 1978. *O. sanctum* L., Mant. Pl. 85. 1767; Hook. f., Fl. Brit. India 4: 609. 1885; Haines, Bot. Bihar Orissa 729. 1922 (Repr. ed., 2: 764. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Grown in every Hindu house throughout the state.

ORTHOSIPHON Benth.

Orthosiphon aristatus (Blume) Miq., Fl. Ind. Bot. 2: 943. 1858. *Ocimum aristatum* Blume, Bijdr. 833. 1826. *Orthosiphon stamineus* Benth. in Wallich, Pl. Asiat. Rar. 2: 15. 1831; Hook. f., Fl. Brit. India 4: 615. 1885. *O. grandiflorus* Haines, Bot. Bihar Orissa 731. 1922 (Repr. ed., 2: 767. 1961).

Fl.: August - September.

Distrib.: Singhbhum (Haines, l.c.).

Orthosiphon pallidus Royle ex Benth. in Hook., Bot. Misc. 3: 370. 1833 & Labiat. Gen. Spec. 708. 1835; Hook. f., Fl. Brit. India 4: 613. 1885; Haines, Bot. Bihar Orissa 730. 1922 (Repr. ed., 2: 765. 1961).

Fl. & Fr.: July - November.

Distrib.: Koderma, Palamau, Santal Pargana.

Orthosiphon rubicundus (D. Don) Benth. in Wallich, Pl. Asiat. Rar. 2: 141. 1831; Hook. f., Fl. Brit. India 4: 614. 1885; Haines, Bot. Bihar Orissa 730. 1922 (Repr. ed., 2: 766. 1961). *Plectranthus rubicundus* D. Don, Prodr. Fl. Nepal. 116. 1825, "rubicunda".

Fl. & Fr.: April - August.

Distrib.: Palamau.

Orthosiphon thymiflorus (Roth) V.D. Sleerson in Reinwardtia 5: 42. 1959. *Ocimum thymiflorum* Roth, Nov. Pl. Sp. 269. 1821. *Orthosiphon glabratus* Benth. in Wallich, Pl. Asiat. Rar. 2: 14. 1830; Haines, Bot. Bihar Orissa 731. 1922 (Repr. ed., 2: 766. 1961). *O. tomentosus* Benth. in Wallich, Pl. Asiat. Rar. 2: 14. 1830; Hook. f., Fl. Brit. India 4: 613. 1885, incl. var. *rubiginosa* C.B. Clarke ex Hook. f., Fl. Brit. India 4: 614. 1885.

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur.

PERILLA L.

Perilla frutescens (L.) Britt. in Mem. Torrey Bot. Club 5: 277. 1894. *Ocimum frutescens* L., Sp. Pl. 597. 1753, *Perilla ocimoides auct. non* L., 1764; Hook. f., Fl. Brit. India 4: 646. 1885; Haines, Bot. Bihar Orissa 742. 1922 (Repr. ed., 2: 778. 1961).

Fl. & Fr.: October - December.

Distrib.: West Champaran.

PLECTRANTHUS L'Hérit., nom. cons.

Plectranthus japonicus (Burm. f.) Koidz. in Bot. Mag. Tokyo 43: 386. 1929. *Scutellaria japonica* Burm. f., Fl. Ind. 130. 1768. *Plectranthus coetsa* Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 117. 1825; Hook. f., Fl. Brit. India 4: 619. 1885. *P. menthoides* Benth. in Wallich, Pl. Asiat. Rar. 2: 17. 1830; Hook. f., Fl. Brit. India 4: 620. 1885; Haines, Bot. Bihar Orissa 734. 1922 (Repr. ed., 2: 770. 1961).

Fl. & Fr.: October - December.

Distrib.: Palamau.

Plectranthus lophanthoides (Buch.-Ham. ex D. Don) Grierson & Long in Notes Roy. Bot. Gard. Edinb. 40: 177. 1982. *Hyssopus lophanthoides* Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 110. 1825. *Plectranthus striatus* Benth. in Wallich, Pl. Asiat. Rar. 2: 17. 1831; Hook. f., Fl. Brit. India 4: 618. 1885.

Fl. & Fr.: August - November.

Distrib.: Palamau.

Plectranthus mollis (Aiton) Spreng., Syst. Veg. 2: 690. 1825. *Ocimum molle* Aiton, Hortus Kew. ed. 1. 2: 322. 1789. *Plectranthus incanus* Link, Enum. Hort. Berol. alt. 2: 120. 1822; Hook. f., Fl. Brit. India 4: 621. 1885; Haines, Bot. Bihar Orissa 735. 1922 (Repr. ed., 2: 771. 1961).

Fl. & Fr.: August - December.

Distrib.: Gaya, Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

Plectranthus rugosus Benth. in Wallich, Pl. Asiat. Rar. 2: 17. 1830; Hook. f., Fl. Brit. India 4: 620. 1885.

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

Plectranthus ternifolius D. Don, Prodr. Fl. Nepal. 117. 1825; Hook. f., Fl. Brit. India 4: 621. 1885; Haines, Bot. Bihar Orissa 734. 1922 (Repr. ed., 2: 770. 1961).

Fl. & Fr.: November - February.

Distrib.: Hazaribagh.

POGOSTEMON Desf.

Pogostemon andersoni (Prain) Panigrahi in Phytologia 32: 479. 1976. *Dysophylla andersoni* Prain in J. Asiat. Soc. Bengal 59: 298. 1891; Haines, Bot. Bihar Orissa 738. 1922 (Repr. ed., 2: 774. 1961).

Fl. & Fr.: March - June.

Distrib.: Singhbhum (Haines, l.c.).

Pogostemon auricularius (L.) Hassk. in Tijdsch. Nat. Geschied. 10: 127. 1843. *Mentha auricularia* L., Mant. Pl. 81. 1767. *Dysophylla auricularia* (L.) Blume, Bijdr. 826. 1826; Hook. f., Fl. Brit. India 4: 638. 1885; Haines, Bot. Bihar Orissa 738. 1922 (Repr. ed., 2: 774. 1961).

Fl. & Fr.: September - November.

Distrib.: Palamau (Haines, *l.c.*).

Pogostemon benghalense (Burm. f.) Kuntze, Revis. Gen. Pl. 2: 529. 1891. *Origanum benghalense* Burm. f., Fl. Ind. 128. t. 38. f. 3. 1768. *Pogostemon plectranthoides* Desf. in Ann. Mus. Nat. Hist. Paris 2: 155. t. 6. 1803; Hook. f., Fl. Brit. India 4: 632. 1885; Haines, Bot. Bihar Orissa 737. 1922 (Repr. ed., 2: 773. 1961).

Fl. & Fr.: October - April.

Distrib.: Giridih, Hazaribagh, Palamau, Purnia, Singhbhum, West Champaran.

Pogostemon crassicaulis (Benth.) J.R. Press in Bull. Brit. Mus. (Nat. Hist.) Bot. 10(1): 73. 1982. *Dysophylla crassicaulis* Benth. in Wallich, Pl. Asiat. Rar. 1: 30. 1830; Hook. f., Fl. Brit. India 4: 640. 1885; Haines, Bot. Bihar Orissa 740. 1922 (Repr. ed., 2: 776. 1961).

Fl. & Fr.: November - January.

Distrib.: Purnia.

Pogostemon cruciata (Benth.) Kuntze, Revis. Gen. Pl. 2: 530. 1891. *Dysophylla cruciata* Benth. in Wallich, Pl. Asiat. Rar. 1: 30. 1830; Hook. f., Fl. Brit. India 4: 639. 1885; Haines, Bot. Bihar Orissa 739. 1922 (Repr. ed., 2: 775. 1961). *Eusteralis cruciata* (Benth.) Panigrahi in Phytologia 32(6): 478. 1976.

Fl. & Fr.: October - March.

Distrib.: Champaran, Purnia, Ranchi, Singhbhum (Haines, *l.c.*).

Pogostemon heyneanthus Benth. in Wallich, Pl. Asiat. Rar. 2: 16. 1831. *P. patchouli auct. non* Pellet, 1845; Hook. f., Fl. Brit. India 4: 633. 1885, *excl. var. suavis* Hook. f.

Fl. & Fr.: April - June.

Distrib.: Ranchi.

Pogostemon pentagonus (C.B. Clarke ex Hook. f.) Kuntze, Revis. Gen. Pl. 2: 530. 1891. *Dysophylla pentagona* C.B. Clarke ex Hook. f., Fl. Brit. India 4: 641. 1885; Haines, Bot. Bihar Orissa 740. 1922 (Repr. ed., 2: 776. 1961).

Fl. & Fr.: October - November.

Distrib.: Singhbhum (Hains, l.c.).

Pogostemon pubescens Benth. in DC., Prodr. 12: 152. 1848. *P. parviflorus* Benth. in Wallich, Pl. Asiat. Rar. 1: 31. 1830, p.p.; Hook. f., Fl. Brit. India 4: 632. 1885, p.p.; Haines, Bot. Bihar Orissa 738. 1922 (Repr. ed., 2: 774. 1961).

Fl. & Fr.: February - April.

Distrib.: Palamau.

Pogostemon quadrifolius (Benth.) Kuntze, Revis. Gen. Pl. 2: 530. 1891. *Dysophylla quadrifolia* Benth. in Wallich, Pl. Asiat. Rar. 1: 30. 1830; Hook. f., Fl. Brit. India 4: 639. 1885; Haines, Bot. Bihar Orissa 739. 1922 (Repr. ed., 2: 775. 1961).

Fl. & Fr.: December - April.

Distrib.: Singhbhum.

Pogostemon stellatus (Lour.) Kuntze, Revis. Gen. Pl. 2: 530. 1891, p.p. excl. syn. *Dysophylla crassicaulis* Benth. *Mentha stellata* Lour., Fl. Cochinch. 2: 361. 1790, non Buch.-Ham. ex Roxb., 1832. *Dysophylla verticillata* Benth. in Wallich, Pl. Asiat. Rar. 1: 30. 1830; Hook. f., Fl. Brit. India 4: 639. 1885; Haines, Bot. Bihar Orissa 739. 1922 (Repr. ed., 2: 775. 1961). *D. stellata* (Lour.) Benth. in Wallich, Pl. Asiat. Rar. 1: 30. 1830, p.p.; Hook. f., Fl. Brit. India 4: 640. 1885.

Fl. & Fr.: November - December.

Distrib.: Gaya, Purnia.

SALVIA L.

Salvia plebeia R. Br., Prodr. 501. 1810; Hook. f., Fl. Brit. India 4: 655. 1885; Haines, Bot. Bihar Orissa 744. 1922 (Repr. ed., 2: 780. 1961).

Fl. & Fr.: December - March.

Distrib.: Muzaffarpur, Palamau, Patna, Purnia, Singhbhum, West Champaran.

SCUTELLARIA L.

Scutellaria discolor Wallich *ex* Benth. in Wallich, Pl. Asiat. Rar. 1: 66. 1830; Hook. *f.*, Fl. Brit. India 4: 667. 1885; Haines, Bot. Bihar Orissa 745. 1922 (Repr. ed., 2: 782. 1961).

Fl. & Fr.: September - January.

Distrib.: Palamau.

Scutellaria repens Buch.-Ham. *ex* D. Don. Prodr. Fl. Nepal. 110. 1825; Hook. *f.*, Fl. Brit. India 4: 669. 1885.

Fl. & Fr.: October - December.

Distrib.: West Champaran.

PLANTAGINACEAE

PLANTAGO L.

Plantago asiatica L., Sp. Pl. 113. 1753. *P. major auct. non* L., 1753; Hook. *f.*, Fl. Brit. India 4: 705. 1885, *p.p.* - *Isabgol*.

Fl. & Fr.: Almost throughout the year.

Distrib.: Bhagalpur (Varma, Fl. Bhagalpur 316. 1981).

Plantago exigua Juss. *ex* Murray in Comm. Soc. Reg. Sci. Gotting. 1. 1778: 94. t. 5. 1779. *P. pumila* L. *f.*, Suppl. Pl. 125. 1782; Hook. *f.*, Fl. Brit. India 4: 707. 1885.

Fl. & Fr.: March - April.

Distrib.: Bhagalpur (Varma, Fl. Bhagalpur 317. 1981).

Plantago ovata Forssk., Fl. Aegypt.-Arab. 31. 1775; Hook. *f.*, Fl. Brit. India 4: 707. 1885.

Fl. & Fr.: January - March.

Distrib.: Bhagalpur (Varma, Fl. Bhagalpur 317. 1981), Patna (Singh, Fl. Patna 290. 1986).

NYCTAGINACEAE

BOERHAVIA L.

Boerhavia diffusa L., Sp. Pl. 3. 1753; Haines, Bot. Bihar Orissa 757. 1924 (Repr. ed., 2: 795. 1961). *B. repens* L. var. *diffusa* (L.) Hook. f., Fl. Brit. India 4: 709. 1885.

Fl. & Fr.: August - March.

Distrib.: Bhagalpur, East Champaran, Hazaribagh, Koderma, Munger, Patna, Sahibganj, West Champaran.

Boerhavia procumbens Banks ex Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 146. 1820. *B. repens* L. var. *procumbens* (Banks ex Roxb.) Hook. f., Fl. Brit. India 4: 709. 1885.

Fl. & Fr.: September - April.

Distrib.: West Champaran.

Boerhavia repens L., Sp. Pl. 3. 1753; Hook. f., Fl. Brit. India 4: 709. 1885, excl. var. *diffusa* & *procumbens*.

Fl. & Fr.: August - January.

Distrib.: West Champaran.

BOUGAINVILLEA Commerson ex Juss., nom. cons.

Bougainvillea glabra Choisy in DC., Prodr. 13(2): 437. 1849; Haines, Bot. Bihar Orissa 756. 1924 (Repr. ed., 2: 794. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated in gardens.

Bougainvillea spectabilis Willd., Sp. Pl. 2: 348. 1799; Haines, Bot. Bihar Orissa 756. 1924 (Repr. ed., 2: 794. 1961).

Fl. & Fr.: February - April.

Distrib.: Cultivated in gardens.

COMMICARPUS Standl.

Commicarpus chinensis (L.) Heimerl in Engler & Prantl, Nat. Pflanzenfam. ed. 2: 16C: 117. 1934. *Valeriana chinensis* L., Sp. Pl. 33. 1753. *Boerhavia repanda* Willd., Sp. Pl. 1: 22. 1797; Hook. f., Fl. Brit. India 4: 709. 1885; Haines, Bot. Bihar Orissa 757. 1924 (Repr. ed., 2: 795. 1961).

Fl. & Fr.: August - April.

Distrib.: Munger, Patna.

MIRABILIS L.

Mirabilis jalapa L., Sp. Pl. 177. 1753; Haines, Bot. Bihar Orissa 756. 1924 (Repr. ed., 2: 794. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated in gardens.

Mirabilis longifolia L., Sp. Pl. 177. 1753; Haines, Bot. Bihar Orissa 756. 1924 (Repr. ed., 2: 794. 1961).

Fl.: Throughout the year.

Distrib.: Cultivated in gardens.

AMARANTHACEAE

ACHYRANTHES L.

Achyranthes aspera L., Sp. Pl. 204. 1753; Hook. f., Fl. Brit. India 4: 730. 1885; Haines, Bot. Bihar Orissa 767. 1924 (Repr. ed., 2: 805. 1961).
Chichdi, Chirchira, Latjira.

var. **argentea** (Thwaites) Hook. f., Fl. Brit. India 4: 730. 1885.
Achyranthes argentea Thwaites, Enum. Pl. Zeyl. 249. 1861.

Fl. & Fr.: August - February.

Distrib.: Chota Nagpur.

var. **aspera**

Fl. & Fr.: August - March.

Distrib.: Throughout the state.

var. **porphyristachya** (Wallich ex Moq.) Hook. *f.*, Fl. Brit. India 4: 730. 1885; Haines, Bot. Bihar Orissa 767. 1924 (Repr. ed., 2: 806. 1961). *Achyranthes porphyristachya* Wallich ex Moq. in DC., Prodr. 13(2): 316. 1849.

Fl. & Fr.: August - January.

Distrib.: Bhagalpur, Gumla, Palamau, Patna, Purnia, West Champaran.

Achyranthes bidentata Blume, Bijdr. 545. 1826; Hook. *f.*, Fl. Brit. India 4: 730. 1885; Haines, Bot. Bihar Orissa 768. 1924 (Repr. ed., 2: 806. 1961).

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Palamau.

AERVA Forssk., *nom. cons.*

Aerva lanata (L.) Juss. ex Schult., Syst. Veg. 5: 564. 1819; Hook. *f.*, Fl. Brit. India 4: 728. 1885; Haines, Bot. Bihar Orissa 766. 1924 (Repr. ed., 2: 804. 1961). *Achyranthes lanata* L., Sp. Pl. 204. 1753.

Fl. & Fr.: November - March.

Distrib.: Hazaribagh, Lohardaga, Palamau, Patna.

Aerva sanguinolenta (L.) Blume, Bijdr. 547. 1826. *Achyranthes sanguinolenta* L., Sp. Pl. ed. 2. 294. 1762. *A. scandens* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 503. 1824. *Aerva scandens* (Roxb.) Wallich ex Moq. in DC., Prodr. 13(2): 302. 1849; Hook. *f.*, Fl. Brit. India 4: 727. 1885; Haines, Bot. Bihar Orissa 765. 1924 (Repr. ed., 2: 804. 1961).

Fl. & Fr.: October - May.

Distrib.: Hazaribagh, Munger, Palamau, Patna, Ranchi, Singhbhum, West Champaran.

ALLMANIA R. Br. ex Wight

Allmania nodiflora (L.) R. Br. ex Wight in Hook., J. Bot. 1: 226. t. 128. 1834; Hook. f., Fl. Brit. India 4: 716. 1885; Haines, Bot. Bihar Orissa 759. 1924 (Repr. ed., 2: 797. 1961). *Celosia nodiflora* L., Sp. Pl. 205. 1753. *Allmania albida* R. Br. ex Hook. f., Fl. Brit. India 4: 717. 1885.

Fl. & Fr.: July - November.

Distrib.: Gaya, Hazaribagh, Koderma, Palamau, Ranchi.

ALTERNANTHERA Forssk.

Alternanthera achyrantha R. Br., Prodr. 417. 1810. *A. echinata* Sm. in Rees, Cyclop. Suppl. n. 10. 1808.

Fl. & Fr.: October - March.

Distrib.: Patna, Purnia.

Alternanthera paronychioides St. Hill., Voy. Distr. Diam. 2: 439. 1833; Mears & Gills in J. Arnold Arb. 58: 62. 1977.

Fl. & Fr.: Throughout the year.

Distrib.: Chota Nagpur.

Alternanthera philoxeroides (Mart.) Griseb. in Abh. Koen. Ges. Wiss. Goett. Phys. Cl. 24: 36. 1879. *Bucholzia philoxeroides* Mart., Beitr. Amarantac. 107. 1825 & in Nova Acta Leop. 13: 315. 1826.

Fl. & Fr.: August - October.

Distrib.: Palamau.

Alternanthera pungens Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. 2: 206. 1818. *Achyranthes repens* L., Sp. Pl. 205. 1753. *Illecebrum achyrantha* L., Sp. Pl. ed. 2. 299. 1762. *Alternanthera repens* (L.) Link, Enum. Hort. Berol. alt. 1: 154. 1821, non J. F. Gmelin, 1791.

Fl. & Fr.: September - December.

Distrib.: Palamau, Patna.

Alternanthera sessilis (L.) R. Br. ex DC., Cat. Pl. Horti. Monsp. 4: 77. 1813; Hook. f., Fl. Brit. India 4: 731. 1885; Haines, Bot. Bihar Orissa

768. 1924 (Repr. ed., 2: 806. 1961) *Gomphrena sessilis* L., Sp. Pl. 225. 1753. *Alternanthera nodiflora* R. Br., Prodr. 417. 1810; Hook. f., Fl. Brit. India 4: 732. 1885.

Fl. & Fr. : July - March.

Distrib. : Throughout the state.

Alternanthera tenella Colla in Mem. R. Acad. Sc. Torino 33: 131. t. 9. 1828. *Gomphrena ficoidea* L., Sp. Pl. 225. 1753. *Alternanthera ficoidea* (L.) R. Br. ex Roem. & Schult., Syst. Veg. 5: 555. 1819, non P. Beauv., 1818.

Fl. & Fr. : December - February.

Distrib. : Chota Nagpur.

AMARANTHUS L.

Amaranthus caudatus L., Sp. Pl. 990. 1753; Hook. f., Fl. Brit. India 4: 719. 1885; Haines, Bot. Bihar Orissa 761. 1924 (Repr. ed., 2: 799. 1961).

Fl. & Fr. : August - October.

Distrib. : Singhbhum.

Amaranthus hybridus L. subsp. *incurvatus* (Gren. & Godr.) Brenan var. *paniculatus* (L.) Mansf. in Die Kulturpfl. Beih 2: 54. 1959. *A. paniculatus* L., Sp. Pl. ed. 2. 1406. 1763; Hook. f., Fl. Brit. India 4: 718. 1885; Haines, Bot. Bihar Orissa 761. 1924 (Repr. ed., 2: 799. 1961).

Fl. & Fr. : August - December.

Distrib. : Bhagalpur, Santal Pargana.

Amaranthus lividus L., Sp. Pl. 990. 1753. *A. blitum* L., Sp. Pl. 990. 1753, *nom. conf.*; Hook. f., Fl. Brit. India 4: 721. 1885, *excl.* var. *sylvestris*; Haines, Bot. Bihar Orissa 764. 1924 (Repr. ed., 2: 802. 1961).

Fl. & Fr. : August - October.

Distrib. : Chota Nagpur.

Amaranthus spinosus L., Sp. Pl. 991. 1753; Hook. f., Fl. Brit. India 4: 718. 1885; Haines, Bot. Bihar Orissa 761. 1924 (Repr. ed., 2: 799. 1961).

Fl. & Fr. : Almost throughout the year.

Distrib. : Throughout the state.

Amaranthus tenuifolius Willd., Sp. Pl. 4: 381. 1805; Hook. *f.*, Fl. Brit. India 4: 722. 1885; Haines, Bot. Bihar Orissa 764. 1924 (Repr. ed., 2: 802. 1961).

Fl. & Fr. : April - June.

Distrib. : Patna.

Amaranthus tricolor L., Sp. Pl. 989. 1753. *A. tristis* L., Sp. Pl. 989. 1753. *A. mangostanus* L., Cent. Pl. 1: 32. 1755; Hook. *f.*, Fl. Brit. India 4: 720. 1885; Haines, Bot. Bihar Orissa 763. 1924 (Repr. ed., 2: 801. 1961). *A. polygamus* L., Cent. Pl. 1: 32. 1755; Hook. *f.*, Fl. Brit. India 4: 721. 1885; Haines, Bot. Bihar Orissa 764. 1924 (Repr. ed., 2: 802. 1961). *A. gangeticus* L., Syst. Nat. ed. 10. 2: 1268. 1759; Hook. *f.*, Fl. Brit. India 4: 719. 1885; Haines, Bot. Bihar Orissa 762. 1924 (Repr. ed., 2: 800. 1961).

Fl. & Fr. : August - February.

Distrib. : Gaya, Patna, Ranchi, Sahibganj, Singhbhum.

Amaranthus viridis L., Sp. Pl. ed. 2. 1405. 1763; Hook. *f.*, Fl. Brit. India 4: 720. 1885; Haines, Bot. Bihar Orissa 763. 1924 (Repr. ed., 2: 801. 1961). *A. gracilis* Desf., Tabl. Ecole Bot. 43. 1804. - *Jangli chaulai*.

Fl. & Fr. : August - May.

Distrib. : Darbhanga, Gaya, Palamau, Patna, Ranchi, West Champaran.

BOSIA L.

Bosia amherstiana Hook. *f.*, Fl. Brit. India 4: 716. 1885.

Distrib. : Chota Nagpur.

CELOSIA L.

Celosia argentea L., Sp. Pl. 205. 1753; Hook. *f.*, Fl. Brit. India 4: 714. 1885; Haines, Bot. Bihar Orissa 759. 1924 (Repr. ed., 2: 797. 1961). *C. cristata* L., Sp. Pl. 205. 1753; Hook. *f.*, Fl. Brit. India 4: 715. 1885;

Haines, Bot. Bihar Orissa 759. 1924 (Repr. ed., 2: 797. 1961). *C. coccinea* L., Sp. Pl. ed. 2. 297. 1762.

Fl. & Fr. : August - December.

Distrib. : Throughout the state.

CENTROSTACHYS Wallich

Centrostachys aquatica (R. Br.) Wallich ex Miq. in DC., Prodr. 13(2): 321. 1849. *Achyranthes aquatica* R. Br., Prodr. 417. 1810; Hook. f., Fl. Brit. India 4: 730. 1885; Haines, Bot. Bihar Orissa 767. 1924 (Repr. ed., 2: 805. 1961).

Fl. & Fr. : September - January.

Distrib. : Purnia (Haines, l.c.).

DEERINGIA R. Br.

Deeringia amaranthoides (Lam.) Merr., Bur. Sci. Publ. Manila 9: 247. 1917. *Achyranthes amaranthoides* Lam., Encycl. 1: 548. 1785. *Deeringia celosioides* R. Br., Prodr. 413. 1810; Hook. f., Fl. Brit. India 4: 714. 1885.

Fl. & Fr. : September - March.

Distrib. : Palamau, Purnia, West Champaran.

DIGERA Forssk.

Digera muricata (L.) Mart., Beitr. Amarantac. 77. n. 2. 1825 & in Nova Acta Leop. 13(1): 285. 1826. *Achyranthes muricata* L., Sp. Pl. ed. 2. 295. 1762. *A. alternifolia* L., Mant. Pl. 50. 1767. *Digera arvensis* Forssk., Fl. Aegypt.-Arab. 65. 1775; Hook. f., Fl. Brit. India 4: 717. 1885. *D. alternifolia* Aschers. in Schweinf., Beitr. Fl. Aethiop. 180. 1867; Haines, Bot. Bihar Orissa 760. 1924 (Repr. ed., 2: 798. 1961).

Fl. & Fr. : August - December.

Distrib. : Darbhanga, Hazaribagh, Patna, Singhbhum, West Champaran.

GOMPHRENA L.

Gomphrena celosioides Mart., Beitr. Amarantac. 93. 1825 & in Nova Acta Leop. 13(1): 301. 1826. *G. decumbens auct. non Jacq.*, 1804; Gamble, Fl. Madras 2: 1179. 1925.

Fl. & Fr. : July - December.

Distrib. : Hazaribagh, Patna, Purnia.

Gomphrena globosa L., Sp. Pl. 224. 1753; Hook. f., Fl. Brit. India 4: 732. 1885.

Fl. & Fr. : August - December.

Distrib. : Santal Pargana

IREFINE P. Br., nom. cons.

Iresine herbstii Hook. in Gard. Chron. 654, 1206. 1864.

Fl. & Fr. : July - September.

Distrib. : Ranchi.

NOTHOSAERVA Wight

Nothosaerva brachiata (L.) Wight, Icon. Pl. Ind. Orient. 6: 1. 1853; Hook. f., Fl. Brit. India 4: 726. 1885. *Achyranthes brachiata* L., Mant. Pl. 50. 1767. *Illecebrum brachiatum* (L.) L., Mant. Pl. 213. 1771. *Pseudanthus brachiatus* (L.) Wight, Icon. Pl. Ind. Orient. 5(2): 3. t. 1776. bis. 1852.

Fl. & Fr. : October - February.

Distrib. : Santal Pargana.

PSILOTRICHUM Blume

Psilotrichum ferrugineum (Roxb.) Moq. in DC., Prodr. 13(2): 279. 1849; Hook. f., Fl. Brit. India 4: 725. 1885. *Achyranthes ferruginea* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 502. 1824.

Fl. & Fr. : August - December.

Distrib. : Santal Pargana.

PUPALIA Juss., *nom. cons.*

Pupalia lappacea (L.) Juss., Ann. Mus. Hist. Nat. 2: 132. 1803; Hook. f., Fl. Brit. India 4: 724. 1885; Haines, Bot. Bihar Orissa 765. 1924 (Repr. ed., 2: 803. 1961). *Achyranthes lappacea* L., Sp. Pl. 204. 1753. *A. atropurpurea* Lam., Encycl. 1: 546. 1785. *Pupalia atropurpurea* (Lam.) Moq. in DC., Prodr. 13(2): 331. 1849; Hook. f., Fl. Brit. India 4: 723. 1885; Haines, Bot. Bihar Orissa 765. 1924 (Repr. ed., 2: 803. 1961).

Fl. & Fr. : September - December.

Distrib. : Hazaribagh, Palamau, Purnia, Santal Pargana.

TRICHURIELLA Bennet

Trichuriella monsoniae (L. f.) Bennet in Indian J. For. 8: 86. 1985. *Illecebrum monsoniae* L. f., Suppl. Pl. 161. 1782. *Celosia monsonia* Retz., Observ. Bot. 2: 13. 1781. *Aerva monsonia* (Retz.) Mart., Beitr. Amarantac. 83. 1825 & in Nova Acta Leop. 13(1): 291. 1826; Hook. f., Fl. Brit. India 4: 728. 1885; Haines, Bot. Bihar Orissa 766. 1924 (Repr. ed., 2: 804. 1961). *Trichurus monsoniae* (L. f.) C. Townsend in Kew Bull. 29(3): 466. 1974.

Fl. & Fr. : November - January.

Distrib. : Giridih, Hazaribagh.

CHENOPODIACEAE**ATRIPLEX** L.

Atriplex hortensis L., Sp. Pl. 1053. 1753; Hook. f., Fl. Brit. India 5: 6. 1886; Haines, Bot. Bihar Orissa 771. 1924 (Repr. ed., 2: 809. 1961).

Distrib. : Cultivated.

BETA L.

Beta vulgaris L., Sp. Pl. 222. 1753; Hook. f., Fl. Brit. India 5: 5. 1886; Haines, Bot. Bihar Orissa 770. 1924 (Repr. ed., 2: 808. 1961).

Distrib. : Cultivated.

CHENOPODIUM L.

Chenopodium album L, Sp. Pl. 219. 1753; Hook. *f.*, Fl. Brit. India 5: 3. 1886; Haines, Bot. Bihar Orissa 769. 1924 (Repr. ed., 2: 808. 1961).
- *Betua-sag*.

Fl. & Fr. : October - March.

Distrib. : Bhagalpur, Gaya, Hazaribagh, Palamau, Patna, West Champaran.

Chenopodium ambrosioides L., Sp. Pl. 219. 1753; Hook. *f.*, Fl. Brit. India 5: 4. 1886; Haines, Bot. Bihar Orissa 770. 1924 (Repr. ed., 2: 808. 1961).

Fl. & Fr. : April - August.

Distrib. : Darbhanga, Palamau, Purnia, Ranchi, West Champaran.

Chenopodium murale L., Sp. Pl. 219. 1753; Hook. *f.*, Fl. Brit. India 5: 4. 1886.

Fl. & Fr. : February - April.

Distrib. : Patna.

SPINACIA L.

Spinacia oleracea L., Sp. Pl. 1027. 1753; Hook. *f.*, Fl. Brit. India 5: 6. 1886; Haines, Bot. Bihar Orissa 770. 1924 (Repr. ed., 2: 809. 1961).

Distrib. : Cultivated.

BASELLACEAE**BASELLA L.**

Basella alba L., Sp. Pl. 272. 1753. *B. rubra* L., Sp. Pl. 272. 1753; Hook. *f.*, Fl. Brit. India 5: 20. 1886; Haines, Bot. Bihar Orissa 772. 1924 (Repr. ed., 2: 810. 1961).

Fl. & Fr. : March - December.

Distrib. : Bhagalpur, Palamau, Patna, West Champaran.

PHYTOLACCACEAE**RIVINA L.**

Rivina humilis L., Sp. Pl. 121. 1753. *R. laevis* L., Mant. Pl. 41. 1767; Hook. f., Fl. Brit. India 5: 21. 1886; Haines, Bot. Bihar Orissa 773. 1924 (Repr. ed., 2: 811. 1961). *R. orientalis* Moq. in DC., Prodr. 13(2): 12. 1849.

Fl. & Fr. : August - November.

Distrib. : Darbhanga, West Champaran.

POLYGONACEAE**ANTIGONON Endl.**

Antigonon leptopus Hook. & Arn., Bot. Beechey Voy. 308. t. 69. 1838; Haines, Bot. Bihar Orissa 783. 1924 (Repr. ed., 2: 821. 1961).

Fl. & Fr. : July - December.

Distrib. : Commonly Cultivated. Bhagalpur, Patna, Sasaram, West Champaran.

MUEHLENBECKIA Meisn., nom. cons.

Muehlenbeckia platyclada (F.v. Muell. ex Hook.) Meisn. in Bot. Zeit. 22: 313. 1865; Haines, Bot. Bihar Orissa 783. 1924 (Repr. ed., 2: 822. 1961). *Coccoloba platyclada* F.v. Muell. ex Hook. in Curtis, Bot. Mag. t. 5382. 1863.

Fl. & Fr. : July - December.

Distrib. : Cultivated in gardens. Bhagalpur, Patna.

POLYGONUM L.

Polygonum auriculatum Meisn., Monogr. Polyg. 59. t. 6. 1826. *P. chinense* var. *ovalifolium* Meisn. in Wallich, Pl. Asiat. Rar. 3: 60. 1832; Hook. f., Fl. Brit. India 5: 45. 1886; Haines, Bot. Bihar Orissa 781. 1924 (Repr. ed., 2: 819. 1961).

Fl. & Fr. : October - January.

Distrib. : Hazaribagh, Purnia.

Polygonum barbatum L., Sp. Pl. 362. 1753; Hook. *f.*, Fl. Brit. India 5: 37. 1886; Haines, Bot. Bihar Orissa 777. 1924 (Repr. ed., 2: 816. 1961). *P. stagnium* Buch.-Ham. ex Meisn. in Wallich, Pl. Asiat. Rar. 3: 56. 1832; Hook. *f.*, Fl. Brit. India 5: 37. 1886; Haines, Bot. Bihar Orissa 778. 1924 (Repr. ed., 2: 816. 1961).

subsp. **barbatum**

Fl. & Fr. : October - March.

Distrib. : East Champaran, Hazaribagh, Lohardaga, Muzaffarpur, Palamau, Patna, Purnia, Ranchi, Saran, West Champaran.

subsp. **gracile** Danser in Bull. Jard. Bot. Buit. ser. 3, 8: 146. f. 2. 1927. *Polygonum barbatum* L. var. *gracile* (Danser) Steward, Contr. Gray Herb. 5(88): 55. 1930. *P. flaccidum* Roxb., Fl. Ind. 2: 291. 1832, non Meisn., 1856.

Fl. & Fr. : October - November.

Distrib. : Chota Nagpur.

Polygonum dichotomum Blume, Bijdr. 529 & 535. 1826. *P. pedunculare* Meisn. in Wallich, Pl. Asiat. Rar. 3: 58. 1832; Hook. *f.*, Fl. Brit. India 5: 48. 1886; Haines, Bot. Bihar Orissa 779. 1924 (Repr. ed., 2: 818. 1961). *P. strigosum* R. Br. var. *pedunculare* (Meisn.) Steward in Contr. Gray Herb. 5(88): 91. 1930.

Fl. & Fr. : September - November.

Distrib. : Palamau.

Polygonum glabrum Willd., Sp. Pl. 2: 447. 1799; Hook. *f.*, Fl. Brit. India 5: 34. 1886; Haines, Bot. Bihar Orissa 776. 1924 (Repr. ed., 2: 814. 1961).

Fl. & Fr. : September - February.

Distrib. : Throughout the state.

Polygonum hydropiper L., Sp. Pl. 361. 1753; Hook. *f.*, Fl. Brit. India 5: 39. 1886; Haines, Bot. Bihar Orissa 779. 1924 (Repr. ed., 2: 817. 1961).

var. **flaccidum** (Meisn.) Steward in Contrib. Gray Herb. 88: 59. 1930. *Polygonum flaccidum* Meisn. in DC., Prodr. 14(1): 107. 1856; Hook. f., Fl. Brit. India 5: 39. 1886; Haines, Bot. Bihar Orissa 778. 1924 (Repr. ed., 2: 817. 1961).

Fl. & Fr. : September - January.

Distrib. : Gaya, Palamau, Purnia, Ranchi, Singhbhum, West Champaran.

var. **hydropiper**

Fl. & Fr. : May - February.

Distrib. : Darbhanga, Hazaribagh, Palamau, Purnia, Ranchi, Singhbhum, West Champaran.

Polygonum lapathifolium L. var. **lanatum** (Roxb.) Steward in Contr. Gray Herb. 5(88): 46. 1930. *P. lanatum* Roxb., Fl. Ind. 2: 285. 1832. *P. lanigerum auct. non R. Br.*, 1810: Hook. f., Fl. Brit. India 5: 35. 1886; Haines, Bot. Bihar Orissa 776. 1924 (Repr. ed., 2: 815. 1961).

Fl. & Fr. : September - November.

Distrib. : Patna, Purnia, West Champaran.

Polygonum limbatum Meisn. in DC., Prodr. 14(1): 123. 1856; Hook. f., Fl. Brit. India 5: 30. 1886; Haines, Bot. Bihar Orissa 776. 1924 (Repr. ed., 2: 814. 1961).

Fl. & Fr. : October - June.

Distrib. : Palamau, Purnia, West Champaran.

Polygonum minus Huds., Fl. Angl. ed. 1. 148. 1762; Hook. f., Fl. Brit. India 5: 36. 1886, *p.p.*; Haines, Bot. Bihar Orissa 777. 1924 (Repr. ed., 2: 815. 1961).

Fl. & Fr. : November - February.

Distrib. : Purnia.

Polygonum nepalense Meisn., Monogr. Polyg. 84. t. 7. f. 2. 1826. *P. alatum* Buch.-Ham. ex Spreng., Syst. Veg. 154. 1827; Hook. f., Fl. Brit. India 5: 41. 1886; Haines, Bot. Bihar Orissa 780. 1924 (Repr. ed., 2: 819. 1961).

Fl. & Fr. : September - March.

Distrib. : Hazaribagh.

Polygonum orientale L., Sp. Pl. 362. 1753; Hook. *f.*, Fl. Brit. India 5: 30. 1886; Haines, Bot. Bihar Orissa 775. 1924 (Repr. ed., 2: 814. 1961).

Fl. & Fr. : August - October.

Distrib. : Champaran, Purnia, Santal Pargana.

Polygonum plebeium R. Br., Prodr. 420. 1810, "*plebejum*"; Hook. *f.*, Fl. Brit. India 5: 27. 1886; Haines, Bot. Bihar Orissa 775. 1924 (Repr. ed., 2: 813. 1961).

var. **brevifolia** Hook. *f.*, Fl. Brit. India 5: 28. 1886; Haines, Bot. Bihar Orissa 775. 1924 (Repr. ed., 2: 814. 1961).

Fl. & Fr. : February - May.

Distrib. : Chota Nagpur (Haines, *l.c.*).

var. **effusa** (Meisn.) Hook. *f.*, Fl. Brit. India 5: 28. 1886; Haines, Bot. Bihar Orissa 775. 1924 (Repr. ed., 2: 813. 1961). *Polygonum effusum* Meisn. in DC., Prodr. 14(1): 93. 1856.

Fl. & Fr. : December - May.

Distrib. : Throughout the state.

var. **griffithii** Hook. *f.*, Fl. Brit. India 5: 29. 1886; Haines, Bot. Bihar Orissa 775. 1924 (Repr. ed., 2: 814. 1961).

Fl. & Fr. : December - April.

Distrib. : Bihar (Haines, *l.c.*).

var. **indica** (Heyne ex Roth) Hook. *f.*, Fl. Brit. India 5: 28. 1886; Haines, Bot. Bihar Orissa 775. 1924 (Repr. ed., 2: 814. 1961). *Polygonum indicum* Heyne ex Roth, Nov. Pl. Sp. 208. 1821.

Fl. & Fr. : November - February.

Distrib. : Singhbhum.

var. plebetum*Fl. & Fr.* : December - May.*Distrib.* : Throughout the state.**Polygonum praetermissum** Hook. *f.*, Fl. Brit. India 5: 47. 1886; Haines, Bot. Bihar Orissa 779. 1924 (Repr. ed., 2: 817. 1961).*Fl.*: December - January.*Distrib.*: North Purnia (Haines, *l.c.*).**Polygonum serrulatum** Lag., Gen. Sp. Pl. 14. 1816; Hook. *f.*, Fl. Brit. India 5: 38. 1886; Haines, Bot. Bihar Orissa 777. 1924 (Repr. ed., 2: 816. 1961).*Fl. & Fr.*: September - May.*Distrib.*: Palamau, Singhbhum, West Champaran.**Polygonum strigosum** R. Br., Prodr. 420. 1810; Hook. *f.*, Fl. Brit. India 5: 47. 1886; Haines, Bot. Bihar Orissa 780. 1924 (Repr. ed., 2: 818. 1961).*Fl.*: July - November.*Distrib.*: Palamau (Haines, *l.c.*).**RUMEX L.****Rumex dentatus** L. subsp. **klotzschianus** (Meisn.) Rchb. *f.*, Beih. Bot. Centralb. 49: 19. 1932 & in Candollea 12: 119. 1949. *Rumex klotzschianus* Meisn. in DC., Prodr. 14(1): 57. 1856. *R. dentatus auct. non L.*, 1771; Hook. *f.*, Fl. Brit. India 5: 59. 1886; Haines, Bot. Bihar Orissa 782. 1924 (Repr. ed., 2: 820. 1961).*Fl. & Fr.*: February - April.*Distrib.*: Bhagalpur, Palamau, Patna, West Champaran.**Rumex maritimus** L., Sp. Pl. 335. 1753; Hook. *f.*, Fl. Brit. India 5: 59. 1886; Haines, Bot. Bihar Orissa 781. 1924 (Repr. ed., 2: 820. 1961).*Fl. & Fr.*: November - March.*Distrib.*: Santal Pargana.

Rumex nepalensis Spreng., Syst. Veg. 2: 159. 1825; Hook. *f.*, Fl. Brit. India 5: 60. 1886.

Fl. & Fr.: December - March.

Distrib.: Santal Pargana.

Rumex nigricans Hook. *f.*, Fl. Brit. India 5: 59. 1886; Haines, Bot. Bihar Orissa 782. 1924 (Repr. ed., 2: 820. 1961).

Fl. & Fr.: August - October.

Distrib.: Purnia.

Rumex orientalis Bernh. ex Schult. *f.* in Roem. & Schult., Syst. Veg. 1: 1433. 1830; Hook. *f.*, Fl. Brit. India 5: 58. 1886.

Fl. & Fr.: December - February.

Distrib.: Patna.

Rumex vesicarius L., Sp. Pl. 336. 1753; Hook. *f.*, Fl. Brit. India 5: 61. 1886; Haines, Bot. Bihar Orissa 782. 1924 (Repr. ed., 2: 821. 1961).

Fl. & Fr.: January - March.

Distrib.: Chota Nagpur, Purnia, West Champaran.

ARISTOLOCHIACEAE

ARISTOLOCHIA L.

Aristolochia bracteolata Lam., Encycl. 1: 258. 1783. *A. bracteata* Retz., Observ. Bot. 5: 29. 1788; Hook. *f.*, Fl. Brit. India 5: 75. 1886; Haines, Bot. Bihar Orissa 785. 1924 (Repr. ed., 2: 823. 1961).

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

Aristolochia indica L., Sp. Pl. 960. 1753; Hook. *f.*, Fl. Brit. India 5: 75. 1886; Haines, Bot. Bihar Orissa 785. 1924 (Repr. ed., 2: 824. 1961).
A. lanceolata Wight, Icon. Pl. Ind. Orient. 5. t. 1858. 1852.

Fl. & Fr.: June - March.

Distrib.: Bhagalpur, Gaya, Patna, Santal Pargana, West Champaran.

Aristolochia littoralis D. Parodi in Anal. Soc. Ci. Argentina 5: 155. 1878. *A. elegans* Mast. in Gard. Chron. 2: 301. 1885.

Fl. & Fr.: June - December.

Distrib.: Bhagalpur (Varma, Fl. Bhagalpur 336. 1981), Patna (Singh, Fl. Patna 304. 1986).

Aristolochia macroura Gomez in Mem. Ac. Lisboa 3: dos Corresp. 77. 1812.

Fl.: January.

Distrib.: Deoghar.

Aristolochia tagala Cham. in Linnaea 7: 207. 1832; Haines, Bot. Bihar Orissa 786. 1924 (Repr. ed., 2: 824. 1961). *A. roxburghiana* Klotzsch in Monatsb. Berl. Akad. 596. 1859; Hook. f., Fl. Brit. India 5: 75. 1886.

Fl. & Fr.: April - March.

Distrib.: Purnia.

PIPERACEAE

PEPEROMIA Ruiz & Pav.

Peperomia dindigulensis Miq., Syst. Pip. 122. 1843; Hook. f., Fl. Brit. India 5: 98. 1886.

Fl. & Fr.: July - September.

Distrib.: Chota Nagpur.

Peperomia pellucida (L.) Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. 1: 64. 1816; Haines, Bot. Bihar Orissa 791. 1924 (Repr. ed., 3: 829. 1961). *Piper pellucidum* L., Sp. Pl. 30. 1753. *Peperomia exigua* (Blume) Miq., Syst. Pip. 77. 1843; Hook. f., Fl. Brit. India 5: 97. 1886.

Fl. & Fr.: September - December.

Distrib.: Purnia, West Champaran.

Peperomia tetraphylla (G. Forster) Hook. & Arn., Bot. Beechey Voy. 97. 1832. *Piper tetraphylla* G. Forster, Fl. Ins. Austr. 5. 1786. *Peperomia reflexa* A. Dietr., Sp. Pl. ed. 6. 180. 1831, *non* Kunth, 1815;

Hook. *f.*, Fl. Brit. India 5: 99. 1886; Haines, Bot. Bihar Orissa 790. 1924 (Repr. ed., 3: 829. 1961).

Fl. & Fr.: October - April.

Distrib.: Hazaribagh.

PIPER L.

Piper betle L., Sp. Pl. 28. 1753; Hook. *f.*, Fl. Brit. India 5: 85. 1886; Haines, Bot. Bihar Orissa 788. 1924 (Repr. ed., 3: 827. 1961). - *Pan.*

Distrib.: Cultivated.

Piper longum L., Sp. Pl. 29. 1753; Hook. *f.*, Fl. Brit. India 5: 83. 1886; Haines, Bot. Bihar Orissa 787. 1924 (Repr. ed., 3: 826. 1961).

Fl. & Fr.: August - January.

Distrib.: Sahibganj, West Champaran.

Piper nigrum L., Sp. Pl. 28. 1753; Hook. *f.*, Fl. Brit. India 5: 90. 1886; Haines, Bot. Bihar Orissa 789. 1924 (Repr. ed., 3: 827. 1961).

Distrib.: Purnia.

Piper peepuloides Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 158. 1820; Hook. *f.*, Fl. Brit. India 5: 83. 1886; Haines, Bot. Bihar Orissa 788. 1924 (Repr. ed., 3: 826. 1961).

Fl. & Fr.: October - March.

Distrib.: West Champaran.

LAURACEAE

ACTINODAPHNE Nees

Actinodaphne angustifolia Nees in Wallich, Pl. Asiat. Rar. 3: 31. 1832; Hook. *f.*, Fl. Brit. India 5: 152. 1886; Haines, Bot. Bihar Orissa 792. 1924 (Repr. ed., 3: 830. 1961).

Fl. & Fr.: August - May.

Distrib.: Bihar (Haines, *l.c.*).

BEILSCHMIEDIA Nees

Beilschmiedia dalzellii (Meisn.) Kosterm. in Reinwardtia 6: 282. 1962. *B. fugifolia* Nees var. *dalzellii* Meisn. in DC., Prodr. 15(1): 64. 1864; Hook. f., Fl. Brit. India 5: 122. 1886. *B. roxburghiana* Nees var. *dalzellii* Meisn. l.c.; Haines, Bot. Bihar Orissa 798. 1924 (Repr. ed., 3: 837. 1961).

Fl. & Fr.: March - May.

Distrib.: Santal Pargana (Haines, l.c.).

Beilschmiedia roxburghiana Nees in Wallich, Pl. Asiat. Rar. 2: 69. 1831; Hook. f., Fl. Brit. India 5: 121. 1886; Haines, Bot. Bihar Orissa 797. 1924 (Repr. ed., 3: 836. 1961).

Fl. & Fr.: March - May.

Distrib.: Singhbhum.

CASSYTHA L.

Cassytha filiformis L., Sp. Pl. 35. 1753; Hook. f., Fl. Brit. India 5: 188. 1886; Haines, Bot. Bihar Orissa 798. 1924 (Repr. ed., 3: 838. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: Gaya, Hazaribagh, Koderma, Singhbhum, West Champaran.

CINNAMOMUM Schaeff., *nom. cons.*

Cinnamomum camphora T. Nees & Eberm., Handb. Med.-Pharm. Bot. 2: 430. 1831.

Fl. & Fr.: March - May.

Distrib.: Planted. Patna.

Cinnamomum multiflorum Wight, Icon. Pl. Ind. Orient. t. 126 & 131. 1839; Hook. f., Fl. Brit. India 5: 132. 1886.

Fl. & Fr.: January - April.

Distrib.: Cultivated in gardens.

Cinnamomum tamala T. Nees in T. Nees & Eberm., Handb. Med.-Pharm. Bot. 2: 426. 1831; Hook. f., Fl. Brit. India 5: 128. 1886; Haines, Bot. Bihar Orissa 797. 1924 (Repr. ed., 3: 836. 1961). *Tejpat*.

Fl. & Fr.: August - November.

Distrib.: Bhagalpur.

LITSEA Lam., *nom. cons.*

Litsea cubeba (Lour.) Pers., Syn. Pl. 2(1): 4. 1806. *Laurus cubeba* Lour., Fl. Cochinch. 1: 252. 1790. *Litsea citrata* Blume, Bijdr. 565. 1825; Hook. f., Fl. Brit. India 5: 155. 1886.

Fl. & Fr.: November - March.

Distrib.: Purnia, West Champaran.

Litsea glutinosa (Lour.) Robinson in Philipp. J. Sci. Bot. 6: 321. 1911. *Sebifera glutinosa* Lour., Fl. Cochinch. 2: 638. 1790. *Litsea sebifera* Pers., Syn. Pl. 2: 4. 1806; Hook. f., Fl. Brit. India 5: 157. 1886; Haines, Bot. Bihar Orissa 793. 1924 (Repr. ed., 3: 832. 1961).

var. **glabraria** (Juss.) Mudgal & Khanna in Mudgal *et al.*, Fl. Madhya Prad. 2: 501. 1997. *Litsea glabraria* Juss. in Ann. Mus. Par. 6: 212. 1805. *L. sebifera* Pers. var. *glabraria* Hook. f., Fl. Brit. India 5: 158. 1886; Haines, Bot. Bihar Orissa 794. 1924 (Repr. ed., 3: 833. 1961).

Fl. & Fr.: August - November.

Distrib.: Singhbhum.

var. **glutinosa**

Fl. & Fr.: June - November.

Distrib.: Purnia, West Champaran.

var. **normalis** (Haines) K.K. Khanna, *comb. nov.* *Litsea sebifera* Pers. var. *normalis* Haines, Bot. Bihar Orissa 794. 1924 (Repr. ed., 3: 832. 1961).

Fl. & Fr.: June - November.

Distrib.: Hazaribagh, Ranchi.

Note. A new combination for another variety of *L. sebifera* is also proposed hereunder.

***Litsea glutinosa* (Lour.) Robinson var. *longifolia* (Haines) K.K. Khanna, *comb. nov.* *Litsea sebifera* Pers. var. *longifolia* Haines, Bot. Bihar Orissa 794. 1924 (Repr. ed., 3: 833. 1961).**

***Litsea monopetala* (Roxb.) Pers., Syn. Pl. 2: 4. 1806. *Tetranthera monopetala* Roxb., Pl. Corom. 2: 26. t. 148. 1800. *Litsea polyantha* Juss. in Ann. Mus. Hist. Nat. 6: 211. 1805; Hook. f., Fl. Brit. India 6: 162. 1886; Haines, Bot. Bihar Orissa 794. 1924 (Repr. ed., 3: 833. 1961).**

***Fl. & Fr.*: March - September.**

***Distrib.*: Giridih, Hazaribagh, Purnia, Santal Pargana, Singhbhum, West Champaran.**

***Litsea nitida* (Roxb. ex Nees) Hook. f., Fl. Brit. India 5: 174. 1886; Haines, Bot. Bihar Orissa 795. 1924 (Repr. ed., 3: 834. 1961). *Tetranthera nitida* Roxb. ex Nees in Wallich, Pl. Asiat. Rar. 2: 67. 1831.**

***Fl. & Fr.*: June - October.**

***Distrib.*: Singhbhum.**

***Litsea salicifolia* Roxb. var. *laurifolia* Hook. f., Fl. Brit. India 5: 168. 1886; Haines, Bot. Bihar Orissa 794. 1924 (Repr. ed., 3: 833. 1961).**

***Fl. & Fr.*: December - January.**

***Distrib.*: Purnia (Haines, l.c.).**

***Litsea sericea* Hook. f., Fl. Brit. India 5: 156. 1886. *Tetranthera sericea* Wallich, Numer. List 2545. 1830.**

***Fl. & Fr.*: March - May.**

***Distrib.*: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 45. 1998).**

NEOLITSEA Merr.

***Neolitsea chinensis* Chun in Contrib. Biol. Lab. Sc. Soc. China 1. No. 5. 68. 1925.**

Fl. & Fr.: January - April.

Distrib.: Palamau.

PERSEA Mill., *nom. cons.*

Persea bombycina (King ex Hook. f.) Kosterm. in *Reinwardtia* 6: 191. 1962 & 9: 110. 1974. *Machilus bombycina* King ex Hook. f., *Fl. Brit. India* 5: 861. 1890. *M. sericea* (Nees) Blume, *Mus. Bot.* 1: 330. 1851; Hook. f., *Fl. Brit. India* 5: 139. 1886. *Ocotea sericea* Nees, Wallich, *Pl. Asiat. Rar.* 2: 17. 1831.

Fl. & Fr.: January - May.

Distrib.: Hazaribagh.

Persea macrantha (Nees) Kosterm. in *Reinwardtia* 6: 193. 1962. *Machilus macrantha* Nees in Wallich, *Pl. Asiat. Rar.* 2: 70. 1831; Hook. f., *Fl. Brit. India* 5: 140. 1886; Haines, *Bot. Bihar Orissa* 795. 1924 (Repr. ed., 3: 834. 1961).

Fl. & Fr.: January - April.

Distrib.: Palamau.

PHOEBE Nees

Phoebe lanceolata (Nees) Nees, *Syst. Lour.* 109. 1836; Hook. f., *Fl. Brit. India* 5: 141. 1886; Haines, *Bot. Bihar Orissa* 796. 1924 (Repr. ed., 3: 835. 1961). *Ocotea lanceolata* Nees in Wallich, *Pl. Asiat. Rar.* 2: 71. 1831.

Fl. & Fr.: April - June.

Distrib.: West Champaran (Bhattacharyya and Sarkar, *Fl. W. Champaran* 45. 1998).

PROTEACEAE

GREVILLEA R. Br. ex J. Knight, *nom. cons.*

Grevillea robusta A. Cunn. ex R. Br., *Suppl. Prodr. Fl. Nov. Holl.* 24. 1830; Haines, *Bot. Bihar Orissa* 800. 1924 (Repr. ed., 3: 839. 1961).

Fl. & Fr.: March - May.

Distrib.: Cultivated.

LORANTHACEAE

DENDROPTHOE Mart.

Dendrophthoe falcata (L. f.) Etting. in Denkschr. Akad. Wissench. Math. Nat. 32: 52. 1872. *Loranthus falcatus* L. f., Suppl. Pl. 211. 1782. *L. longiflorus* Desr. in Lam., Encycl. 3: 598. 1792; Hook. f., Fl. Brit. India 5: 214. 1886, *incl. var. falcata* (L. f.) Kurz & var. *amplexifolia* (DC.) Thwaites; Haines, Bot. Bihar Orissa 801. 1924 (Repr. ed., 3: 840. 1961).

Fl. & Fr.: November - March.

Distrib.: Throughout the state.

LORANTHUS Jacq., *nom. cons.*

Loranthus cordifolius Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 223. 1824; Hook. f., Fl. Brit. India 5: 209. 1886; Haines, Bot. Bihar Orissa 802. 1924 (Repr. ed., 3: 842. 1961).

Fl. & Fr.: November - February.

Distrib.: Hazaribagh, Sahibganj.

Loranthus parasiticus (L.) Merr. in Phil. J. Sci. 15: 232. 1919. *Scurrula parasitica* L., Sp. Pl. 110. 1753. *Loranthus scurrula* L., Sp. Pl. ed. 2. 472. 1762, *nom. illeg.*; Hook. f., Fl. Brit. India 5: 208. 1886, *p.p.*; Haines, Bot. Bihar Orissa 802. 1924 (Repr. ed., 3: 841. 1961).

Fl. & Fr.: October - March.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

Loranthus philippensis Cham. & Schlechtend. in Linnaea 3: 204. 1828. *Scurrula philippensis* (Cham. & Schlechtend.) G. Don, Gen. Hist. 3: 422. 1834.

Fl. & Fr.: July - February.

Distrib.: Chota Nagpur.

VISCUM L.

Viscum articulatum Burm. *f.*, Fl. Ind. 311. 1768; Hook. *f.*, Fl. Brit. India 5: 226. 1886; Haines, Bot. Bihar Orissa 804. 1924 (Repr. ed., 3: 843. 1961).

Fl. & Fr.: December - March.

Distrib.: Palamau, Singhbhum, West Champaran.

Viscum monoicum Roxb. *ex DC.*, Prodr. 4: 278. 1830; Hook. *f.*, Fl. Brit. India 5: 224. 1886; Haines, Bot. Bihar Orissa 803. 1924 (Repr. ed., 3: 842. 1961).

Fl. & Fr.: October - April.

Distrib.: Hazaribagh, Lohardaga, Munger, Ranchi, Sahibganj.

Viscum orientale Willd., Sp. Pl. 4: 737. 1806; Hook. *f.*, Fl. Brit. India 5: 224. 1886; Haines, Bot. Bihar Orissa 803. 1924 (Repr. ed., 3: 842. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: Hazaribagh, Palamau, Singhbhum.

SANTALACEAE**SANTALUM L.**

Santalum album L., Sp. Pl. 349. 1753; Hook. *f.*, Fl. Brit. India 5: 231. 1886; Haines, Bot. Bihar Orissa 805. 1924 (Repr. ed., 3: 844. 1961).

Fl. & Fr.: October - April.

Distrib.: Cultivated.

THESIUM L.

Thesium unicaule Haines in J. Asiat. Soc. Bengal n.s. 15(7): 316. 1920 & Bot. Bihar Orissa 804. 1924 (Repr. ed., 3: 844. 1961).

Fl. & Fr.: April - June.

Distrib.: Chota Nagpur (Haines, *l.c.*).

BALANOPHORACEAE**BALANOPHORA** J.R. Forster & G. Forster

Balanophora polyandra Griffith in Trans. Linn. Soc. London 20: 94. t. 7. 1851; Hook. *f.*, Fl. Brit. India 5: 238. 1886; Haines, Bot. Bihar Orissa 806. 1924 (Repr. ed., 3: 845. 1961).

Fl.: September - October.

Distrib.: Palamau, Santal Pargana.

EUPHORBIACEAE**ACALYPHA** L.

Acalypha ciliata Forssk., Fl. Aegypt.-Arab. 162. 1775; Hook. *f.*, Fl. Brit. India 5: 417. 1887; Haines, Bot. Bihar Orissa 113. 1921 (Repr. ed., 1: 117. 1961).

Fl. & Fr.: July - December.

Distrib.: Bihar, *s.l.*(CAL).

Acalypha hispida Burm. *f.*, Fl. Ind. 303. t. 61. f. 1. 1768; Hook. *f.*, Fl. Brit. India 5: 417. 1887.

Fl. & Fr.: April - June.

Distrib.: Cultivated in gardens.

Acalypha indica L., Sp. Pl. 1003. 1753; Hook. *f.*, Fl. Brit. India 5: 416. 1887; Haines, Bot. Bihar Orissa 113. 1921 (Repr. ed., 1: 117. 1961).

Fl. & Fr.: August - February.

Distrib.: Bhagalpur, Hazaribagh, Patna, West Champaran.

Acalypha malabarica Muell. Arg. in Linnæa 34: 42. 1865-1866; Hook. *f.*, Fl. Brit. India 5: 416. 1887.

Fl. & Fr.: August - November.

Distrib.: Palamau.

Acalypha wilkesiana Muell. Arg. in DC., Prodr. 15 (2.2): 817. 1866.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated in gardens.

ANTIDESMA L.

Antidesma acidum Retz., Observ. Bot. 5: 30. 1788; Airy Shaw in Kew Bull. 26: 352. 1972. *A. diandrum* (Roxb.) Heyne ex Roth, Nov. Pl. Sp. 369. 1821; Hook. f., Fl. Brit. India 5: 361. 1887, *p.p.*; Haines, Bot. Bihar Orissa 138. 1921 (Repr. ed., 1: 142. 1961). *Stilago diandra* Roxb., Pl. Corom. 2: 35. t. 166. 1802. *Antidesma ghaesembilla auct. non* Gaertn., 1788; Hook. f., Fl. Brit. India 5: 357. 1887, *p.p. quoad syn. A. acidum* Retz.

Fl. & Fr.: July - March.

Distrib.: Giridih, Hazaribagh, Palamau, Purnia, Singhbhum.

Antidesma acuminatum Wight, Icon. Pl. Ind. Orient. 6. t. 1991. 1853; Hook. f., Fl. Brit. India 5: 363. 1887, *p.p.*; Haines, Bot. Bihar Orissa 138. 1921 (Repr. ed., 1: 143. 1961).

Fl. & Fr.: May - August.

Distrib.: Palamau, Singhbhum.

Antidesma bunius (L.) Spreng., Syst. Veg. 1: 826. 1825; Hook. f., Fl. Brit. India 5: 358. 1887; Haines, Bot. Bihar Orissa 138. 1921 (Repr. ed., 1: 143. 1961). *Stilago bunius* L., Mant. Pl. 122. 1767.

Fl. & Fr.: April - August.

Distrib.: Hazaribagh.

Antidesma ghaesembilla Gaertn., Fruct. Sem. Pl. 1: 189. t. 39. 1788; Hook. f., Fl. Brit. India 5: 357. 1887, *p.p.*; Haines, Bot. Bihar Orissa 139. 1921 (Repr. ed., 1: 144. 1961).

Fl. & Fr.: May - October.

Distrib.: Gaya, Hazaribagh, Palamau, Purnia, Singhbhum, West Champaran.

Antidesma menasu Miq. ex Tul. in Ann. Sci. Nat. Bot. ser. 3, 15: 215. 1851; Hook. f., Fl. Brit. India 5: 364. 1887.

Fl. & Fr.: May - September.

Distrib.: Singhbhum.

APORUSA Blume

Aporusa octandra (Buch.-Ham. ex D. Don) Vickery in Enum. Fl. Pl. Nepal 3: 193. 1982. *Myrica octandra* Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 56. 1825. *Aporusa dioica* (Roxb.) Muell. Arg. in DC., Prodr. 15(2): 472. 1886; Haines, Bot. Bihar Orissa 137. 1921 (Repr. ed., 1: 141. 1961). *A. roxburghii* Baill., Et. Gen. Euphorb. 644. 1858; Hook. f., Fl. Brit. India 5: 347. 1887. *Alnus dioica* Roxb., Fl. Ind. 3: 580. 1832.

Fl. & Fr.: February - May.

Distrib.: Purnia.

BALIOSPERMUM Blume

Baliospermum montanum (Willd.) Muell. Arg. in DC., Prodr. 15(2.2): 1125. 1866; Haines, Bot. Bihar Orissa 115. 1921 (Repr. ed., 1: 119. 1961). *Jatropha montana* Willd., Sp. Pl. 4: 563. 1805. *Baliospermum axillare* Blume, Bijdr. 604. 1826; Hook. f., Fl. Brit. India 5: 461. 1887.

Fl. & Fr.: December - March.

Distrib.: Bhojpur, Palamau, Patna, Singhbhum, West Champaran.

BISCHOFIA Blume

Bischofia javanica Blume, Bijdr. 1168. 1827; Hook. f., Fl. Brit. India 5: 345. 1887; Haines, Bot. Bihar Orissa 140. 1921 (Repr. ed., 1: 145. 1961).

Fl. & Fr.: February - March.

Distrib.: West Champaran.

BREYNIA J.R. Forster & G. Forster, *nom. cons.*

Breynia cernua Muell. Arg. in DC., Prodr. 15(2): 439. 1866; Haines, Bot. Bihar Orissa 134. 1921 (Repr. ed., 1: 138. 1961).

Fl.: April.

Distrib.: Cultivated in gardens.

Breynia retusa (Dennst.) Alston in Ann. Roy. Bot. Gard. 11: 204. 1929. *Phyllanthus retusus* Dennst., Schluessel Hortus Malab. 31. 1818. *Breynia patens* (Roxb.) Rolfe in J. Bot. 20: 359. 1882; Hook. *f.*, Fl. Brit. India 5: 329. 1887; Haines, Bot. Bihar Orissa 134. 1921 (Repr. ed., 1: 138. 1961).

Fl. & Fr.: April - July.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 208. 1998).

Breynia vitis-idaea (Burm. *f.*) C. Fischer in Bull. Misc. Infortn. Kew 1932: 65. 1932. *Rhamnus vitis-idaea* Burm. *f.*, Fl. Ind. 61. 1768. *Phyllanthus rhamnoides* Retz., Observ. Bot. 5: 30. 1788. *Breynia rhamnoides* (Retz.) Muell. Arg. in DC., Prodr. 15(2.2): 440. 1866; Hook. *f.*, Fl. Brit. India 5: 330. 1887; Haines, Bot. Bihar Orissa 133. 1921 (Repr. ed., 1: 138. 1961).

Fl. & Fr.: June - October.

Distrib.: Chota Nagpur, Santal Pargana, West Champaran.

BRIDELIA Willd.

Bridelia hamiltoniana Wallich ex Muell. Arg. in Linnaea 34: 77. 1865-1866; Hook. *f.*, Fl. Brit. India 5: 271. 1887. *B. montana* Willd. var. *hamiltoniana* (Wallich ex Muell. Arg.) Haines, Bot. Bihar Orissa 120. 1921 (Repr. ed., 1: 125. 1961).

Fl. & Fr.: August - December.

Distrib.: Munger (Haines, *l.c.*).

Bridelia monoica (Lour.) Merr. in Philipp. J. Sci. Bot. 13: 142. 1918. *Cluytia monoica* Lour., Fl. Cochinch. 2: 638. 1790. *Bridelia tomentosa* Blume, Bijdr. 597. 1826; Hook. *f.*, Fl. Brit. India 5: 271. 1887; Haines, Bot. Bihar Orissa 120. 1921 (Repr. ed., 1: 124. 1961).

Fl. & Fr.: September - January.

Distrib.: Santal Pargana.

Bridelia montana Willd., Sp. Pl. 4: 978. 1806; Hook. *f.*, Fl. Brit. India 5: 269. 1887, *p.p.*; Haines, Bot. Bihar Orissa 120. 1921 (Repr. ed., 1: 125. 1921).

Fl. & Fr.: August - December.

Distrib.: Munger, Santal Pargana.

Bridelia pubescens Kurz in J. Asiat. Soc. Bengal 42: 241. 1873; Hook. *f.*, Fl. Brit. India 5: 270. 1887; Haines, Bot. Bihar Orissa 120. 1921 (Repr. ed., 1: 125. 1961).

Fl. & Fr.: April - February.

Distrib.: Giridih, Hazaribagh, Palamau, Ranchi, Singhbhum.

Bridelia retusa (L.) Spreng., Syst. Veg. 3: 48. 1826; Hook. *f.*, Fl. Brit. India 5: 268. 1887; Haines, Bot. Bihar Orissa 119. 1921 (Repr. ed., 1: 123. 1961). *Cluytia retusa* L., Sp. Pl. 1042. 1753.

Fl. & Fr.: August - February.

Distrib.: Giridih, Hazaribagh, Koderma, Palamau, Ranchi, Singhbhum, West Champaran.

Bridelia squamosa (Lam.) Gehrm. in Engler, Bot. Jahrb. 41, Beibl. 95: 30. 1908. *Cluytia squamosa* Lam., Encycl. 5: 54. 1790. *Bridelia retusa* var. *squamosa* Muell. Arg. in DC., Prodr. 15(2.2): 493. 1866; Hook. *f.*, Fl. Brit. India 5: 268. 1887.

Fl. & Fr.: August - January.

Distrib.: Champaran.

Bridelia stipularis Blume, Bijdr. 597. 1827; Hook. *f.*, Fl. Brit. India 5: 270. 1887; Haines, Bot. Bihar Orissa 121. 1921 (Repr. ed., 1: 125. 1961).

Fl. & Fr.: October - April.

Distrib.: Munger, West Champaran.

Bridelia verrucosa Haines, Bot. Bihar Orissa 119. 1921 (Repr. ed., 1: 123. 1961). *B. montana* auct. non Willd., 1806; Hook. *f.*, Fl. Brit. India 5: 269. 1887, *p.p.*

Fl. & Fr.: October - February.

Distrib.: Hazaribagh, West Champaran.

CHROZOPHORA Adr. Juss.

Chrozophora prostrata Dalzell in Dalzell & Gibson, Bombay Fl. 233. 1861; Haines, Bot. Bihar Orissa 103. 1921 (Repr. ed., 1: 107. 1961). *C. plicata* Adr. Juss. in Euphorb. Gen. 28. 1824; Hook. f., Fl. Brit. India 5: 409. 1887.

var. **parvifolia** (Klotz. ex Schweinf.) Balakr. in Bull. Bot. Surv. India 15: 7. 1976. *C. parvifolia* Klotz. ex Schweinf., Pl. Quaed. Nilot. 110. 1862. *C. plicata* Adr. Juss. in Euphorb. Gen. 28. 1824; forma 2, Hook. f., Fl. Brit. India 5: 410. 1887.

Fl. & Fr.: April - July.

Distrib.: East Champaran.

var. **prostrata**

Fl. & Fr.: March - June.

Distrib.: Muzaffarpur, Palamau, Patna, Singhbhum.

Chrozophora rottleri (Geiseler) Adr. Juss. ex Spreng., Syst. Veg. 3: 850. 1826; Haines, Bot. Bihar Orissa 103. 1921 (Repr. ed., 1: 107. 1961). *Croton rottleri* Geiseler, Croton Monogr. 54. 1807. *Chrozophora tinctoria auct. non* Adr. Juss., 1824; Hook. f., Fl. Brit. India 5: 409. 1887, p.p.

Fl. & Fr.: March - November.

Distrib.: Bhagalpur, Darbhanga, East Champaran, Palamau, Purnia, West Champaran.

CLEIDION Blume

Cleidion javanicum Blume, Bijdr. 613. 1827; Hook. f., Fl. Brit. India 5: 444. 1887; Haines, Bot. Bihar Orissa 109. 1921 (Repr. ed., 1: 113. 1961).

Fl. & Fr.: December - March.

Distrib.: West Champaran.

CLEISTANTHUS Hook. f. ex Planch.

Cleistanthus collinus (Roxb.) Benth. ex Hook. f., Fl. Brit. India 5: 274. 1887; Haines, Bot. Bihar Orissa 121. 1921 (Repr. ed., 1: 126. 1961). *Cluytia collina* Roxb., Pl. Corom. 2: 37. t. 169. 1802.

Fl. & Fr.: April - March.

Distrib.: Gumla, Hazaribagh, Palamau.

CODIAEUM Adr. Juss., *nom. cons.*

Codiaeum variegatum (L.) Blume, Bijdr. 606. 1826; Hook. *f.*, Fl. Brit. India 5: 399. 1887; Haines, Bot. Bihar Orissa 104. 1921 (Repr. ed., 1: 108. 1961). *Croton variegatum* L., Sp. Pl. 1199. 1753.

Fl. & Fr.: October - February.

Distrib.: Cultivated in gardens.

CROTON L.

Croton bonplandianus Baill. in Adansonia 4: 339. 1863-1864; Croizat in J. Bombay Nat. Hist. Soc. 41: 573. 1940, "*bonplandianum*"; *C. sparsiflorus* Morong in Ann. N.Y. Acad. Sci. 7: 221. 1893; Haines, Bot. Bihar Orissa 105. 1921 (Repr. ed., 1: 109. 1961).

Fl. & Fr.: May - March.

Distrib.: East Champaran, Gaya, Koderma, Muzaffarpur, Palamau, Patna, Purnia, Sahibganj, Singhbhum, West Champaran.

Croton caudatus Geiseler, Croton. Monogr. 73. 1807; Hook. *f.*, Fl. Brit. India 5: 388. 1887; Haines, Bot. Bihar Orissa 105. 1921 (Repr. ed., 1: 108. 1961).

Fl. & Fr.: January - July.

Distrib.: Chota Nagpur.

Croton roxburghii Balakr. in Bull. Bot. Surv. India 3: 39. 1961. *C. oblongifolius* Roxb., Fl. Ind. 3: 685. 1832, *non* Delile, 1814, *nec* Spreng., 1826; Hook. *f.*, Fl. Brit. India 5: 386. 1887, "*oblongifolium*"; Haines, Bot. Bihar Orissa 104. 1921 (Repr. ed., 1: 108. 1961).

Fl. & Fr.: August - April.

Distrib.: Bhagalpur, Gumla, Hazaribagh, Koderma, Palamau, Sahibganj, Singhbhum, West Champaran.

Croton tiglium L., Sp. Pl. 1004. 1753; Hook. *f.*, Fl. Brit. India 5: 393. 1887; Haines, Bot. Bihar Orissa 104. 1921 (Repr. ed., 1: 108. 1961).

Fl. & Fr.: September - November.

Distrib.: Cultivated.

DRYPETES Vahl

Drypetes assamica (Hook. *f.*) Pax & Hoffm. in Engler, Pflanzenr. 4. 147. 15: 241. 1922. *Cyclostemon assamicus* Hook. *f.*, Fl. Brit. India 5: 342. 1887; Haines, Bot. Bihar Orissa 136. 1921 (Repr. ed., 1: 141. 1961).

Fl. & Fr.: November - April.

Distrib.: Singhbhum, West Champaran.

Drypetes roxburghii (Wallich) Hurusawa in J. Fac. Sci. Univ. Tokyo Sect. 3, Bot. 6(6): 337. 1954. *Putranjiva roxburghii* Wallich, Tent. Fl. Nepal. 61. 1826; Hook. *f.*, Fl. Brit. India 5: 336. 1887; Haines, Bot. Bihar Orissa 136. 1921 (Repr. ed., 1: 140. 1961).

Fl. & Fr.: March - February.

Distrib.: Purnia, West Champaran.

EUPHORBIA L.

Euphorbia antiquorum L., Sp. Pl. 450. 1753; Hook. *f.*, Fl. Brit. India 5: 255. 1887; Haines, Bot. Bihar Orissa 143. 1921 (Repr. ed., 1: 148. 1961).

Fl. & Fr.: November - January.

Distrib.: Chota Nagpur.

Euphorbia barnhartii Croizat., Euphorb. Art. 52. t. 25. 1934; *E. trigona* *auct. non* Haw., 1812; Hook. *f.*, Fl. Brit. India 5: 256. 1887; Haines, Bot. Bihar Orissa 143. 1921 (Repr. ed., 1: 148. 1961).

Fl. & Fr.: February - April.

Distrib.: Cultivated in gardens.

Euphorbia caducifolia Haines in Indian For. 40: 154. 1914 & Bot. Bihar Orissa 2: 143. 1921. *E. nerifolia* *auct. plur. non* L., 1753, *nec* Roxb., 1832.

Fl. & Fr.: January - April.

Distrib.: Singhbhum.

Euphorbia chamaesyce L., Sp. Pl. 455. 1753. *E. prostrata* Aiton, Hortus Kew. ed. 1. 2: 139. 1789; Hook. *f.*, Fl. Brit. India 5: 266. 1887.

Fl. & Fr.: August - November.

Distrib.: Patna, West Champaran.

Euphorbia cristata Heyne ex Roth, Nov. Pl. Sp. 226. 1821; Hook. *f.*, Fl. Brit. India 5: 247. 1887, *p.p.*; Haines, Bot. Bihar Orissa 146. 1921 (Repr. ed., 1: 151. 1961).

Distrib.: Bihar (Haines, *l.c.*).

Euphorbia dracunculoides Lam., Encycl. 2: 428. 1788; Hook. *f.*, Fl. Brit. India 5: 262. 1887; Haines, Bot. Bihar Orissa 145. 1921 (Repr. ed., 1: 150. 1961). *E. angustifolia* Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 62. 1825; Hook. *f.*, Fl. Brit. India 5: 265. 1887.

Fl. & Fr.: August - March.

Distrib.: Darbhanga, Muzaffarpur, Palamau, Patna, West Champaran.

Euphorbia fusiformis Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 62. 1825; Hook. *f.*, Fl. Brit. India 5: 257. 1887; Haines, Bot. Bihar Orissa 144. 1921 (Repr. ed., 1: 148. 1961).

Fl. & Fr.: March - May.

Distrib.: Purnia, West Champaran.

Euphorbia granulata Forssk., Fl. Aegypt.-Arab. 94. 1775; Hook. *f.*, Fl. Brit. India 5: 252. 1887; Haines, Bot. Bihar Orissa 148. 1921 (Repr. ed., 1: 153. 1961).

Fl. & Fr.: July - April.

Distrib.: Patna, Ranchi, West Champaran.

Euphorbia helioscopia L., Sp. Pl. 459. 1753; Hook. *f.*, Fl. Brit. India 5: 262. 1887.

Fl. & Fr.: February - April.

Distrib.: Bhagalpur.

Euphorbia heterophylla L., Sp. Pl. 453. 1753; Haines, Bot. Bihar Orissa 144. 1921 (Repr. ed., 1: 149. 1961). *E. geniculata* Ort., Nov. Pl. Desr. Dec. 18. 1797; Haines, Bot. Bihar Orissa 144. 1921 (Repr. ed., 1: 149. 1961). *E. prunifolia* Jacq., Pl. Hort. Schoenbr. 3: 15. 1798; Hook. f., Fl. Brit. India 5: 266. 1887.

Fl. & Fr.: August - October.

Distrib.: East Champaran, Hazaribagh, Patna.

Euphorbia heyneana Spreng., Syst. Veg. 3: 791. 1826. *E. microphylla* Heyne ex Roth, Nov. Pl. Sp. 229. 1821, non Lam., 1788; Hook. f., Fl. Brit. India 5: 252. 1887, *p.p.*; Haines, Bot. Bihar Orissa 148. 1961 (Repr. ed., 1: 153. 1961).

Fl. & Fr.: September - October.

Distrib.: East Champaran, Gaya, Hazaribagh, Koderma, Patna, Sahibganj.

Euphorbia hirta L., Sp. Pl. 454. 1753; Haines, Bot. Bihar Orissa 147. 1921 (Repr. ed., 1: 152. 1961). *E. pilulifera* L., Sp. Pl. 454. 1753; Hook. f., Fl. Brit. India 5: 250. 1887.

Fl. & Fr.: July - April.

Distrib.: East Champaran, Gaya, Hazaribagh, Koderma, Palamau, Patna, West Champaran.

Euphorbia hypericifolia L., Sp. Pl. 454. 1753; Hook. f., Fl. Brit. India 5: 249. 1887, *p.p.*; Haines, Bot. Bihar Orissa 146. 1921 (Repr. ed., 1: 151. 1961). *E. parviflora* L., Syst. Nat. ed. 10. 2: 1047. 1759.

Fl. & Fr.: August - May.

Distrib.: Darbhanga, East Champaran, Muzaffarpur, Palamau, Ranchi, Singhbhum, West Champaran.

Euphorbia laeta Heyne ex Roth, Nov. Pl. Sp. 230. 1821, non Aiton, 1789. *E. rothiana* Spreng., Syst. Veg. 3: 796. 1826; Hook. f., Fl. Brit. India 5: 263. 1887.

Fl. & Fr.: October - November.

Distrib.: Palamau.

Euphorbia mili Desmoul. in Bull. Hist. Nat. Soc. Linn. Bordeaux 1: 27-30, Pl. 1. 1826; *E. splendens* Bojer ex Hook. in Curtis, Bot. Mag. 56. t. 2902. 1829.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated in gardens.

Euphorbia neriifolia L., Sp. Pl. 451. 1753; Hook. *f.*, Fl. Brit. India 5: 255. 1887; Haines, Bot. Bihar Orissa 142. 1921 (Repr. ed., 1: 147. 1961). *E. ligularia* Roxb., Fl. Ind. 2: 465. 1832.

Fl. & Fr.: November - December.

Distrib.: Planted. Purnia.

Euphorbia nivulia Buch.-Ham. in Trans. Linn. Soc. London 14: 286. 1825; Hook. *f.*, Fl. Brit. India 5: 255. 1887; Haines, Bot. Bihar Orissa 142. 1921 (Repr. ed., 1: 146. 1961). *E. neriifolia* Roxb., Fl. Ind. 2: 467. 1832, *non* L., 1753.

Fl. & Fr.: February - April.

Distrib.: Sahibganj.

Euphorbia perbracteata Gage in Bull. Misc. Inform. Kew 1914: 238. 1914; Haines, Bot. Bihar Orissa 145. 1921 (Repr. ed., 1: 150. 1961).

Fl. & Fr.: February - April.

Distrib.: Patna.

Euphorbia pilosa L., Sp. Pl. 460. 1753; Hook. *f.*, Fl. Brit. India 5: 260. 1887.

Fl. & Fr.: August - November.

Distrib.: Palamau.

Euphorbia prolifera Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 62. 1825; Hook. *f.*, Fl. Brit. India 5: 264. 1887; Haines, Bot. Bihar Orissa 145. 1921 (Repr. ed., 1: 150. 1961).

Fl. & Fr.: April - June.

Distrib.: Palamau.

Euphorbia pulcherrima Willd. ex Klotzsch in Otto & A. Dietr., Allg. Gartenz. 2: 27. 1834; Haines, Bot. Bihar Orissa 144. 1921 (Repr. ed., 1: 149. 1961). *Poinsettia pulcherrima* R. Graham in Edinb. New Phil. J. 20: 412. 1836; Hook. f., Fl. Brit. India 5: 239. 1886.

Fl. & Fr.: November - February.

Distrib.: Cultivated in gardens. East Champaran, Palamau, West Champaran.

Euphorbia pycnostegia Boiss., Cent. Euphorb. 9. 1860; Hook. f., Fl. Brit. India 5: 246. 1887; Haines, Bot. Bihar Orissa 146. 1921 (Repr. ed., 1: 151. 1961).

Fl. & Fr.: September - December.

Distrib.: Bihar (Haines, l.c.).

Euphorbia serpens Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. 2: 52. 1817. *E. microphylla auct. non Heyne ex Roth*, 1821; Hook. f., Fl. Brit. India 5: 252. 1887, p.p. *E. orbiculata* var. *jawaharii* Rajagopal & Panigrahi in Taxon 17: 547. 1968.

Fl. & Fr.: August - December.

Distrib.: Santal Pargana.

Euphorbia thymifolia L., Sp. Pl. 454. 1753; Hook. f., Fl. Brit. India 5: 252. 1887; Haines, Bot. Bihar Orissa 147. 1921 (Repr. ed., 1: 152. 1961).

Fl. & Fr.: July - March.

Distrib.: Darbhanga, East Champaran, Hazaribagh, Palamau, Patna, Singhbhum, West Champaran.

Euphorbia tirucalli L., Sp. Pl. 452. 1753; Hook. f., Fl. Brit. India 5: 254. 1887; Haines, Bot. Bihar Orissa 144. 1921 (Repr. ed., 1: 149. 1961).

Fl. & Fr.: August - September.

Distrib.: Chota Nagpur.

EXCOECARIA L.

Excoecaria cochinchinensis Lour., Fl. Cochinch. 2: 612. 1790. *E. bicolor* (Hassk.) Zoll. ex Hassk., Retzia 1: 158. 1855.

Fl. & Fr.: September - December.

Distrib.: Cultivated in gardens.

GLOCHIDION J.R. Forster & G. Forster, *nom. cons.*

Glochidion assamicum (Muell. Arg.) Hook. *f.*, Fl. Brit. India 5: 319. 1887; Haines, Bot. Bihar Orissa 131. 1921 (Repr. ed., 1: 136. 1961). *Phyllanthus assamicus* Muell. Arg. in Flora 48: 378. 1865.

Fl. & Fr.: October - March.

Distrib.: West Champaran.

Glochidion lanceolarium (Roxb.) Voigt, Hort. Suburb. Calc. 153. 1845; Hook. *f.*, Fl. Brit. India 5: 308. 1887; Haines, Bot. Bihar Orissa 131. 1921 (Repr. ed., 1: 136. 1961). *Bradleia lanceolaria* Roxb., Fl. Ind. 3: 697. 1832.

Fl. & Fr.: March - January.

Distrib.: Ranchi, Santal Pargana, Singhbhum, West Champaran.

Glochidion multiloculare Voigt, Hort. Suburb. Calc. 152. 1845; Hook. *f.*, Fl. Brit. India 5: 307. 1887; Haines, Bot. Bihar Orissa 130. 1921 (Repr. ed., 1: 135. 1961).

Fl. & Fr.: April - February.

Distrib.: Gumla, Hazaribagh, West Champaran.

Glochidion tomentosum Dalzell in Hook., J. Bot. 3: 38. 1853; Hook. *f.*, Fl. Brit. India 5: 309. 1887.

Fl. & Fr.: March - July.

Distrib.: Palamau.

Glochidion velutinum Wight, Icon. Pl. Ind. Orient. t. 1907. f. 2. 1852; Hook. *f.*, Fl. Brit. India 5: 322. 1887; Haines, Bot. Bihar Orissa 131. 1921 (Repr. ed., 1: 135. 1961).

Fl. & Fr.: April - August.

Distrib.: West Champaran.

Glochidion zeylanicum (Gaertn.) Adr. Juss., Euphorb. Gen. 107. t. 3. 1824; Hook. *f.*, Fl. Brit. India 5: 310. 1887; Haines, Bot. Bihar Orissa 132. 1921 (Repr. ed., 1: 136. 1961). *Bradleia zeylanica* Gaertn., Fruct. Sem. Pl. 2: 128. t. 109. 1790.

Fl. & Fr.: March - June.

Distrib.: Chota Nagpur.

HOMONOIA Lour.

Homonoia riparia Lour., Fl. Cochinch. 2: 637. 1790; Hook. *f.*, Fl. Brit. India 5: 455. 1887; Haines, Bot. Bihar Orissa 110. 1921 (Repr. ed., 1: 114. 1961).

Fl. & Fr.: December - May.

Distrib.: Santal Pargana, Singhbhum.

JATROPHA L.

Jatropha curcas L., Sp. Pl. 1006. 1753; Hook. *f.*, Fl. Brit. India 5: 383. 1887; Haines, Bot. Bihar Orissa 101. 1921 (Repr. ed., 1: 105. 1961).

Fl. & Fr.: May - January.

Distrib.: Hazaribagh, Singhbhum, West Champaran.

Jatropha gossypifolia L., Sp. Pl. 1006. 1753; Hook. *f.*, Fl. Brit. India 5: 383. 1887; Haines, Bot. Bihar Orissa 101. 1921 (Repr. ed., 1: 105. 1961).

Fl. & Fr.: April - December.

Distrib.: Bhojpur, Singhbhum, West Champaran.

Jatropha heynei Balakr. in Bull. Bot. Surv. India 3: 40. 1961. *J. heterophylla* Heyne ex Hook. *f.*, Fl. Brit. India 5: 382. 1887, non Steud., 1840.

Fl. & Fr.: August - December.

Distrib.: Koderma.

Jatropha integerrima Jacq., Stirp. Sel. Amer. 256. 1763. *J. hastata* Jacq., Stirp. Sel. Amer. 256. 1763. *J. pandurifolia* Andr., Bot. Repos. 4: t. 267. 1802; Haines, Bot. Bihar Orissa 102. 1921 (Repr. ed., 1: 105. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Bhagalpur, West Champaran.

Jatropha multifida L., Sp. Pl. 1006. 1753; Hook. *f.*, Fl. Brit. India 5: 383. 1887; Haines, Bot. Bihar Orissa 101. 1921 (Repr. ed., 1: 105. 1961).

Fl. & Fr.: March - October.

Distrib.: Cultivated in gardens. Patna.

Jatropha podagrica Hook. in Curtis, Bot. Mag. t. 4376. 1848; Haines, Bot. Bihar Orissa 101. 1921 (Repr. ed., 1: 105. 1961).

Fl. & Fr.: October - December.

Distrib.: Cultivated in gardens.

MACARANGA Thou.

Macaranga denticulata (Blume) Muell. Arg. in DC., Prodr. 15(2.2): 1000. 1866; Hook. *f.*, Fl. Brit. India 5: 446. 1887; Haines, Bot. Bihar Orissa 108. 1921 (Repr. ed., 1: 112. 1961). *Mappa denticulata* Blume, Bijdr. 625. 1826.

Fl. & Fr.: April - July.

Distrib.: North Purnia (Haines, *l.c.*).

Macaranga indica Wight, Icon. Pl. Ind. Orient. t. 1883. 1852; Hook. *f.*, Fl. Brit. India 5: 446. 1887; Haines, Bot. Bihar Orissa 108. 1921 (Repr. ed., 1: 112. 1961).

Fl. & Fr.: September - November.

Distrib.: Singhbhum (Haines, *l.c.*).

Macaranga peltata (Roxb.) Muell. Arg. in DC., Prodr. 15(2.2): 1010. 1866; Haines, Bot. Bihar Orissa 108. 1921 (Repr. ed., 1: 112. 1961). *Osyris peltata* Roxb., Fl. Ind. 3: 755. 1832. *Macaranga roxburghii* Wight, Icon. Pl. Ind. Orient. t. 1949. f. 4. 1853; Hook. *f.*, Fl. Brit. India 5: 448. 1887.

Fl. & Fr.: March - April.

Distrib.: Singhbhum.

MALLOTUS Lour.

Mallotus philippensis (Lam.) Muell. Arg. in *Linnaea* 34: 196. 1865-1866; Hook. *f.*, *Fl. Brit. India* 5: 442. 1887, "*philippinensis*"; Haines, *Bot. Bihar Orissa* 106. 1921 (Repr. ed., 1: 110. 1961). *Croton philippense* Lam., *Encycl.* 2: 206. 1786. - *Kamala, Rori*.

Fl. & Fr.: October - March.

Distrib.: Hazaribagh, Lohardaga, Palamau, Purnia, Singhbhum, West Champaran.

Mallotus repandus Muell. Arg. in *Linnaea* 34: 197. 1865-1866; Hook. *f.*, *Fl. Brit. India* 5: 442. 1887; Haines, *Bot. Bihar Orissa* 107. 1921 (Repr. ed., 1: 111. 1961).

Fl. & Fr.: January - April.

Distrib.: Bhagalpur, Hazaribagh, Purnia, West Champaran.

Mallotus roxburghianus Muell. Arg. in *Linnaea* 34: 186. 1865-1866; Hook. *f.*, *Fl. Brit. India* 5: 428. 1887; Haines, *Bot. Bihar Orissa* 106. 1921 (Repr. ed., 1: 110. 1961).

Fl. & Fr.: May - September.

Distrib.: Santal Pargana.

MANIHOT Mill.

Manihot esculenta Crantz., *Inst. Rei Herb.* 1: 167. 1766. *M. utilissima* Pohl, *Pl. Bras. Icon. Descr.* 1: 32. t. 24. 1826; Hook. *f.*, *Fl. Brit. India* 5: 239. 1886; Haines, *Bot. Bihar Orissa* 102. 1921 (Repr. ed., 1: 106. 1961).

Fl. & Fr.: February - March.

Distrib.: Cultivated.

Manihot glaziovii Muell. Arg. in *Mart.*, *Fl. Bras.* 11(2): 446. 1874; Haines, *Bot. Bihar Orissa* 102. 1921 (Repr. ed., 1: 106. 1961).

Distrib.: Planted.

MICROCOCCA Benth.

Micrococca mercurialis (L.) Benth. in Hook., Niger Fl. 503. 1849. *Tragia mercurialis* L., Sp. Pl. 980. 1753. *Claoxylon mercurialis* (L.) Thwaites, Enum. Pl. Zeyl. 142. 1859; Hook. f., Fl. Brit. India 5: 412. 1887; Haines, Bot. Bihar Orissa 112. 1921 (Repr. ed., 1: 116. 1961).

Fl. & Fr.: June - October.

Distrib.: West Champaran.

PACHYSTYLIDIUM Pax ex Hoffm.

Pachystylidium hirsutum (Blume) Pax & Hoffm. in Engler, Pflanzenr. 4. 147. IX XI (heft 68): 108. 1919. *Tragia hirsuta* Blume, Bijdr. 630. 1825. *T. gagei* Haines in J. Asiat. Soc. Bengal n.s. 15(7): 317. 1920 & Bot. Bihar Orissa 116. 1921 (Repr. ed., 1: 120. 1961).

Fl. & Fr.: March - May.

Distrib.: Purnia.

PEDILANTHUS Neck. ex Poit., *nom. cons.*

Pedilanthus tithymaloides (L.) Poit. in Ann. Mus. Hist. Nat. 19: 390. t. 19. 1812; Hook. f., Fl. Brit. India 5: 239. 1886; Haines, Bot. Bihar Orissa 149. 1921 (Repr. ed., 1: 154. 1961). *Euphorbia tithymaloides* L., Sp. Pl. 453. 1753.

Fl. & Fr.: October - December.

Distrib.: Cultivated in gardens.

PHYLLANTHUS L.

Phyllanthus acidus (L.) Skeels, U. S. D. A. Bur. Pl. Indust. Bull. 148: 17. 1909. *Averrhoa acida* L., Sp. Pl. 428. 1753. *Cicca disticha* L., Mant. Pl. 124. 1767; Haines, Bot. Bihar Orissa 129. 1921 (Repr. ed., 1: 133. 1961). *Phyllanthus distichus* (L.) Muell. Arg. in DC., Prodr. 15(2.2): 413. 1866; Hook. f., Fl. Brit. India 5: 304. 1887 - *Harfarebari*.

Fl. & Fr.: May - July.

Distrib.: Cultivated in gardens.

Phyllanthus airy-shawii Brunel *ex* Roux in *Taxon* 37(2): 469. 1988.
P. debilis Klein *ex* Willd., *Sp. Pl.* 4: 582. 1805; Hook. *f.*, *Fl. Brit. India* 5:
 299. 1887; Haines, *Bot. Bihar Orissa* 126. 1921 (Repr. ed., 1: 131. 1961).

Fl. & Fr.: May - January.

Distrib.: Giridih, Hazaribagh, Koderma, Lohardaga, Palamau, Sahibganj, West Champaran.

Phyllanthus amarus Schumach. & Thonn. in *Danske Vid. Selsk. Skr.* 4: 195. 1829. *P. fraternus* Webster in *Contrib. Grey Herb.* 176: 53. 1955.
P. niruri auct. non L., 1753; Hook. *f.*, *Fl. Brit. India* 5: 298. 1887; Haines, *Bot. Bihar Orissa* 126. 1921 (Repr. ed., 1: 130. 1961). *P. nanus* Hook. *f.*, *Fl. Brit. India* 5: 298. 1887; Haines, *Bot. Bihar Orissa* 127. 1921 (Repr. ed., 1: 131. 1961).

Fl. & Fr.: August - December.

Distrib.: Begusarai, Bhojpur, East Champaran, Hazaribagh, Palamau, Patna, Singhbhum, West Champaran.

Phyllanthus emblica L., *Sp. Pl.* 982. 1753; Hook. *f.*, *Fl. Brit. India* 5: 289. 1887. *Emblica officinalis* Gaertn., *Fruct. Sem. Pl.* 2: 122. t. 108. 1790; Haines, *Bot. Bihar Orissa* 128. 1921 (Repr. ed., 1: 132. 1961).

Fl. & Fr.: February - December.

Distrib.: Throughout the state.

Phyllanthus lawii J. Graham, *Cat. Pl. Bombay* 181. 1839; Hook. *f.*, *Fl. Brit. India* 5: 290. 1887; Haines, *Bot. Bihar Orissa* 124. 1921 (Repr. ed., 1: 128. 1961).

Fl. & Fr.: January - March.

Distrib.: West Champaran.

Phyllanthus maderaspatensis L., *Sp. Pl.* 982. 1753; Hook. *f.*, *Fl. Brit. India* 5: 292. 1887; Haines, *Bot. Bihar Orissa* 124. 1921 (Repr. ed., 1: 129. 1961).

Fl. & Fr.: July - September.

Distrib.: Hazaribagh, Palamau, Patna.

Phyllanthus reticulatus Poir. in Lam., Encycl. 5: 298. 1804; Hook. *f.*, Fl. Brit. India 5: 288. 1887. *Kirganelia reticulata* (Poir.) Baill., Etude Gen. Euphorb. 613. 1858; Haines, Bot. Bihar Orissa 129. 1921 (Repr. ed., 1: 134. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: Bhagalpur, Chota Nagpur, East Champaran, West Champaran.

Phyllanthus rheedii Wight, Icon. Pl. Ind. Orient. 5(2): t. 1895. f. 1. 1852; Hook. *f.*, Fl. Brit. India 5: 293. 1887.

Fl. & Fr.: December - February.

Distrib.: Chota Nagpur.

Phyllanthus urinaria L., Sp. Pl. 982. 1753; Hook. *f.*, Fl. Brit. India 5: 293. 1887; Haines, Bot. Bihar Orissa 125. 1921 (Repr. ed., 1: 129. 1961).

var. **laevis** Haines, Bot. Bihar Orissa 125. 1921 (Repr. ed., 1: 130. 1961).

Fl. & Fr.: July - December.

Distrib.: Palamau.

var. **urinaria**

Fl. & Fr.: July - December.

Distrib.: Giridih, Hazaribagh, Palamau, West Champaran.

Phyllanthus virgatus G. Forster, Fl. Ins. Austr. 65. 1786. *P. simplex* Retz., Observ. Bot. 5: 29. 1788; Hook. *f.*, Fl. Brit. India 5: 295. 1887; Haines, Bot. Bihar Orissa 125. 1921 (Repr. ed., 1: 130. 1961).

Fl. & Fr.: July - March.

Distrib.: East Champaran, Koderma, Munger, Muzaffarpur, Palamau, Patna, Singhbhum, West Champaran.

RICINUS L.

Ricinus communis L., Sp. Pl. 1007. 1753; Hook. *f.*, Fl. Brit. India 5: 457. 1887; Haines, Bot. Bihar Orissa 112. 1921 (Repr. ed., 1: 116. 1961).

Fl. & Fr.: September - June.

Distrib.: Hazaribagh, Koderma, Palamau, Ranchi, Singhbhum, West Champaran.

SAPIUM P. Br.

Sapium sebiferum Roxb., Fl. Ind. 3: 693. 1832; Hook. *f.*, Fl. Brit. India 5: 470. 1888; Haines, Bot. Bihar Orissa 116. 1921 (Repr. ed., 1: 120. 1961).

Distrib.: Planted.

SAUROPUS Blume

Sauropus quadrangularis Muell. Arg. in Linnaea 32: 73. 1863 & in DC., Prodr. 15(2.2): 242. 1866; Hook. *f.*, Fl. Brit. India 5: 335. 1887; Haines, Bot. Bihar Orissa 135. 1921 (Repr. ed., 1: 140. 1961).

var. **pubescens** Kurz, For. Fl. Burma 2: 350. 1877. *Sauropus pubescens* Hook. *f.*, Fl. Brit. India 5: 335. 1887; Haines, Bot. Bihar Orissa 135. 1921 (Repr. ed., 1: 139. 1961).

Fl. & Fr.: May - October.

Distrib.: Purnia, Singhbhum, West Champaran.

var. **quadrangularis**

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

SEBASTIANIA Spreng.

Sebastiania chamaelea (L.) Muell. Arg. in DC., Prodr. 15(2.2): 1175. 1866; Hook. *f.*, Fl. Brit. India 5: 475. 1888; Haines, Bot. Bihar Orissa 118. 1921 (Repr. ed., 1: 122. 1961). *Tragia chamaelea* L., Sp. Pl. 981. 1753.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum.

SECURINEGA Commerson *ex* Juss., *nom. cons.*

Securinega virosa (Roxb. *ex* Willd.) Baill. in Adansonia 6: 334. 1865-1866 *quoad syn. tantum excl. descr.* *Phyllanthus virosus* Roxb. *ex* Willd., Sp. Pl. 4: 578. 1805. *Flueggea microcarpa* Blume, Bijdr. 580. 1826; Hook. *f.*, Fl. Brit. India 5: 328. 1887. *F. obovata* Baill. in Adansonia 2: 41. 1861-1862; Haines, Bot. Bihar Orissa 123. 1921 (Repr. ed., 1: 127. 1961).

Fl. & Fr.: May - September.

Distrib.: Gaya, Hazaribagh, Palamau, Patna, Ranchi, Santal Pargana, Singhbhum, West Champaran.

SUREGADA Roxb. *ex* Rottler

Suregada multiflora (Juss.) Baill., Et. Gen. Euphorb. 396. 1858. *Gelonium multiflorum* Juss., Euph. Gen. Tent. 111. t. 10. f. 31A. 1824; Hook. *f.*, Fl. Brit. India 5: 459. 1887; Haines, Bot. Bihar Orissa 114. 1921 (Repr. ed., 1: 118. 1961).

Fl. & Fr.: March - June.

Distrib.: Purnia, Santal Pargana, West Champaran.

TRAGIA L.

Tragia hispida Willd., Sp. Pl. 4: 323. 1805. *T. involucrata* L. var. *angustifolia* Hook. *f.*, Fl. Brit. India 5: 465. 1888.

Fl. & Fr.: Throughout the year.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 222. 1998).

Tragia involucrata L., Sp. Pl. 980. 1753; Hook. *f.*, Fl. Brit. India 5: 465. 1888; Haines, Bot. Bihar Orissa 115. 1921 (Repr. ed., 1: 119. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Palamau, Singhbhum, West Champaran.

TREWIA L.

Trewia nudiflora L., Sp. Pl. 1193. 1753; Hook. *f.*, Fl. Brit. India 5: 423. 1887; Haines, Bot. Bihar Orissa 105. 1921 (Repr. ed., 1: 109. 1961).

Fl. & Fr.: January - October.

Distrib.: Patna, Purnia, West Champaran.

Trewia polycarpa Benth. in Benth. & Hook. *f.*, Gen. Pl. 3: 318. 1880; Hook. *f.*, Fl. Brit. India 5: 424. 1887.

Fl. & Fr.: March - May.

Distrib.: Chota Nagpur.

URTICACEAE

BOEHMERIA Jacq.

Boehmeria macrophylla Hornem., Hort. Reg. Bot. Hafn. 2: 890. 1815, non D. Don, 1825 nec (Thunb.) Sieb. & Zucc., 1844. *B. platyphylla* D. Don, Prodr. Fl. Nepal. 60. 1825; Hook. *f.*, Fl. Brit. India 5: 578. 1888, excl. var.; Haines, Bot. Bihar Orissa 815. 1924 (Repr. ed., 3: 855. 1961).

Fl. & Fr.: August - March.

Distrib.: Hazaribagh, Palamau, Purnia, Ranchi, Singhbhum.

Boehmeria penduliflora Long in Notes Roy. Bot. Gard. Edinb. 40: 130. 1982. *B. macrophylla* D. Don, Prodr. Fl. Nepal. 60. 1825; Hook. *f.*, Fl. Brit. India 5: 577. 1888; Haines, Bot. Bihar Orissa 815. 1924 (Repr. ed., 3: 855. 1961).

Fl. & Fr.: September - February.

Distrib.: Singhbhum, West Champaran.

Boehmeria rugulosa Wedd. in Ann. Sci. Nat. ser. 4, 1: 200. 1854 & Monogr. Urtic. 373. 1856-1857; Hook. *f.*, Fl. Brit. India 5: 577. 1888; Haines, Bot. Bihar Orissa 815. 1924 (Repr. ed., 3: 854. 1961).

Fl. & Fr.: September - November.

Distrib.: West Champaran (Haines, *l.c.*).

Boehmeria scabrella Gaud., Voy. Uranie 499. 1830. *B. platyphylla* var. *scabrella* (Gaud.) Wedd. in Nouv. Arch. Mus. Hist. Nat. Paris 9: 365. 1856; Hook. *f.*, Fl. Brit. India 5: 578. 1888; Haines, Bot. Bihar Orissa 816. 1924 (Repr. ed., 3: 856. 1961).

Fl. & Fr.: September - January.

Distrib.: Purnia (Haines, *l.c.*).

DENDROCNIDE Miq.

Dendrocniide sinuata (Blume) Chew. in Gard. Bull. Singapore 21: 206. 1965. *Urtica sinuata* Blume, Bijdr. 505. 1825. *Laportea crenulata* Gaud. in Freye. Voy. Bot. 498. 1826; Hook. *f.*, Fl. Brit. India 5: 550. 1888; Haines, Bot. Bihar Orissa 812. 1924 (Repr. ed., 3: 852. 1961).

Fl. & Fr.: September - December.

Distrib.: Singhbhum.

ELATOSTEMA J.R. Forster & G. Forster, *nom. cons.*

Elatostema cuneatum Wight, Icon. Pl. Ind. Orient. 6: t. 2091. f. 3. 1853, '*cuneata*'; Hook. *f.*, Fl. Brit. India 5: 568. 1888.

Fl. & Fr.: August - October.

Distrib.: Chota Nagpur.

Elatostema rupestre Wedd., Monogr. Urtic. 304. 1856; Hook. *f.*, Fl. Brit. India 5: 564. 1888.

Fl. & Fr.: August - October.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 70. 1998).

GIRARDINIA Gaud.

Girardinia diversifolia (Link) Friis in Kew Bull. 36: 145. 1981. *Urtica diversifolia* Link, Enum. Hort. Berol. Alt. 2: 385. 1822, *non* Blume, 1825. *U. heterophylla* Vahl, Symb. Bot. 1: 76. 1790. *Girardinia heterophylla* (Vahl) Decne. in Jacquem., Voy. Inde 4(Bot.): 151. t. 153. 1844; Hook. *f.*, Fl. Brit. India 5: 550. 1888. *G. zeylanica* Decne. in Jacquem., Voy. Inde 4 (Bot.): 152. 1844; Haines, Bot. Bihar Orissa 813. 1924 (Repr. ed., 3: 853. 1961). *G. heterophylla* Decne. var. *palmata* Hook. *f.*, Fl. Brit. India 5: 551. 1888 & var. *zeylanica* Hook. *f.*, Fl. Brit. India 5: 551. 1888.

Fl. & Fr.: October - January.

Distrib.: Ranchi.

LAPORTEA Gaud., *nom. cons.*

Laportea interrupta (L.) Chew. in Gard. Bull. Singapore 21: 200. 1965. *Urtica interrupta* L., Sp. Pl. 985. 1753. *Fleurya interrupta* (L.) Gaud., Voy. Uranie 497. 1830; Hook. f., Fl. Brit. India 5: 548. 1888; Haines, Bot. Bihar Orissa 812. 1924 (Repr. ed., 3: 852. 1961). - *Lal bichua*.

Fl. & Fr.: September - October.

Distrib.: Palamau, Ranchi, West Champaran.

Laportea terminalis Wight, Icon. Pl. Ind. Orient. 6: 9. t. 1972. 1853; Hook. f., Fl. Brit. India 5: 549. 1888.

Fl. & Fr.: August - December.

Distrib.: Hazaribagh (Paria and Chattopadhyay, Fl. Hazaribagh Distr. Bihar 92. 2000; as *Laportea bulbifera* (Sieb. & Zucc.) Wedd.)

LECANTHUS Wedd.

Lecanthus peduncularis (Wallich ex Royle) Wedd. in DC., Prodr. 16(1): 164. 1869. *Procris peduncularis* Wallich ex Royle, Ill. Bot. Himal. Mts. t. 83. 1836. *Lecanthus wightii* Wedd. in Ann. Sci. Nat. Bot. ser. 4, 1: 187. 1854; Hook. f., Fl. Brit. India 5: 559. 1888.

Fl. & Fr.: August - December.

Distrib.: Palamau, Purnia.

NEODISTEMON Babu & Henry

Neodistemon indicum (Wedd.) Babu & Henry in Taxon 19: 651. 1970. *Distemon indicum* Wedd. in Nouv. Arch. Mus. Hist. Nat. Paris 9: 551. t. 20A. 1857; Hook. f., Fl. Brit. India 5: 588. 1888; Haines, Bot. Bihar Orissa 818. 1924 (Repr. ed., 3: 858. 1961).

Fl. & Fr.: August - September.

Distrib.: Ranchi.

PILEA Lindl., *nom. cons.*

Pilea microphylla (L.) Liebm. in Vid. Selsk. Skr. 5(2): 302. 1851; Haines, Bot. Bihar Orissa 814. 1924 (Repr. ed., 3: 854. 1961). *Parietaria*

microphylla L., Syst. Nat. ed. 10, 2: 1308. 1759. *Pilea muscosa* Lindl., Coll. Bot. t. 4. 1821; Hook. f., Fl. Brit. India 5: 551. 1888.

Fl. & Fr.: December - January.

Distrib.: Hazaribagh, Singhbhum, West Champaran.

POUZOLZIA Gaud.

Pouzolzia auriculata Wight, Icon. Pl. Ind. Orient. t. 1980. f. 2. 1853; Hook. f., Fl. Brit. India 5: 582. 1888; Haines, Bot. Bihar Orissa 817. 1924 (Repr. ed., 3: 857. 1961).

Fl. & Fr.: November - December.

Distrib.: Singhbhum (Haines, l.c.).

Pouzolzia hirta Hassk., Cat. Hort. Bot. Bogor 80. 1844; Hook. f., Fl. Brit. India 5: 586. 1888; Haines, Bot. Bihar Orissa 817. 1924 (Repr. ed., 3: 857. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Purnia.

Pouzolzia pentandra (Roxb.) Benn., Pl. Jav. Rar. 1: 64. t. 14. 1838; Hook. f., Fl. Brit. India 5: 583. 1888; Haines, Bot. Bihar Orissa 817. 1924 (Repr. ed., 3: 857. 1961). *Urtica pentandra* Roxb., Fl. Ind. 3: 583. 1832.

Fl. & Fr.: August - December.

Distrib.: Palamau, Ranchi, Singhbhum, West Champaran.

Pouzolzia wightii Benn., Pl. Jav. Rar. 1: 66. 1838; Hook. f., Fl. Brit. India 5: 584. 1888.

Fl. & Fr.: July - October.

Distrib.: Chota Nagpur.

Pouzolzia zeylanica (L.) Benn., Pl. Jav. Rar. 1: 67. 1838. *Parietaria zeylanica* L., Sp. Pl. 1052. 1753. *P. indica* L., Mant. Pl. 128. 1767. *Pouzolzia indica* (L.) Gaud., Voy. Uranie 503. 1830; Hook. f., Fl. Brit. India 5: 581. 1888; Haines, Bot. Bihar Orissa 816. 1924 (Repr. ed., 3: 856. 1961).

Fl. & Fr.: August - November.

Distrib.: Darbhanga, Purnia, Ranchi, Singhbhum, West Champaran.

URTICA L.

Urtica ardens Link, Enum. Hort. Berol. 385. 1822. *U. parviflora* Roxb., Fl. Ind. 3: 581. 1832; Hook. f., Fl. Brit. India 5: 548. 1888, p.p.

Fl. & Fr.: August - October.

Distrib.: Purnia.

Urtica dioica L., Sp. Pl. 984. 1753; Hook. f., Fl. Brit. India 5: 548. 1888.

Fl. & Fr.: August - September.

Distrib.: West Champaran.

ULMACEAE**CELTIS L.**

Celtis tetrandra Roxb., Fl. Ind. 2: 63. 1832; Hook. f., Fl. Brit. India 5: 482. 1888, *incl. var. hamiltonii* (Planch.) Hook. f. & *var. mollis* (Planch.) Hook. f.; Haines, Bot. Bihar Orissa 808. 1924 (Repr. ed., 3: 848. 1961).

Fl. & Fr.: February - November.

Distrib.: Palamau, Purnia, West Champaran.

Celtis timorensis Spanoghe in Linnaea 15: 343. 1841. *C. cinnamomea* Lindl. ex Planch. in Ann. Sci. Nat. Bot. ser. III. 10: 303. 1848; Hook. f., Fl. Brit. India 5: 482. 1888; Haines, Bot. Bihar Orissa 808. 1924 (Repr. ed., 3: 848. 1961).

Fl. & Fr.: March - May.

Distrib.: Singhbhum.

HOLOPTELEA Planch.

Holoptelea integrifolia (Roxb.) Planch. in Ann. Sci. Nat. Bot. ser. III. 10: 259. 1848; Hook. f., Fl. Brit. India 5: 481. 1888; Haines, Bot. Bihar Orissa 807. 1924 (Repr. ed., 3: 847. 1961). *Ulmus integrifolia* Roxb., Pl. Corom. 56. t. 78. 1796-1798 & Fl. Ind. 2: 68. 1832. *Chilbil*.

Fl. & Fr.: February - May.

Distrib.: Hazaribagh, Koderma, Palamau, Santal Pargana, West Champaran.

TREMA Lour.

Trema orientalis (L.) Blume, Mus. Bot. 2: 62. 1856; Hook. *f.*, Fl. Brit. India 5: 484. 1888; Haines, Bot. Bihar Orissa 809. 1924 (Repr. ed., 3: 848. 1961). *Celtis orientalis* L., Sp. Pl. 1044. 1753.

Fl. & Fr.: Almost throughout the year.

Distrib.: Hazaribagh, Palamau, Santal Pargana, West Champaran.

Trema politoria Planch. in Ann. Sci. Nat. Bot. ser. III, 10: 326. 1848; Hook. *f.*, Fl. Brit. India 5: 484. 1888; Haines, Bot. Bihar Orissa 809. 1924 (Repr. ed., 3: 849. 1961).

Fl. & Fr.: April - September.

Distrib.: Hazaribagh, Santal Pargana, Singhbhum, West Champaran.

Trema tomentosa (Roxb.) Hara, Fl. East. Himal. 2: 19. 1971. *Celtis tomentosa* Roxb., Fl. Ind. 2: 66. 1832. *Trema amboinensis auct. non Willd.* (*Celtis amboinensis*), 1806; Blume, Mus. Bot. 2: 61. 1856; Hook. *f.*, Fl. Brit. India 5: 484. 1888. *T. orientalis* (L.) Blume var. *amboinensis* Haines, Bot. Bihar Orissa 809. 1924 (Repr. ed., 3: 849. 1961).

Fl. & Fr.: April - September.

Distrib.: Hazaribagh.

CANNABACEAE

CANNABIS L.

Cannabis sativa L., Sp. Pl. 1027. 1753; Hook. *f.*, Fl. Brit. India 5: 487. 1888; Haines, Bot. Bihar Orissa 810. 1924 (Repr. ed., 3: 850. 1961).
- *Bhang*.

Fl. & Fr.: March - November.

Distrib.: Darbhanga, Muzaffarpur, Purnia, Singhbhum, West Champaran.

MORACEAE**ARTOCARPUS** J.R. Forster & G. Forster, *nom. cons.*

Artocarpus chama Buch.-Ham. in Mem. Wern. Soc. 5: 331. 1826. *A. chaplasha* Roxb., Fl. Ind. 3: 525. 1832; King in Hook. *f.*, Fl. Brit. India 5: 543. 1888.

Fl. & Fr.: October - March.

Distrib.: Cultivated in gardens. Buxar.

Artocarpus heterophyllus Lam., Encycl. 3: 209. 1789. *A. integrifolia auct. non L. f.*, 1782; King in Hook. *f.*, Fl. Brit. India 5: 541. 1888; Haines, Bot. Bihar Orissa 825. 1924 (Repr. ed., 3: 865. 1961). - *Kathal*.

Fl. & Fr.: December - July.

Distrib.: Cultivated throughout the state.

Artocarpus lakoocha Roxb., Fl. Ind. 3: 524. 1832; King in Hook. *f.*, Fl. Brit. India 5: 543. 1888; Haines, Bot. Bihar Orissa 824. 1924 (Repr. ed., 3: 865. 1961).

Fl. & Fr.: December - October.

Distrib.: Hazaribagh, Palamau, Purnia, Ranchi, Singhbhum, West Champaran.

BROUSSONETIA L'Hérit. ex Venten., *nom. cons.*

Broussonetia papyrifera Venten., Tabl. Regn. Veg. 3: 547. 1799; Hook. *f.*, Fl. Brit. India 5: 490. 1888; Bot. Bihar Orissa 822. 1924 (Repr. ed., 3: 862. 1961).

Fl. & Fr.: July - October.

Distrib.: Planted.

FICUS L.

Ficus amplissima Sm. in Rees, Cyclop. 14: n. 68. 1810. *F. tsiela* Roxb. ex Buch.-Ham. in Trans. Linn. Soc. London 15: 149. 1826; King in Hook. *f.*, Fl. Brit. India 5: 515. 1888; Haines, Bot. Bihar Orissa 832. 1924 (Repr. ed., 2: 872. 1961).

Fl. & Fr.: December - February.

Distrib.: Palamau.

Ficus arnottiana (Miq.) Miq., Ann. Mus. Lugd.-Bat. 3: 287. 1867; King in Hook. *f.*, Fl. Brit. India 5: 513. 1888; Haines, Bot. Bihar Orissa 833. 1924 (Repr. ed., 3: 874. 1961). *Urostigma arnottianum* Miq. in Hook., Lond. J. Bot. 6: 564. 1847.

Fl. & Fr.: March - June.

Distrib.: Gaya, Giridih, Hazaribagh, Singhbhum.

Ficus benghalensis L., Sp. Pl. 1059. 1753; King in Hook. *f.*, Fl. Brit. India 5: 499. 1888; Haines, Bot. Bihar Orissa 834. 1924 (Repr. ed., 3: 874. 1961). *Urostigma bengalense* Gasp., Nov. Gen. Fic. 7. 1844. - *Bar, Bat.*

var. **benghalensis**

Fl. & Fr.: Throughout the year.

Distrib.: Throughout the state.

var. **krishnae** (C. DC.) Corner in Gard. Bull. Singapore 21: 14. 1965. *F. krishnae* C. DC. in Curtis, Bot. Mag. t. 8092. 1906.

Fl. & Fr.: October - January.

Distrib.: Planted in gardens.

Ficus benamina L. var. **nuda** (Miq.) Barrett in Amer. Midl. Naturalist 45: 127. 1951. *Urostigma nudum* Miq. in Hook., Lond. J. Bot. 6: 584. 1847. *Ficus benamina* L. var. **comosa** (Roxb.) Kurz, Forest Fl. Burma 2: 446. 1877; King in Hook. *f.*, Fl. Brit. India 5: 508. 1888. *F. comosa* Roxb., Pl. Corom. 2: 14. t. 125. 1799; Haines, Bot. Bihar Orissa 828. 1924 (Repr. ed., 3: 868. 1961).

Fl. & Fr.: February - May.

Distrib.: Hazaribagh, Singhbhum, West Champaran.

Ficus carica L., Sp. Pl. 1059. 1753; Haines, Bot. Bihar Orissa 1248. 1924 (Repr. ed., 3: 879 & 1302. 1961).

Fl. & Fr.: January - October.

Distrib.: Cultivated.

Ficus concinna Miq. var. **subsessilis** Corner in Gard. Bull. Singapore 17: 376. 1959. *F. glabella auct. non* Blume, 1825; King in Hook. *f.*, Fl. Brit. India 5: 511. 1888, *p.p.*; Haines, Bot. Bihar Orissa 830. 1924 (Repr. ed., 2: 870. 1961).

Fl. & Fr.: April - June.

Distrib.: Palamau, Ranchi, Singhbhum.

Ficus cuspidifera Miq. in Hook., Lond. J. Bot. 7: 434. 1848; Haines, Bot. Bihar Orissa 835. 1924 (Repr. ed., 3: 875. 1961). *F. gibbosa* Blume var. *cuspidifera* (Miq.) King in Hook. *f.*, Fl. Brit. India 5: 497. 1888.

Fl. & Fr.: November - January.

Distrib.: Santal Pargana, Singhbhum (Haines, *l.c.*).

Ficus elastica Roxb., Fl. Ind. 3: 541. 1832; King in Hook. *f.*, Fl. Brit. India 5: 508. 1888; Haines, Bot. Bihar Orissa 829. 1924 (Repr. ed., 3: 869. 1961).

Distrib.: Cultivated in gardens.

Ficus exasperata Vahl, Enum. Pl. 2: 197. 1805. *F. asperrima* Roxb., Fl. Ind. 3: 554. 1832; King in Hook. *f.*, Fl. Brit. India 5: 522. 1888; Haines, Bot. Bihar Orissa 836. 1924 (Repr. ed., 2: 877. 1961).

Fl. & Fr.: February - May.

Distrib.: Chota Nagpur.

Ficus fruticosa Roxb., Fl. Ind. 3: 533. 1832. *F. scandens* Roxb., Fl. Ind. 3: 536. 1832, *non* Lam., 1788; King in Hook. *f.*, Fl. Brit. India 5: 526. 1888; Haines, Bot. Bihar Orissa 837. 1924 (Repr. ed., 3: 878. 1961).

Fl. & Fr.: January - May.

Distrib.: Hazaribagh, Lohardaga, Singhbhum, West Champaran.

Ficus geniculata Kurz, Forest Fl. Burma 2: 447. 1877; King in Hook. *f.*, Fl. Brit. India 5: 516. 1888; Haines, Bot. Bihar Orissa 831. 1924 (Repr. ed., 3: 872. 1961).

Fl. & Fr.: September - March.

Distrib.: Singhbhum (Haines, *l.c.*).

Ficus heterophylla L. *f.*, Suppl. Pl. 442. 1782; King in Hook. *f.*, Fl. Brit. India 5: 518. 1888; Haines, Bot. Bihar Orissa 835. 1924 (Repr. ed., 3: 876. 1961).

var. heterophylla

Fl. & Fr.: January - May.

Distrib.: West Champaran.

var. sarmentosa Haines, Bot. Bihar Orissa 836. 1924 (Repr. ed., 3: 877. 1961).

Fl. & Fr.: January - May.

Distrib.: Purnia (Haines, *l.c.*).

var. scabrella (Roxb.) Haines, Bot. Bihar Orissa 836. 1924 (Repr. ed., 3: 876. 1961). *Ficus scabrella* Roxb., Fl. Ind. 3: 532. 1832.

Fl. & Fr.: January - May.

Distrib.: Purnia (Haines, *l.c.*).

Ficus hirta Vahl, Enum. Pl. 2: 201. 1805; King in Hook. *f.*, Fl. Brit. India 5: 531. 1888.

Fl. & Fr.: June - October.

Distrib.: Singhbhum.

Ficus hispida L. *f.*, Suppl. Pl. 442. 1782; King in Hook. *f.*, Fl. Brit. India 5: 522. 1888; Haines, Bot. Bihar Orissa 837. 1924 (Repr. ed., 3: 878. 1961). *F. oppositifolia* Roxb., Pl. Corom. 2: 14. t. 124. 1799. *F. daemonia* Koenig ex Vahl, Enum. Pl. 2: 198. 1805.

Fl. & Fr.: December - March.

Distrib.: Hazaribagh, Palamau, Singhbhum, West Champaran.

Ficus lanceolata Buch.-Ham. ex Roxb., Fl. Ind. 3: 557. 1832; King in Hook. *f.*, Fl. Brit. India 5: 536. 1888; Haines, Bot. Bihar Orissa 838. 1924 (Repr. ed., 3: 879. 1961).

Fl. & Fr.: May - June.

Distrib.: Palamau, Singhbhum.

Ficus macrophylla Roxb., Fl. Ind. 3: 557. 1832; Haines, Bot. Bihar Orissa 839. 1924 (Repr. ed., 3: 880. 1961). *F. roxburghii* Wallich ex Miq., Ann. Mus. Lugd. Bat. 3: 296. 1867; King in Hook. f., Fl. Brit. India 5: 534. 1888.

Fl. & Fr.: April - September.

Distrib.: Lohardaga, Palamau, Singhbhum.

Ficus microcarpa L. f., Suppl. Pl. 442. 1782. *F. retusa auct. non L.*, 1767; King in Hook. f., Fl. Brit. India 5: 511. 1888; Haines, Bot. Bihar Orissa 828. 1924 (Repr. ed., 3: 869. 1961).

Fl. & Fr.: October - May.

Distrib.: Chota Nagpur, Dumka, Munger, West Champaran.

Ficus mollis Vahl, Symb. Bot. 1: 82. 1790. *F. tomentosa* Roxb. ex Willd., Sp. Pl. 4: 1136. 1806; King in Hook. f., Fl. Brit. India 5: 501. 1888; Haines, Bot. Bihar Orissa 834. 1924 (Repr. ed., 3: 875. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Gaya, Gumla, Hazaribagh, Koderma, Palamau, Ranchi.

Ficus nervosa Heyne ex Roth in Roem. & Schult., Syst. Veg. 1: 513. 1817; King in Hook. f., Fl. Brit. India 5: 512. 1888; Haines, Bot. Bihar Orissa 830. 1924 (Repr. ed., 3: 871. 1961).

Fl. & Fr.: March - May.

Distrib.: Santal Pargana, Singhbhum.

Ficus palmata Forssk., Fl. Aegypt. - Arab. 179. 1775; King in Hook. f., Fl. Brit. India 5: 530. 1888; Haines, Bot. Bihar Orissa 1248. 1924 (Repr. ed., 3: 879 & 1302. 1961). - *Anjir*.

Fl. & Fr.: June - September.

Distrib.: Gaya, Palamau, Patna, Purnia, West Champaran.

Ficus pumila L., Sp. Pl. 1060. 1753.

Fl. & Fr.: December - January.

Distrib.: West Champaran.

Ficus racemosa L., Sp. Pl. 1060. 1753. *F. glomerata* Roxb., Pl. Corom. 2: 13. t. 123. 1799; King in Hook. *f.*, Fl. Brit. India 5: 535. 1888; Haines, Bot. Bihar Orissa 838. 1924 (Repr. ed., 3: 880. 1961). *Gular*.

Fl. & Fr.: February - June.

Distrib.: Gumla, Hazaribagh, Palamau, Patna, Purnia, Singhbhum, West Champaran.

Ficus religiosa L., Sp. Pl. 1059. 1753; King in Hook. *f.*, Fl. Brit. India 5: 513. 1888; Haines, Bot. Bihar Orissa 833. 1924 (Repr. ed., 3: 874. 1961). - *Pipal*.

Fl. & Fr.: March - September.

Distrib.: Throughout the state.

Ficus rigida Jack., Mal. Misc. 2(7): 72. 1822; King in Hook. *f.*, Fl. Brit. India 5: 505. 1888. *F. glaberrima* Blume, Bijdr. 457. 1825; King in Hook. *f.*, Fl. Brit. India 5: 505. 1888; Haines, Bot. Bihar Orissa 829. 1924 (Repr. ed., 3: 870. 1961).

Fl. & Fr.: January - March.

Distrib.: West Champaran.

Ficus rumphii Blume, Bijdr. 437. 1825; King in Hook. *f.*, Fl. Brit. India 5: 512. 1888; Haines, Bot. Bihar Orissa 832. 1924 (Repr. ed., 3: 873. 1961);

Fl. & Fr.: August - January.

Distrib.: Bhagalpur, Hazaribagh, Koderma, Palamau, Singhbhum, West Champaran.

Ficus sarmentosa Buch.-Ham. ex Sm. in Rees, Cyclop. 14: n. 45. 1810. *F. foveolata* Wallich ex Miq., Ann. Mus. Bot. Lugd.-Bat. 3: 294. 1867; King in Hook. *f.*, Fl. Brit. India 5: 528. 1888, *p.p.*

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Santal Pargana.

Ficus semicordata Buch.-Ham. ex Sm. in Rees, Cyclop. 14: n. 71. 1810, *non* Miq., 1867. *F. cunia* Buch.-Ham. ex Roxb., Fl. Ind. 3: 561. 1832; King in Hook. *f.*, Fl. Brit. India 5: 523. 1888; Haines, Bot. Bihar Orissa 836. 1924 (Repr. ed., 3: 877. 1961).

Fl. & Fr.: Throughout the year.

Distrib.: Giridih, Hazaribagh, Palamau, Santal Pargana, West Champaran.

Ficus squamosa Roxb., Fl. Ind. 3: 531. 1832. *F. saemocarpa* Miq., Ann. Mus. Bot. Lugd. - Bat. 3: 232, 296. 1867; King in Hook. f., Fl. Brit. India 5: 523. 1888; Haines, Bot. Bihar Orissa 837. 1924 (Repr. ed., 3: 878. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: West Champaran (Haines, l.c.).

Ficus thwaitesii Miq., Ann. Mus. Bot. Lugd. - Bat. 3: 229. 1867; King in Hook. f., Fl. Brit. India 5: 525. 1888.

Fl. & Fr.: July - October.

Distrib.: Hazaribagh.

Ficus tinctoria G. Forster, Fl. Ins. Austr. 76. 1786.

subsp. **gibbosa** (Blume) Corner in Gard. Bull. Singapore 17: 476. 1959 var. **gibbosa**. *F. gibbosa* Blume, Bijdr. 466. 1825; King in Hook. f., Fl. Brit. India 5: 496. 1888.

Fl. & Fr.: July - December.

Distrib.: Palamau.

subsp. **parasitica** (Willd.) Corner in Gard. Bull. Singapore 17: 476. 1959. *F. parasitica* Willd. in Mem. Acad. R. Sci. Berlin 2: 102. 1798; Haines, Bot. Bihar Orissa 835. 1924 (Repr. ed., 3: 876. 1961). *F. gibbosa* Blume var. **parasitica** (Willd.) King in Ann. Roy. Bot. Gard. Calcutta 1: 6. t. 2 a-b. 1887 & in Hook. f., Fl. Brit. India 5: 497. 1888.

Fl. & Fr.: February - November.

Distrib.: Hazaribagh, Palamau, Singhbhum.

Ficus virens Dryander in Aiton, Hortus Kew., ed. 1. 3: 451. 1789. *F. infectoria* Roxb., Fl. Ind. 3: 551. 1832, non Willd., 1806; King in Hook. f., Fl. Brit. India 5: 515. 1888; Haines, Bot. Bihar Orissa 830. 1924 (Repr. ed., 3: 871. 1961).

Fl. & Fr.: December - July

Distrib.: Throughout the state.

MACLURA Nutt., *nom. cons.*

Maclura cochinchinensis (Lour.) Corner in Gard. Bull. Singapore 19: 239. 1962. *Vanieria cochinchinensis* Lour., Fl. Cochinch. 2: 564. 1790. *Cudrania javanensis* Trec., Ann. Sci. Nat. ser. 3, 8: 123. 1847; Hook. f., Fl. Brit. India 5: 538. 1888, *p.p.*; Haines, Bot. Bihar Orissa 823. 1924 (Repr. ed., 2: 864. 1961).

Fl. & Fr.: April - May.

Distrib.: Purnia, West Champaran.

MORUS L.

Morus alba L., Sp. Pl. 986. 1753; Hook. f., Fl. Brit. India 5: 492. 1888. *Tut.*

Fl. & Fr.: January - May.

Distrib.: Gumla.

Morus australis Poir. in Lam., Encycl. 4: 380. 1797. *M. indica auct. non L.*, 1753; Roxb., Fl. Ind. 3: 596. 1832; Hook. f., Fl. Brit. India 5: 492. 1888; Haines, Bot. Bihar Orissa 821. 1924 (Repr. ed., 3: 861. 1961).

Fl. & Fr.: October - May.

Distrib.: Chota Nagpur, West Champaran.

Morus macroura Miq., Pl. Jungh. 42. 1851. *M. laevigata* Wallich ex Brandis, Forest Fl. N.W. India 409. 1874; Hook. f., Fl. Brit. India 5: 492. 1888; Haines, Bot. Bihar Orissa 821. 1924 (Repr. ed., 3: 862. 1961).

var. **macroura**

Fl. & Fr.: February - May.

Distrib.: Cultivated. Ranchi.

var. **viridis** (Bureau) K.K. Khanna, *comb. nov.* *Morus laevigata* Wallich ex Brandis var. *viridis* Bureau in DC., Prodr. 17: 245. 1873.

Distrib.: Cultivated. Patna.

STREBLUS Lour.

Streblus asper Lour., Fl. Cochinch. 2: 615. 1790; Hook. f., Fl. Brit. India 5: 489. 1888; Haines, Bot. Bihar Orissa 820. 1924 (Repr. ed., 3: 860. 1961).

Fl. & Fr.: May - August.

Distrib.: Chota Nagpur, Purnia, West Champaran.

Streblus taxoides (Heyne ex Roth) Kurz, For. Fl. Burma 2: 465. 1877. *Trophis taxoides* Heyne ex Roth, Nov. Pl. Sp. 368. 1821. *Phyllochlamys spinosa* (Roxb.) Bureau in DC., Prodr. 17: 218. 1873; Hook. f., Fl. Brit. India 5: 488. 1888; Haines, Bot. Bihar Orissa 820. 1924 (Repr. ed., 3: 860. 1961).

Fl. & Fr.: April - June.

Distrib.: Ranchi (Haines, l.c.).

CASUARINACEAE

CASUARINA L.

Casuarina equisetifolia L., Amoen. Acad. 4: 143. 1759, "*equisetifolia*"; Hook. f., Fl. Brit. India 5: 598. 1888; Haines, Bot. Bihar Orissa 840. 1924 (Repr. ed., 3: 882. 1961).

Fl. & Fr.: March - July.

Distrib.: Planted.

SALICACEAE

POPULUS L.

Populus alba L., Sp. Pl. 1034. 1753; Hook. f., Fl. Brit. India 5: 638. 1888.

Fl. & Fr.: March - July.

Distrib.: Planted.

SALIX L.

Salix tetrasperma Roxb., Pl. Corom. 1: 66. t. 97. 1798 & Fl. Ind. 3: 753. 1832; Hook. f., Fl. Brit. India 5: 626. 1888; Haines, Bot. Bihar Orissa 839. 1924 (Repr. ed., 3: 881. 1961).

Fl. & Fr.: October - February.

Distrib.: Palamau, Purnia.

CERATOPHYLLACEAE**CERATOPHYLLUM L.**

Ceratophyllum demersum L., Sp. Pl. 992. 1753; Hook. f., Fl. Brit. India 5: 639. 1888; Haines, Bot. Bihar Orissa 841. 1924 (Repr. ed., 3: 883. 1961).

Fl. & Fr.: October - February.

Distrib.: Palamau, Purnia, West Champaran.

HYDROCHARITACEAE**BLYXA** Noron. ex Petit-Thou.

Blyxa aubertii Rich. in Mem. Inst. Paris 12, 2: 19, 23, 77. t. 4. 1812. *B. oryzetorum* (Decne.) Hook. f., Fl. Brit. India 5: 661. 1888; Haines, Bot. Bihar Orissa 854. 1922 (Repr. ed., 3: 896. 1961).

Fl. & Fr.: August - September.

Distrib.: Ranchi, West Champaran.

Blyxa echinosperma (C.B. Clarke) Hook. f., Fl. Brit. India 5: 661. 1888; Haines, Bot. Bihar Orissa 854. 1922 (Repr. ed., 3: 895. 1961). *Hydrotrophus echinospermus* C.B. Clarke in J. Linn. Soc. London (Bot.) 14: 8. t. 1. 1875.

Fl.: October.

Distrib.: Bihar (Haines, l.c.)

Blyxa octandra (Roxb.) Planch. ex Thwaites, Enum. Pl. Zeyl. 332. 1864; Haines, Bot. Bihar Orissa 854. 1922 (Repr. ed., 3: 895. 1961). *Vallisneria octandra* Roxb., Pl. Corom. 2: 34. t. 165. 1802. *Blyxa roxburghii* Rich. in Mem. Inst. Paris 12, 2: 77. t. 5. 1812; Hook. f., Fl. Brit. India 5: 660. 1888.

Fl.: November.

Distrib.: Hazaribagh.

HYDRILLA L.C. Rich.

Hydrilla verticillata (L. f.) Royle, Ill. Bot. Himal. t. 376. 1839; Hook. f., Fl. Brit. India 5: 659. 1888; Haines, Bot. Bihar Orissa 852. 1922 (Repr. ed., 3: 893. 1961). *Serpicula verticillata* L. f., Suppl. Pl. 416. 1782.- *Senwar*.

Fl. & Fr.: April - December.

Distrib.: West Champaran.

HYDROCHARIS L.

Hydrocharis dubia (Blume) Backer, Handb. Fl. Java 1: 64. 1925. *Pontederia dubia* Blume, Enum. Pl. Jav. 1: 33. 1827. *Hydrocharis morsusranae auct. non L.*, 1753; Hook. f., Fl. Brit. India 5: 662. 1888. *H. asiatica* Miq., Fl. Ind. Bat. 3: 239. 1856; Haines, Bot. Bihar Orissa 855. 1922 (Repr. ed., 3: 896. 1961).

Fl. & Fr.: December - February.

Distrib.: Purnia (Haines, l.c.).

LAGAROSIPHON W.H. Harvey

Lagarosiphon alternifolia (Roxb.) Druce in Rep. Bot. Exch. Cl. Brit. Is. 1916: 630. 1917; Haines, Bot. Bihar Orissa 853. 1922 (Repr. ed., 3: 894. 1961). *Vallisneria alternifolia* Roxb., Pl. Corom. 2: t. 165. 1802. *Lagarosiphon roxburghii* (Planch.) Benth. in Benth. & Hook. f., Gen. Pl. 3: 451. 1883; Hook. f., Fl. Brit. India 5: 659. 1888.

Fl. & Fr.: August - November.

Distrib.: West Champaran.

OTTELIA Pers.

Ottelia alismoides (L.) Pers., Syn. Pl. 1: 400. 1805; Hook. *f.*, Fl. Brit. India 5: 662. 1888; Haines, Bot. Bihar Orissa 855. 1922 (Repr. ed., 3: 897. 1961). *Stratiotes alismoides* L., Sp. Pl. 535. 1753.

Fl. & Fr.: November - April.

Distrib.: Purnia, West Champaran.

VALLISNERIA L.

Vallisneria spiralis L., Sp. Pl. 1015. 1753; Hook. *f.*, Fl. Brit. India 5: 660. 1888; Haines, Bot. Bihar Orissa 853. 1922 (Repr. ed., 3: 894. 1961).

var. **spiralis**

Fl. & Fr.: January - May.

Distrib.: Hazaribagh, West Champaran.

var. **dense-serrulata** Mahino in Bot. Mag. Tokyo 28: 27. 1914; Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 82. 1989.

Distrib.: Bihar (Karthikeyan *et al.*, *l.c.*)

BURMANNIACEAE**BURMANNIA L.**

Burmattia coelestis D. Don, Prodr. Fl. Nepal. 44. 1825; Hook. *f.*, Fl. Brit. India 5: 665. 1888; Haines, Bot. Bihar Orissa 1125. 1922 (Repr. ed., 3: 1175. 1961).

Fl. & Fr.: November - January.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum.

ORCHIDACEAE**ACAMPE Lindl., nom. cons.**

Acampe papillosa (Lindl.) Lindl., Fol. Orchid. Acampe 2. 1853. *Saccolabium papillosum* Lindl. in Edward's Bot. Reg. 18: t. 1552. 1833;

Hook. *f.*, Fl. Brit. India 6: 63. 1890; Haines, Bot. Bihar Orissa 1180. 1922 (Repr. ed., 3: 1232. 1961).

Fl. & Fr.: July - January.

Distrib.: Chota Nagpur.

Acampe praemorsa (Roxb.) Blatter & McCann in J. Bombay Nat. Hist. Soc. 35: 495. 1932. *Epidendrum praemorsum* Roxb., Pl. Corom. 34. t. 43. 1795. *Saccolabium praemorsum* (Roxb.) Hook. *f.*, Fl. Brit. India 6: 62. 1890; Haines, Bot. Bihar Orissa 1180. 1922 (Repr. ed., 3: 1232. 1961).

Fl. & Fr.: July - September.

Distrib.: Ranchi.

ACANTHEPHIPIUM Blume

Acanthephippium striatum Lindl. in Edward's Bot. Reg. Misc. 24: 45. 1838; Hook. *f.*, Fl. Brit. India 5: 816. 1890; Haines, Bot. Bihar Orissa 1168. 1922 (Repr. ed., 3: 1221. 1961).

Fl. & Fr.: May - August.

Distrib.: Chota Nagpur (Haines, *l.c.*).

AERIDES Lour.

Aerides maculosum Lindl. in Edward's Bot. Reg. 31: t. 58. 1845; Hook. *f.*, Fl. Brit. India 6: 45. 1890; Haines, Bot. Bihar Orissa 1182. 1922 (Repr. ed., 3: 1234. 1961).

Fl. & Fr.: May - September.

Distrib.: Chota Nagpur.

Aerides multiflorum Roxb., Pl. Corom. 3: 68. t. 271. 1820 & Fl. Ind. 3: 475. 1832; Hook. *f.*, Fl. Brit. India 6: 44. 1890; Haines, Bot. Bihar Orissa 1182. 1922 (Repr. ed., 3: 1234. 1961).

Fl. & Fr.: June - February.

Distrib.: Hazaribagh, Koderma, Santal Pargana.

Aerides odoratum Lour., Fl. Cochinch. 2: 525. 1790; Hook. *f.*, Fl. Brit. India 6: 47. 1890; Haines, Bot. Bihar Orissa 1182. 1922 (Repr. ed., 3: 1235. 1961).

Fl. & Fr.: July - March.

Distrib.: Chota Nagpur.

BRACHYCORYTHIS Lindl.

Brachycorythis obcordata (Buch.-Ham. ex D. Don) Summerh. in Kew Bull. 1955: 24. 1955. *Orchis obcordata* Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 230. 1825. *Habenaria galeandra auct. non* (Reichb. f.) Benth., 1963: Hook. f., Fl. Brit. India 6: 163. 1890; Haines, Bot. Bihar Orissa 1158. 1922 (Repr. ed., 3: 1210. 1961).

Fl. & Fr.: July - December.

Distrib.: Chota Nagpur.

BULBOPHYLLUM Thouars, *nom. cons.*

Bulbophyllum careyanum (Hook.) Spreng., Syst. Veg. 3: 732. 1826; Hook. f., Fl. Brit. India 5: 760. 1890. *Anisopetalon careyanum* Hook., Fl. Exot. 2: t. 149. 1825.

Fl. & Fr.: January - June.

Distrib.: Singhbhum.

Bulbophyllum leopardinum (Wallich) Lindl., Gen. Sp. Orchid. Pl. 48. 1830; Hook. f., Fl. Brit. India 5: 756. 1890. *Dendrobium leopardinum* Wallich, Tent. Fl. Nepal. 39. t. 28. 1826.

Fl. & Fr.: February - May.

Distrib.: Palamau.

Bulbophyllum ornatissimum (Reichb. f.) J.J. Sm. in Bull. Jard. Bot. Buitenz. ser. 2, 8: 26. 1912. *Cirrhopetalum ornatissimum* Reichb. f. in Gard. Chron. 2: 424. 1882; Hook. f., Fl. Brit. India 5: 773. 1890; Haines, Bot. Bihar Orissa 1177. 1922 (Repr. ed. 3: 1229. 1961).

Fl. & Fr.: October - January.

Distrib.: Chota Nagpur.

Bulbophyllum putidum (Teijsm. & Binn.) J.J. Sm. in Bull. Jard. Bot. Buitenz. ser. 2, 8: 27. 1912. *Cirrhopetalum putidum* Teijsm. & Binn. in Tijdschr. Nederl. Ind. 24: 311. 1862.

Distrib.: Bihar (Naithani, Fl. Pl. India, Nepal & Bhutan 398. 1990).

Bulbophyllum triste Reichb. *f.* in Walp., Ann. Bot. Syst. 6: 253. 1861; Hook. *f.*, Fl. Brit. India 5: 768. 1890; Haines, Bot. Bihar Orissa 1176. 1922 (Repr. ed., 3: 1229. 1961).

Fl. & Fr.: February - May.

Distrib.: Chota Nagpur.

CYMBIDIUM Sw.

Cymbidium aloifolium (L.) Sw. in Nova Acta Regiae Soc. Sci. Upsal. 6: 73. 1799; Hook. *f.*, Fl. Brit. India 6: 10. 1890. *Epidendrum aloifolium* L., Sp. Pl. 953. 1753.

Fl. & Fr.: February - July.

Distrib.: Ranchi, Singhbhum.

DENDROBIUM Sw., *nom. cons.*

Dendrobium bicameratum Lindl. in Edward's Bot. Reg. 59. 1839; Hook. *f.*, Fl. Brit. India 5: 729. 1890; Haines, Bot. Bihar Orissa 1173. 1922 (Repr. ed., 3: 1226. 1961).

Fl. & Fr.: October - January.

Distrib.: Hazaribagh.

Dendrobium chrysanthum Lindl., Gen. Sp. Orchid. Pl. 80. 1830 & in Edward's Bot. Reg. 15: t. 1299. 1830; Hook. *f.*, Fl. Brit. India 5: 747. 1890.

Fl. & Fr.: April - June.

Distrib.: Chota Nagpur.

Dendrobium crepidatum Lindl. in Paxt., Fl. Gard. 1: 63. f. 45. 1850; Hook. *f.*, Fl. Brit. India 5: 740. 1890; Haines, Bot. Bihar Orissa 1175. 1922 (Repr. ed., 3: 1227. 1961).

Fl. & Fr.: March - August.

Distrib.: Palamau, Ranchi, Singhbhum.

Dendrobium fimbriatum Hook., Exot. Fl. 1. t. 71. 1823; Hook. *f.*, Fl. Brit. India 5: 745. 1890; Haines, Bot. Bihar Orissa 1175. 1922 (Repr. ed., 3: 1227. 1961).

Fl. & Fr.: March - July.

Distrib.: Ranchi.

Dendrobium formosum Roxb. in Wallich, Pl. Asiat. Rar. 1(2): 34. t. 39. 1830 & Fl. Ind. 3: 485. 1832; Hook. *f.*, Fl. Brit. India 5: 721. 1890; Haines, Bot. Bihar Orissa 1173. 1922 (Repr. ed., 3: 1225. 1961).

Fl. & Fr.: April - May.

Distrib.: Chota Nagpur.

Dendrobium herbaceum Lindl. in Edward's Bot. Reg. Misc. 69. 1840; Hook. *f.*, Fl. Brit. India 5: 719. 1890; Haines, Bot. Bihar Orissa 1173. 1922 (Repr. ed., 3: 1225. 1961).

Fl. & Fr.: July - November.

Distrib.: Hazaribagh, Palamau.

Dendrobium macrostachyum Lindl., Gen. Sp. Orchid. Pl. 78. 1830; Hook. *f.*, Fl. Brit. India 5: 735. 1890; Haines, Bot. Bihar Orissa 1174. 1922 (Repr. ed., 3: 1226. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh.

Dendrobium moschatum (Buch.-Ham.) Sw. in Schrad., Neu. J. Bot. 1: 94. 1805; Haines, Bot. Bihar Orissa 1175. 1922 (Repr. ed., 3: 1227. 1961). *Epidendrum moschatum* Buch.-Ham. in Syme's, Embassy Ava. ed. 2. 3: 315. 1800. *Dendrobium calceolaria* Carey ex Hook., Exot. Fl. 3: t. 184. 1825-1826; Hook. *f.*, Fl. Brit. India 5: 744. 1890.

Fl.: May - July.

Distrib.: Chota Nagpur.

Dendrobium peguanum Lindl. in J. Proc. Linn. Soc. 3: 19. 1859. *D. pygmaeum* Lindl., Gen. Sp. Orchid. Pl. 85. 1830, *non* Sm. ex Rees, 1808; Hook. *f.*, Fl. Brit. India 5: 717. 1890; Haines, Bot. Bihar Orissa 1173. 1922 (Repr. ed., 3: 1225. 1961).

Fl.: November.

Distrib.: Chota Nagpur (Haines, *l.c.*).

Dendrobium regium Prain in J. Asiat. Soc. Bengal 71: 80. 1902; Haines, Bot. Bihar Orissa 1174. 1922 (Repr. ed., 3: 1226. 1961).

Fl.: June.

Distrib.: Ranchi.

Dendrobium transparens Wallich ex Lindl., Gen. Sp. Orchid. Pl. 79. 1830; Hook. *f.*, Fl. Brit. India 5: 738. 1890; Haines, Bot. Bihar Orissa 1174. 1922 (Repr. ed., 3: 1226. 1961).

Fl.: April - May.

Distrib.: Ranchi.

EPIPACTIS

Epipactis gigantea Dougl. ex Hook., Fl. Bor.-Amer. 2: 202. 1839. *E. royleana* Royle ex Lindl., Gen. Sp. Orchid. Pl. 461. 1840; Hook. *f.*, Fl. Brit. India 6: 126. 1890.

Fl. & Fr.: February - April.

Distrib.: West Champaran.

Epipactis veratrifolia Boiss. & Hohen. in Boiss., Diagn. Pl. Orient. Nov. 1, 131: 11. 1854. *E. consimilis* Wallich ex Hook. *f.*, Fl. Brit. India 6: 126. 1890, non D. Don, 1825.

Fl. & Fr.: February - March.

Distrib.: West Champaran.

ERIA Lindl., *nom. cons.*

Eria muscicola (Lindl.) Lindl. in J. Proc. Linn. Soc. 3: 47. 1859; Hook. *f.*, Fl. Brit. India 5: 789. 1890; Haines, Bot. Bihar Orissa 1176. 1922 (Repr. ed., 3: 1228. 1961). *Dendrobium muscicola* Lindl., Gen. Sp. Orchid. Pl. 75. 1830.

Fl. & Fr.: June - August.

Distrib.: Chota Nagpur.

Eria pubescens (Hook.) Lindl. *ex* Steud., Nomencl. Bot. ed. 2. 1: 566. 1840. *Dendrobium pubescens* Hook., Exot. Fl. 2: t. 124. 1824. *Eria flava* Lindl., Gen. Sp. Orchid. Pl. 65. 1830; Hook. *f.*, Fl. Brit. India 5: 801. 1890; Haines, Bot. Bihar Orissa 1176. 1922 (Repr. ed., 3: 1228. 1961).

Fl. & Fr.: February - April.

Distrib.: Chota Nagpur.

EULOPHIA R. Br. *ex* Lindl., *nom. cons.*

Eulophia dabia (D. Don) Hochr. in Bull. New York Bot. Gard. 6: 270. 1910. *Bletia dabia* D. Don, Prodr. Fl. Nepal. 30. 1825. *Eulophia campestris* Wallich *ex* Lindl., Gen. Sp. Orchid. Pl. 185. 1833; Hook. *f.*, Fl. Brit. India 6: 4. 1890; Haines, Bot. Bihar Orissa 1171. 1922 (Repr. ed., 3: 1223. 1961).

Fl. & Fr.: April - June.

Distrib.: Palamau, Ranchi, Singhbhum.

Eulophia campbellii Prain in J. Asiat. Soc. Bengal 73: 190. 1904.

Distrib.: Bihar (Naithani, Fl. Pl. India, Nepal & Bhutan 411. 1990).

Eulophia explanata Lindl., Gen. Sp. Orchid. Pl. 180. 1833; Hook. *f.*, Fl. Brit. India 6: 3. 1890; Haines, Bot. Bihar Orissa 1171. 1922 (Repr. ed., 3: 1223. 1961).

Fl. & Fr.: April - June.

Distrib.: West Champaran.

Eulophia flava (Lindl.) Hook. *f.*, Fl. Brit. India 6: 7. 1890; Haines, Bot. Bihar Orissa 1170. 1922 (Repr. ed., 3: 1222. 1961). *Cyrtopera flava* Lindl., Gen. Sp. Orchid. Pl. 189. 1833.

Fl. & Fr.: April - June.

Distrib.: Palamau, Ranchi, Singhbhum.

Eulophia gramine Lindl., Gen. Sp. Orchid. Pl. 182. 1833; Hook. *f.*, Fl. Brit. India 6: 2. 1890.

Fl. & Fr.: April - October.

Distrib.: West Champaran.

Eulophia herbacea Lindl., Gen. Sp. Orchid. Pl. 182. 1833; Hook. *f.*, Fl. Brit. India 6: 2. 1890.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 137. 1989).

Eulophia holochila Coll. & Hemsl. in J. Linn. Soc. London (Bot.) 28: 132. 1890.

Distrib.: Singhbhum (Mooney, Suppl. Bot. Bihar Orissa 211. 1950).

Eulophia nuda Lindl., Gen. Sp. Orchid. Pl. 180. 1833; Hook. *f.*, Fl. Brit. India 6: 5. 1890; Haines, Bot. Bihar Orissa 1171. 1922 (Repr. ed., 3: 1223. 1961).

Fl.: May - June.

Distrib.: Palamau, Ranchi, Singhbhum.

Eulophia ochreatea Lindl. in J. Linn. Soc. London (Bot.) 3: 24. 1859; Hook. *f.*, Fl. Brit. India 6: 2. 1890.

Distrib.: Singhbhum (Mooney, Suppl. Bot. Bihar Orissa 212. 1950).

GASTROCHILUS D. Don

Gastrochilus inconspicuus (Hook. *f.*) Kuntze, Revis. Gen. Pl. 2: 661. 1891. *Saccolabium inconspicuum* Hook. *f.*, Fl. Brit. India 6: 56. 1890. *Luisia inconspicua* (Hook. *f.*) King & Pantl. in Ann. Roy. Bot. Gard. Calcutta 8: 203. t. 272. 1898; Haines, Bot. Bihar Orissa 1178. 1922 (Repr. ed., 3: 1230. 1961).

Fl. & Fr.: June - September.

Distrib.: Chota Nagpur.

GEODORUM G. Jacks

Geodorum densiflorum (Lam.) Schlechter in Fedde, Repert. Beih. 4: 259. 1919. *Limodorum densiflorum* Lam., Encycl. 3: 516. 1792. *Geodorum dilatatum auct. non R. Br.*, 1813; Hook. *f.*, Fl. Brit. India 6: 17. 1890; Haines, Bot. Bihar Orissa 1170. 1922 (Repr. ed., 3: 1222. 1961).

Fl. & Fr.: July - September.

Distrib.: Hazaribagh, Palamau, Singhbhum, West Champaran.

GOODYERA R. Br.

Goodyera procera (Ker-Gawl.) Hook., Exot. Fl. 1: t. 39. 1823; Hook. f., Fl. Brit. India 6: 111. 1890; Haines, Bot. Bihar Orissa 1160. 1922 (Repr. ed., 3: 1212. 1961). *Neottia procera* Ker-Gawl., Bot. Reg. 8: t. 639. 1822-1823.

Fl.: March - April.

Distrib.: Singhbhum.

HABENARIA Willd.

Habenaria commelinifolia (Roxb.) Wallich ex Lindl., Gen. Sp. Orchid. Pl. 325. 1835; Hook. f., Fl. Brit. India 6: 143. 1890; Haines, Bot. Bihar Orissa 1157. 1924 (Repr. ed., 3: 1208. 1961). *Orchis commelinifolia* Roxb., Fl. Ind. 3: 451. 1832.

Fl. & Fr.: August - December.

Distrib. Hazaribagh, Koderma, Lohardaga, Ranchi, Singhbhum.

Habenaria digitata Lindl., Gen. Sp. Orchid. Pl. 307. 1835; Hook. f., Fl. Brit. India 6: 134. 1890; Haines, Bot. Bihar Orissa 1154. 1924 (Repr. ed., 3: 1206. 1961).

Fl. & Fr.: July - October.

Distrib.: Hazaribagh.

Habenaria diphylla Dalzell in Hook., J. Bot. 2: 262. 1850; Hook. f., Fl. Brit. India 6: 151. 1890; Haines, Bot. Bihar Orissa 1158. 1924 (Repr. ed., 3: 1210. 1961).

Fl. & Fr.: September - November.

Distrib.: Singhbhum.

Habenaria edgeworthii Hook. f. ex Collett, Fl. Siml. 504. 1902.

Fl. & Fr.: March - May.

Distrib.: West Champaran.

Habenaria furcifera Lindl., Gen. Sp. Orchid. Pl. 319. 1835; Hook. f., Fl. Brit. India 6: 149. 1890; Haines, Bot. Bihar Orissa 1157. 1924 (Repr. ed., 3: 1209. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh.

Habenaria hollandiana Sant., Fl. Purandhar 126. 1958. *H. affinis* Wight, Icon. Pl. Ind. Orient. t. 1707. 1852, *non* D. Don, 1825; Haines, Bot. Bihar Orissa 1157. 1924. (Repr. ed. 3: 1209. 1961).

Fl. & Fr.: August - November.

Distrib.: Singhbhum.

Habenaria longicorniculata Graham, Cat. Bombay Pl. 202. 1839. *H. longecalcarata* A. Rich. in Ann. Sci. Nat. 2, 15: 71. t. 3 B. 1841; Hook. f., Fl. Brit. India 6: 141. 1890; Haines, Bot. Bihar Orissa 1156. 1924 (Repr. ed., 3: 1207. 1961).

Fl.: August.

Distrib.: Ranchi.

Habenaria longifolia Buch.-Ham. ex Lindl., Gen. Sp. Orchid. Pl. 324. 1835; Hook. f., Fl. Brit. India 6: 141. 1890; Haines, Bot. Bihar Orissa 1156. 1924 (Repr. ed., 3: 1208. 1961).

Fl. & Fr.: September - October.

Distrib.: Bhagalpur, Darbhanga.

Habenaria marginata Colebr. in Hook., Exot. Fl. t. 136. 1824; Hook. f., Fl. Brit. India 6: 150. 1890; Haines, Bot. Bihar Orissa 1157. 1924 (Repr. ed., 3: 1209. 1961).

Fl. & Fr.: August - October.

Distrib.: Gumla, Palamau, Sahibganj.

Habenaria plantaginea Lindl., Gen. Sp. Orchid. Pl. 323. 1835; Hook. f., Fl. Brit. India 6: 141. 1890; Haines, Bot. Bihar Orissa 1155. 1924 (Repr. ed., 3: 1207. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Palamau, Singhbhum.

Habenaria reniformis (D. Don) Hook. f., Fl. Brit. India 6: 152. 1890. *Listera reniformis* D. Don, Prodr. Fl. Nepal. 28. 1825.

Fl. & Fr.: July - October.

Distrib.: Ranchi.

Habenaria roxburghii Nicolson in Saldanha & Nicolson, Fl. Hassan Dist. 834. 1976. *H. platyphylla* (Willd.) Spreng., Syst. Veg. 3: 690. 1826, *nom. superfl.*; Hook. f., Fl. Brit. India 6: 140. 1890; Haines, Bot. Bihar Orissa 1155. 1924 (Repr. ed., 3: 1206. 1961). *Orchis platyphyllus* Willd., Sp. Pl. 4: 10. 1805, *nom. superfl.*

Fl. & Fr.: August - October.

Distrib.: Singhbhum (Haines, l.c.).

Habenaria stenopetala Lindl., Gen. Sp. Orchid. Pl. 319. 1835; Hook. f., Fl. Brit. India 6: 134. 1890; Haines, Bot. Bihar Orissa 1154. 1924 (Repr. ed., 3: 1205. 1961).

Fl. & Fr.: August - October.

Distrib.: Singhbhum.

KINGIDIUM P.F. Hunt

Kingidium deliciosum (Reichb. f.) Sweet in Amer. Orchid. Soc. Bull. 39: 1095. 1970. *Phalaenopsis deliciosa* Reichb. f. in Bonplandia 2: 93. 1854. *Doritis wightii* (Reichb. f.) Benth. in Benth. & Hook. f., Gen. Pl. 3: 574. 1883; Hook. f., Fl. Brit. India 6: 32. 1890; Haines, Bot. Bihar Orissa 1179. 1924 (Repr. ed., 3: 1231. 1961).

Fl.: July - August.

Distrib.: Chota Nagpur.

LIPARIS L.C. Rich.

Liparis nervosa (Thunb.) Lindl., Gen. Sp. Orchid. Pl. 26. 1830; Haines, Bot. Bihar Orissa 1166. 1924 (Repr. ed., 3: 1218. 1961). *Ophrys nervosa* Thunb., Fl. Jap. 27. 1784. *Liparis bituberculata* (Hook.) Lindl. in Edward's Bot. Reg. 11: sub. t. 882. 1825; Hook. f., Fl. Brit. India 5: 696. 1890; Haines, Bot. Bihar Orissa 1166. 1924 (Repr. ed., 3: 1218. 1961).

Fl. & Fr.: August - November.

Distrib.: Palamau, Ranchi.

Liparis paradoxa (Lindl.) Reichb. *f.* in Walp., Ann. Bot. Syst. 6: 218. 1861; Hook. *f.*, Fl. Brit. India 5: 697. 1890. *Empusa paradoxa* Lindl. in Bot. Reg. 10: sub t. 825. 1824.

Distrib.: Bihar (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 149. 1989).

LUISIA Gaud.

Luisia filiformis Hook. *f.*, Fl. Brit. India 6: 23. 1890.

Fl. & Fr.: March - April.

Distrib.: Chota Nagpur.

Luisia trichorhiza (Hook.) Blume, Mus. Bot. 1: 63. 1849; Hook. *f.*, Fl. Brit. India 6: 23. 1890; Haines, Bot. Bihar Orissa 1177. 1924 (Repr. ed., 3: 1230. 1961). *Vanda trichorhiza* Hook., Exot. Fl. 1: t. 72. 1823.

Fl. & Fr.: March - April.

Distrib.: North Bihar, Palamau.

Luisia zeylanica Lindl., Fol. Orchid. Luisia 3. 1853. *L. teretifolia* auct. non Gaud., 1829; Hook. *f.*, Fl. Brit. India 6: 22. 1890.

Fl. & Fr.: March - April.

Distrib.: Chota Nagpur.

MALAXIS Soland. ex Sw.

Malaxis acuminata D. Don, Prodr. Fl. Nepal. 29. 1825. *Microstylis wallichii* Lindl., Gen. Sp. Orchid. Pl. 20. 1830; Hook. *f.*, Fl. Brit. India 5: 686. 1888.

forma **acuminata**

Distrib.: Widespread in India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 151. 1989).

Malaxis latifolia Sm. in Rees, Cyclop. 22: n. 3. 1812. *Microstylis congesta* Reichb. *f.* in Walp., Ann. Bot. Syst. 6: 206. 1861; Hook. *f.*, Fl. Brit. India 5: 689. 1888; Haines, Bot. Bihar Orissa 1165. 1924 (Repr. ed., 3: 1217. 1961).

Fl. & Fr.: June - November.

Distrib.: Hazaribagh.

Malaxis mackinnonii (Duthie) Ames, *Orchid.* 6: 289. 1920. *Microstylis mackinnonii* Duthie in *J. Asiat. Soc. Bengal* 71: 37. 1902. *M. cardonii* Prain, *Bengal Pl.* 2: 1004. 1903; Haines, *Bot. Bihar Orissa* 1165. 1924 (Repr. ed., 3: 1217. 1961).

Fl. & Fr.: July - October.

Distrib.: Chota Nagpur

Malaxis rheedii Sw. in *Vet. Akad. Nya Handl. Stockh.* 21: 235. 1800. *Microstylis rheedii* (Sw.) Lindl., *Gen. Sp. Orchid. Pl.* 21. 1830, *p.p.*; Hook. *f.*, *Fl. Brit. India* 5: 690. 1890. *M. versicolor* Lindl., *Gen. Sp. Orchid. Pl.* 21. 1830; Haines, *Bot. Bihar Orissa* 1165. 1924 (Repr. ed., 3: 1217. 1961).

Fl. & Fr.: July - October.

Distrib.: Ranchi.

NERVILIA Commerson ex Gaud., *nom. cons.*

Nervilia aragoana Gaud., *Voy. Uranie* 422. t. 35. 1829. *Pogonia flabelliformis* Lindl., *Gen. Sp. Orchid. Pl.* 415. 1840; Hook. *f.*, *Fl. Brit. India* 6: 121. 1890; Haines, *Bot. Bihar Orissa* 1163. 1924 (Repr. ed., 3: 1215. 1961).

Fl. & Fr.: May - August.

Distrib.: Palamau, Ranchi, Sahibganj, West Champaran.

Nervilia plicata (Andr.) Schlechter in *Engler, Bot. Jahrb.* 45: 403. 1911. *Arethusa plicata* Andr., *Bot. Repos.* 5: t. 321. 1803. *Pogonia plicata* (Andr.) Lindl., *Gen. Sp. Orchid. Pl.* 415. 1840; Hook. *f.*, *Fl. Brit. India* 6: 119. 1890.

Fl. & Fr.: May - July.

Distrib.: West Champaran.

OBERONIA Lindl., *nom. cons.*

Oberonia ensiformis (Sm.) Lindl., *Fol. Orchid. Oberon.* 4. 1859; Hook. *f.*, *Fl. Brit. India* 5: 679. 1888. *Malaxis ensiformis* Sm. in *Rees, Cyclop.* 22: 14. 1812.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 156. 1989).

Oberonia falconeri Hook. *f.* in Hook., Icon. Pl. t. 1780. 1888 & Fl. Brit. India 5: 678. 1888; Haines, Bot. Bihar Orissa 1164. 1924 (Repr. ed., 3: 1216. 1961).

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Ranchi, Singhbhum.

Oberonia iridifolia Lindl., Gen. Sp. Orchid. Pl. 15. 1830; Hook. *f.*, Fl. Brit. India 5: 675. 1888.

var. **iridifolia**

Distrib.: Almost throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 156. 1989).

Oberonia pachyrachis Reichb. *f. ex* Hook. *f.*, Fl. Brit. India 5: 681. 1888; Haines, Bot. Bihar Orissa 1164. 1924 (Repr. ed., 3: 1216. 1961).

Fl. & Fr.: February - May.

Distrib.: Purnia.

Oberonia rufilabris Lindl., Sert. Orch. t. 8A. 1888; Hook. *f.*, Fl. Brit. India 5: 686. 1888; Haines, Bot. Bihar Orissa 1164. 1924 (Repr. ed., 3: 1216. 1961).

Fl.: February.

Distrib.: Bihar (Haines, *l.c.*)

PACHYSTOMA Blume

Pachystoma senile (Lindl.) Reichb. *f.* in Bonplandia 3: 250. 1858; Hook. *f.*, Fl. Brit. India 5: 812. 1890; Haines, Bot. Bihar Orissa 1169. 1924 (Repr. ed., 3: 1221. 1961). *Apaturia senilis* Lindl., Gen. Sp. Orchid. Pl. 130. 1831.

Fl. & Fr.: February - May.

Distrib.: West Champaran.

PAPILIONANTHE Schlechter

Papilionanthe teres (Roxb.) Schlechter in *Orchis* 9: 78. 1915. *Dendrobium teres* Roxb., *Fl. Ind.* 3: 485. 1832. *Vanda teres* (Roxb.) Lindl., *Gen. Sp. Orchid. Pl.* 217. 1833; Hook. *f.*, *Fl. Brit. India* 6: 49. 1890.

Fl.: September.

Distrib.: West Champaran (Bhattacharyya and Sarkar, *Fl. W. Champaran* 494. 1998).

PECTEILIS Rafin.

Pecteilis gigantea (Sm.) Rafin., *Fl. Tell.* 2: 38. 1837. *Orchis gigantea* Sm., *Exot. Bot.* 2: 79. t. 100. 1805. *Habenaria susannae auct. pl. non* (L.) R. Br., 1810; Hook. *f.*, *Fl. Brit. India* 6: 137. 1890, *p.p.*

Fl. & Fr.: August - October.

Distrib.: West Champaran.

Pecteilis susannae (L.) Rafin., *Fl. Tell.* 2: 38. 1837, "*susanna*". *Orchis susannae* L., *Sp. Pl.* 939. 1753. *Habenaria susannae* (L.) R. Br., *Prodr.* 312. 1810; Hook. *f.*, *Fl. Brit. India* 6: 137. 1890, *p.p.*; Haines, *Bot. Bihar Orissa* 1155. 1924 (*Repr. ed.*, 3: 1206. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Palamau, Singhbhum.

Pecteilis triflora (D. Don) Tang & Wang in *Acta Phytotax. Sin.* 1: 62. 1951. *Habenaria triflora* D. Don, *Prodr. Fl. Nepal.* 25. 1825; Hook. *f.*, *Fl. Brit. India* 6: 142. 1890; Haines, *Bot. Bihar Orissa* 1156. 1924 (*Repr. ed.*, 3: 1208. 1961).

Fl. & Fr.: August - October.

Distrib.: Lohardaga, Ranchi, Singhbhum.

PELATANTHERIA Ridl.

Pelatantheria insectifera (Reichb. *f.*) Ridl. in *J. Linn. Soc. London (Bot.)* 32: 373. 1896. *Sarcanthus insectifera* Reichb. *f.* in *Bot. Zeit.* 159. 1857; Hook. *f.*, *Fl. Brit. India* 6: 68. 1890; Haines, *Bot. Bihar Orissa* 1179. 1924 (*Repr. ed.*, 3: 1231. 1961).

Fl. & Fr.: July - September.

Distrib.: Hazaribagh, Singhbhum.

PERISTYLUS Blume, *nom. cons.*

Peristylus affinis (D. Don) Seid. in Dansk. Bot. Ask. 31(3): 48. 1977.
Habenaria affinis D. Don, Prodr. Fl. Nepal. 25. 1825; Hook. *f.*, Fl. Brit. India 6: 166. 1890.

Distrib.: Chota Nagpur.

Peristylus constrictus Lindl., Gen. Sp. Orchid. Pl. 300. 1835, '*constricta*'. *Habenaria constricta* Hook. *f.*, Fl. Brit. India 6: 161. 1890; Haines, Bot. Bihar Orissa 1159. 1924 (Repr. ed., 3: 1211. 1961).

Fl. & Fr.: July - October.

Distrib.: Hazaribagh, Koderma, Palamau, Purnia.

Peristylus goodyeroides (D. Don) Lindl., Gen. Sp. Orchid. Pl. 299. 1835. *Habenaria goodyeroides* D. Don, Prodr. Fl. Nepal. 25. 1825; Hook. *f.*, Fl. Brit. India 6: 161. 1890; Haines, Bot. Bihar Orissa 1159. 1924 (Repr. ed., 3: 1211. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Palamau, Ranchi.

Peristylus lawii Wight, Icon. Pl. Ind. Orient. 5(1): t. 1695. 1851. *Habenaria lawii* Hook. *f.*, Fl. Brit. India 6: 162. 1890; Haines, Bot. Bihar Orissa 1160. 1924 (Repr. ed., 3: 1211. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Ranchi.

Peristylus stocksii (Hook. *f.*) Kraenzl., Orchid. Gen. Sp. 1: 513. 1898. *Habenaria stocksii* Hook. *f.*, Fl. Brit. India 6: 158. 1890; Haines, Bot. Bihar Orissa 1159. 1924 (Repr. ed., 3: 1210. 1961).

Fl. & Fr.: September - November.

Distrib.: Hazaribagh.

PHAIUS Lour.

Phaius mishmensis Reichb. *f.* in Bonplandia 5: 43. 1857; Hook. *f.*, Fl. Brit. India 5: 817. 1890.

Fl. & Fr.: January - March.

Distrib.: Chota Nagpur.

Phaius nanus Hook. *f.*, Fl. Brit. India 6: 192. 1890; Haines, Bot. Bihar Orissa 1168. 1924 (Repr. ed., 3: 1220. 1961).

Fl. & Fr.: February - April.

Distrib.: Purnia.

Phaius tancarvilleae (Banks ex L'Hérit.) Blume, Mus. Bot. 2: 177. 1856. *Limodorum tancarvilleae* Banks ex L'Hérit., Sert. Angl. 28. 1789. *Phaius wallichii* Lindl. in Wallich, Pl. Asiat. Rar. 2: 46. t. 158. 1831; Hook. *f.*, Fl. Brit. India 5: 816. 1890; Haines, Bot. Bihar Orissa 1168. 1924 (Repr. ed., 3: 1220. 1961).

Fl. & Fr.: April - October.

Distrib.: Palamau, Singhbhum.

PHOLIDOTA Lindl. ex Hook.

Pholidota imbricata Lindl. in Hook., Exot. Fl. sub t. 138. 1825; Hook. *f.*, Fl. Brit. India 5: 845. 1890; Haines, Bot. Bihar Orissa 1167. 1924 (Repr. ed., 3: 1219. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum.

PLATANThERA Rich., *nom. cons.*

Platanthera stenantha (Hook. *f.*) Soo in Ann. Hist. Nat. Mus. Natl. Hung. 26: 363. 1929. *Habenaria stenantha* Hook. *f.*, Fl. Brit. India 6: 153. 1890; Haines, Bot. Bihar Orissa 1158. 1924 (Repr. ed., 3: 1210. 1961).

Fl. & Fr.: August - October.

Distrib.: Chota Nagpur.

RHYNCHOSTYLIS Blume

Rhynchostylis retusa (L.) Blume, Bijdr. 286. 1825; Hook. *f.*, Fl. Brit. India 6: 32. 1890; Haines, Bot. Bihar Orissa 1178. 1924 (Repr. ed., 3: 1230. 1961). *Epidendrum retusum* L., Sp. Pl. 953. 1753.

Fl. & Fr.: May - July.

Distrib.: Ranchi, West Champaran.

SMITINANDIA Holtt.

Smitinandia micrantha (Lindl.) Holtt. in Gard. Bull. Sing. 25: 106. 1969. *Saccolabium micranthum* Lindl., Gen. Sp. Orchid. Pl. 220. 1833; Hook. *f.*, Fl. Brit. India 6: 59. 1890. *Cleisostoma micrantha* (Lindl.) King & Pantl. in Ann. Roy. Bot. Gard. Calcutta 8: 234. t. 312. 1898; Haines, Bot. Bihar Orissa 1179. 1924 (Repr. ed., 3: 1232. 1961).

Fl. & Fr.: July - November.

Distrib.: Chota Nagpur.

SPIRANTHES Rich., *nom. cons.*

Spiranthes sinensis (Pers.) Ames, Orchid. 2: 53. 1908. *Neottia sinensis* Pers., Syn. Pl. 2: 511. 1807. *Spiranthes australis* (R. Br.) Lindl., Bot. Reg. 10: sub. t. 823. 1825; Hook. *f.*, Fl. Brit. India 6: 102. 1890; Haines, Bot. Bihar Orissa 1161. 1924 (Repr. ed., 3: 1213. 1961).

Fl. & Fr.: March - April.

Distrib.: Purnia.

THUNIA Reichb. *f.*

Thunia alba (Lindl.) Reichb. *f.* in Bot. Zeit. 1852: 764. 1852. *Phajus albus* Lindl., Gen. Sp. Orchid. Pl. 128. 1831; Hook. *f.*, Fl. Brit. India 5: 818. 1890, *p.p.*

Fl. & Fr.: July - October.

Distrib.: Chota Nagpur.

Thunia venosa Rolfe in Orchid Rev. 13: 206. 1905; Haines, Bot. Bihar Orissa 1167. 1924 (Repr. ed., 3: 1219. 1961). *Phaius albus auct. pl. non* Lindl., 1830; Hook. *f.*, Fl. Brit. India 5: 818. 1890, *p.p.*

Fl. & Fr.: July - October.

Distrib.: Chota Nagpur.

TROPIDIA Lindl.

Tropidia curculigoides Lindl., Gen. Sp. Orchid. Pl. 497. 1840; Hook. *f.*, Fl. Brit. India 6: 93. 1890.

Fl. & Fr.: August - December.

Distrib.: Singhbhum.

VANDA W. Jones ex R. Br.

Vanda coerulea Griff. ex Lindl. in Edward's Bot. Reg. n.s. 33: t. 30. 1847; Hook. *f.*, Fl. Brit. India 6: 51. 1890.

Distrib.: South Bihar.

Vanda cristata Lindl., Gen. Sp. Orchid. Pl. 216. 1833; Hook. *f.*, Fl. Brit. India 6: 53. 1890.

Fl. & Fr.: December - March.

Distrib.: Chota Nagpur.

Vanda tessellata (Roxb.) Hook. ex G. Don in Loud., Hort. Brit. 372. 1830; Haines, Bot. Bihar Orissa 1181. 1924 (Repr. ed., 3: 1233. 1961). *Epidendrum tessellatum* Roxb., Pl. Corom. 1: 34. t. 42. 1795. *Vanda roxburghii* R. Br. in Bot. Reg. 6: t. 506. 1821.

Fl. & Fr.: April - July.

Distrib.: Palamau, Purnia, Ranchi, Santal Pargana, West Champaran.

Vanda testacea (Lindl.) Reichb. *f.* in Gard. Chron. 2: 166. 1877. *Aerides testaceum* Lindl., Gen. Sp. Orchid. Pl. 238. 1833. *Vanda parviflora* Lindl. in Bot. Reg. 30: Misc. 45. 1844; Hook. *f.*, Fl. Brit. India 6: 50. 1890; Haines, Bot. Bihar Orissa 1181. 1924 (Repr. ed., 3: 1233. 1961).

Fl. & Fr.: April - July.

Distrib.: Palamau, Purnia, Ranchi, Singhbhum.

VANILLA Mill.

Vanilla planifolia Andr., Bot. Repos. t. 538. 1808; Haines, Bot. Bihar Orissa 1163. 1924 (Repr. ed., 3: 1215. 1961).

Fl. & Fr.: February - April.

Distrib.: Cultivated. Ranchi (Haines, *l.c.*).

ZEUXINE Lindl., *orth. et nom. cons.*

Zeuxine affinis (Lindl.) Benth. *ex Hook. f.*, Fl. Brit. India 6: 108. 1890; Haines, Bot. Bihar Orissa 1162. 1924 (Repr. ed., 3: 1214. 1961). *Monochilus affine* Lindl., Gen. Sp. Orchid. Pl. 487. 1840.

Fl. & Fr.: January - March.

Distrib.: West Champaran.

Zeuxine membranacea Lindl., Gen. Sp. Orchid. Pl. 486. 1840; Haines, Bot. Bihar Orissa 1162. 1924 (Repr. ed., 3: 1214. 1961).

Fl. & Fr.: December - February.

Distrib.: Purnia.

Zeuxine strateumatica (L.) Schlechter in Fedde, Repert. Beih. 1: 77. 1911. *Orchis strateumatica* L., Sp. Pl. 943. 1753. *Zeuxine sulcata* Lindl., Gen. Sp. Orchid. Pl. 485. 1840; Hook. *f.*, Fl. Brit. India 6: 106. 1890; Haines, Bot. Bihar Orissa 1161. 1924 (Repr. ed., 3: 1213. 1961).

Fl. & Fr.: January - March.

Distrib.: Munger, Muzaffarpur, Purnia, Singhbhum, West Champaran.

ZINGIBERACEAE

ALPINIA Roxb., *nom. cons.*

Alpinia bracteata Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 63. 1820; Baker in Hook. *f.*, Fl. Brit. India 6: 255. 1892; Haines, Bot. Bihar Orissa 1147. 1924 (Repr. ed., 3: 1198. 1961).

Fl. & Fr.: April - May.

Distrib.: Chota Nagpur.

Alpinia calcarata Roscoe in Trans. Linn. Soc. London 8: 347. 1807; Baker in Hook. *f.*, Fl. Brit. India 6: 254. 1892; Haines, Bot. Bihar Orissa 1146. 1924 (Repr. ed., 3: 1197. 1961).

Fl. & Fr.: December - June.

Distrib.: Cultivated. Patna.

Alpinia galanga (L.) Sw., Obs. Bot. 8. 1791; Baker in Hook. *f.*, Fl. Brit. India 6: 253. 1892; Haines, Bot. Bihar Orissa 1146. 1924 (Repr. ed., 3: 1197. 1961). *Maranta galanga* L., Sp. Pl. ed. 2. 2. 1762.

Fl. & Fr.: April - May.

Distrib.: Ranchi, Singhbhum.

Alpinia malaccensis (Burm. *f.*) Roscoe in Trans. Linn. Soc. London 8: 345. 1807; Baker in Hook. *f.*, Fl. Brit. India 6: 255. 1892; Haines, Bot. Bihar Orissa 1147. 1924 (Repr. ed., 3: 1198. 1961). *Maranta malaccensis* Burm. *f.*, Fl. Ind. 2. 1768.

Fl. & Fr.: March - May.

Distrib.: Purnia.

Alpinia nlgra (Gaertn.) Burt in Notes Roy. Bot. Gard. Edinb. 35: 213. 1977. *Zingiber nigrum* Gaertn., Fruct. Sem. Pl. 1: 35. t. 12. 1788. *Alpinia allughas* (Retz.) Roscoe in Trans. Linn. Soc. London 8: 346. 1807; Baker in Hook. *f.*, Fl. Brit. India 6: 253. 1892; Haines, Bot. Bihar Orissa 1146. 1924 (Repr. ed., 3: 1197. 1961).

Fl. & Fr.: May - December.

Distrib.: Purnia.

AMOMUM Roxb., *nom. cons.*

Amomum aromaticum Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 45. 1820; Baker in Hook. *f.*, Fl. Brit. India 6: 241. 1892; Haines, Bot. Bihar Orissa 1140. 1924 (Repr. ed., 3: 1191. 1961).

Fl. & Fr.: May - September.

Distrib.: Cultivated.

Amomum dealbatum Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 42. 1820; Baker in Hook. *f.*, Fl. Brit. India 6: 239. 1892; Haines, Bot. Bihar Orissa 1140. 1924 (Repr. ed., 3: 1191. 1961).

Fl. & Fr.: April - September.

Distrib.: Hazaribagh, Purnia, Santal Pargana, Singhbhum.

Amomum subulatum Roxb., Pl. Corom. 3: 75. t. 277. 1819; Baker in Hook. *f.*, Fl. Brit. India 6: 240. 1892.

Distrib.: Cultivated.

CURCUMA L.

Curcuma amada Roxb. in Asiat. Res. 11: 341. 1810; Baker in Hook. *f.*, Fl. Brit. India 6: 213. 1890; Haines, Bot. Bihar Orissa 1135. 1924 (Repr. ed., 3: 1185. 1961).

Fl. & Fr.: August - October.

Distrib.: Palamau, West Champaran.

Curcuma angustifolia Roxb. in Asiat. Res. 11: 338. t. 3. 1810; Baker in Hook. *f.*, Fl. Brit. India 6: 210. 1890; Haines, Bot. Bihar Orissa 1131. 1924 (Repr. ed., 3: 1182. 1961).

Fl. & Fr.: May - October.

Distrib.: Palamau, Ranchi.

Curcuma aromatica Salisb., Parad. Lond. t. 96. 1807; Baker in Hook. *f.*, Fl. Brit. India 6: 210. 1890; Haines, Bot. Bihar Orissa 1133. 1924 (Repr. ed., 3: 1184. 1961).

Fl. & Fr.: July - November.

Distrib.: Hazaribagh, Palamau, Singhbhum.

Curcuma caesia Roxb. in Asiat. Res. 11: 334. 1810; Baker in Hook. *f.*, Fl. Brit. India 6: 212. 1890; Haines, Bot. Bihar Orissa 1135. 1924 (Repr. ed., 3: 1185. 1961).

Fl.: May.

Distrib.: Chota Nagpur.

Curcuma leucorrhiza Roxb. in *Asiat. Res.* 11: 337. 1810; Baker in *Hook. f.*, *Fl. Brit. India* 6: 212. 1890; Haines, *Bot. Bihar Orissa* 1133. 1924 (Repr. ed., 3: 1184. 1961).

Fl. & Fr.: May - October.

Distrib.: Santal Pargana.

Curcuma longa L., *Sp. Pl.* 2. 1753, *pro max. parte*; Baker in *Hook. f.*, *Fl. Brit. India* 6: 214. 1890; Haines, *Bot. Bihar Orissa* 1135. 1924 (Repr. ed., 3: 1186. 1961).

Fl. & Fr.: September - November.

Distrib.: Cultivated. Chatra, Hazaribagh, West Champaran.

Curcuma pseudomontana Graham, *Cat. Bombay Pl.* 210. 1839. *C. montana* Baker in *Hook. f.*, *Fl. Brit. India* 6: 214. 1890, *p.p.*, *non* Roscoe, 1828.

Fl. & Fr.: August - September.

Distrib.: Palamau.

Curcuma reclinata Roxb. in *Asiat. Res.* 11: 342. 1810; Baker in *Hook. f.*, *Fl. Brit. India* 6: 214. 1890; Haines, *Bot. Bihar Orissa* 1136. 1924 (Repr. ed., 3: 1187. 1961).

Fl. & Fr.: August - November.

Distrib.: Singhbhum.

Curcuma rubescens Roxb. in *Asiat. Res.* 11: 336. 1810; Baker in *Hook. f.*, *Fl. Brit. India* 6: 213. 1890; Haines, *Bot. Bihar Orissa* 1132. 1924 (Repr. ed., 3: 1183. 1961).

Fl.: May.

Distrib.: Singhbhum (Haines, *l.c.*).

Curcuma sulcata Haines in *Bull. Misc. Inform. Kew* 1923: 119. 1923; Haines, *Bot. Bihar Orissa* 1132. 1924 (Repr. ed., 3: 1182. 1961).

Fl.: May - August.

Distrib.: Chota Nagpur.

Curcuma zedoaria (Bergius) Roscoe in Trans. Linn. Soc. London 8: 354. 1807; Baker in Hook. *f.*, Fl. Brit. India 6: 210. 1890; Haines, Bot. Bihar Orissa 1134. 1924 (Repr. ed., 3: 1185. 1961). *Amomum zedoaria* Bergius, Mater. Med. 41. 1778.

Fl. & Fr.: September - February.

Distrib.: West Champaran.

CURCUMORPHA A.S. Rao & Verma

Curcumorpha longiflora (Wallich) A.S. Rao & Verma in Bull. Bot. Surv. India 13: 339. 1974. *Gastrochilus longifolia* Wallich, Pl. Asiat. Rar. 1: 22. t. 25. 1829; Baker in Hook. *f.*, Fl. Brit. India 6: 217. 1890; Haines, Bot. Bihar Orissa 1136. 1924 (Repr. ed., 3: 1187. 1961).

Fl.: June - September.

Distrib.: Singhbhum (Haines, *l.c.*).

ETLINGERA Giseke

Etingera linguiformis (Roxb.) R.M. Smith in Notes Roy. Bot. Gard. Edinb. 43: 246. 1986. *Alpinia linguiforme* Roxb., Pl. Corom. 3: 74. t. 276. 1819. *Amomum linguiforme* (Schult.) Baker in Hook. *f.*, Fl. Brit. India 6: 235. 1892; Haines, Bot. Bihar Orissa 1141. 1924 (Repr. ed., 3: 1191. 1961).

Fl. & Fr.: July - October.

Distrib.: Purnia.

GLOBBA L.

Globba bulbifera Roxb. in Asiat. Res. 11: 358. 1810; Baker in Hook. *f.*, Fl. Brit. India 6: 206. 1890; Haines, Bot. Bihar Orissa 1130. 1924 (Repr. ed., 3: 1180. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Palamau, Ranchi, West Champaran.

Globba clarkei Baker in Hook. *f.*, Fl. Brit. India 6: 201. 1890.

Distrib.: C. to E. Himalaya (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 293. 1989).

Globba hookeri C.B. Clarke *ex* Baker in Hook. *f.*, Fl. Brit. India 6: 202. 1890.

Distrib.: C. to E. Himalaya (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 293. 1989).

Globba multiflora Wallich *ex* Baker in Hook. *f.*, Fl. Brit. India 6: 202. 1890.

Fl. & Fr.: August - October.

Distrib.: Santal Pargana.

Globba ophioglossa Wight, Icon. Pl. Ind. Orient. t. 2002. 1853; Baker in Hook. *f.*, Fl. Brit. India 6: 202. 1890; Haines, Bot. Bihar Orissa 1130. 1924 (Repr. ed., 3: 1180. 1961).

Distrib.: Chota Nagpur (Haines, *l.c.*).

Globba orixensis Roxb. in Asiat. Res. 11: 358. 1810; Baker in Hook. *f.*, Fl. Brit. India 6: 201. 1890; Haines, Bot. Bihar Orissa 1129. 1924 (Repr. ed., 3: 1180. 1961).

Fl. & Fr.: August - September.

Distrib.: Chota Nagpur.

Globba racemosa Sm., Exot. Bot. 2: 115. t. 117. 1805; Baker in Hook. *f.*, Fl. Brit. India 6: 201. 1890; Haines, Bot. Bihar Orissa 1129. 1924 (Repr. ed., 3: 1179. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Ranchi, West Champaran.

HEDYCHIUM J. Koenig

Hedychium coccineum Buch.-Ham. *ex* Sm. in Rees, Cyclop. 17: 5. 1811; Baker in Hook. *f.*, Fl. Brit. India 6: 231. 1892; Haines, Bot. Bihar Orissa 1139. 1924 (Repr. ed., 3: 1190. 1961).

Fl. & Fr.: March - June.

Distrib.: West Champaran.

Hedychium coronarium J. Koenig in Retz., *Observ. Bot.* 3: 73. 1783; Baker in Hook. *f.*, *Fl. Brit. India* 6: 225. 1892; Haines, *Bot. Bihar Orissa* 1138. 1924 (Repr. ed., 3: 1189. 1961).

Fl. & Fr.: May - October.

Distrib.: Palamau, Ranchi, Singhbhum, West Champaran.

Hedychium gardnerianum Sheppard *ex* Ker-Gawl. in *Bot. Reg.* 9: t. 774. 1824; Baker in Hook. *f.*, *Fl. Brit. India* 6: 230. 1892; Haines, *Bot. Bihar Orissa* 1139. 1924 (Repr. ed., 3: 1190. 1961).

Distrib.: Cultivated in gardens.

Hedychium gracile Roxb., *Pl. Corom.* 3: 48. t. 251. 1820; Baker in Hook. *f.*, *Fl. Brit. India* 6: 229. 1892, *p.p.*

Distrib.: C. to E. Himalaya (Karthikeyan *et al.*, *Fl. Ind. Enum. Monocot.* 295. 1989).

Hedychium stenopetalum Lodd., *Bot. Cab.* t. 1902. 1833; Baker in Hook. *f.*, *Fl. Brit. India* 6: 231. 1892; Haines, *Bot. Bihar Orissa* 1139. 1924 (Repr. ed., 3: 1190. 1961).

Fl. & Fr.: August - November.

Distrib.: Santal Pargana.

Hedychium thyrsoforme Buch.-Ham. *ex* Sm. in Rees, *Cyclop.* 17. 1811; Baker in Hook. *f.*, *Fl. Brit. India* 6: 230. 1892; Haines, *Bot. Bihar Orissa* 1139. 1924 (Repr. ed., 3: 1189. 1961).

Fl. & Fr.: August - December.

Distrib.: West Champaran (Bhattacharyya and Sarkar, *Fl. W. Champaran* 474. 1998).

HEMIORCHIS Kurz

Hemiorchis pantlingii King in *Ann. Roy. Bot. Gard. Calcutta* 5: 163. t. 198-199. 1896.

Distrib.: C. to E. Himalaya (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 296. 1989).

KAEMPFERIA L.

Kaempferia galanga L., Sp. Pl. 2. 1753; Baker in Hook. *f.*, Fl. Brit. India 6: 219. 1890; Haines, Bot. Bihar Orissa 1137. 1924 (Repr. ed., 3: 1188. 1961).

Fl. & Fr.: August - December.

Distrib.: North Bihar.

Kaempferia rotunda L., Sp. Pl. 3. 1753; Baker in Hook. *f.*, Fl. Brit. India 6: 222. 1890; Haines, Bot. Bihar Orissa 1137. 1924 (Repr. ed., 1188. 1961):

Fl. & Fr.: March - November.

Distrib.: Hazaribagh, Koderma.

ROSCOEIA Sm.

Roscoeia auriculata K. Schum. in Engler, Pflanzenr. 46: 118. 1904.

Distrib.: E. to C. Himalaya (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 298. 1989).

ZINGIBER Boehmer, *nom. cons.*

Zingiber capitatum Roxb. in Asiat. Res. 11: 348. 1810; Baker in Hook. *f.*, Fl. Brit. India 6: 248. 1892; Haines, Bot. Bihar Orissa 1144. 1924 (Repr. ed., 3: 1195. 1961).

Fl. & Fr.: August - October.

Distrib.: Palamau, Ranchi, West Champaran.

Zingiber elatum Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 57. 1820; Mitra, Fl. Pl. E. India 1: 252. 1958. *Z. capitatum* Roxb. var. *elatum* Baker in Hook. *f.*, Fl. Brit. India 6: 249. 1892.

Fl. & Fr.: August - October.

Distrib.: Chatra, Hazaribagh, Palamau.

Zingiber officinale Roscoe in Trans. Linn. Soc. London 8: 348. 1807; Baker in Hook. *f.*, Fl. Brit. India 6: 246. 1892; Haines, Bot. Bihar Orissa 1143. 1924 (Repr. ed., 3: 1193. 1961).

Fl. & Fr.: August - November.

Distrib.: Cultivated.

Zingiber purpureum Roscoe in Trans. Linn. Soc. London 8: 348. 1807. *Z. cassumunar* Roxb. in Asiat. Res. 11: 347. t. 5. 1810; Baker in Hook. *f.*, Fl. Brit. India 6: 248. 1892; Haines, Bot. Bihar Orissa 1143. (Repr. ed., 3: 1194. 1961).

var. **palamaunsis** (Haines) K.K. Khanna, *comb. nov.* *Zingiber cassumunar* Roxb. var. *palamaunsis* Haines, Bot. Bihar Orissa 1144. 1924 (Repr. ed., 3: 1195. 1961).

Fl.: August - September.

Distrib.: Palamau (Haines, *l.c.*). Endemic.

var. **purpureum**

Fl. & Fr.: August - November.

Distrib.: Palamau, Ranchi, Santal Pargana.

Zingiber roseum (Roxb.) Roscoe in Trans. Linn. Soc. London 8: 348. 1807; Baker in Hook. *f.*, Fl. Brit. India 6: 244. 1892; Haines, Bot. Bihar Orissa 1142. 1924 (Repr. ed., 3: 1193. 1961). *Amomum roseum* Roxb., Pl. Corom. t. 126. 1800.

Fl. & Fr.: August - November.

Distrib.: Singhbhum.

Zingiber rubens Roxb. in Asiat. Res. 11: 348. 1810; Baker in Hook. *f.*, Fl. Brit. India 6: 243. 1892; Haines, Bot. Bihar Orissa 1142. 1924 (Repr. ed., 3: 1192. 1961).

Fl. & Fr.: August - October.

Distrib.: Ranchi.

Zingiber zerumbet (L.) Roscoe *ex Sm.*, Exot. Bot. 2: 103. t. 112. 1804; Baker in Hook. *f.*, Fl. Brit. India 6: 247. 1892; Haines, Bot. Bihar

Orissa 1143. 1924 (Repr. ed., 3: 1194. 1961). *Amomum zerumbet* L., Sp. Pl. 1. 1753.

Fl. & Fr.: August - October.

Distrib.: Palamau, Ranchi.

COSTACEAE

COSTUS L.

Costus speciosus (J. Koenig) Sm. in Trans. Linn. Soc. London 1: 249. 1791; Baker in Hook. *f.*, Fl. Brit. India 6: 249. 1892; Haines, Bot. Bihar Orissa 1145. 1924 (Repr. ed., 3: 1196. 1961). *Banksea speciosa* J. Koenig in Retz., Observ. Bot. 3: 75. 1783.

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Koderma, Palamau, West Champaran.

MARANTACEAE

MARANTA L.

Maranta arundinacea L., Sp. Pl. 2. 1753; Haines, Bot. Bihar Orissa 1150. 1924 (Repr. ed., 3: 1201. 1961).

Distrib.: Cultivated.

PHRYNIUM Willd., *nom. cons.*

Phrynium placentarium (Lour.) Merr. in Philipp. J. Sci. 15: 230. 1919. *Phyllodes placentaria* Lour., Fl. Cochinch. 1: 13. 1790. *Phrynium parviflorum* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 7. 1820; Baker in Hook. *f.*, Fl. Brit. India 6: 259. 1892; Haines, Bot. Bihar Orissa 1149. 1924 (Repr. ed., 3: 1200. 1961).

Fl. & Fr.: July - February.

Distrib.: Palamau, Singhbhum.

Phrynium pubinerve Blume, Enum. Pl. Javae 1: 38. 1827. *P. capitatum auct. non* Willd., 1797; Baker in Hook. *f.*, Fl. Brit. India 6: 258. 1892; Haines, Bot. Bihar Orissa 1149. 1924 (Repr. ed., 3: 1200. 1961).

Fl. & Fr.: July - December.

Distrib.: Singhbhum.

MUSACEAE

MUSA L.

Musa paradisiaca L., Sp. Pl. 1043. 1753. *M. sapientum* L., Syst. Nat. ed. 10. 1303. 1759; Baker in Hook. *f.*, Fl. Brit. India 6: 262. 1892; Haines, Bot. Bihar Orissa 1127. 1924 (Repr. ed., 3: 1177. 1961).

Fl. & Fr.: March - September.

Distrib.: Hazaribagh, Palamau, Ranchi, Sahibganj, Singhbhum. Cultivated elsewhere.

Musa rosacea Jacq., Pl. Hort. Schoenbr. 4: 22. t. 445. 1804; Baker in Hook. *f.*, Fl. Brit. India 6: 263. 1892. *M. ornata* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 488. 1824; Haines, Bot. Bihar Orissa 1127. 1924 (Repr. ed., 3: 1177. 1961).

Fl. & Fr.: May - July.

Distrib.: Ranchi, Singhbhum.

STRELITZIACEAE

RAVENALA Adans.

Ravenala madagascariensis Sonn., Voy. Indes Orient. 3: 244. 1782; Baker in Hook. *f.*, Fl. Brit. India 6: 198. 1890; Haines, Bot. Bihar Orissa 1127. 1924 (Repr. ed., 3: 1178. 1961).

Fl. & Fr.: October - December.

Distrib.: Cultivated in gardens.

STRELITZIA Banks ex Dryand.

Strelitzia augusta Thunb., Nov. Gen. 113. 1792; Haines, Bot. Bihar Orissa 1128. 1924 (Repr. ed., 3: 1178. 1961).

Distrib.: Cultivated (Haines, *l.c.*).

Strelitzia reginae Aiton, Hortus Kew. ed. 1. 1: 285. t. 2. 1789; Haines, Bot. Bihar Orissa 1128. 1924 (Repr. ed., 3: 1178. 1961).

Distrib.: Cultivated (Haines, *l.c.*).

CANNACEAE

CANNA L.

Canna indica L., Sp. Pl. 1. 1753. *C. indica* L. var. *orientalis* (Roscoe) Baker in Hook. *f.*, Fl. Brit. India 6: 260. 1892; Haines, Bot. Bihar Orissa 1147. 1924 (Repr. ed., 3: 1199. 1961).

Fl. & Fr.: Almost throughout the year.

Distrib.: Cultivated throughout the state; also found in waste lands near villages.

BROMELIACEAE

ANANAS Mill.

Ananas comosus (L.) Merr., Interpr. Herb. Amb. 133. 1917. *Bromelia comosa* L. in Stickman, Herb. Amb. 21. 1754. *Ananas sativus* J.H. Schult. in Roem. & Schult., Syst. Vcg. 7: 1283. 1830; Haines, Bot. Bihar Orissa 1115. 1924 (Repr. ed., 3: 1164. 1961).

Distrib.: Cultivated.

IRIDACEAE

BELAMCANDA Adans., *orth. et nom. cons.*

Belamcanda chinensis (L.) DC. in Redoute, Liliac. 3: t. 121. 1805; Hook. *f.*, Fl. Brit. India 6: 277. 1892; Haines, Bot. Bihar Orissa 1125. 1924 (Repr. ed., 3: 1176. 1961). *Ixia chinensis* L., Sp. Pl. 36. 1753.

Fl.: August - October.

Distrib.: Cultivated throughout the state.

AMARYLLIDACEAE

CRINUM L.

Crinum asiaticum L., Sp. Pl. 292. 1753; Hook. *f.*, Fl. Brit. India 6: 280. 1892; Haines, Bot. Bihar Orissa 1108. 1924 (Repr. ed., 3: 1157. 1961).

Fl.: Almost throughout the year.

Distrib.: Purnia.

Crinum defixum Ker-Gawl. in J. Sci. Arts London 3: 105. 1817; Hook. *f.*, Fl. Brit. India 6: 281. 1892; Haines, Bot. Bihar Orissa 1108. 1924 (Repr. ed., 3: 1157. 1961).

var. **defixum**

Fl.: August - November.

Distrib.: Palamau.

var. **ensifolium** (Roxb.) Baker, Handb. Amaryllid. 76. 1888. *Crinum ensifolium* Roxb., Fl. Ind. 2: 129. 1832; Hook. *f.*, Fl. Brit. India 6: 281. 1892; Haines, Bot. Bihar Orissa 1109. 1924 (Repr. ed., 3: 1158. 1961).

Fl.: August - October.

Distrib.: Singhbhum.

Crinum humile Herb. in Curtis, Bot. Mag. t. 2636. 1826; Hook. *f.*, Fl. Brit. India 6: 282. 1892.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 3. 1989).

Crinum latifolium L., Sp. Pl. 291. 1753; Hook. *f.*, Fl. Brit. India 6: 283. 1892; Haines, Bot. Bihar Orissa 1109. 1924 (Repr. ed., 3: 1158. 1961).

Fl. & Fr.: May - October.

Distrib.: Hazaribagh, Palamau, Singhbhum.

Crinum pratense Herb., Amaryllid. 256. 1837; Hook. *f.*, Fl. Brit. India 6: 282. 1892.

Distrib.: Throughout the plains of India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 3. 1989).

FURCRAEA Vent.

Furcraea foetida (L.) Haw., Syn. Pl. Succ. 73. 1812. *Agave foetida* L., Sp. Pl. 323. 1753. *Furcraea gigantea* Vent. in Bull. Sci. Soc. Philom. Paris 1: 65. 1793; Haines, Bot. Bihar Orissa 1106. 1924 (Repr. ed., 3: 1156. 1961).

Distrib.: Cultivated in gardens.

PANCRATIUM L.

Pancratium biflorum Roxb., Fl. Ind. 2: 125. 1832; Hook. *f.*, Fl. Brit. India 6: 285. 1892; Haines, Bot. Bihar Orissa 1111. 1924 (Repr. ed., 3: 1160. 1961).

Fl. & Fr.: July - October.

Distrib.: Chota Nagpur.

Pancratium longiflorum Roxb., Fl. Ind. 2: 125. 1832; Hook. *f.*, Fl. Brit. India 6: 286. 1892; Haines, Bot. Bihar Orissa 1111. 1924 (Repr. ed., 3: 1160. 1961).

Fl. & Fr.: July - October.

Distrib.: Palamau.

Pancratium triflorum Roxb., Fl. Ind. 2: 126. 1832; Hook. *f.*, Fl. Brit. India 6: 285. 1892; Haines, Bot. Bihar Orissa 1110. 1924 (Repr. ed., 3: 1160. 1961).

Fl. & Fr.: April - July.

Distrib.: Palamau, Ranchi, Singhbhum.

Pancratium verecundum Aiton, Hortus Kew. ed. 1. 1: 412. 1789; Hook. *f.*, Fl. Brit. India 6: 285. 1892; Haines, Bot. Bihar Orissa 1111. 1924 (Repr. ed., 3: 1161. 1961).

Fl.: May - June.

Distrib.: East Champaran, Sitamarhi.

Pancratium zeylanicum L., Sp. Pl. 290. 1753; Hook. *f.*, Fl. Brit. India 6: 285. 1892.

Fl. & Fr.: April - May.

Distrib.: Chota Nagpur.

ZEPHYRANTHES Herb.

Zephyranthes rosea Lindl. in Bot. Reg. 10: t. 821. 1824; Haines, Bot. Bihar Orissa 1107. 1924 (Repr. ed., 3: 1156. 1961).

Fl. & Fr.: April - August.

Distrib.: Cultivated and as an escape. West Champaran.

HYPOXIDACEAE

CURCULIGO Gaertn.

Curculigo capitulata (Lour.) Kuntze, Revis. Gen. Pl. 2: 703. 1891. *Leucojum capitulatum* Lour., Fl. Cochinch. 1: 199. 1790. *Curculigo recurvata* Dryand. in Aiton *f.*, Hortus Kew. ed. 2. 2: 253. 1811; Hook. *f.*, Fl. Brit. India 6: 278. 1892; Haines, Bot. Bihar Orissa 1113. 1924 (Repr. ed., 3: 1162. 1961).

Fl. & Fr.: April - August.

Distrib.: Palamau, Singhbhum.

Curculigo orchlroides Gaertn., Fruct. Sem. Pl. 1: 63. t. 16. 1788; Hook. *f.*, Fl. Brit. India 6: 279. 1892; Haines, Bot. Bihar Orissa 1112. 1924 (Repr. ed., 3: 1162. 1961).

Fl. & Fr.: May - August.

Distrib.: Gaya, Hazaribagh, Palamau, Singhbhum, West Champaran.

HYPOXIS L.

Hypoxis aurea Lour., Fl. Cochinch. 1: 200. 1790; Hook. *f.*, Fl. Brit. India 6: 277. 1892; Haines, Bot. Bihar Orissa 1113. 1924 (Repr. ed., 3: 1163. 1961).

Fl. & Fr.: June - July.

Distrib.: Chota Nagpur, Hazaribagh.

AGAVACEAE

AGAVE L.

Agave americana L., Sp. Pl. 323. 1753; Haines, Bot. Bihar Orissa 1104. 1924 (Repr. ed., 3: 1154. 1961).

Fl. & Fr.: January - June.

Distrib.: Cultivated.

Agave angustifolia Haw., Syn. Pl. Succ. 72. 1812. *A. wightii* Drumm. & Prain in Agric. Ledg. 13: 91. 1906; Haines, Bot. Bihar Orissa 1106. 1924 (Repr. ed., 3: 1155. 1961).

Fl. & Fr.: July - December.

Distrib.: Champaran, Santal Pargana.

Agave cantula Roxb., Fl. Ind. 2: 167. 1832; Haines, Bot. Bihar Orissa 1105. 1924 (Repr. ed., 3: 1154. 1961). *A. americana auct. non L.*, 1753; Hook. f., Fl. Brit. India 6: 277. 1892.

Fl. & Fr.: July - September.

Distrib.: Champaran, Hazaribagh, Santal Pargana.

Agave sisalana Perrine in U.S. Senate Document 300: 36. 1838; Haines, Bot. Bihar Orissa 1106. 1924 (Repr. ed., 3: 1155. 1961).

Fl. & Fr.: January - April.

Distrib.: Cultivated. Hazaribagh, Ranchi, Santal Pargana.

Agave vera-cruz Mill., Gard. Dict. ed. 8: 7. 1754; Haines, Bot. Bihar Orissa 1105. 1924 (Repr. ed., 3: 1154. 1961).

Fl.: September - December.

Distrib.: Champaran, Hazaribagh, Palamau, Singhbhum.

CORDYLINE Comm. ex A.L. Juss., *nom. cons.*

Cordyline terminalis Kunth, Enum. Pl. 5: 25. 1850; Hook. f., Fl. Brit. India 6: 331. 1892; Haines, Bot. Bihar Orissa 1091. 1924 (Repr. ed., 3: 1140. 1961).

Fl.: March.

Distrib.: Cultivated in gardens.

DRACAENA Vandelli ex L.

Dracaena angustifolia Roxb., Fl. Ind. 2: 155. 1832; Hook. f., Fl. Brit. India 6: 327. 1892; Haines, Bot. Bihar Orissa 1090. 1924 (Repr. ed., 3: 1139. 1961).

Fl.: November - December.

Distrib.: Purnia.

SANSEVIERIA Thunb., *nom. cons.*

Sansevieria cylindrica Bojer in Hort. Maurit. 349. 1839.

Distrib.: Cultivated in gardens.

Sansevieria roxburghiana Schult. & Schult. f. in Roem. & Schult., Syst. Veg. 7: 357. f. 12 D-E. 1829; Haines, Bot. Bihar Orissa 1090. 1924 (Repr. ed., 3: 1140. 1961).

Distrib.: Cultivated in gardens.

Sansevieria trifasciata Hort. ex Prain, Bengal Pl. 2: 1054. 1903 (Repr. ed., 192. 1963).

Distrib.: Cultivated in gardens.

TACCACEAE

TACCA J.R. Forster & G. Forster, *nom. cons.*

Tacca leontopetaloides (L.) Kuntze, Revis. Gen. Pl. 2: 704. 1891. *Leontice leontopetaloides* L., Sp. Pl. 313. 1753. *Tacca pinnatifida* J.R. Forster & G. Forster, Char. Gen. Pl. 69. t. 35. 1775; Hook. f., Fl. Brit. India 6: 287. 1892; Haines, Bot. Bihar Orissa 1114. 1924 (Repr. ed., 3: 1164. 1961).

Fl. & Fr.: July - October.

Distrib.: Chatra, Hazaribagh, Palamau, Sahibganj.

DIOSCOREACEAE**DIOSCOREA L.**

Dioscorea alata L., Sp. Pl. 1033. 1753; Hook. f., Fl. Brit. India 6: 296. 1892; Haines, Bot. Bihar Orissa 1122. 1924 (Repr. ed., 3: 1171. 1961).
- *Lator*.

Fl. & Fr.: September - December.

Distrib.: Bhagalpur, Chota Nagpur, Darbhanga, Deoghar, Muzaffarpur, Sahibganj, West Champaran.

Dioscorea belophylla (Prain) Voigt ex Haines, For. Fl. Chota Nagpur 530. 1910; Haines, Bot. Bihar Orissa 1119. 1924 (Repr. ed., 3: 1169. 1961).
D. nummularia var. *belophylla* Prain, Bengal Pl. 2: 1065, 1067. 1903.
D. glabra auct. non Roxb., 1832; Hook. f., Fl. Brit. India 6: 294. 1892,
p.p. *Duri sauga*, *Pitha aroo*.

Fl. & Fr.: September - March.

Distrib.: Gumla, Hazaribagh, Palamau, Purnia, Singhbhum.

Dioscorea bulbifera L., Sp. Pl. 1033. 1753; Haines, Bot. Bihar Orissa 1122. 1924 (Repr. ed., 3: 1172. 1961). *D. sativa* Thunb., Fl. Jap. 151. 1784,
non L. 1753; Hook. f., Fl. Brit. India 6: 295. 1892. - *Hathia Khand*.

Fl. & Fr.: August - November.

Distrib.: Bhagalpur, East Champaran, Hazaribagh, Kishanganj, Palamau, Purnia, Ranchi, Santal Pargana, Sasaram, Singhbhum, West Champaran.

Dioscorea esculenta (Lour.) Burkill in Gard. Bull. Straits Settl. 1: 396. 1917. *Oncus esculentus* Lour., Fl. Cochinch. 1: 194. 1790. *Dioscorea aculeata* auct. non L., 1753; Hook. f., Fl. Brit. India 6: 296. 1892.

var. **esculenta**

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Koderma, Singhbhum.

var. **fasciculata** (Roxb.) Prain & Burkill in J. Asiat. Soc. Bengal n.s. 10: 19. 1914. *Dioscorea fasciculata* Roxb., Fl. Ind. 3: 801. 1832; Hook. f., Fl. Brit. India 6: 296. 1892. - *Pedgo*.

Fl. & Fr.: October - January.

Distrib.: Champaran, Darbhanga, Muzaffarpur, Sahibganj.

Dioscorea glabra Roxb., Fl. Ind. 3: 804. 1832; Hook. f., Fl. Brit. India 6: 294. 1892; Haines, Bot. Bihar Orissa 1119. 1924 (Repr. ed., 3: 1168. 1961). - *Pita alu*.

Fl. & Fr.: September - March.

Distrib.: Deoghar, Hazaribagh, Koderma, Purnia, Ranchi, Singhbhum, West Champaran.

Dioscorea hamiltonii Hook. f., Fl. Brit. India 6: 295. 1892; Haines, Bot. Bihar Orissa 1121. 1924 (Repr. ed., 3: 1171. 1961). - *Banaru*.

Fl. & Fr.: September - December.

Distrib.: Deoghar, Hazaribagh, Ranchi, Singhbhum.

Dioscorea hispida Dennst., Schluessel Hortus Malab. 15. 1818. *D. daemona* Roxb., Fl. Ind. 3: 805. 1832; Hook. f., Fl. Brit. India 6: 289. 1892; Haines, Bot. Bihar Orissa 1123. 1924 (Repr. ed., 3: 1173. 1961).

Fl. & Fr.: June - September.

Distrib.: Hazaribagh, Koderma, Palamau, Purnia, Sahibganj, Santal Pargana, West Champaran.

Dioscorea kalkapershadii Prain & Burkill in J. Asiat. Soc. Bengal 10: 24. 1914; Haines, Bot. Bihar Orissa 1124. 1924 (Repr. ed., 3: 1174. 1961).

Distrib.: Ranchi (Haines, *l.c.*).

Dioscorea oppositifolia L., Sp. Pl. 1033. 1753; Hook. f., Fl. Brit. India 6: 292. 1892, *p.p.*; Haines, Bot. Bihar Orissa 1118. 1924 (Repr. ed., 3: 1168. 1961).

Fl. & Fr.: July - November.

Distrib.: Palamau.

Dioscorea pentaphylla L., Sp. Pl. 1032. 1753; Hook. *f.*, Fl. Brit. India 6: 289. 1892; Haines, Bot. Bihar Orissa 1123. 1924 (Repr. ed., 3: 1173. 1961).

var. **communis** Prain & Burkill in Ann. Roy. Bot. Gard. Calcutta 14: 165. 1936; Haines, Bot. Bihar Orissa 1124. 1924 (Repr. ed., 3: 1174. 1961).

Fl. & Fr.: August - December.

Distrib.: Ranchi, Singhbhum (Haines, *l.c.*).

var. **cyathiformis** Haines, Bot. Bihar Orissa 1124. 1924 (Repr. ed., 3: 1174. 1961).

Fl. & Fr.: August - November.

Distrib.: Ranchi (Haines, *l.c.*).

var. **pentaphylla**

Fl. & Fr.: August.

Distrib.: Hazaribagh, Koderma, Palamau, Purnia, Ranchi, Singhbhum, West Champaran.

Dioscorea pubera Blume, Enum. Pl. Javae 1: 21. 1827. *D. anguina* Roxb., Fl. Ind. 3: 803. 1832 (*excl. ref. Rumph.*); Hook. *f.*, Fl. Brit. India 6: 293. 1892; Haines, Bot. Bihar Orissa 1117. 1924 (Repr. ed., 3: 1167. 1961). - *Banaroo*.

Fl. & Fr.: September - January.

Distrib.: Hazaribagh, Koderma, Palamau, Purnia, Ranchi, Singhbhum, West Champaran.

Dioscorea tomentosa Koenig *ex* Spreng., Pl. Min. Cogn. Pug. 2: 92. 1815; Hook. *f.*, Fl. Brit. India 6: 289. 1892; Haines, Bot. Bihar Orissa 1123. 1924 (Repr. ed., 3: 1173. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Koderma, Palamau.

Dioscorea wallichii Hook. *f.*, Fl. Brit. India 6: 295. 1892; Haines, Bot. Bihar Orissa 1120. 1924 (Repr. ed., 3: 1170. 1961).

Fl. & Fr.: October - February.

Distrib.: Hazaribagh, Palamau, Singhbhum, West Champaran.

LILIACEAE

ALLIUM L.

Allium ascalonicum L., Sp. Pl. ed. 2. 429. 1762; Hook. *f.*, Fl. Brit. India 6: 337. 1892; Haines, Bot. Bihar Orissa 1095. 1924 (Repr. ed., 3: 1144. 1961).

Distrib.: Cultivated in gardens.

Allium cepa L., Sp. Pl. 300. 1753; Hook. *f.*, Fl. Brit. India 6: 337. 1892; Haines, Bot. Bihar Orissa 1095. 1924 (Repr. ed., 3: 1144. 1961).
Piyaz.

Fl. & Fr.: December - March.

Distrib.: Cultivated throughout the state.

Allium porrum L., Sp. Pl. 294. 1753. *A. ampeloporasum* L., Sp. Pl. 295. 1753; Hook. *f.*, Fl. Brit. India 6: 337. 1892; Haines, Bot. Bihar Orissa 1095. 1924 (Repr. ed., 3: 1144. 1961).

Distrib.: Cultivated in gardens.

Allium sativum L., Sp. Pl. 296. 1753; Hook. *f.*, Fl. Brit. India 6: 337. 1892; Haines, Bot. Bihar Orissa 1094. 1924 (Repr. ed., 3: 1144. 1961).
Lahsun.

Fl. & Fr.: December - March.

Distrib.: Cultivated throughout the state.

Allium schoenoprasum L., Sp. Pl. 301. 1753; Hook. *f.*, Fl. Brit. India 6: 338. 1892; Haines, Bot. Bihar Orissa 1095. 1924 (Repr. ed., 3: 1144. 1961).

Distrib.: Cultivated.

Allium tuberosum Rottler ex Spreng, Syst. Veg. 2: 38. 1825; Hook. *f.*, Fl. Brit. India 6: 343. 1892; Haines, Bot. Bihar Orissa 1095. 1924 (Repr. ed., 3: 1144. 1961).

Distrib.: Cultivated.

ASPARAGUS L.

Asparagus acerosus Roxb., Fl. Ind. 2: 150. 1832; Hook. f., Fl. Brit. India 6: 317. 1892; Haines, Bot. Bihar Orissa 1089. 1924 (Repr. ed., 3: 1138. 1961).

Fl. & Fr.: May - October.

Distrib.: Purnia.

Asparagus capitatus Baker in J. Linn. Soc. London (Bot.) 14: 607. 1875; Hook. f., Fl. Brit. India 6: 315. 1892. *A. gracilis* Royle ex Baker in J. Linn. Soc. London (Bot.) 14: 607. 1875, non Salisb., 1796; Haines, Bot. Bihar Orissa 1089. 1924 (Repr. ed., 3: 1138. 1961).

Fl. & Fr.: May - November.

Distrib.: Palamau.

Asparagus racemosus Willd., Sp. Pl. 2: 152. 1799; Hook. f., Fl. Brit. India 6: 316. 1892; Haines, Bot. Bihar Orissa 1088. 1924 (Repr. ed., 3: 1137. 1961).

var. **prainii** Haines, Bot. Bihar Orissa 1088. 1924 (Repr. ed., 3: 1137. 1961).

Distrib.: Singhbhum (Haines, l.c.).

var. **racemosus**

Fl. & Fr.: September - December.

Distrib.: Throughout the state.

ASPHODELUS L.

Asphodelus tenuifolius Cavan. in Anal. Cienc. Nat. 3: 46. t. 27. f. 2. 1801; Hook. f., Fl. Brit. India 6: 332. 1892, *excl. syn. A. fistulosus* L.; Haines, Bot. Bihar Orissa 1097. 1924 (Repr. ed., 3: 1147. 1961).

Fl. & Fr.: May - December.

Distrib.: Bhagalpur, Patna, Singhbhum.

CHLOROPHYTUM Ker.-Gawl.

Chlorophytum arundinaceum Baker in J. Linn. Soc. London (Bot.) 15: 323. 1876; Hook. *f.*, Fl. Brit. India 6: 333. 1892; Haines, Bot. Bihar Orissa 1098. 1924 (Repr. ed., 3: 1147. 1961).

Fl. & Fr.: March - December.

Distrib.: Munger, Palamau, Ranchi, West Champaran.

Chlorophytum heynei Rottler *ex* Baker in J. Linn. soc. London (Bot.) 15: 322. 1876. *C. heyneanum* Wallich *ex* Hook. *f.*, Fl. Brit. India 6: 333. 1892.

Fl. & Fr.: August - January.

Distrib.: Palamau.

Chlorophytum laxum R. Br., Prodr. 277. 1810; Hook. *f.*, Fl. Brit. India 6: 336. 1892; Haines, Bot. Bihar Orissa 1099. 1924 (Repr. ed., 3: 1148. 1961).

Fl. & Fr.: May - November.

Distrib.: Palamau, Ranchi.

Chlorophytum nimmonii (Graham) Dalz. in Hook., Kew J. Bot. 2: 142. 1850. *Anthericum nimmonii* Graham, Cat. Bombay Pl. 220. 1839. *Chlorophytum orchidastrum auct. non* Lindl., 1824; Baker in J. Linn. Soc. London (Bot.) 15: 325. 1876, *p.p.*; Hook. *f.*, Fl. Brit. India 6: 336. 1892.

Fl. & Fr.: August - January.

Distrib.: Palamau.

Chlorophytum tuberosum (Roxb.) Baker in J. Linn. Soc. London (Bot.) 15: 332. 1876; Hook. *f.*, Fl. Brit. India 6: 334. 1892; Haines, Bot. Bihar Orissa 1099. 1924 (Repr. ed., 3: 1148. 1961). *Anthericum tuberosum* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 149. 1824.

Fl. & Fr.: May - December.

Distrib.: East Champaran, Gaya, Hazaribagh, Palamau, Ranchi.

DIANELLA Lam. *emend.* Schlittl.

Dianella ensifolia (L.) DC. in Redoute, Lil. 1: t. 1. 1802; Hook. *f.*, Fl. Brit. India 6: 337. 1892; Haines, Bot. Bihar Orissa 1092. 1924 (Repr. ed., 3: 1141. 1961). *Dracaena ensifolia* L., Mant. Pl. 63. 1767.

Fl. & Fr.: April - June.

Distrib.: Palamau, Ranchi.

DISPORUM Salisb. *ex* D. Don

Disporum cantoniense (Lour.) Merr. in Philipp. J. Sci. 15: 229. 1919 & in Trans. Amer. Philos. Soc. Philadelphia (N.S.) 24: 109. 1935. *Fritillaria cantoniensis* Lour., Fl. Cochinch. 1: 206. 1790. *Disporum pullum* Salisb. in Trans. Hort. Soc. 1: 330. 1812; Hook. *f.*, Fl. Brit. India 6: 360. 1892; Haines, Bot. Bihar Orissa 1093. 1924 (Repr. ed., 3: 1142. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum.

DRIMIA Jacq. *ex* Willd.

Drimia indica (Roxb.) Jessop in J. S. Afr. Bot. 43: 272. 1977. *Scilla indica* Roxb., Fl. Ind. (Carey & Wallich ed.) 2: 147. 1824. *Urginea indica* (Roxb.) Kunth, Enum. Pl. 4: 333. 1843; Hook. *f.*, Fl. Brit. India 6: 347. 1892; Haines, Bot. Bihar Orissa 1096. 1924 (Repr. ed., 3: 1145. 1961).

Fl. & Fr.: March - July.

Distrib.: Palamau, Ranchi, Singhbhum.

GLORIOSA L.

Gloriosa superba L., Sp. Pl. 305. 1753; Hook. *f.*, Fl. Brit. India 6: 358. 1892; Haines, Bot. Bihar Orissa 1093. 1924 (Repr. ed., 3: 1143. 1961).

Fl. & Fr.: July - October.

Distrib.: Hazaribagh, Koderma, Palamau, Purnia, West Champaran.

IPHIGENIA Kunth

Iphigenia indica (L.) A. Gray apud Kunth, Enum. Pl. 4: 213. 1843; Hook. f., Fl. Brit. India 6: 357. 1892; Haines, Bot. Bihar Orissa 1097. 1924 (Repr. ed., 3: 1146. 1961). *Melanthium indicum* L., Mant. Pl. 226. 1771.

Fl. & Fr.: August - November.

Distrib.: Palamau.

SCILLA L.

Scilla hyacinthina (Roth) McBride in Contr. Gray Herb. 2, 56: 14. 1918. *Ledbouria hyacinthina* Roth, Nov. Pl. Sp. 195. 1821. *Scilla indica* (Wight) Baker in Saund., Refug. Bot. 3. App. 12. 1870 & J. Linn. Soc. London (Bot.) 13: 250. 1872, *non* Roxb., 1832; Haines, Bot. Bihar Orissa 1096. 1924 (Repr. ed., 3: 1145. 1961).

Fl.: June - July.

Distrib.: Chota Nagpur.

SMILAX L.

Smilax aspera L., Sp. Pl. 1028. 1753; Hook. f., Fl. Brit. India 6: 306. 1892.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 285. 1989).

Smilax glaucophylla Klotz. in Reise. Prinz. Neld. Bot. 45. t. 91. 1862. *S. parvifolia* Kunth *ex* Hook. f., Fl. Brit. India 6: 304. 1892.

Distrib.: N.W. to N.E. India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 286. 1989).

Smilax lanceaefolia Roxb., Fl. Ind. 3: 792. 1832; Hook. f., Fl. Brit. India 6: 308. 1892; Haines, Bot. Bihar Orissa 1086. 1924 (Repr. ed., 3: 1135. 1961).

Fl. & Fr.: July - November.

Distrib.: West Champaran.

Smilax minutiflora A. DC., Monogr. Phan. 1: 109. 1878; Hook. *f.*, Fl. Brit. India 6: 305. 1893.

Distrib.: C. to E. Himalaya (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 286. 1989).

Smilax ocreata A. DC., Monogr. Phan. 1: 193. 1878. *S. roxburghiana* Wallich *ex* Hook. *f.*, Fl. Brit. India 6: 311. 1892, *p.p.*; Haines, Bot. Bihar Orissa 1087. 1924 (Repr. ed., 3: 1136. 1961).

Fl. & Fr.: December - May.

Distrib.: Hazaribagh, Santal Pargana.

Smilax ovalifolia Roxb., Fl. Ind. 3: 794. 1832. *S. macrophylla* Roxb., Fl. Ind. 3: 793. 1832; Haines, Bot. Bihar Orissa 1086. 1924 (Repr. ed., 3: 1135. 1961).

Fl. & Fr.: April - January.

Distrib.: Hazaribagh, Koderma, Palamau, Purnia, West Champaran.

Smilax perfoliata Lour., Fl. Cochinch. 2: 622. 1790. *S. prolifera* Roxb., Fl. Ind. 3: 795. 1832; Hook. *f.*, Fl. Brit. India 6: 312. 1892; Haines, Bot. Bihar Orissa 1087. 1924 (Repr. ed., 3: 1136. 1961).

Fl. & Fr.: February - December.

Distrib.: Palamau, Purnia, Ranchi, West Champaran.

Smilax rigida Wallich *ex* Kunth, Enum. Pl. 5: 164. 1850.

Distrib.: C. to E. Himalaya (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 287. 1989).

Smilax siamensis T. Koyama in Brittonia 26: 136. 1974.

Fl. & Fr.: September - February.

Distrib.: Palamau.

Smilax zeylanica L., Sp. Pl. 1429. 1753; Hook. *f.*, Fl. Brit. India 6: 309. 1892; Haines, Bot. Bihar Orissa 1087. 1924 (Repr. ed., 3: 1136. 1961).

Fl. & Fr.: September - April.

Distrib.: Chota Nagpur.

PONTEDERIACEAE**EICHHORNIA** Kunth

Eichhornia crassipes (Mart.) Solms in A. DC., Monogr. Phan. 4: 527. 1883; Haines, Bot. Bihar Orissa 1102. 1924 (Repr. ed., 3: 1151. 1961). *Pontederia crassipes* Mart., Nov. Gen. Sp. Pl. 1: 9. t. 4. 1823.

Fl. & Fr.: May - September.

Distrib.: Palamau, Patna, West Champaran.

MONOCHORIA K. Presl

Monochoria hastata (L.) Solms in A. DC., Monogr. Phan. 4: 523. 1883; Haines, Bot. Bihar Orissa 1101. 1924 (Repr. ed., 3: 1150. 1961). *Pontederia hastata* L., Sp. Pl. 288. 1753. *Monochoria hastaefolia* K. Presl, Reliq. Haenk. 1: 128. 1827; Hook. f., Fl. Brit. India 6: 362. 1892.

Fl. & Fr.: July - October.

Distrib.: Throughout the state.

Monochoria vaginalis (Burm. f.) K. Presl, Reliq. Haenk. 1: 128. 1827; Hook. f., Fl. Brit. India 6: 363. 1892; Haines, Bot. Bihar Orissa 1101. 1924 (Repr. ed., 3: 1151. 1961). *Pontederia vaginalis* Burm. f., Fl. Ind. 80. 1768.

Fl. & Fr.: July - November.

Distrib.: West Champaran.

XYRIDACEAE**XYRIS** L.

Xyris coronata Haines, Bot. Bihar Orissa 1072. 1924 (Repr. ed., 3: 1121. 1961).

Fl. & Fr.: August - October.

Distrib.: Ranchi.

Xyris indica L., Sp. Pl. 42. 1753; Hook. f., Fl. Brit. India 6: 364. 1892; Haines, Bot. Bihar Orissa 1072. 1924 (Repr. ed., 3: 1120. 1961).

Fl. & Fr.: October - November.

Distrib.: Purnia.

Xyris pauciflora Willd., *Phytographia* 1: 2. t. 1. f. 1. 1794; Hook. *f.*, *Fl. Brit. India* 6: 365. 1892; Haines, *Bot. Bihar Orissa* 1073. 1924 (Repr. ed., 3: 1121. 1961).

Fl. & Fr.: November - March.

Distrib.: Gaya, Gumla, West Champaran.

COMMELINACEAE

COMMELINA L.

Commelina attenuata J. Koenig ex Vahl, *Enum. Pl.* 2: 168. 1805; Hook. *f.*, *Fl. Brit. India* 6: 372. 1892; Haines, *Bot. Bihar Orissa* 1076. 1924 (Repr. ed., 3: 1124. 1961).

Fl. & Fr.: October - November.

Distrib.: Hazaribagh, Palamau, Ranchi, Sahibganj.

Commelina benghalensis L., *Sp. Pl.* 41. 1753; Hook. *f.*, *Fl. Brit. India* 6: 370. 1892; Haines, *Bot. Bihar Orissa* 1077. 1924 (Repr. ed., 3: 1125. 1961).

Fl. & Fr.: July - November.

Distrib.: Throughout the state.

Commelina diffusa Burm. *f.*, *Fl. Ind.* 18. t. 7. f. 2. 1768. *C. nudiflora* auct. pl. non L., 1753; Hook. *f.*, *Fl. Brit. India* 6: 369. 1892; Haines, *Bot. Bihar Orissa* 1075. 1924 (Repr. ed., 3: 1123. 1961).

Fl. & Fr.: August - November.

Distrib.: Singhbhum.

Commelina erecta L., *Sp. Pl.* 41. 1753. *C. kurzii* C.B. Clarke in *J. Linn. Soc. London (Bot.)* 11: 444. 1871; Hook. *f.*, *Fl. Brit. India* 6: 373. 1892; Haines, *Bot. Bihar Orissa* 1077. 1924 (Repr. ed., 3: 1126. 1961).

Fl. & Fr.: May - July.

Distrib.: Hazaribagh, Palamau, Sahibganj.

Commelina hasskarlii C.B. Clarke, *Commelyn. Cyrtandr. Bengal.* 13. t. 5. 1874; Hook. *f.*, *Fl. Brit. India* 6: 370. 1892; Haines, *Bot. Bihar Orissa* 1076. 1924 (Repr. ed., 3: 1125. 1961).

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Palamau, Purnia, Ranchi, Singhbhum, West Champaran.

Commelina longifolia Lam., *Encycl.* 1: 129. 1783. *C. salicifolia* Roxb., *Fl. Ind. (Carey & Wallich ed.)* 1: 176. 1820; Hook. *f.*, *Fl. Brit. India* 6: 370. 1892; Haines, *Bot. Bihar Orissa* 1075. 1924 (Repr. ed., 3: 1124. 1961).

Fl. & Fr.: August - November.

Distrib.: Purnia, West Champaran.

Commelina maculata Edgew. in *Trans. Linn. Soc. London* 20: 89. 1846. *C. obliqua* Buch.-Ham. ex D. Don, *Prodr. Fl. Nepal.* 45. 1825, *non* Vahl, 1806; Hook. *f.*, *Fl. Brit. India* 6: 372. 1892; Haines, *Bot. Bihar Orissa* 1077. 1924 (Repr. ed., 3: 1126. 1961).

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Munger, Palamau, Ranchi.

Commelina suffruticosa Blume, *Enum. Pl. Javae* 1: 3. 1827; Hook. *f.*, *Fl. Brit. India* 6: 374. 1892; Haines, *Bot. Bihar Orissa* 1078. 1924 (Repr. ed., 3: 1126. 1961).

Fl. & Fr.: August - October.

Distrib.: Gaya, Hazaribagh, Palamau, West Champaran.

CYANOTIS D. Don, *nom. cons.*

Cyanotis cristata (L.) D. Don, *Prodr. Fl. Nepal.* 46. 1825; Hook. *f.*, *Fl. Brit. India* 6: 385. 1892; Haines, *Bot. Bihar Orissa* 1081. 1924 (Repr. ed., 3: 1130. 1961). *Commelina cristata* L., *Sp. Pl.* 42. 1753.

Fl. & Fr.: August - October.

Distrib.: Gaya, Hazaribagh, Palamau, Sahibganj, West Champaran.

Cyanotis fasciculata (Heyne ex Roth) Schult. & J.H. Schult. in *Roem. & Schult., Syst. Veg.* 7: 1152. 1830; Hook. *f.*, *Fl. Brit. India* 6: 387. 1892. *Tradescantia fasciculata* Heyne ex Roth, *Nov. Pl. Sp.* 189. 1821.

Fl. & Fr.: August - September.

Distrib.: Hazaribagh.

Cyanotis tuberosa (Roxb.) Schult. & J.H. Schult. in Roem. & Schult., Syst. Veg. 7: 1153. 1830; Hook. *f.*, Fl. Brit. India 6: 386. 1892; Haines, Bot. Bihar Orissa 1081. 1924 (Repr. ed., 3: 1130. 1961). *Tradescantia tuberosa* Roxb., Pl. Corom. 2: 5. t. 108. 1799 & Fl. Ind. 2: 119. 1832.

Fl. & Fr.: August - October.

Distrib.: Singhbhum.

Cyanotis vaga (Lour.) Schult. & J.H. Schult. in Roem. & Schult., Syst. Veg. 7: 1153. 1830. *Tradescantia vaga* Lour., Fl. Cochinch. 1: 193. 1790. *Cyanotis barbata* D. Don, Prodr. Fl. Nepal. 46. 1825; Hook. *f.*, Fl. Brit. India 6: 385. 1892.

Fl. & Fr.: August - October.

Distrib.: Palamau.

FLOSCOPA Lour.

Floscopa scandens Lour., Fl. Cochinch. 1: 193. 1790; Hook. *f.*, Fl. Brit. India 6: 390. 1892; Haines, Bot. Bihar Orissa 1082. 1924 (Repr. ed., 3: 1131. 1961).

Fl. & Fr.: September - November.

Distrib.: Palamau, Purnia, Ranchi, West Champaran.

MURDANNIA Royle, *nom. cons.*

Murdannia blumei (Hassk.) Brenan in Hook., Icon. Pl. t. 3578. 1962. *Dichaespermum blumei* Hassk., Commel. Ind. 41. 1870. *Aneilema hamiltonianum* Wallich ex C.B. Clarke in A. & C. DC., Monogr. Phan. 3: 213. 1881; Hook. *f.*, Fl. Brit. India 6: 380. 1892. *A. terminalis* (Blume) Haines, Bot. Bihar Orissa 1080. 1924 (Repr. ed., 3: 1129. 1961).

Fl. & Fr.: August - October.

Distrib.: Palamau.

Murdannia divergens (C.B. Clarke) Brueck. in Engler & Prantl, Pflanzenfam. ed. 2. 15a: 173. 1930. *Aneilema herbaceum* var. *divergens*

C.B. Clarke in J. Linn. Soc. London (Bot.) 6: 448. 1871. *A. divergens* (C.B. Clarke) C.B. Clarke, Commelyn. Cyrtandr. Bengal. t. 16. 1874; Hook. f., Fl. Brit. India 6: 376. 1892.

Fl. & Fr.: August - October.

Distrib.: North Bihar.

Murdannia edulis (Stokes) Faden in Taxon 29: 77. 1980. *Commelina edulis* Stokes, Bot. Mat. Med. 1: 184. 1812. *Aneilema scapiflorum* Kostel., Allg. Med. - Pharm. Fl. 1: 127. 1831; Hook. f., Fl. Brit. India 6: 375. 1892; Haines, Bot. Bihar Orissa 1079. 1924. (Repr. ed., 3: 1127. 1961).

Fl. & Fr.: March - July.

Distrib.: Chota Nagpur, Purnia, West Champaran.

Murdannia japonica (Thunb.) Faden in Taxon 26: 142. 1977. *Commelina japonica* Thunb. in Trans. Linn. Soc. London 2: 332. 1794. *Aneilema lineolatum* (Blume) Kunth, Enum. Pl. 4: 69. 1843; Hook. f., Fl. Brit. India 6: 376. 1892; Haines, Bot. Bihar Orissa 1079. 1924 (Repr. ed., 3: 1128. 1961).

Fl. & Fr.: August - September.

Distrib.: Hazaribagh, Palamau, Ranchi.

Murdannia nudiflora (L.) Brenan in Kew Bull. 1952: 189. 1952. *Commelina nudiflora* L., Sp. Pl. 41. 1753, p.p. *Aneilema nudiflorum* Wallich ex Hook. f., Fl. Brit. India 6: 378. 1892; Haines, Bot. Bihar Orissa 1080. 1924 (Repr. ed., 3: 1128. 1961).

Fl. & Fr.: August - November.

Distrib.: Throughout the state.

Murdannia spirata (L.) Brückner in Engler & Prantl, Nat. Pflanzenfam. ed. 2. 15a: 173. 1930. *Commelina spirata* L., Mant. Pl. 176. 1771. *Aneilema spiratum* (L.) R. Br., Prodr. 271. 1810; Hook. f., Fl. Brit. India 6: 377. 1892; Haines, Bot. Bihar Orissa 1079. 1924 (Repr. ed., 3: 1128. 1961).

Fl. & Fr.: September - January.

Distrib.: Gaya, Hazaribagh, Palamau, Purnia, Ranchi, West Champaran.

Murdannia vaginata (L.) Brückner in Engler & Prantl, Nat. Pflanzenfam. ed. 2. 15a: 173. 1930. *Commelina vaginata* L., Mant. Pl. 177. 1771. *Aneilema vaginatum* (L.) R. Br., Prodr. 271. 1810; Hook. f., Fl. Brit. India 6: 381. 1892; Haines, Bot. Bihar Orissa 1080. 1924 (Repr. ed., 3: 1129. 1961).

Fl. & Fr.: July - October.

Distrib.: Hazaribagh, Palamau, Purnia, Ranchi.

RHOEO Hance ex Walp.

Rhoeo spathacea (Sw.) W.T. Stearn in Baileya 5: 198. 1957. *Tradescantia spathacea* Sw., Prodr. 57. 1808. *Rhoeo discolor* Hance in Walp., Ann. Bot. Syst. 3: 660. 1852; Haines, Bot. Bihar Orissa 1082. 1924 (Repr. ed., 3: 1131. 1961).

Fl.: Throughout the year.

Distrib.: Cultivated.

TONNINGIA Neck. ex Adr. Juss.

Tonningia axillaris (L.) Kuntze, Revis. Gen. Pl. 2: 721. 1891. *Commelina axillaris* L., Sp. Pl. 42. 1753. *Cyanotis axillaris* (L.) D. Don, Prodr. Fl. Nepal. 46. 1825; Hook. f., Fl. Brit. India 6: 388. 1892; Haines, Bot. Bihar Orissa 1081. 1924 (Repr. ed., 3: 1130. 1961).

Fl. & Fr.: August - January.

Distrib.: Throughout the state.

Tonningia cucullata (Roth) Kuntze, Revis. Gen. Pl. 2: 722. 1891. *Tradescantia cucullata* Roth, Nov. Pl. Sp. 189. 1821. *Cyanotis cucullata* (Roth) Kunth, Enum. Pl. 4: 107. 1843; Hook. f., Fl. Brit. India 6: 389. 1892.

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

ZEBRINA Schnizl.

Zebrina pendula Schnizl. in Bot. Zeit. 7: 870. 1849; Haines, Bot. Bihar Orissa 1082. 1924 (Repr. ed., 3: 1131. 1961).

Fl.: March - April.

Distrib.: Cultivated.

FLAGELLARIACEAE

FLAGELLARIA L.

Flagellaria indica L., Sp. Pl. 333. 1753; Hook. *f.*, Fl. Brit. India 6: 391. 1892; Haines, Bot. Bihar Orissa 1073. 1924 (Repr. ed., 3: 1122. 1961).

Fl. & Fr.: March - October.

Distrib.: Chota Nagpur.

JUNCACEAE

JUNCUS L.

Juncus bufonius L., Sp. Pl. 328. 1753; Hook. *f.*, Fl. Brit. India 6: 392. 1892; Haines, Bot. Bihar Orissa 1083. 1924 (Repr. ed., 3: 1132. 1961).

Fl. & Fr.: November - February.

Distrib.: Palamau.

Juncus prismatocarpus R. Br., Prodr. 259. 1810; Hook. *f.*, Fl. Brit. India 6: 395. 1892; Haines, Bot. Bihar Orissa 1083. 1924 (Repr. ed., 3: 1132. 1961).

Fl. & Fr.: September - November.

Distrib.: Purnia, West Champaran.

ARECACEAE

ARECA L.

Areca catechu L., Sp. Pl. 1189. 1753; Becc. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 6: 405. 1892; Haines, Bot. Bihar Orissa 880. 1924 (Repr. ed., 3: 922. 1961). - *Supari*.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated.

BORASSUS L.

Borassus flabellifer L., Sp. Pl. 1187. 1753; Becc. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 6: 482. 1892; Haines, Bot. Bihar Orissa 885. 1924 (Repr. ed., 3: 927. 1961).

Fl. & Fr.: March - February.

Distrib.: Hazaribagh, Palamau, Ranchi, Sahibganj, West Champaran.

CALAMUS L.

Calamus guruba Buch.-Ham. in Mart., Hist. Nat. Palm. 206, 211, 330. t. 175. f. 1. 1849; Becc. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 6: 449. 1893; Haines, Bot. Bihar Orissa 887. 1924 (Repr. ed., 3: 929. 1961).

Fl. & Fr.: March - December.

Distrib.: Purnia (Haines, *l.c.*).

Calamus latifolius Roxb., Fl. Ind. 3: 775. 1832; Becc. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 6: 455. 1893, *p.p.*; Haines, Bot. Bihar Orissa 886. 1924 (Repr. ed., 3: 928. 1961).

Fl. & Fr.: December - April.

Distrib.: Chota Nagpur.

Calamus tenuis Roxb., Fl. Ind. 3: 780. 1832, "*tenuius*"; Becc. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 6: 447. 1892; Haines, Bot. Bihar Orissa 887. 1924 (Repr. ed., 3: 929. 1961).

Fl. & Fr.: July - December.

Distrib.: Purnia, West Champaran.

Calamus viminalis Willd. var. **fasciculatus** (Roxb.) Becc. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 6: 444. 1892; Haines, Bot. Bihar Orissa 886. 1924 (Repr. ed., 3: 928. 1961). *C. fasciculatus* Roxb., Fl. Ind. 3: 779. 1832.

Fl. & Fr.: September - May.

Distrib.: Purnia, Singhbhum, West Champaran.

CARYOTA L.

Caryota mitis Lour., Fl. Cochinch. 2: 569. 1790; Becc. & Hook. f. in Hook. f., Fl. Brit. India 6: 423. 1892; Haines, Bot. Bihar Orissa 879. 1924 (Repr. ed., 3: 921. 1961).

Fl. & Fr.: March - August.

Distrib.: Purnia.

Caryota urens L., Sp. Pl. 1189. 1753; Becc. & Hook. f. in Hook. f., Fl. Brit. India 6: 422. 1892; Haines, Bot. Bihar Orissa 879. 1924 (Repr. ed., 3: 921. 1961).

Fl. & Fr.: April - August.

Distrib.: West Champaran.

COCOS L.

Cocos nucifera L., Sp. Pl. 1188. 1753; Becc. & Hook. f. in Hook. f., Fl. Brit. India 6: 482. 1893; Haines, Bot. Bihar Orissa 880. 1924 (Repr. ed., 3: 922. 1961). - *Nariyal*.

Fl. & Fr.: Throughout the year.

Distrib.: Cultivated.

CORYPHA L.

Corypha umbraculifera L., Sp. Pl. 1187. 1753; Becc. & Hook. f. in Hook. f., Fl. Brit. India 6: 428. 1892; Haines, Bot. Bihar Orissa 883. 1924 (Repr. ed., 3: 925. 1961).

Distrib.: Cultivated.

DAEMONOROPS Blume

Daemonorops jenkinsianus (Griff.) Mart., Hist. Nat. Palm. 327. 1850; Becc. & Hook. f. in Hook. f., Fl. Brit. India 6: 462. 1893; Haines, Bot. Bihar Orissa 888. 1924 (Repr. ed., 3: 930. 1961). *Calamus jenkinsianus* Griff. in Calcutta J. Nat. Hist. 5: 81. 1850.

Fl. & Fr.: May - January.

Distrib.: North Bihar.

LICUALA Thunb.

Licuala peltata Roxb., Fl. Ind. 2: 179. 1832; Becc. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 6: 430. 1893; Haines, Bot. Bihar Orissa 884. 1924 (Repr. ed., 3: 926. 1961).

Fl. & Fr.: December - May.

Distrib.: Chota Nagpur.

LIVISTONA R. Br.

Livistona chinensis R. Br., Prodr. 268. 1810; Becc. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 6: 434. 1892; Haines, Bot. Bihar Orissa 884. 1924 (Repr. ed., 3: 926. 1961).

Fl. & Fr.: February - June.

Distrib.: Cultivated in gardens.

PHOENIX L.

Phoenix acaulis Roxb. ex Buch.-Ham. in Trans. Linn. Soc. London 15: 87. 1826; Becc. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 6: 426. 1892; Haines, Bot. Bihar Orissa 882. 1924 (Repr. ed., 3: 924. 1961).

Fl. & Fr.: March - June.

Distrib.: Hazaribagh, Palamau, Singhbhum, West Champaran.

Phoenix humilis Royle ex Becc. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 6: 426. 1892; Haines, Bot. Bihar Orissa 882. 1924 (Repr. ed., 3: 924. 1961).
- *Khajur*.

Fl. & Fr.: March - June.

Distrib.: Singhbhum, West Champaran.

Phoenix robusta (Becc.) Becc. & Hook. *f.* in Hook. *f.*, Fl. Brit. India 6: 427. 1892. *P. humilis* var. *robusta* Becc. in Males. 3: 348, 384. 1890; Haines, Bot. Bihar Orissa 882. 1924 (Repr. ed., 3: 924. 1961).

Fl. & Fr.: March - August.

Distrib.: Hazaribagh.

Phoenix sylvestris (L.) Roxb., Fl. Ind. 3: 787. 1832; Becc. & Hook. f. in Hook. f., Fl. Brit. India 6: 425. 1892; Haines, Bot. Bihar Orissa 881. 1924 (Repr. ed., 3: 923. 1961). *Elate sylvestris* L., Sp. Pl. 1189. 1753. *Khajuri*.

Fl. & Fr.: March - June.

Distrib.: Gaya, Hazaribagh, Palamau, Patna, Purnia, West Champaran.

PANDANACEAE

PANDANUS S. Parkinson

Pandanus amaryllifolius Roxb., Fl. Ind. 3: 743. 1832.

Distrib.: Planted in gardens. West Champaran.

Pandanus foetidus Roxb., Fl. Ind. 3: 742. 1832; Hook. f., Fl. Brit. India 6: 483. 1893; Haines, Bot. Bihar Orissa 877. 1924 (Repr. ed., 3: 919. 1961).

Fl. & Fr.: December - June.

Distrib.: Palamau, Purnia, Santal Pargana.

Pandanus odoratissimus L. f., Suppl. Pl. 64. 1782. *P. fascicularis* Lam., Encycl. 1: 372. 1785; Hook. f., Fl. Brit. India 6: 485. 1893. *P. tectorius auct. non* Soland. ex Parkinson, 1773; Haines, Bot. Bihar Orissa 877. 1924 (Repr. ed., 3: 918. 1961).

Fl. & Fr.: August - June.

Distrib.: Cultivated. Ranchi, West Champaran.

CYCLANTHACEAE

CARLUDOVICA

Carludovica palmata Ruiz & Pav., Syst. Veg. Fl. Peruv. Chil. 291. 1798.

Distrib.: Cultivated.

TYPHACEAE

TYPHA L.

Typha angustifolia L., Sp. Pl. 971. 1753. *T. angustata* Bory & Chaub., Exp. Sci. Moree, Bot. 2, 1: 338. 1833; Hook. *f.*, Fl. Brit. India 6: 489. 1893; Haines, Bot. Bihar Orissa 876. 1924 (Repr. ed., 3: 918. 1961). *Hogla, Pater.*

Fl. & Fr.: May - June.

Distrib.: Throughout the state.

Typha elephantina Roxb., Fl. Ind. 3: 366. 1832; Hook. *f.*, Fl. Brit. India 6: 489. 1893; Haines, Bot. Bihar Orissa 875. 1924 (Repr. ed., 3: 917. 1961). - *Hogla.*

Fl. & Fr.: July - September.

Distrib.: Purnia, West Champaran.

ARACEAE

ACORUS L.

Acorus calamus L., Sp. Pl. 324. 1753; Hook. *f.*, Fl. Brit. India 6: 555. 1893.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 5. 1989).

AGLAONEMA Schott

Aglaonema commutatum Schott, Syn. Aroid. 123. 1856; Haines, Bot. Bihar Orissa 860. 1924 (Repr. ed., 3: 901. 1961).

Distrib.: Cultivated in gardens.

Aglaonema costatum N.E. Br. in Gard. Chron. 1: 426. 1892.

Distrib.: Cultivated in gardens.

ALOCASIA (Schott) G. Don, *nom. cons.*

Alocasia acuminata Schott in Bonplandia 7: 28. 1859; Hook. *f.*, Fl. Brit. India 6: 527. 1893.

Fl. & Fr.: July - October.

Distrib.: Santal Pargana.

Alocasia cucullata (Lour.) Schott in Oestr. Bot. Wochenbl. 4: 410. 1854; Hook. *f.*, Fl. Brit. India 6: 525. 1893. *Arum cucullatum* Lour., Fl. Cochinch. 2: 656. 1790.

Fl. & Fr.: July - October.

Distrib.: Santal Pargana.

Alocasia fornicata (Roxb.) Schott in Oestr. Bot. Wochenbl. 4: 410. 1854; Hook. *f.*, Fl. Brit. India 6: 526. 1893; Haines, Bot. Bihar Orissa 870. 1924 (Repr. ed., 3: 912. 1961). *Arum fornicatum* Roxb., Fl. Ind. 3: 501. 1832, *non* Wight, 1844.

Fl. & Fr.: June - September.

Distrib.: Ranchi, Singhbhum.

Alocasia macrorrhiza (L.) G. Don in R. Sweet, Hort. Brit. ed. 3. 631. 1839; Hook. *f.*, Fl. Brit. India 6: 526. 1893. *Arum macrorrhizon* L., Sp. Pl. 965. 1753. *Alocasia indica* Spach, Hist. Nat. Veg. Phan. 12: 47. 1846; Hook. *f.*, Fl. Brit. India 6: 525. 1893; Haines, Bot. Bihar Orissa 870. 1924 (Repr. ed., 3: 912. 1961).

Fl. & Fr.: December - June.

Distrib.: Cultivated. Purnia, West Champaran.

Alocasia montana (Roxb.) Schott in Oestr. Bot. Wochenbl. 4: 410. 1854; Hook. *f.*, Fl. Brit. India 6: 525. 1893; Haines, Bot. Bihar Orissa 869. 1924 (Repr. ed., 3: 911. 1961). *Arum montanum* Roxb., Fl. Ind. 3: 497. 1832.

Fl. & Fr.: August - November.

Distrib.: Singhbhum.

Alocasia odora (Roxb.) Koch & Bouche in Index Sem. Hort. Berol. App. 5. 1855; Haines, Bot. Bihar Orissa 870. 1924 (Repr. ed., 3: 911. 1961). *Arum odorum* Roxb., Fl. Ind. 3: 499. 1832.

Fl. & Fr.: January - June.

Distrib.: Chota Nagpur.

AMORPHOPHALLUS Blume ex Decne., *nom. cons.*

Amorphophallus bulbifer (Roxb.) Blume, Rumphia 1: 148. 1837; Hook. f., Fl. Brit. India 6: 515. 1893; Haines, Bot. Bihar Orissa 862. 1924 (Repr. ed., 3: 903. 1961). *Arum bulbiferum* Roxb., Fl. Ind. 3: 510. 1832.

Fl. & Fr.: June - August.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum.

Amorphophallus paeonifolius (Dennst.) Nicolson var. **campanulatus** (Decne.) Sivadasan in Taxon 32: 130. 1983. *Arum campanulatum* Decne. in Novu. Ann. Mus. Hist. Paris 3: 366. 1834. *Amorphophallus campanulatus auct. non* Blume ex Decne., 1834: Hook. f., Fl. Brit. India 6: 513. 1893; Haines, Bot. Bihar Orissa 861. 1924 (Repr. ed., 3: 903. 1961).

Fl. & Fr.: April - November.

Distrib.: Ranchi, West Champaran.

ARISAEMA Mart.

Arisaema tortuosum (Wallich) Schott in Schott & Endl., Melet. Bot. 17. 1832; Hook. f., Fl. Brit. India 6: 502. 1893; Haines, Bot. Bihar Orissa 863. 1924 (Repr. ed., 3: 905. 1961). *Arum tortuosum* Wallich, Pl. Asiat. Rar. 2: 10. t. 114. 1830.

Fl. & Fr.: May - November.

Distrib.: Hazaribagh, Palamau, Ranchi, West Champaran.

CALADIUM Vent.

Caladium bicolor Vent., Jard. Cels. t. 30. 1800.

Distrib.: Cultivated in gardens.

COLOCASIA Schott, *nom. cons.*

Colocasia esculenta (L.) Schott in Schott & Endl., Melet. Bot. 18. 1832. *Arum esculentum* L., Sp. Pl. 965. 1753. *Colocasia antiquorum* Schott in Schott & Endl., Melet. Bot. 18. 1832; Hook. f., Fl. Brit. India 6: 523. 1893; Haines, Bot. Bihar Orissa 866. 1924 (Repr. ed., 3: 908. 1961).

var. **esculenta**

Fl. & Fr.: August - December.

Distrib.: Palamau, Ranchi, West Champaran.

var. **rupicola** (Haines) H.B. Naithani, Fl. Pl. India, Nepal & Bhutan 454. 1990. *Colocasia antiquorum* Schott var. *rupicola* Haines, Bot. Bihar Orissa 867. 1924 (Repr. ed., 3: 909. 1961).

Fl.: October.

Distrib.: Ranchi, Singhbhum (Haines, *l.c.*).

var. **stolonifera** (Haines) H.B. Naithani, Fl. Pl. India, Nepal & Bhutan 454. 1990. *Colocasia antiquorum* Schott var. *stolonifera* Haines, Bot. Bihar Orissa 867. 1924 (Repr. ed., 3: 909. 1961).

Fl.: October.

Distrib.: Chota Nagpur.

Colocasia fallax Schott in Bonplandia 7: 28. 1859; Hook. f., Fl. Brit. India 6: 524. 1893; Haines, Bot. Bihar Orissa 868. 1924 (Repr. ed., 3: 909. 1961).

Fl. & Fr.: August - November.

Distrib.: Palamau, Ranchi, Singhbhum.

CRYPTOCORYNE Fisch. ex Wydl.

Cryptocoryne retrospiralls (Roxb.) Wydl. in Linnæa 5: 428. 1830; Hook. f., Fl. Brit. India 6: 493. 1893; Haines, Bot. Bihar Orissa 871. 1924 (Repr. ed., 3: 913. 1961). *Ambrosinia retrospirale* Roxb., Fl. Ind. 3: 492. 1832.

Fl. & Fr.: October - January.

Distrib.: Chota Nagpur (Haines, *l.c.*).

Cryptocoryne spiralis (Retz.) Fisch. ex Wydl. in *Linnaea* 5: 428. 1830; Hook. *f.*, *Fl. Brit. India* 6: 494. 1893; Haines, *Bot. Bihar Orissa* 872. 1924 (Repr. ed., 3: 913. 1961). *Arum spirale* Retz., *Observ. Bot.* 1: 30. 1779.

Fl. & Fr.: October - January.

Distrib.: Palamau.

DIEFFENBACHIA Schott

Dieffenbachia picta Schott in *Oestr. Bot. Wochenbl.* 2: 68. 1852.

Distrib.: Cultivated in gardens.

Dieffenbachia seguine Schott in Schott & Endl., *Melet. Bot.* 1: 20. 1832.

Distrib.: Cultivated in gardens.

LASIA Lour.

Lasia spinosa (L.) Thwaites, *Enum. Pl. Zeyl.* 336. 1864; Haines, *Bot. Bihar Orissa* 859. 1924 (Repr. ed., 3: 901. 1961). *Dracontium spinosum* L., *Sp. Pl.* 967. 1753. *Lasia heterophylla* Schott in Schott & Endl., *Melet. Bot.* 21. 1832; Hook. *f.*, *Fl. Brit. India* 6: 550. 1893.

Fl. & Fr.: November - February.

Distrib.: Santal Pargana, Singhbhum, West Champaran.

MONSTERA Adans., *nom. cons.*

Monstera deliciosa Liebm. in Kjoeb. *Vidensk. Meddel.* 19. 1849.

Distrib.: Cultivated in gardens.

PISTIA L.

Pistia stratiotes L., *Sp. Pl.* 963. 1753; Hook. *f.*, *Fl. Brit. India* 6: 497. 1893; Haines, *Bot. Bihar Orissa* 873. 1924 (Repr. ed., 3: 915. 1961).

Fl. & Fr.: May - December.

Distrib.: Throughout the state.

PLESMONIUM Schott

Plesmonium margaritiferum (Roxb.) Schott, Syn. Aroid. 34. 1856; Hook. *f.*, Fl. Brit. India 6: 518. 1893; Haines, Bot. Bihar Orissa 861. 1924 (Repr. ed., 3: 902. 1961). *Arum margaritifer* Roxb., Fl. Ind. 3: 512. 1832.

Fl. & Fr.: May - October.

Distrib.: Hazaribagh, Palamau, Purnia, Ranchi, Singhbhum.

POTHOS L.

Pothos cathartii Schott, Syn. Aroid. 22. tt. 44-45. 1853; Hook. *f.*, Fl. Brit. India 6: 552. 1893; Haines, Bot. Bihar Orissa 858. 1924 (Repr. ed., 3: 899. 1961).

Fl.: November - December.

Distrib.: Purnia.

Pothos scandens L., Sp. Pl. 968. 1753; Hook. *f.*, Fl. Brit. India 6: 551. 1893, *p.p.*; Haines, Bot. Bihar Orissa 857. 1924 (Repr. ed., 3: 899. 1961).

Fl.: March - April.

Distrib.: West Champaran.

REMUSATIA Schott

Remusatia vivipara (Roxb.) Schott in Schott & Endl., Melet. Bot. 18 1832; Hook. *f.*, Fl. Brit. India 6: 521. 1893; Haines, Bot. Bihar Orissa 865. 1924 (Repr. ed., 3: 907. 1961). *Arum viviparum* Roxb., Fl. Ind. 3: 496. 1832, '*viviparium*'.

Fl. & Fr.: April - September.

Distrib.: Hazaribagh, Palamau, Purnia, Ranchi, Singhbhum, West Champaran.

RHAPHIDOPHORA Hassk.

Rhaphidophora aurea (Linden ex Andre) Furtado in Gard. Bull. Sing. 20: 379. 1964. *Pothos aurea* Linden ex Andre in Ill. Hort. 27: 69. t. 381. 1880.

Distrib.: Cultivated.

Rhaphidophora decursiva (Roxb.) Schott in Bonplandia 5: 45. 1857; Hook. *f.*, Fl. Brit. India 6: 547. 1893; Haines, Bot. Bihar Orissa 858. 1924 (Repr. ed., 3: 900. 1961). *Pothos decursiva* Roxb., Fl. Ind. 1: 456. 1832.

Fl. & Fr.: August - November.

Distrib.: Singhbhum.

SAUROMATUM Schott

Sauromatum venosum (Aiton) Kunth, Enum. Pl. 3: 28. 1841. *Arum venosum* Aiton, Hortus Kew. ed. 1. 3: 315. 1789. *Sauromatum guttatum* (Wallich) Schott in Schott & Endl., Melet. Bot. 17. 1832; Hook. *f.*, Fl. Brit. India 6: 508. 1893; Haines, Bot. Bihar Orissa 862. 1924 (Repr. ed., 3: 904. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Palamau.

SCINDAPSUS Schott

Scindapsus officinalis (Roxb.) Schott in Schott & Endl., Melet. Bot. 21. 1832; Hook. *f.*, Fl. Brit. India 6: 541. 1893; Haines, Bot. Bihar Orissa 859. 1924 (Repr. ed., 3: 900. 1961). *Pothos officinalis* Roxb., Fl. Ind. 1: 431. 1832. - *Gaj-pipal*.

Fl. & Fr.: July - October.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

STEUDNERA Koch

Stuednera colocasioides Hook. *f.*, Fl. Brit. India 6: 520. 1893.

Fl.: April.

Distrib.: Chota Nagpur.

THERIOPHONUM Blume

Therriophonum minutum (Willd.) Baill., Hist. Pl. 13: 457. 1895; Haines, Bot. Bihar Orissa 864. 1924 (Repr. ed., 3: 906. 1961). *Arum minutum* Willd., Sp. Pl. 4: 484. 1805, *excl.* Rheede, Illustr. cited. *A. crenatum* Wight in Hook., J. Bot. Misc. 2: 100 (Suppl.) t. 3. 1831.

Theriophonum crenatum (Wight) Blume, Rumphia 1: 128. 1837; Hook. f., Fl. Brit. India 6: 512. 1893.

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

TYPHONIUM Schott

Typhonium trilobatum (L.) Schott in Wien. Zeitschr. 3: 72. 1829; Hook. f., Fl. Brit. India 6: 509. 1893; Haines, Bot. Bihar Orissa 865. 1924 (Repr. ed., 3: 906. 1961). *Arum trilobatum* L., Sp. Pl. 965. 1753.

Fl. & Fr.: April - September.

Distrib.: Hazaribagh, Singhbhum, West Champaran.

LEMNACEAE

LEMNA L.

Lemna gibba L., Sp. Pl. 970. 1753; Hook. f., Fl. Brit. India 6: 556. 1893; Haines, Bot. Bihar Orissa 874. 1924 (Repr. ed., 3: 916. 1961).

Fl. & Fr.: April - October.

Distrib.: Throughout the state.

Lemna minor L., Sp. Pl. 970. 1753; Hook. f., Fl. Brit. India 6: 556. 1893, p.p.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 87. 1989).

Lemna perpusilla Torr., Fl. New York 2: 245. 1843. *L. paucicostata* Engelm. in Gray, Manual ed. 5. 681. 1867; Hook. f., Fl. Brit. India 6: 556. 1893; Haines, Bot. Bihar Orissa 874. 1924 (Repr. ed., 3: 916. 1961).

Fl. & Fr.: May - November.

Distrib.: Sahibganj, Santal Pargana, West Champaran.

Lemna trisulca L., Sp. Pl. 970. 1753; Hook. f., Fl. Brit. India 6: 557. 1893; Haines, Bot. Bihar Orissa 874. 1924 (Repr. ed., 3: 916. 1961).

Distrib.: Throughout the plains of India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 87. 1989).

SPIRODELA Schleid.

Spirodela polyrhiza (L.) Schleid. in *Linnaea* 13: 392. 1839. *Lemna polyrhiza* L., *Sp. Pl.* 970. 1753; Hook. *f.*, *Fl. Brit. India* 6: 557. 1893; Haines, *Bot. Bihar Orissa* 874. 1924 (Repr. ed., 3: 916. 1961).

Fl. & Fr.: February - April.

Distrib.: Muzaffarpur, Patna, West Champaran.

Spirodela punctata (E. Mey.) Thompson in *Rep. Missouri Bot. Gard.* 9: 28. 1897. *Lemna punctata* E. Mey., *Prim. Fl. Esseq.* 262. 1818. *L. oligorrhiza* Kurz in *J. Linn. Soc. London (Bot.)* 9: 267. t. 5. f. 1-6. 1866; Hook. *f.*, *Fl. Brit. India* 6: 557. 1893; Haines, *Bot. Bihar Orissa* 874. 1924 (Repr. ed., 3: 916. 1961).

Distrib.: North Bihar (plains).

WOLFFIA Horkel ex Schleid., *nom. cons.*

Wolffia arrhiza (L.) Horkel ex Wimm., *Fl. Schles.* ed. 3. 140. 1857; Hook. *f.*, *Fl. Brit. India* 6: 557. 1893, *p.p.*; Haines, *Bot. Bihar Orissa* 875. 1924 (Repr. ed., 3: 917. 1961). *Lemna arrhiza* L., *Mant. Pl.* 294. 1771.

Fl. & Fr.: July - November.

Distrib.: Throughout the state.

Wolffia globosa (Roxb.) Hartog & Plas in *Blumea* 18: 367. 1970. *Lemna globosa* Roxb., *Fl. Ind.* 3: 565. 1832. *Wolffia arrhiza auct. non* (L.) Horkel ex Wimm., 1857; Hook. *f.*, *Fl. Brit. India* 6: 557. 1893, *p.p.*

Fl. & Fr.: October - February.

Distrib.: Throughout the state.

ALISMATACEAE**ALISMA** L.

Alisma plantago-aquatica L., *Sp. Pl.* 342. 1753. *A. plantago* L., *Sp. Pl.* 342. 1753; Hook. *f.*, *Fl. Brit. India* 6: 559. 1893; Haines, *Bot. Bihar Orissa* 843. 1924 (Repr. ed., 3: 884. 1961).

Fl. & Fr.: November - February.

Distrib.: East Champaran, Purnia, West Champaran.

CALDESIA Parl.

Caldesia oligococca (F.v. Muell.) Buch. in Engler, Bot. Jahrb. 2: 459. 1882. *Alisma oligococcum* F.v. Muell., Fragm. Phyt. Austral. 1: 23. 1858; Hook. f., Fl. Brit. India 6: 560. 1893; Haines, Bot. Bihar Orissa 844. 1924 (Repr. ed., 3: 885. 1961).

Fl. & Fr.: September - December.

Distrib.: Santal Pargana.

Caldesia parnassifolia (Bassi ex L.) Parl., Fl. Ital. 3: 599. 1858. *Alisma parnassifolia* Bassi ex L., Syst. Nat. ed. 12 (Append.): 230. 1768. *A. reniforme auct. non* D. Don, 1825; Hook. f., Fl. Brit. India 6: 560. 1893, p.p.

Fl. & Fr.: February - April.

Distrib.: West Champaran.

Caldesia reniformis (D. Don) Makino in Bot. Mag. Tokyo 20: 34. 1906. *Alisma reniforme* D. Don, Prodr. Fl. Nepal. 22. 1825; Hook. f., Fl. Brit. India 6: 560. 1893, p.p.; Haines, Bot. Bihar Orissa 843. 1924 (Repr. ed., 3: 884. 1961).

Fl. & Fr.: February - April.

Distrib.: Purnia, West Champaran.

LIMNOPHYTON Miq.

Limnophyton obtusifolium (L.) Miq., Fl. Ind. Bat. 3: 242. 1856; Hook. f., Fl. Brit. India 6: 560. 1893; Haines, Bot. Bihar Orissa 844. 1924 (Repr. ed., 3: 885. 1961). *Sagittaria obtusifolia* L., Sp. Pl. 993. 1753.

Fl. & Fr.: February - March.

Distrib.: Santal Pargana.

SAGITTARIA L.

Sagittaria guayanensis H.B.K. subsp. **lappula** (D. Don) Bogin in Mem. N. Y. Bot. Gard. 9: 192. f. 5. 1955. *S. lappula* D. Don, Prodr. Fl. Nepal. 22. 1825. *S. guayanensis auct. non* H.B.K., 1850: Hook. *f.*, Fl. Brit. India 6: 561. 1893; Haines, Bot. Bihar Orissa 845. 1924 (Repr. ed., 3: 886. 1961).

Fl. & Fr.: July - October.

Distrib.: Hazaribagh, Purnia, Ranchi, West Champaran.

Sagittaria trifolia L., Sp. Pl. 993. 1753. *S. sagittifolia* L., Sp. Pl. 993. 1753; Hook. *f.*, Fl. Brit. India 6: 561. 1893; Haines, Bot. Bihar Orissa 844. 1924 (Repr. ed. 3: 886. 1961).

Fl. & Fr.: October - April.

Distrib.: Munger, Palamau, Purnia.

LIMNOCHARITACEAE**BUTOMOPSIS Kunth**

Butomopsis latifolia (D. Don) Kunth, Enum. Pl. 3: 165. 1841. *Butomus latifolius* D. Don, Prodr. Fl. Nepal. 22. 1825. *Butomopsis lanceolata* (Roxb.) Kunth, Enum. Pl. 3: 165. 1841; Hook. *f.*, Fl. Brit. India 6: 562. 1893; Haines, Bot. Bihar Orissa 845. 1924 (Repr. ed., 3: 886. 1961).

Fl. & Fr.: September - January.

Distrib.: Darbhanga, Hazaribagh, Purnia, Ranchi, Singhbhum.

NAJADACEAE**NAJAS L.**

Najas foveolata A. Br. ex Magnus, Beitr. Najas 7. 1870; Haines, Bot. Bihar Orissa 851. 1924 (Repr. ed., 3: 892. 1961).

Fl. & Fr.: February - April.

Distrib.: Chota Nagpur.

Najas graminea Del., Descr. Egypt. Hist. Nat. 2: 282. t. 50. f. 3. 1813; Hook. *f.*, Fl. Brit. India 6: 569. 1893; Haines, Bot. Bihar Orissa 851. 1924 (Repr. ed., 3: 893. 1961).

Fl. & Fr.: August - October.

Distrib.: Palamau, Ranchi.

Najas indica (Willd.) Cham. in Linnaea 4: 501. 1829; Haines, Bot. Bihar Orissa 850. 1924 (Repr. ed., 3: 892. 1961). *Cauline indica* Willd. in Mem. Ac. R. Sci. Berl. 89. f. 3. 1801. *N. minor auct. non All.*, 1785; Hook. *f.*, Fl. Brit. India 6: 569. 1893, *pro majore parte*.

Fl. & Fr.: August - September.

Distrib.: Chota Nagpur.

Najas kurziana Rendle in Trans. Linn. Soc. London 2, Bot. 5: 413. t. 41. f. 116-121. 1899; Haines, Bot. Bihar Orissa 851. 1924 (Repr. ed., 3: 892. 1961).

Fl.: September.

Distrib.: Purnia (Haines, *l.c.*).

Najas marina L., Sp. Pl. 1015. 1753. *N. major* All., Fl. Pedem. 2: 221. 1785; Hook. *f.*, Fl. Brit. India 6: 569. 1893; Haines, Bot. Bihar Orissa 850. 1924 (Repr. ed., 3: 892. 1961).

Fl. & Fr.: March - May.

Distrib.: West Champaran.

Najas minor All., Auct. Syn. Meth. Stirp. Hort. Taurin. 3. 1773; Hook. *f.*, Fl. Brit. India 6: 569. 1893, *p.p.*; Haines, Bot. Bihar Orissa 851. 1924 (Repr. ed., 3: 892. 1961).

Fl. & Fr.: October - February.

Distrib.: Muzaffarpur.

APONOGETONACEAE

APONOGETON L. *f.*

Aponogeton crispus Thunb., Nov. Gen. 4: 73. 1784; Hook. *f.*, Fl. Brit. India 6: 564. 1893, *p.p.*; Haines, Bot. Bihar Orissa 847. 1924 (Repr. ed., 3: 888. 1961), *p.p.*

Fl. & Fr.: August - November.

Distrib.: Patna.

Aponogeton natans (L.) Engler & Krause, *Pflanzenr.* 24: 11. 1906. *Saururus natans* L., *Mant. Pl.* 227. 1771. *Aponogeton monostachyon* L. f., *Suppl. Pl.* 214. 1782; *Hook. f.*, *Fl. Brit. India* 6: 564. 1893; Haines, *Bot. Bihar Orissa* 846. 1924 (Repr. ed., 3: 887. 1961).

Fl. & Fr.: August - February.

Distrib.: Muzaffarpur, West Champaran.

Aponogeton undulatus Roxb., *Fl. Ind.* 2: 211. 1832. *A. crispus auct. non* Thunb., 1784; *Hook. f.*, *Fl. Brit. India* 6: 564. 1893, *p.p.*; Haines, *Bot. Bihar Orissa* 847. 1924 (Repr. ed., 3: 888. 1961), *p.p.*

Distrib.: Throughout N. India (Karthikeyan *et al.*, *Fl. Ind. Enum. Monocot.* 5. 1989).

POTAMOGETONACEAE

POTAMOGETON L.

Potamogeton crispus L., *Sp. Pl.* 126. 1753; *Hook. f.*, *Fl. Brit. India* 6: 566. 1893; Haines, *Bot. Bihar Orissa* 848. 1924 (Repr. ed., 3: 889. 1961).

Fl. & Fr.: November - April.

Distrib.: Palamau, Patna.

Potamogeton malaianus Miq., *Fl. Arch. Ind.* 46. 1871. *P. mucronatus* K.B. Presl, *Epimel. Bot.* 245. 1895; *Hook. f.*, *Fl. Brit. India* 6: 567. 1893; Haines, *Bot. Bihar Orissa* 848. 1924 (Repr. ed., 3: 889. 1961).

Fl. & Fr.: November - December.

Distrib.: Singhbhum.

Potamogeton natans L., *Sp. Pl.* 126. 1753; *Hook. f.*, *Fl. Brit. India* 6: 565. 1893.

Distrib.: North Bihar.

Potamogeton nodosus Poir. in *Lam., Encycl. Suppl.* 4: 535. 1816. *P. indicus auct. non* Roxb., 1832; *Hook. f.*, *Fl. Brit. India* 6: 565. 1893; Haines, *Bot. Bihar Orissa* 847. 1924 (Repr. ed., 3: 888. 1961).

Fl. & Fr.: August - May.

Distrib.: Muzaffarpur, Palamau, West Champaran.

Potamogeton octandrus Poir. in Lam., Encycl. Suppl. 4: 517. 1816. *P. javanicus* Hassk. in Act. Soc. Sci. Ind. Neerl. Ind. 1: 26. 1856; Hook. *f.*, Fl. Brit. India 6: 566. 1893; Haines, Bot. Bihar Orissa 848. 1924 (Repr. ed., 3: 889. 1961).

Fl. & Fr.: December - March.

Distrib.: Chota Nagpur.

Potamogeton pectinatus L., Sp. Pl. 127. 1753; Hook. *f.*, Fl. Brit. India 6: 567. 1893; Haines, Bot. Bihar Orissa 848. 1924 (Repr. ed., 3: 890. 1961).

Fl. & Fr.: November - February.

Distrib.: East Champaran, Muzaffarpur, Patna, West Champaran.

Potamogeton pusillus L., Sp. Pl. 127. 1753; Hook. *f.*, Fl. Brit. India 6: 567. 1893; Haines, Bot. Bihar Orissa 849. 1924 (Repr. ed., 3: 890. 1961).

Distrib.: Patna (Haines, *l.c.*)

RUPPIACEAE

RUPPIA L.

Ruppia maritima L., Sp. Pl. 127. 1753. *R. rostellata* Koch in Reichb., Ic. Pl. Crit. 2: 66. t. 174. 1824; Hook. *f.*, Fl. Brit. India 6: 568. 1893; Haines, Bot. Bihar Orissa 849. 1924 (Repr. ed., 3: 890. 1961).

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 285. 1989).

ZANNICHELLIACEAE

ZANNICHELLIA L.

Zannichellia palustris L., Sp. Pl. 969. 1753; Haines, Bot. Bihar Orissa 850. 1924 (Repr. ed., 3: 891. 1961). *Z. palustris* L. subsp. *pedicellata* Hook. *f.*, Fl. Brit. India 6: 568. 1892.

Fl.: December.

Distrib.: Bihar (Hook. *f.*, *l.c.*).

ERIOCAULACEAE

ERIOCAULON L.

Eriocaulon achiton Koern. in *Linnaea* 27: 630. 1856; Hook. *f.*, *Fl. Brit. India* 6: 584. 1893; Haines, *Bot. Bihar Orissa* 1070. 1924 (Repr. ed., 3: 1119. 1961).

Fl. & Fr.: November - December.

Distrib.: Singhbhum.

Eriocaulon cinereum R. Br., *Prodr.* 254. 1810. *E. sieboldianum* Siebold & Zucc. *ex Steud.*, *Syn. Pl. Glumac.* 2: 272. 1855; Hook. *f.*, *Fl. Brit. India* 6: 577. 1893; Haines, *Bot. Bihar Orissa* 1068. 1924 (Repr. ed., 3: 1116. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Palamau, Purnia, Singhbhum.

Eriocaulon dalzellii Koern. in *Linnaea* 27: 605. 1856; Hook. *f.*, *Fl. Brit. India* 6: 580. 1893. *E. rivulare* Dalzell in Hook., *J. Bot. Kew Gard. Misc.* 3: 280. 1851, *non* G. Don *ex Benth.*, 1849; Haines, *Bot. Bihar Orissa* 1067. 1924 (Repr. ed., 3: 115. 1961).

Fl. & Fr.: October - April.

Distrib.: Singhbhum.

Eriocaulon edwardii Fyson in *J. Ind. Bot.* 2: 313. 1921; Haines, *Bot. Bihar Orissa* 1071. 1924 (Repr. ed., 3: 119. 1961).

Fl. & Fr.: September - November.

Distrib.: Ranchi.

Eriocaulon heterolepis Steud., *Syn. Pl. Glumac.* 2: 271. 1855; Hook. *f.*, *Fl. Brit. India* 6: 585. 1893.

Fl. & Fr.: October - February.

Distrib.: Ranchi.

Eriocaulon leucomelas Steud., Nom. Bot. 585. 1840. *E. melalencum* Mart. in Wallich, Pl. Asiat. Rar. 3: 29. 1832, *non* Bong. 1831; Hook. f., Fl. Brit. India 6: 574. 1893.

Distrib.: Bihar (Naithani, Fl. Pl. India, Nepal & Bhutan 460. 1990).

Eriocaulon nepalense Prescott ex Bong. in Act. Acad. Petrop. ser. 6, 1: 610. 1831; Hook. f., Fl. Brit. India 6: 581. 1893.

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur.

Eriocaulon odoratum Dalzell in Hook., J. Bot. Kew Gard. Misc. 3: 280. 1851; Hook. f., Fl. Brit. India 6: 574. 1893.

Fl. & Fr.: July - December.

Distrib.: Palamau.

Eriocaulon oryzetorum Mart. in Wallich, Pl. Asiat. Rar. 3: 28. 1832; Hook. f., Fl. Brit. India 6: 579. 1893, *p.p. excl. syn. E. hamiltonianum* Mart.; Haines, Bot. Bihar Orissa 1069. 1924 (Repr. ed., 3: 1117. 1961).

Fl. & Fr.: October - November.

Distrib.: Chota Nagpur.

Eriocaulon quinquangulare L., Sp. Pl. 87. 1753; Hook. f., Fl. Brit. India 6: 582. 1893, *excl. syn. E. martianum* Wallich ex Koern.; Haines, Bot. Bihar Orissa 1068. 1924 (Repr. ed., 3: 1116. 1961).

Fl. & Fr.: October - February.

Distrib.: Throughout the state.

Eriocaulon ritchieanum Ruhland in Engler, Pflanzenr. 13. IV. 30: 73. 1903.

Fl. & Fr.: September - November.

Distrib.: Chota Nagpur.

Eriocaulon robusto-brownianum Ruhland in Engler, Pflanzenr. 13. IV. 30: 77. 1903.

Distrib.: Bihar (Naithani, Fl. Pl. India, Nepal & Bhutan 461. 1990).

Eriocaulon setaceum L., Sp. Pl. 87. 1753; Hook. *f.*, Fl. Brit. India 6: 572. 1893; Haines, Bot. Bihar Orissa 1067. 1924 (Repr. ed., 3: 1115. 1961).

Fl. & Fr.: August - September.

Distrib.: West Champaran.

Eriocaulon trilobum Buch.-Ham. ex Koern. in Linnaea 27: 645. 1856; Hook. *f.*, Fl. Brit. India 6: 583. 1893; Haines, Bot. Bihar Orissa 1068. 1924 (Repr. ed., 3: 1116. 1961).

Fl. & Fr.: October - April.

Distrib.: Champaran, Hazaribagh.

Eriocaulon truncatum Buch.-Ham. ex Mart. in Wallich, Pl. Asiat. Rar. 3: 29. 1832; Hook. *f.*, Fl. Brit. India 6: 578. 1893; Haines, Bot. Bihar Orissa 1070. 1924 (Repr. ed., 3: 1118. 1961).

Fl. & Fr.: September - November.

Distrib.: Munger.

Eriocaulon xeranthemum Mart. in Wallich, Pl. Asiat. Rar. 3: 29. 1832; Hook. *f.*, Fl. Brit. India 6: 584. 1893; Haines, Bot. Bihar Orissa 1070. 1924 (Repr. ed., 3: 1118. 1961).

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

CYPERACEAE

ANOSPORUM Nees

Anosporum cephalotes (Vahl) Kurz in J. Asiat. Soc. Bengal 65: 159. 1876. *Cyperus cephalotes* Vahl, Enum. Pl. 2: 311. 1805; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 597. 1893; Haines, Bot. Bihar Orissa 892. 1924 (Repr. ed., 3: 935. 1961).

Fl. & Fr.: August - March.

Distrib.: Purnia, West Champaran.

BULBOSTYLIS Kunth

Bulbostylis barbata (Rottb.) C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 651. 1893; Haines, Bot. Bihar Orissa 923. 1924 (Repr. ed., 3: 967. 1961). *Scirpus barbatus* Rottb., Descr. Pl. Rar. 27. 1772 & Descr. Icon. Rar. Pl. 52. t. 17. f. 4. 1773.

Fl. & Fr.: July - December.

Distrib.: Gaya, Hazaribagh, Koderma, Palamau, Patna, Purnia, Ranchi, Singhbhum.

Bulbostylis densa (Wallich) Hand.-Mazz. in G. Karst. & Schenk, Vegetationsb. 20. 7: 16. 1930. *Scirpus densus* Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 231. 1820. *Bulbostylis capillaris* Kunth var. *trifida* (Nees) C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 652. 1893. *B. capillaris auct. non* Kunth, 1837; Haines, Bot. Bihar Orissa 924. 1924 (Repr. ed., 3: 967. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Saran, West Champaran.

Bulbostylis subspinescens C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 652. 1893; Haines, Bot. Bihar Orissa 924. 1924 (Repr. ed., 3: 967. 1961).

Distrib.: Singhbhum.

CAREX L.

Carex caricina (D. Don) Ghildyal & Bhattacharyya in J. Econ. Tax. Bot. 7: 602. 1985. *Cyperus caricinus* D. Don, Prodr. Fl. Nepal. 39. 1825.

var. **caricina**

Fl. & Fr.: August - February.

Distrib.: Hazaribagh, Palamau.

Carex cruciata Wahlenb. in Vet. Akad. Handl. Stockh. 24: 149. 1803; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 715. 1894; Haines, Bot. Bihar Orissa 934. 1924 (Repr. ed., 3: 978. 1961).

var. cruciata*Fl. & Fr.*: September - January.*Distrib.*: Hazaribagh, Palamau.**var. nagporensis** C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 716. 1894.*Fl. & Fr.*: September - October.*Distrib.*: Hazaribagh, Singhbhum.**Carex dimorpholepis** Steud., Syn. Pl. Glumac. 1: 214. 1855. *C. cernua* Boott, Illustr. 4: 171. t. 578. 1867; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 708. 1894.*Fl. & Fr.*: March - April.*Distrib.*: Purnia.**Carex myosurus** Nees in Wight, Contr. Bot. India 122. 1834; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 723. 1894.**var. myosurus***Distrib.*: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 39. 1989).**Carex oligostachya** Nees *ex* Hook. in Kew J. Bot. 6: 29. 1854. *C. rhizomatosa* Steud. in Zoll., Verz. Ind. Archip. 2: 60. 1855; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 721. 1894; Haines, Bot. Bihar Orissa 936. 1924 (Repr. ed., 3: 980. 1961).*Fl. & Fr.*: May - June.*Distrib.*: Palamau, Ranchi.**Carex phacota** Spreng., Syst. Veg. 3: 826. 1826; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 708. 1894; Haines, Bot. Bihar Orissa 937. 1924 (Repr. ed., 3: 981. 1961).*Fl. & Fr.*: March - June.*Distrib.*: Singhbhum.

Carex plebeia C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 718. 1894. *C. cruciata* Wahlenb. var. *plebeia* (C.B. Clarke) Haines, Bot. Bihar Orissa 935. 1924 (Repr. ed., 3: 979. 1961).

Fl. & Fr.: September - November.

Distrib.: Singhbhum.

Carex speciosa Kunth, Enum. Pl. 2: 504. 1837; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 729. 1894; Haines, Bot. Bihar Orissa 936. 1924 (Repr. ed., 3: 980. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Sahibganj.

Carex stramentitia Bortt ex Boeck. in Linnaea 40: 351. 1876; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 717. 1894; Haines, Bot. Bihar Orissa 935. 1924 (Repr. ed., 3: 979. 1961).

Fl. & Fr.: March - April.

Distrib.: Hazaribagh, West Champaran.

Carex wallichiana Spreng., Syst. Veg. 3: 812. 1826; Haines, Bot. Bihar Orissa 936. 1924 (Repr. ed., 3: 980. 1961).

Fl. & Fr.: February - April.

Distrib.: West Champaran.

CYPERUS L.

Cyperus alopecuroides Rottb., Descr. Pl. Rar. Progr. 20. 1772. *Juncellus alopecuroides* (Rottb.) C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 595. 1893.

Fl. & Fr.: November - January.

Distrib.: Palamau, West Champaran.

Cyperus alulatus Kern in Reinwardtia 1: 463-466. f. 1. 1952. *C. iria* auct. non L., 1753; C.B. Clarke in Ill. Cyper. t. 14. 1909.

Fl. & Fr.: August - December.

Distrib.: Singhbhum.

Cyperus amabilis Vahl, Enum. Pl. 2: 318. 1806; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 598. 1893; Haines, Bot. Bihar Orissa 894. 1924 (Repr. ed., 3: 937. 1961).

Fl. & Fr.: April - December.

Distrib.: Giridih, Hazaribagh, Koderma, Lohardaga.

Cyperus arenarius Retz., Observ. Bot. 4: 9. 1786; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 602. 1893; Haines, Bot. Bihar Orissa 897. 1924 (Repr. ed., 3: 939. 1961).

Fl. & Fr.: September - October.

Distrib.: Singhbhum.

Cyperus articulatus L., Sp. Pl. 44. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 611. 1893; Haines, Bot. Bihar Orissa 900. 1924 (Repr. ed., 3: 943. 1961).

Fl. & Fr.: September - February.

Distrib.: West Champaran.

Cyperus babakan Steud., Syn. Pl. Glumac. 2: 6. 1854, '*babakensis*'; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 610. 1893; Haines, Bot. Bihar Orissa 901. 1924 (Repr. ed., 3: 944. 1961).

Fl. & Fr.: September - October.

Distrib.: Bhagalpur.

Cyperus bifax C.B. Clarke in Bull. Misc. Inform. Kew 1908: 13. 1908.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 43. 1989).

Cyperus bulbosus Vahl, Enum. Pl. 2: 342. 1806; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 611. 1893.

Distrib.: Throughout the plains of India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 44. 1989).

Cyperus castaneus Willd., Sp. Pl. 1: 278. 1797; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 598. 1893; Haines, Bot. Bihar Orissa 894. 1924 (Repr. ed., 3: 937. 1961).

Fl. & Fr.: September - December.

Distrib.: Giridih, Hazaribagh, Singhbhum.

Cyperus compressus L., Sp. Pl. 46. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 605. 1893; Haines, Bot. Bihar Orissa 896. 1924 (Repr. ed., 3: 938. 1961).

Fl. & Fr.: July - December.

Distrib.: Champaran, Gaya, Hazaribagh, Koderma, Palamau.

Cyperus corymbosus Rottb., Descr. Icon. Rar. Pl. 42. t. 7. f. 4. 1773; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 612. 1893; Haines, Bot. Bihar Orissa 900. 1924 (Repr. ed., 3: 942. 1961).

var. **corymbosus**

Fl. & Fr.: October - November.

Distrib.: Champaran, Hazaribagh, Munger, Singhbhum.

var. **longispiculatus** (Kuntze) Kuekenh. in Engler, Pflanzenr. 101: 82. 1935. *C. enodis* var. *longispiculatus* Kuntze, Revis. Gen. Pl. 2: 749. 1891. *C. tegetiformis* Roxb. ex Arnott in Wight, Contrib. Bot. India 89. 1834; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 612. 1893; Haines, Bot. Bihar Orissa 899. 1924 (Repr. ed., 3: 942. 1961).

Fl. & Fr.: October - November.

Distrib.: Gaya.

Cyperus cuspidatus Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. 1: 204. 1816; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 598. 1893; Haines, Bot. Bihar Orissa 895. 1924 (Repr. ed., 3: 937. 1961).

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Munger, Palamau, Purnia.

Cyperus difformis L., Cent. Pl. 2: 6. 1756; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 599. 1893; Haines, Bot. Bihar Orissa 893. 1924 (Repr. ed., 3: 935. 1961).

Fl. & Fr.: August - December.

Distrib.: Bhagalpur, Hazaribagh, Munger, Singhbhum, West Champaran.

Cyperus digitatus Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 209. 1820; C.B. Clarke in Hook. f., Fl. Brit. India 6: 618. 1893; Haines, Bot. Bihar Orissa 1249. 1924 (Repr. ed., 3: 945. 1961).

Fl. & Fr.: August - November.

Distrib.: Bhagalpur.

Cyperus distans L. f., Suppl. Pl. 103. 1782; C.B. Clarke in Hook. f., Fl. Brit. India 6: 607. 1893; Haines, Bot. Bihar Orissa 898. 1924 (Repr. ed., 3: 940. 1961).

Fl. & Fr.: August - October.

Distrib.: Munger, Singhbhum.

Cyperus esculentus L., Sp. Pl. 67. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 6: 616. 1893.

Fl. & Fr.: August - October.

Distrib.: Palamau.

Cyperus exaltatus Retz., Observ. Bot. 5: 11. 1789; C.B. Clarke in Hook. f., Fl. Brit. India 6: 617. 1893; Haines, Bot. Bihar Orissa 902. 1924 (Repr. ed., 3: 945. 1961).

Fl. & Fr.: September - November.

Distrib.: Gaya, Patna, Purnia, Ranchi.

Cyperus halpan L., Sp. Pl. 45. 1753, '*haspan*'; C.B. Clarke in Hook. f., Fl. Brit. India 6: 600. 1893; Haines, Bot. Bihar Orissa 894. 1924 (Repr. ed., 3: 936. 1961).

Fl. & Fr.: August - December.

Distrib.: Munger, Purnia, West Champaran.

Cyperus imbricatus Retz., Observ. Bot. 5: 12. 1789. *C. radiatus* Vahl, Enum. Pl. 2: 369. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 6: 617. 1893; Haines, Bot. Bihar Orissa 902. 1924 (Repr. ed., 3: 945. 1961).

Fl. & Fr.: May - August.

Distrib.: Champaran, Santal Pargana.

Cyperus inundatus Roxb., Fl. Ind. 3: 201. 1832. *Juncellus inundatus* (Roxb.) C.B. Clarke in Hook. f., Fl. Brit. India 6: 595. 1893; Haines, Bot. Bihar Orissa 1257. 1924 (Repr. ed., 3: 1311. 1961).

Fl. & Fr.: September - October.

Distrib.: Bhagalpur.

Cyperus iria L., Sp. Pl. 45. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 6: 606. 1893 & in Ill. Cyper. t. 4. f. 2., non f. 1. 1909; Haines, Bot. Bihar Orissa 895. 1924 (Repr. ed., 3: 938. 1961).

Fl. & Fr.: August - January.

Distrib.: Throughout the state.

Cyperus laxus Lam., Illustr. 1: 146. 1791 *emend.* Poir. in Lam., Encycl. 7: 260. 1806. *C. diffusus* Vahl, Enum. Pl. 2: 321. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 6: 603. 1893; Haines, Bot. Bihar Orissa 897. 1924 (Repr. ed., 3: 940. 1961).

Fl. & Fr.: April - May.

Distrib.: Singhbhum.

Cyperus malaccensis Lam., Illustr. 1: 146. 1791; C.B. Clarke in Hook. f., Fl. Brit. India 6: 608. 1893; Haines, Bot. Bihar Orissa 899. 1924 (Repr. ed., 3: 941. 1961).

Fl. & Fr.: August - October.

Distrib.: Singhbhum.

Cyperus niveus Retz., Observ. Bot. 5: 12. 1789; C.B. Clarke in Hook. f., Fl. Brit. India 6: 601. 1893; Haines, Bot. Bihar Orissa 896. 1924 (Repr. ed., 3: 939. 1961).

Fl. & Fr.: February - June.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum, West Champaran.

Cyperus nutans Vahl, Enum. Pl. 2: 363. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 6: 607. 1893; Haines, Bot. Bihar Orissa 898. 1924 (Repr. ed., 3: 941. 1961).

var. **eleusinoides** (Kunth) Haines, Bot. Bihar Orissa 5: 898. 1924 (Repr. ed., 3: 941. 1961). *Cyperus eleusinoides* Kunth, Enum. Pl. 2: 39. 1837; C.B. Clarke in Hook. f., Fl. Brit. India 6: 608. 1893; Haines, Bot. Bihar Orissa 898. 1924 (Repr. ed., 3: 941. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Munger, Ranchi, West Champaran.

var. **nutans**

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Lohardaga, Palamau, Ranchi, Sahibganj, Singhbhum.

Cyperus pangorei Rottb., Descr. Icon. Rar. Pl. 31. t. 7. f. 3. 1773, non *C. corymbosus* var. *pangorei* C.B. Clarke in Hook. f., Fl. Brit. India 6: 612. 1893. *C. tegetum* Roxb., Fl. Ind. 1: 208. 1832; C.B. Clarke in Hook. f., Fl. Brit. India 6: 613. 1893; Haines, Bot. Bihar Orissa 900. 1924 (Repr. ed., 3: 943. 1961).

Fl. & Fr.: August - January.

Distrib.: Champaran, Gaya, Giridih, Hazaribagh, Koderma, Palamau, Ranchi, Singhbhum.

Cyperus pilosus Vahl, Enum. Pl. 2: 354. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 6: 609. 1893; Haines, Bot. Bihar Orissa 901. 1924 (Repr. ed., 3: 944. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Palamau, Ranchi.

Cyperus platystylis R. Br., Prodr. 214. 1810; C.B. Clarke in Hook. f., Fl. Brit. India 6: 598. 1893; Haines, Bot. Bihar Orissa 893. 1924 (Repr. ed., 3: 935. 1961).

Fl. & Fr.: November - February.

Distrib.: Bhagalpur, Champaran, Santal Pargana.

Cyperus procerus Rottb., Descr. Icon. Rar. Pl. 29. t. 5. 1773; C.B. Clarke in Hook. f., Fl. Brit. India 6: 610. 1893; Haines, Bot. Bihar Orissa 902. 1924 (Repr. ed., 3: 944. 1961).

var. **lasiorrhachis** C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 610. 1893; Haines, Bot. Bihar Orissa 902. 1924 (Repr. ed., 3: 945. 1961).

Fl. & Fr.: September - October.

Distrib.: Hazaribagh, Ranchi (Haines, *l.c.*).

var. **procerus**

Fl. & Fr.: September - October.

Distrib.: Hazaribagh.

Cyperus pygmaeus Rottb., Descr. Icon. Rar. Pl. 20. t. 14. f. 5. 1773.
Juncellus pygmaeus (Rottb.) C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 596. 1893; Haines, Bot. Bihar Orissa 906. 1924 (Repr. ed., 3: 949. 1961).

Fl. & Fr.: December - May.

Distrib.: Muzaffarpur, Patna, Purnia, Saran.

Cyperus rotundus L., Sp. Pl. 45. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 614. 1893; Haines, Bot. Bihar Orissa 903. 1924 (Repr. ed., 3: 946. 1961).

subsp. **rotundus**

Fl. & Fr.: July - December.

Distrib.: Throughout the state.

subsp. **tuberosus** (Rottb.) Kuekenh. in Engler, Pflanzenr. 101: 113. 1935. *Cyperus tuberosus* Rottb., Descr. Icon. Rar. Pl. 28. t. 7. f. 1. 1773; Haines, Bot. Bihar Orissa 903. 1924 (Repr. ed., 3: 946. 1961).

Fl. & Fr.: August - December.

Distrib.: Purnia.

Cyperus scariosus R. Br., Prodr. 216. 1810; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 612. 1893.

Fl. & Fr.: August - October.

Distrib.: Chota Nagpur.

Cyperus tenuiculmis Boeck. in *Linnaea* 36: 286. 1870. *C. zollingeri* auct. non Steud., 1854; C.B. Clarke in *Hook. f.*, *Fl. Brit. India* 6: 613. 1893.

Distrib.: Throughout India (Karthikeyan *et al.*, *Fl. Ind. Enum. Monocot.* 48. 1989).

Cyperus tenuispica Steud., *Syn. Pl. Cyp.* 2: 11. 1854. *C. flavidus* C.B. Clarke in *J. Linn. Soc. London (Bot.)* 21: 122. t. 3. f. 25. 1884 & in *Hook. f.*, *Fl. Brit. India* 6: 600. 1893, non Retz., 1789.

Distrib.: Throughout India (Karthikeyan *et al.*, *Fl. Ind. Enum. Monocot.* 48. 1989).

Cyperus thomsoni Boeck. in *Linnaea* 36: 295. 1870; C.B. Clarke in *Hook. f.*, *Fl. Brit. India* 6: 608. 1893; Haines, *Bot. Bihar Orissa* 899. 1924 (Repr. ed., 3: 941. 1961).

Fl. & Fr.: August - December.

Distrib.: Purnia.

ELEOCHARIS R. Br.

Eleocharis acutangula (Roxb.) Schult. in *Roem. & Schult.*, *Mant.* 2: 91. 1824. *Scirpus acutangulus* Roxb., *Fl. Ind.* (Carey & Wallich ed.) 1: 216. 1820. *Eleocharis fistulosa* Schult. in *Roem. & Schult.*, *Mant.* 2: 89. 1824; C.B. Clarke in *Hook. f.*, *Fl. Brit. India* 6: 626. 1893; Haines, *Bot. Bihar Orissa* 912. 1924 (Repr. ed., 3: 955. 1961).

Fl. & Fr.: October - December.

Distrib.: Palamau, Ranchi.

Eleocharis atropurpurea (Retz.) J. Presl & K. Presl, *Reliq. Haenk.* 1: 196. 1828, *excl. spec. cit.*; C.B. Clarke in *Hook. f.*, *Fl. Brit. India* 6: 627. 1893; Haines, *Bot. Bihar Orissa* 913. 1924 (Repr. ed., 3: 956. 1961). *Scirpus atropurpureus* Retz., *Observ. Bot.* 5: 14. 1789.

Fl. & Fr.: March - December.

Distrib.: Hazaribagh, Purnia, Singhbhum.

Eleocharis congesta D. Don, *Prodr. Fl. Nepal.* 41. 1825; C.B. Clarke in *Hook. f.*, *Fl. Brit. India* 6: 630. 1893; Haines, *Bot. Bihar Orissa* 913. 1924 (Repr. ed., 3: 957. 1961).

Fl. & Fr.: October - March.

Distrib.: Chota Nagpur.

Eleocharis dulcis (Burm. f.) Hensch., Vita Rumph. 186. 1833. *Andropogon dulce* Burm. f., Fl. Ind. 219. 1768. *Eleocharis plantaginea* Roem. & Schult., Syst. Veg. 2: 150. 1817; C.B. Clarke in Hook. f., Fl. Brit. India 6: 625. 1893; Haines, Bot. Bihar Orissa 911. 1924 (Repr. ed., 3: 955. 1961).

Fl. & Fr.: October - March.

Distrib.: Hazaribagh, Muzaffarpur, Patna.

Eleocharis geniculata (L.) Roem. & Schult., Syst. Veg. 2: 150. 1817. *Scirpus geniculatus* L., Sp. Pl. 48. 1753. *Eleocharis capitata* R. Br., Prodr. 225. 1810; C.B. Clarke in Hook. f., Fl. Brit. India 6: 627. 1893; Haines, Bot. Bihar Orissa 913. 1924 (Repr. ed., 3: 956. 1961).

Fl. & Fr.: September - December.

Distrib.: Champaran, Hazaribagh.

Eleocharis palustris (L.) R. Br., Prodr. 224. 1810; C.B. Clarke in Hook. f., Fl. Brit. India 6: 628. 1893; Haines, Bot. Bihar Orissa 912. 1924 (Repr. ed., 3: 955. 1961). *Scirpus palustris* L., Sp. Pl. 47. 1753.

Fl. & Fr.: December - March.

Distrib.: Santal Pargana.

Eleocharis retroflexa (Poir.) Urb., Symb. Antill. 2: 165. 1900. *Scirpus retroflexa* Poir. in Lam., Encycl. 6: 753. 1805. *Eleocharis chaetaria* Roem. & Schult., Syst. Veg. 2: 154. 1817; C.B. Clarke in Hook. f., Fl. Brit. India 6: 629. 1893; Haines, Bot. Bihar Orissa 913. 1924 (Repr. ed., 3: 956. 1961).

Fl. & Fr.: September - December.

Distrib.: Purnia, Ranchi, Singhbhum.

Eleocharis tetraquetra Nees in Wight, Contrib. Bot. India 113. 1834; C.B. Clarke in Hook. f., Fl. Brit. India 6: 630. 1893.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 50. 1989).

ERIOPHORUM L.

Eriophorum comosum (Wallich) Wallich ex Nees in Wight, Contrib. Bot. Ind. 110. 1834; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 664. 1893; Haines, Bot. Bihar Orissa 927. 1924 (Repr. ed., 3: 971. 1961). *Scirpus comosus* Wallich in Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 234. 1820.

Fl. & Fr.: September - December.

Distrib.: West Champaran.

FIMBRISTYLIS Vahl, nom. cons.

Fimbristylis acuminata Vahl, Enum. Pl. 2: 285. 1805; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 631. 1893; Haines, Bot. Bihar Orissa 918. 1924 (Repr. ed., 3: 962. 1961).

Fl. & Fr.: September - October.

Distrib.: North Bihar.

Fimbristylis aestivalis (Retz.) Vahl, Enum. Pl. 2: 288. 1805; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 637. 1893, *p.p.*; Haines, Bot. Bihar Orissa 920. 1924 (Repr. ed., 3: 963. 1961). *Scirpus aestivalis* Retz., Observ. Bot. 4: 12. 1786.

Fl. & Fr.: September - November.

Distrib.: Champaran, Palamau, Patna, Ranchi.

Fimbristylis argentea (Rottb.) Vahl, Enum. Pl. 2: 294. 1805; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 640. 1893; Haines, Bot. Bihar Orissa 922. 1924 (Repr. ed., 3: 966. 1961). *Scirpus argenteus* Rottb., Descr. Pl. Rar. 27. 1772.

Fl. & Fr.: December - January.

Distrib.: Santal Pargana.

Fimbristylis bisumbellata (Forssk.) Bubani, Dodec. 30. 1850. *Scirpus bisumbellatus* Forssk., Fl. Aegypt.-Arab. 15. 1775. *Fimbristylis dichotoma auct. non Vahl*, 1805; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 635. 1893; Haines, Bot. Bihar Orissa 921. 1924 (Repr. ed., 3: 965. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Koderma, Muzaffarpur, Palamau, Purnia.

Fimbristylis complanata (Retz.) Link, Hort. Berol. 1: 292. 1827; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 646. 1893; Haines, Bot. Bihar Orissa 916. 1924 (Repr. ed., 3: 959. 1961). *Scirpus complanatus* Retz., Observ. Bot. 5: 14. 1789.

Fl. & Fr.: September - January.

Distrib.: Patna.

Fimbristylis cymosa R. Br., Prodr. 228. 1810. *F. spathacea* Roth, Nov. Pl. Sp. 24. 1821; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 640. 1893; Haines, Bot. Bihar Orissa 922. 1924 (Repr. ed., 3: 965. 1961).

Fl. & Fr.: July - October.

Distrib.: Singhbhum.

Fimbristylis dichotoma (L.) Vahl, Enum. Pl. 2: 287. 1805, *excl.* var. *Scirpus dichotomus* L., Sp. Pl. 50. 1753. *Fimbristylis diphylla* Vahl, Enum. Pl. 2: 289. 1805; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 636. 1893; Haines, Bot. Bihar Orissa 920. 1924 (Repr. ed., 3: 964. 1961), *incl.* var. *annua* C.B. Clarke.

Fl. & Fr.: May - October.

Distrib.: Throughout the state.

Fimbristylis dipsacea (Rottb.) C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 635. 1893; Haines, Bot. Bihar Orissa 919. 1924 (Repr. ed., 3: 963. 1961). *Scirpus dipsaceus* Rottb., Descr. Icon. Rar. Pl. 56. t. 12. f. 1. 1773.

Fl. & Fr.: May - September.

Distrib.: Purnia.

Fimbristylis falcata (Vahl) Kunth, Enum. Pl. 2: 239. 1837. *Scirpus falcatus* Vahl, Enum. Pl. 2: 275. 1805. *Fimbristylis junciformis* Kunth, Enum. Pl. 2: 239. 1837; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 647. 1893; Haines, Bot. Bihar Orissa 916. 1924 (Repr. ed., 3: 960. 1961).

Fl. & Fr.: June - November.

Distrib.: Gaya, Hazaribagh, Koderma, Palamau, Patna, Ranchi.

Fimbristylis ferruginea (L.) Vahl, Enum. Pl. 2: 291. 1805; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 638. 1893; Haines, Bot. Bihar Orissa 921. 1924 (Repr. ed., 3: 965. 1961). *Scirpus ferrugineus* L., Sp. Pl. 50. 1753.

Fl. & Fr.: August - October.

Distrib.: Santal Pargana.

Fimbristylis fusca (Nees) C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 649. 1893; Haines, Bot. Bihar Orissa 917. 1924 (Repr. ed., 3: 960. 1961). *Abildgaardia fusca* Nees in Wight, Contr. Bot. India 95. 1834.

Fl. & Fr.: July - September.

Distrib.: Santal Pargana.

Fimbristylis hookeriana Boeck. in Linnaea 37: 22. 1871; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 641. 1893; Haines, Bot. Bihar Orissa 922. 1924 (Repr. ed., 3: 966. 1961).

Fl. & Fr.: October - November.

Distrib.: Lohardaga, Ranchi.

Fimbristylis littoralis Gaud. in Freyc., Voy. Bot. 413. 1826. *F. miliacea* sensu Benth., Fl. Austral. 316. 1878; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 644. 1893, *p.p. omne non* Vahl, 1806, *non Scirpus miliaceus* L.

Fl. & Fr.: August - October.

Distrib.: Giridih, Hazaribagh, Koderma, Purnia, West Champaran.

Fimbristylis miliacea (L.) Vahl, Enum. Pl. 2: 287. 1805, *quoad basion.*; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 644. 1893; Haines, Bot. Bihar Orissa 915. 1924 (Repr. ed., 3: 958. 1961). *Scirpus miliaceus* L., Syst. Veg. ed. 10. 868. 1759.

Fl. & Fr.: October - November.

Distrib.: Champaran, Hazaribagh, Purnia, Singhbhum.

Fimbristylis nutans (Retz.) Vahl, Enum. Pl. 2: 285. 1805; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 632. 1893. *Scirpus nutans* Retz., Observ. Bot. 4: 12. 1786.

Fl. & Fr.: August - October.

Distrib.: Santal Pargana.

Fimbristylis ovata (Burm. f.) Kern in Blumea 15: 126. 1967. *Carex ovata* Burm. f., Fl. Ind. 194. 1768. *Fimbristylis monostachyos* Hassk., Pl. Jan. Rar. 61. 1848, 'monostachya'; C.B. Clarke in Hook. f., Fl. Brit. India 6: 649. 1893; Haines, Bot. Bihar Orissa 917. 1924 (Repr. ed., 3: 961. 1961).

Fl. & Fr.: July - November.

Distrib.: Hazaribagh, Koderma, Palamau, Patna, Singhbhum.

Fimbristylis obtusata (C.B. Clarke) Ridl., Fl. Malay. Pen. 5: 157. 1925. *F. tenera* Roem. & Schult. var. *obtusata* C.B. Clarke in Hook. f., Fl. Brit. India 6: 642. 1893.

Fl. & Fr.: October - December.

Distrib.: Purnia.

Fimbristylis quinquangularis (Vahl) Kunth, Enum. Pl. 2: 229. 1807; C.B. Clarke in Hook. f., Fl. Brit. India 6: 644. 1893; Haines, Bot. Bihar Orissa 915. 1924 (Repr. ed., 3: 959. 1961). *Scirpus quinquangularis* Vahl, Enum. Pl. 2: 279. 1806.

Fl. & Fr.: October - January.

Distrib.: Champaran, Giridih, Hazaribagh, Lohardaga, Ranchi, Sahibganj, Singhbhum.

Fimbristylis schoenoides (Retz.) Vahl, Enum. Pl. 2: 286. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 6: 634. 1893, *p.p.*; Haines, Bot. Bihar Orissa 918. 1924 (Repr. ed., 3: 962. 1961). *Scirpus schoenoides* Retz., Observ. Bot. 5: 14. 1789.

Fl. & Fr.: August - October.

Distrib.: Giridih, Hazaribagh, Palamau, Purnia.

Fimbristylis sericea R. Br., Prodr. 228. 1810; C.B. Clarke in Hook. f., Fl. Brit. India 6: 641. 1893; Haines, Bot. Bihar Orissa 923. 1924 (Repr. ed., 3: 966. 1961).

Fl. & Fr.: October - January.

Distrib.: Singhbhum.

Fimbristylis sieberiana Kunth, Enum. Pl. 2: 237. 1837. *F. ferruginea* auct. non (L.) Vahl, 1806: Decne. in Nouv. Ann. Mus. Hist. Nat. Paris 3: 352. 1834.

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

Fimbristylis squarrosa Vahl, Enum. Pl. 2: 289. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 6: 635. 1893; Haines, Bot. Bihar Orissa 919. 1924 (Repr. ed., 3: 963. 1961).

Fl. & Fr.: January - May.

Distrib.: Patna, Purnia, Santal Pargana (Haines, l.c.).

Fimbristylis tenera Schult. in Roem. & Schult., Mant. 2: 57. 1824; C.B. Clarke in Hook. f., Fl. Brit. India 6: 642. 1893.

var. *oxylepis* (Steud.) C.B. Clarke in Hook. f., Fl. Brit. India 6: 642. 1893. *Fimbristylis oxylepis* Steud., Syn. Cyp. 110. 1855. *F. tenera* var. *verrucaenum* C.B. Clarke ex Haines, Bot. Bihar Orissa 917. 1924 (Repr. ed., 3: 961. 1961).

Fl. & Fr.: August - October.

Distrib.: Ranchi, West Champaran.

var. *tenera*

Fl. & Fr.: February - April.

Distrib.: Muzaffarpur.

Fimbristylis tetragona R. Br., Prodr. 226. 1810; C.B. Clarke in Hook. f., Fl. Brit. India 6: 631. 1893; Haines, Bot. Bihar Orissa 918. 1924 (Repr. ed., 3: 961. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum.

Fimbristylis thomsonii Boeck. in Linnaea 37: 37. 1871; C.B. Clarke in Hook. f., Fl. Brit. India 6: 646. 1893; Haines, Bot. Bihar Orissa 916. 1924 (Repr. ed., 3: 959. 1961).

Fl. & Fr.: February - April.

Distrib.: Hazaribagh.

Fimbristylis tomentosa Vahl, Enum. Pl. 2: 290. 1805. *F. podocarpa* Nees in Wight, Contrib. Bot. India 98. 1834, *p.p.*; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 637. 1893; Haines, Bot. Bihar Orissa 920. 1924 (Repr. ed., 3: 964. 1961). *F. diphylla* var. *pluristriata* C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 637. 1893; Haines, Bot. Bihar Orissa 921. 1924 (Repr. ed., 3: 964. 1961).

Fl. & Fr.: May - November.

Distrib.: Gumla, Palamau, Ranchi, Singhbhum.

Fimbristylis tristachya R. Br., Prodr. 226. 1810; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 649. 1893. *F. sub-bispicata* auct. non Nees & Mey., 1843; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 634. 1893; Haines, Bot. Bihar Orissa 919. 1924 (Repr. ed., 3: 962. 1961).

Fl. & Fr.: January - May.

Distrib.: Singhbhum.

FUIRENA Rottb.

Fuirena ciliaris (L.) Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 184. 1820. *Scirpus ciliaris* L., Mant. Pl. 182. 1771. *Fuirena glomerata* Lam., Tabl. Encycl. 1: 150. 1791; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 666. 1893; Haines, Bot. Bihar Orissa 928. 1924 (Repr. ed., 3: 972. 1961).

Fl. & Fr.: October - January.

Distrib.: Giridih, Hazaribagh, Lohardaga, Palamau, Purnia, Singhbhum, West Champaran.

Fuirena umbellata Rottb., Descr. Icon. Rar. Pl. 70. t. 19. f. 3. 1773; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 666. 1893; Haines, Bot. Bihar Orissa 928. 1924 (Repr. ed., 3: 972. 1961).

Fl. & Fr.: September - December.

Distrib.: Chota Nagpur.

HYPOLYTRUM L.C. Rich.

Hypolytrum nemorum (Vahl) Spreng., Syst. Veg. 1: 233. 1825. *Schoenus nemorum* Vahl, Symb. Bot. 3: 8. 1794. *Hypolytrum latifolium* L.C. Rich. in Pers., Syn. Pl. 1: 70. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 6: 678. 1894.

Distrib.: Chota Nagpur.

INDOCOURTOISIA Bennet & Raiz.

Indocourtoisia cyperoides (Roxb.) Bennet & Raiz. in Indian For. 107: 432. 1981. *Kyllinga cyperoides* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 187. 1820. *Courtoisia cyperoides* (Roxb.) Nees in Linnaea 9: 286. 1834; C.B. Clarke in Hook. f., Fl. Brit. India 6: 625. 1893; Haines, Bot. Bihar Orissa 910. 1924 (Repr. ed., 3: 954. 1961).

Fl. & Fr.: October - February.

Distrib.: Champaran, Hazaribagh, Ranchi, Singhbhum.

KYLLINGA Rottb.

Kyllinga brevifolia Rottb., Descr. Icon. Rar. Pl. 13. t. 4. f. 3. 1773; C.B. Clarke in Hook. f., Fl. Brit. India 6: 588. 1893; Haines, Bot. Bihar Orissa 907. 1924 (Repr. ed., 3: 950. 1961).

Fl. & Fr.: August - November.

Distrib.: Champaran, Hazaribagh, Muzaffarpur, Palamau, Singhbhum.

Kyllinga melanosperma Nees in Wight, Contrib. Bot. Ind. 91. 1834; C.B. Clarke in Hook. f., Fl. Brit. India 6: 588. 1893.

Fl. & Fr.: August - November.

Distrib.: Palamau.

Kyllinga nemoralis (J.R. Forster & G. Forster) Dandy ex Hutch. in Fl. W. Trop. Africa ed. 1. 2: 487. 1936. *Thyrocephalon nemorale* J.R. Forster & G. Forster, Char. Gen. Pl. 130. 1775. *Kyllinga monocephala* Rottb., Descr. Icon. Rar. Pl. 13. t. 4. f. 4. 1773; C.B. Clarke in Hook. f., Fl. Brit. India 6: 588. 1893; Haines, Bot. Bihar Orissa 907. 1924 (Repr. ed., 3: 950. 1961).

Fl. & Fr.: August - November.

Distrib.: Palamau, Patna.

Kyllinga odorata Vahl, Enum. Pl. 2: 382. 1806. *K. cylindrica* Nees in Wight, Contrib. Bot. India 91. 1834; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 588. 1893; Haines, Bot. Bihar Orissa 907. 1924 (Repr. ed., 3: 950. 1961).

Fl. & Fr.: August - December.

Distrib.: Giridih, Palamau.

Kyllinga squamulata Thonn. ex Vahl, Enum. Pl. 2: 381. 1806; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 589. 1893.

Distrib.: Almost throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 61. 1989).

Kyllinga tenuifolia Steud., Syn. Pl. Cyp. 2: 69. 1855. *K. triceps* Rottb., Descr. Icon. Rar. Pl. 14. t. 4. f. 6. 1773, *nom. superfl.*; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 587. 1893; Haines, Bot. Bihar Orissa 907. 1924 (Repr. ed., 3: 950. 1961).

Fl. & Fr.: July - February.

Distrib.: Hazaribagh, Koderma, Muzaffarpur, Palamau, Ranchi.

LIPOCARPHA R. Br., *nom. cons.*

Lipocarpa chinensis (Osbeck) Kern in Blumea, Suppl. 4: 167. 1958. *Scirpus chinensis* Osbeck, Dagb. Ostind. Resa 220. 1757. *Lipocarpa argentea* Nees in Linnaea 9: 287. 1834; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 667. 1893; Haines, Bot. Bihar Orissa 929. 1924 (Repr. ed., 3: 973. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Palamau.

Lipocarpa sphacelata (Vahl) Kunth, Enum. Pl. 2: 267. 1837; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 667. 1893; Haines, Bot. Bihar Orissa 929. 1924 (Repr. ed., 3: 973. 1961). *Hypaelyptum sphacelatum* Vahl, Enum. Pl. 2: 283. 1805.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh.

MARISCUS Vahl, *nom. cons.*

Mariscus compactus (Retz.) Boldingh, *Zakfl. Landb. Java* 77. 1916; Haines, *Bot. Bihar Orissa* 910. 1924 (Repr. ed., 3: 953. 1961). *Cyperus compactus* Retz., *Observ. Bot.* 5: 10. 1789. *Mariscus microcephalus* Presl, *Reliq. Haenk.* 1: 182. 1830; C.B. Clarke in *Hook. f., Fl. Brit. India* 6: 624. 1893.

Fl. & Fr.: August - November.

Distrib.: Champaran, Purnia, Ranchi, Singhbhum.

Mariscus cyperinus (Retz.) Vahl, *Enum. Pl.* 2: 377. 1806; C.B. Clarke in *Hook. f., Fl. Brit. India* 6: 621. 1893. *Kyllinga cyperina* Retz., *Observ. Bot.* 6: 21. 1791.

Fl. & Fr.: July - October.

Distrib.: Koderma.

Mariscus dubius (Rottb.) C.E.C. Fischer in Gamble, *Fl. Pres. Madras* 1644. 1931. (Repr. ed. 3: 1142. 1967). *Cyperus dubius* Rottb., *Descr. Icon. Rar. Pl.* 21. t. 4. f. 5. 1773. *Mariscus dregeanus* Kunth, *Enum. Pl.* 2: 120. 1837; C.B. Clarke in *Hook. f., Fl. Brit. India* 6: 620. 1893; Haines, *Bot. Bihar Orissa* 908. 1924 (Repr. ed., 3: 951. 1961).

Fl. & Fr.: August - October.

Distrib.: Ranchi.

Mariscus javanicus (Houtt.) Merr. & Metc. in *Lingnan Sci. J.* 21: 4. 1945. *Cyperus javanicus* Houtt., *Nat. Hist.* 2: 13, *Aanw. Pl.* 1, 7: t. 88. f. 1. 1782. *Mariscus albescens* Gaud. in Freye., *Voy. Bot.* 415. 1826; C.B. Clarke in *Hook. f., Fl. Brit. India* 6: 623. 1893; Haines, *Bot. Bihar Orissa* 909. 1924 (Repr. ed., 3: 953. 1961).

Fl. & Fr.: July - October.

Distrib.: Singhbhum.

Mariscus paniceus (Rottb.) Vahl, Enum. Pl. 2: 378. 1806; C.B. Clarke in Hook. f., Fl. Brit. India 6: 620. 1893; Haines, Bot. Bihar Orissa 1257. 1924 (Repr. ed., 3: 1311. 1961). *Kyllinga panicea* Rottb., Descr. Icon. Rar. Pl. 15. t. 4. f. 1. 1773.

Fl. & Fr.: August - October.

Distrib.: Gaya, Giridih, Hazaribagh, Koderma, Palamau.

Mariscus squarrosus (L.) C.B. Clarke in Hook. f., Fl. Brit. India 6: 623. 1893; Haines, Bot. Bihar Orissa 909. 1924 (Repr. ed., 3: 952. 1961). *Cyperus squarrosus* L., Cent. Pl. 2: 6. 1756. *C. aristatus* Rottb., Descr. Pl. Rar. 22. 1772; C.B. Clarke in Hook. f., Fl. Brit. India 6: 606. 1893; Haines, Bot. Bihar Orissa 895. 1924 (Repr. ed., 3: 938. 1961).

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Palamau, Patna, Ranchi.

Mariscus sumatrensis (Retz.) Raynal in Adansonia 15: 110. 1975. *Kyllinga sumatrensis* Retz., Observ. Bot. 4: 13. 1786. *Mariscus sieberianus* Nees ex C.B. Clarke in Hook. f., Fl. Brit. India 6: 622. 1893; Haines, Bot. Bihar Orissa 909. 1924 (Repr. ed., 3: 952. 1961).

Fl. & Fr.: August - September.

Distrib.: Champaran, Gaya, Giridih, Hazaribagh, Koderma, Palamau, Purnia, Singhbhum.

PYCREUS P. Beauv.

Pycreus diaphanus (Schrad. ex Roem. & Schult.) Hooper & T. Koyama in J. Jap. Bot. 51: 316. 1976. *Cyperus diaphanus* Schrad. ex Roem. & Schult., Mant. 2: 477. 1824. *Pycreus latespicatus* (Boeck.) C.B. Clarke in Hook. f., Fl. Brit. India 6: 590. 1893; Haines, Bot. Bihar Orissa 904. 1924 (Repr. ed., 3: 947. 1961).

var. **diaphanus**

Fl. & Fr.: August - November.

Distrib.: Gaya, Hazaribagh, Koderma, Lohardaga, Palamau, Purnia, Ranchi, Singhbhum.

var. **laxus** (Kukenth.) H.B. Naithani & Sas Biswas in Naithani, Fl. Pl. India, Nepal & Bhutan 471. 1990. *Cyperus latespicatus* Boeck. var. *laxus* Kukenth. in Engler, Pflanzenr. heft 101: 393. 1936.

Distrib.: Bihar (Naithani, l.c.).

Pycreus flavidus (Retz.) T. Koyama in J. Jap. Bot. 51: 316. 1976. *Cyperus flavidus* Retz., Observ. Bot. 5: 13. 1789. *Pycreus globosus* (All.) Reichb., Fl. Germ. Excurs. 2: 140. 1830; Haines, Bot. Bihar Orissa 905. 1924 (Repr. ed., 3: 948. 1961). *P. capillaris* (Koen. ex Roxb.) Nees ex C.B. Clarke in Hook. f., Fl. Brit. India 6: 591. 1893.

var. **flavidus**

Fl. & Fr.: April - December.

Distrib.: Gaya, Hazaribagh, Lohardaga, Palamau, Purnia, Ranchi.

var. **strictus** (Roxb.) Karthik. in Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 65. 1989. *Cyperus strictus* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 200. 1820. *Pycreus capillaris* var. *stricta* (Roxb.) C.B. Clarke in J. Linn. Soc. London (Bot.) & Hook. f., Fl. Brit. India 6: 592. 1893.

Fl. & Fr.: October - January.

Distrib.: Chota Nagpur.

Pycreus polystachyos (Rottb.) P. Beauv., Fl. Oware 2: 48. t. 86. f. 2. 1807; C.B. Clarke in Hook. f., Fl. Brit. India 6: 592. 1893. *Cyperus polystachyos* Rottb., Descr. Icon. Rar. Pl. 39. t. 11. f. 1. 1773; Haines, Bot. Bihar Orissa 903. 1924 (Repr. ed., 3: 946. 1961).

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur.

Pycreus pumilus (L.) Nees ex C.B. Clarke in Hook. f., Fl. Brit. India 6: 591. 1893; Haines, Bot. Bihar Orissa 905. 1924 (Repr. ed., 3: 948. 1961). *Cyperus pumilus* L., Cent. Pl. 2: 6. 1756.

var. **membranaceus** (Vahl) Karthik. in Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 66. 1989. *Cyperus membranaceus* Vahl, Enum. Pl. 2: 330. 1806.

Distrib.: Throughout India (Karthikeyan *et al.*, l.c.).

var. pumilus*Fl. & Fr.*: August - November.*Distrib.*: Hazaribagh, Lohardaga, Ranchi, Sahibganj.

Pycreus sanguinolentus (Vahl) Nees ex C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 590. 1893; Haines, Bot. Bihar Orissa 904. 1924 (Repr. ed., 3: 947. 1961). *Cyperus sanguinolentus* Vahl, Enum. Pl. 2: 351. 1806.

Fl. & Fr.: August - February.*Distrib.*: Champaran, Hazaribagh, Palamau, Santal Pargana.

Pycreus stramineus C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 589. 1893; Haines, Bot. Bihar Orissa 904. 1924 (Repr. ed., 3: 947. 1961).

Fl. & Fr.: September - December.*Distrib.*: Hazaribagh, Munger.

Pycreus sulcinux (C.B. Clarke) C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 593. 1893; Haines, Bot. Bihar Orissa 906. 1924 (Repr. ed., 3: 949. 1961). *Cyperus sulcinux* C.B. Clarke in J. Linn. Soc. London (Bot.) 21: 56. 1884.

Fl. & Fr.: September - October.*Distrib.*: Purnia.**RHYNCHOSPORA** Vahl, *nom. cons.*

Rhynchospora corymbosa (L.) Britton in Trans. New York Acad. Sci. 11: 84. 1892. *Scirpus corymbosus* L., Cent. Pl. 2: 7. 1756. *Rhynchospora aurea* Vahl, Enum. Pl. 2: 229. 1806; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 671. 1893; Haines, Bot. Bihar Orissa 930. 1924 (Repr. ed., 3: 974. 1961).

Fl. & Fr.: August - October.*Distrib.*: Purnia.

Rhynchospora hookeri Boeck. in Linnaea 37: 621. 1873; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 671. 1893; Haines, Bot. Bihar Orissa 930. 1924 (Repr. ed., 3: 974. 1961).

Fl. & Fr.: August - September.*Distrib.*: Bhagalpur.

Rhynchospora rubra (Lour.) Makino in Bot. Mag. Tokyo 17: 180. t. 7. f. 1A-B. 1903. *Schoenus ruber* Lour., Fl. Cochinch. 1: 141. 1790. *Rhynchospora wallichiana* Kunth, Enum. Pl. 2: 289. 1837; C.B. Clarke in Hook. f., Fl. Brit. India 6: 668. 1893; Haines, Bot. Bihar Orissa 930. 1924 (Repr. ed., 3: 973. 1961).

Fl. & Fr.: August - October.

Distrib.: Singhbhum.

RIKLIELLA J. Raynal

Rikliella squarrosa (L.) J. Raynal in Adansonia 2, 13: 154. 1973. *Scirpus squarrosus* L., Mant. Pl. 181. 1771; C.B. Clarke in Hook. f., Fl. Brit. India 6: 663. 1893; Haines, Bot. Bihar Orissa 925. 1924 (Repr. ed., 3: 969. 1961).

Fl. & Fr.: August - January.

Distrib.: Hazaribagh, Munger, Palamau, Singhbhum.

SCHOENOPLECTUS (H.G.L. Reichb.) Palla, *nom. cons.*

Schoenoplectus articulatus (L.) Palla in Bot. Jahrb. Syst. 10: 299. 1888. *Scirpus articulatus* L., Sp. Pl. 47. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 6: 656. 1893; Haines, Bot. Bihar Orissa 926. 1924 (Repr. ed., 3: 969. 1961).

Fl. & Fr.: July - December.

Distrib.: Koderma, Patna, Purnia, Singhbhum, West Champaran.

Schoenoplectus corymbosus (Roth ex Roem. & Schult.) J. Raynal in J.B. Lebrun *et al.*, Cat. Niger Pl. 343. 1976. *Isolepis corymbosus* Roth ex Roem. & Schult., Syst. Veg. 2: 110. 1817. *Scirpus corymbosus auct. non* L., 1753 *nec.* Forssk., 1775; C.B. Clarke in Hook. f., Fl. Brit. India 6: 657. 1893; Haines, Bot. Bihar Orissa 1258. 1924 (Repr. ed., 3: 1312. 1961).

Fl. & Fr.: July - October.

Distrib.: Patna.

Schoenoplectus grossus (L. f.) Palla in Allg. Bot. Z. 17: Beibl. 3. 1911. *Scirpus grossus* L. f., Suppl. Pl. 104. 1782; C.B. Clarke in Hook. f.

Fl. Brit. India 6: 659. 1893; Haines, Bot. Bihar Orissa 927. 1924 (Repr. ed., 3: 971. 1961).

Fl. & Fr.: August - December.

Distrib.: Champaran, Lohardaga, Purnia.

Schoenoplectus juncooides (Roxb.) Palla in Bot. Jahrb. Syst. 10: 299. 1888. *Scirpus juncooides* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 218. 1820. *S. erectus auct. non* Poir., 1804: C.B. Clarke in Hook. f., Fl. Brit. India 6: 656. 1893.

Fl. & Fr.: March - May.

Distrib.: West Champaran.

Schoenoplectus lateriflorus (Gmel.) Lye in Bot. Notis. 124: 290. 1971. *Scirpus lateriflorus* Gmel., Syst. Veg. ed. 13. 1: 127. 1791. *S. supinus* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 219. 1820, *non* L., 1753. *S. supinus* var. *uninodis auct. non* (Del.) Asch. & Schweinf., 1887: C.B. Clarke in Hook. f., Fl. Brit. India 6: 656. 1893; Haines, Bot. Bihar Orissa 925. 1924 (Repr. ed., 3: 969. 1961).

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Palamau, Purnia, Singhbhum.

Schoenoplectus litoralis (Schrad.) Palla in Verh. K. K. Zool. Bot. Ges. Wien 38, Sitzb. 49. 1888, 'littoralis'. *Scirpus litoralis* Schrad., Fl. Germ. 1: 142. t. 5. f. 7. 1806; C.B. Clarke in Hook. f., Fl. Brit. India 6: 659. 1893; Haines, Bot. Bihar Orissa 926. 1924 (Repr. ed., 3: 970. 1961).

Fl. & Fr.: October - January.

Distrib.: Hazaribagh.

Schoenoplectus maritimus (L.) Lye in Blyttia 29: 145. 1971. *Scirpus maritimus* L., Sp. Pl. 75. 1753; C.B. Clarke in Hook. f., Fl. Brit. India 6: 658. 1893.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 69. 1989).

Schoenoplectus mucronatus (L.) Palla in Verh. K. K. Zool. - Bot. Ges. Wien 38, Sitzb. 49. 1888. *Scirpus mucronatus* L., Sp. Pl. 73. 1753;

C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 657. 1893; Haines, Bot. Bihar Orissa 926. 1924 (Repr. ed., 3: 970. 1961).

Fl. & Fr.: October - November.

Distrib.: Champaran, Lohardaga, Ranchi, Singhbhum.

Schoenoplectus praelongatus (Poir.) J. Raynal in Adansonia 2, 16: 148. 1976. *Scirpus praelongatus* Poir. in Lam., Encycl. 6: 764. 1804.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 69. 1989).

Schoenoplectus roylei (Nees) Ovczinn. & Czucar., Fl. Tadjikist. 2: 40. 1963. *Isolepis roylei* Nees in Wight, Contrib. Bot. Ind. 107. 1834. *Scirpus quinquefarius* Buch.-Ham. ex Boeck. in Linnaea 36: 701. 1870; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 657. 1893.

Fl. & Fr.: August - October.

Distrib.: Patna.

Schoenoplectus supinus (L.) Palla in Engler, Bot. Jahrb. 10: 299. 1889. *Scirpus supinus* L., Sp. Pl. 49. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 655. 1893; Haines, Bot. Bihar Orissa 925. 1924 (Repr. ed., 3: 969. 1961).

Fl. & Fr.: October - November.

Distrib.: Giridih, Hazaribagh, Palamau, Purnia, Singhbhum, West Champaran.

SCIRPUS L.

Scirpus affinis Roth in Roem. & Schult., Syst. Veg. 2: 140. 1817. *S. maritimus* L. var. *affinis* (Roth) C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 659. 1893; Haines, Bot. Bihar Orissa 926. 1924 (Repr. ed., 3: 970. 1961).

Fl. & Fr.: February - April.

Distrib.: Patna, Purnia.

Scirpus isolepis (Nees) Boeck. in Linnaea 36: 498. 1870; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 663. 1893; Haines, Bot. Bihar Orissa 925. 1924 (Repr. ed., 3: 968. 1961). *Hemicarpha isolepis* Nees in Arnott, Edinb. New Phil. J. 17: 263. 1834.

Fl. & Fr.: November - December.

Distrib.: Lohardaga, Patna, Ranchi.

Scirpus michelianus L., Sp. Pl. 52. 1753; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 662. 1893.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 70. 1989).

SCLERIA Bergius

Scleria annularis Nees ex Steud., Syn. Pl. Cyp. 2: 176. 1855, *excl. descr.*; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 687. 1894; Haines, Bot. Bihar Orissa 932. 1924 (Repr. ed., 3: 976. 1961).

Fl. & Fr.: September - October.

Distrib.: Chota Nagpur.

Scleria biflora Roxb., Fl. Ind. 3: 573. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 687. 1894.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 71. 1989).

Scleria caricina (R. Br.) Benth., Fl. Austral. 7: 426. 1878; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 688. 1894. *Diplacrum caricinum* R. Br., Prodr. 241. 1810.

Fl. & Fr.: August - October.

Distrib.: Purnia.

Scleria corymbosa Roxb., Fl. Ind. 3: 574. 1832; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 686. 1894.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 71. 1989).

Scleria levis Retz., Observ. Bot. 4: 13. 1786, *non* C.B. Clarke, 1894. *S. hebecarpa* Nees in Wight, Contrib. Bot. India 117. 1834; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 689. 1894, *incl. var. pubescens* (Steud.) C.B. Clarke; Haines, Bot. Bihar Orissa 932. 1924 (Repr. ed., 3: 976. 1961).

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Lohardaga, Palamau, Patna, Ranchi, Sahibganj.

Scleria lithosperma (L.) Sw., Prodr. 18. 1788; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 685. 1894; Haines, Bot. Bihar Orissa 931. 1924 (Repr. ed., 3: 975. 1961). *Scirpus lithospermus* L., Sp. Pl. 51. 1753.

var. ***linearis*** Benth., Fl. Austral. 7: 430. 1878.

Fl. & Fr.: October - January.

Distrib.: Giridih, Hazaribagh.

var. ***lithosperma***

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Patna, Singhbhum.

Scleria parvula Steud., Syn. Pl. Cyp. 2: 174. 1855. *S. tessellata* auct. non Willd., 1805: C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 686. 1894, *p.p.*

Fl. & Fr.: August - October.

Distrib.: Giridih, Hazaribagh.

Scleria pergracilis (Nees) Kunth, Enum. Pl. 2: 354. 1837; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 685. 1894; Haines, Bot. Bihar Orissa 931. 1924 (Repr. ed., 3: 975. 1961). *Hypoporum pergracile* Nees in Edinb. New Phil. J. 17: 267. 1834.

Fl. & Fr.: March - April.

Distrib.: Hazaribagh.

Scleria rugosa R. Br., Prodr. 240. 1810. *S. flaccida* C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 688. 1894, non Steud., 1855.

Distrib.: Chota Nagpur.

Scleria terrestris (L.) Fass. in Rhodora 26: 159. 1924. *Zizania terrestris* L., Sp. Pl. 991. 1753. *Scleria elata* Thwaites, Enum. Pl. Zeyl. 353. 1864; C.B. Clarke in Hook. *f.*, Fl. Brit. India 6: 690. 1894, *incl. var.*

latior C.B. Clarke and var. *decolorans* C.B. Clarke; Haines, Bot. Bihar Orissa 933. 1924 (Repr. ed., 3: 977. 1961).

Fl. & Fr.: March - June.

Distrib.: Singhbhum.

Scleria tessellata Willd., Sp. Pl. 4: 315. 1805; C.B. Clarke in Hook. f., Fl. Brit. India 6: 686. 1894, *p.p.*; Haines, Bot. Bihar Orissa 932. 1924 (Repr. ed., 3: 976. 1961).

Fl. & Fr.: January - March.

Distrib.: Purnia.

SOROSTACHYS Steud.

Sorostachys leucocephalus (Retz.) Lye in Nord. J. Bot. 1: 190. 1981. *Cyperus leucocephalus* Retz., Observ. Bot. 5: 11. 1789; C.B. Clarke in Hook. f., Fl. Brit. India 6: 602. 1893; Haines, Bot. Bihar Orissa 897. 1924 (Repr. ed., 3: 939. 1961).

Fl. & Fr.: March - May.

Distrib.: Munger.

Sorostachys pulchellus (R. Br.) Lye in Nord. J. Bot. 1: 189. 1981. *Cyperus pulchellus* R. Br., Prodr. 213. 1810. *C. leucocephalus* Nees in Hook., J. Bot. 21: 107. 1841, *non* Retz., 1789.

Fl. & Fr.: February - April.

Distrib.: Chota Nagpur.

POACEAE

ACRACHNE Wight & Arn. ex Chiov.

Acrachne racemosa (Heyne ex Roem. & Schult.) Ohwi in Bull. Tokyo Sci. Mus. n. 18: 1. 1947; Bor, Grass. Burm. Ceyl. Ind. Pak. 487. 1960. *Eleusine racemosa* Heyne ex Roem. & Schult., Syst. Veg. 2: 583. 1817. *E. verticillata* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 346. 1820; Hook. f., Fl. Brit. India 7: 295. 1896.

Fl. & Fr.: August - November.

Distrib.: Palamau.

AELUROPUS Trin.

Aeluropus lagopoides (L.) Trin. ex Thwaites, Enum. Pl. Zeyl. 374. 1864. '*lagopodioides*'; Bor, Grass. Burm. Ceyl. Ind. Pak. 380. 1960. *Dactylis lagopoides* L., Mant. Pl. 33. 1767. *Aeluropus villosus* Trin. ex C.A. Mey., Verz. Pfl. Cauc. 18. 1831; Hook. f., Fl. Brit. India 7: 334. 1896.

Distrib.: Godda (Jha and Varma in Indian Bot. Repr. 10: 45. 1991).

AGROPOGON P. Fourn.

Agropogon lutosus (Poir.) P. Fourn. in Le Monde des Plantes 36 (no. 213): 20. 1935. *Agrostis lutosus* Poir. in Lam., Encycl. Suppl. 1: 249. 1810. *A. subaristata* Aitch. & Hemsl. in J. Linn. Soc. London (Bot.) 19: 192. t. 29. 1881; Hook. f., Fl. Brit. India 7: 255. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 390. 1960. *Polypogon littoralis* Sm., Compend. Pl. Brit. ed. 2. 13. 1816; Hook. f., Fl. Brit. India 7: 246. 1896; Haines, Bot. Bihar Orissa 976. 1924 (Repr. ed., 3: 1021. 1961).

Fl. & Fr.: May - June.

Distrib.: Santal Pargana.

AGROSTIS L.

Agrostis brachiata Munro ex Hook. f., Fl. Brit. India 7: 256. 1896; Haines, Bot. Bihar Orissa 972. 1924 (Repr. ed., 3: 1018. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 386. 1960.

Fl. & Fr.: September - November.

Distrib.: Munger. Endemic.

Agrostis pilosula Trin. in Mem. Acad. Sci. Petersb. 6, 6: 372. 1841; Bor, Grass. Burm. Ceyl. Ind. Pak. 388. 1960.

Fl. & Fr.: August - November.

Distrib.: Patna.

ALLOTEROPSIS C.B. Presl

Alloteropsis cimicina (L.) Stapf in Prain, Fl. Trop. Afr. 9: 487. 1919; Haines, Bot. Bihar Orissa 1009. 1924 (Repr. ed., 3: 1055. 1961); Bor, Grass.

Burm. Ceyl. Ind. Pak. 276. 1960. *Milium cimicinum* L., Mant. Pl. 184. 1771. *Axonopus cimicinus* (L.) P. Beauv., Ess. Agrost. 12. 1812; Hook. f., Fl. Brit. India 7: 64. 1896.

Fl. & Fr.: August - October.

Distrib.: Giridih, Hazaribagh, Munger, Palamau, Ranchi, Singhbhum.

Alloteropsis semialata (R. Br.) Hitch. in Contrib. U. S. Nat. Herb. 12: 210. 1909; Haines, Bot. Bihar Orissa 1009. 1924 (Repr. ed., 3: 1056. 1961). Bor, Grass. Burm. Ceyl. Ind. Pak. 276. 1960. *Panicum semialatum* R. Br., Prodr. 192. 1810. *Axonopus semialatus* (R. Br.) Hook. f., Fl. Brit. India 7: 64. 1896.

Fl. & Fr.: April - July.

Distrib.: Hazaribagh, Palamau, Ranchi.

ANDROPOGON L.

Andropogon ascinodis C.B. Clarke in J. Linn. Soc. London (Bot.) 25: 87. t. 36. 1889; Bor, Grass. Burm. Ceyl. Ind. Pak. 90. 1960. *A. apricus auct. non Trin.*, 1836; Hook. f., Fl. Brit. India 7: 169. 1896; Haines, Bot. Bihar Orissa 1044. 1924 (Repr. ed., 3: 1091. 1961).

Fl. & Fr.: October - November.

Distrib.: Chota Nagpur, Singhbhum.

Andropogon pumilus Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 277. 1820; Hook. f., Fl. Brit. India 7: 170. 1896; Haines, Bot. Bihar Orissa 1044. 1924 (Repr. ed., 3: 1092. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 93. 1960.

Fl. & Fr.: December - February.

Distrib.: Purnia.

APLUDA L.

Apluda mutica L., Sp. Pl. 82. 1753; Bor, Grass. Burm. Ceyl. Ind. Pak. 93. 1960. *A. varia* Hack. in A. & C. DC., Monogr. Phan. 6: 196. 1889; Hook. f., Fl. Brit. India 7: 150. 1896; Haines, Bot. Bihar Orissa 1056. 1924 (Repr. ed., 3: 1104. 1961).

Fl. & Fr.: October - January.

Distrib.: Throughout the state.

APOCOPIS Nees

Apocopis courtallumensis (Steud.) Henr. in *Blumea* 4: 524. 1941; Bor, Grass. Burm. Ceyl. Ind. Pak. 95. 1960. *Andropogon courtallumensis* Steud., Syn. Pl. Glum. 1: 377. 1854. *Apocopis wightii* Nees ex Thw., Enum. Pl. Zeyl. 365. 1864; Hook. *f.*, Fl. Brit. India 7: 142. 1896.

Fl. & Fr.: September - November.

Distrib.: Chota Nagpur.

Apocopis paleacea (Trin.) Hochr. in Bull. N. Y. Bot. Gard. 6: 262. 1910; Bor, Grass. Burm. Ceyl. Ind. Pak. 96. 1960. *Ischaemum paleaceum* Trin. in Mem. Acad. Sci. Pétersb. ser. 6, 2: 293. 1832. *Apocopis royleanus* Nees in Ann. Mag. Nat. Hist. 7: 142. 1841; Hook. *f.*, Fl. Brit. India 7: 142. 1896; Haines, Bot. Bihar Orissa 1024. 1924 (Repr. ed., 3: 1070. 1961).

Fl. & Fr.: May - September.

Distrib.: Purnia, Singhbhum.

Apocopis vaginata Hack. in Oest. Bot. Z. 41: 8. 1891; Haines, Bot. Bihar Orissa 1024. 1924 (Repr. ed., 3: 1071. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 96. 1960. *A. wightii* var. *vaginata* (Hack.) Hook. *f.*, Fl. Brit. India 7: 143. 1896.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Singhbhum.

ARISTIDA L.

Aristida adscensionis L., Sp. Pl. 82. 1753; Hook. *f.*, Fl. Brit. India 7: 224. 1896; Haines, Bot. Bihar Orissa 977. 1924 (Repr. ed., 3: 1022. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 407. 1960.

Fl. & Fr.: August - January.

Distrib.: Throughout the state.

Aristida cumingiana Trin. & Rupr., Sp. Gram. Stip. 141. 1842 & in Mem. Acad. Sci. Pétersb. ser. 6, 7: 141. 1843; Hook. *f.*, Fl. Brit. India 7: 224. 1896; Haines, Bot. Bihar Orissa 977. 1924 (Repr. ed., 3: 1022. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 409. 1960.

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Ranchi.

Aristida cyanantha Nees ex Steud., Syn. Pl. Glum. 1: 141. 1854; Hook. *f.*, Fl. Brit. India 7: 225. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 409. 1960.

Fl. & Fr.: October - November.

Distrib.: Bihar (DD).

Aristida funiculata Trin. & Rupr., Sp. Gram. Stip. 159. 1842 & in Mem. Acad. Sci. Pétersb. ser. 6, 7: 159. 1843; Hook. *f.*, Fl. Brit. India 7: 226. 1896; Haines, Bot. Bihar Orissa 978. 1924 (Repr. ed., 3: 1023. 1961).

Fl. & Fr.: October - December.

Distrib.: Gaya, Sahibganj.

Aristida hystrix L. *f.*, Suppl. Pl. 113. 1782; Hook. *f.*, Fl. Brit. India 7: 225. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 410. 1960.

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur.

Aristida redacta Stapf in Bull. Misc. Inform. Kew 1892: 85. 1892; Hook. *f.*, Fl. Brit. India 7: 227. 1896; Haines, Bot. Bihar Orissa 978. 1924 (Repr. ed., 3: 1023. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 412. 1960.

Fl. & Fr.: September - December.

Distrib.: Palamau.

Aristida setacea Retz., Observ. Bot. 4: 22. 1786; Hook. *f.*, Fl. Brit. India 7: 225. 1896; Haines, Bot. Bihar Orissa 977. 1924 (Repr. ed., 3: 1023. 1961); Bor., Grass. Burm. Ceyl. Ind. Pak. 412. 1960.

Fl. & Fr.: August - February.

Distrib.: Gaya, Giridih, Hazaribagh.

ARTHRAOXON P. Beauv.

Arthraxon castratus (Griff.) Narayana ex Bor, Fl. Assam 5: 376. 1940 & Grass. Burm. Ceyl. Ind. Pak. 99. 1960. *Andropogon castratus* Griff., Notul. 3: 89. 1851. *Arthraxon rudis* (Steud.) Hochst. in Flora 39: 188. 1856; Hook. f., Fl. Brit. India 7: 144. 1896.

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

Arthraxon echinatus (Nees) Hochst. in Flora 39: 188. 1856; Bor, Grass. Burm. Ceyl. Ind. Pak. 99. 1960. *Bathratherum echinatum* Nees in Edinb. New Phil. J. 18: 181. 1835. *Arthraxon spathaceus* Hook. f., Fl. Brit. India 7: 145. 1896.

Distrib.: Chota Nagpur.

Arthraxon hispidus (Thunb.) Makino in Bot. Mag. Tokyo 26: 214. 1912; Bor, Grass. Burm. Ceyl. Ind. Pak. 99. 1960. *Phalaris hispida* Thunb., Fl. Jap. 44. 1784. *Arthraxon ciliaris* P. Beauv., Ess. Agrost. 111, 152. t. 11. f. 6. 1812; Hook. f., Fl. Brit. India 7: 145. 1896; Haines, Bot. Bihar Orissa 1026. 1924 (Repr. ed., 3: 1073. 1961).

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Koderma, Palamau, Ranchi, Sahibganj, Singhbhum.

Arthraxon lanceolatus (Roxb.) Hochst. in Flora 39: 188. 1856; Hook. f., Fl. Brit. India 7: 143. 1896; Haines, Bot. Bihar Orissa 1026. 1924 (Repr. ed., 3: 1072. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 100. 1960. *Andropogon lanceolatus* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 262. 1820.

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Palamau.

Arthraxon lancifolius (Trin.) Hochst. in Flora 39: 188. 1856; Bor, Grass. Burm. Ceyl. Ind. Pak. 100. 1960. *Andropogon lancifolius* Trin. in Mem. Acad. Sci. Pétersb. ser. 6, 2: 271. 1832.

Fl. & Fr.: September - December.

Distrib.: Deoghar, Hazaribagh, Koderma, Lohardaga, Munger, Patna, Ranchi, Sahibganj.

Arthraxon microphyllum (Trin.) Hochst. in Flora 39: 188. 1856; Hook. *f.*, Fl. Brit. India 7: 147. 1896; Haines, Bot. Bihar Orissa 1026. 1924 (Repr. ed., 3: 1073. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. ed. 2. 1. 1973. *Andropogon microphyllum* Trin. in Mem. Acad. Sci. Pétersb. ser. 6, 2: 275. 1833.

Fl. & Fr.: September - December.

Distrib.: Gaya, Hazaribagh, Munger, Ranchi, Santal Pargana, Singhbhum.

ARUNDINELLA Raddi

Arundinella bengalensis (Spreng.) Druce in Rep. Bot. Exchng. Cl. Brit. Isles 605. 1916; Bor, Grass. Burm. Ceyl. Ind. Pak. 421. 1960. *Panicum bengalense* Spreng., Syst. Veg. 1: 311. 1825. *Arundinella wallichii* Nees ex Steud., Syn. Pl. Glum. 1: 114. 1854; Hook. *f.*, Fl. Brit. India 7: 75. 1896; Haines, Bot. Bihar Orissa 984. 1924 (Repr. ed., 3: 1029. 1961).

Fl. & Fr.: August - January.

Distrib.: Bhagalpur, Giridih, Hazaribagh, Palamau, Purnia, Ranchi.

Arundinella metzli Hochst. ex Miq. in Verh. Nederl. Inst. 3(4): 31. 1851; Hook. *f.*, Fl. Brit. India 7: 72. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 423. 1960.

Distrib.: Bihar (LWG).

Arundinella nepalensis Trin., Gram. Panic. 62. 1826 & Sp. Gram. 3. t. 1268. 1836; Bor, Grass. Burm. Ceyl. Ind. Pak. 423. 1960.

Fl. & Fr.: October - March.

Distrib.: Palamau, West Champaran.

Arundinella pumila (Hochst. ex A. Rich.) Steud., Syn. Pl. Glum. 1: 114. 1854; Bor, Grass. Burm. Ceyl. Ind. Pak. 423. 1960. *Acratherum pumilum* Hochst. ex A. Rich., Tent. Fl. Abyss. 2: 414. t. 100. 1851. *Arundinella tenella* Nees ex Steud., Syn. Pl. Glum. 1: 115. 1854; Hook. *f.*, Fl. Brit. India 7: 71. 1896; Haines, Bot. Bihar Orissa 983. 1924 (Repr. ed., 3: 1029. 1961).

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Purnia, Ranchi.

Arundinella setosa Trin., Gram. Panic. 63. 1826; Hook. *f.*, Fl. Brit. India 7: 70. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 424. 1960.

var. **esetosa** Bor, Grass. Burm. Ceyl. Ind. Pak. 425. 1960.

Distrib.: Throughout India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 187. 1989).

var. **setosa**

Fl. & Fr.: September - December.

Distrib.: Ranchi, Sahibganj, Singhbhum.

ARUNDO L.

Arundo donax L., Sp. Pl. 81. 1753; Hook. *f.*, Fl. Brit. India 7: 302. 1896; Haines, Bot. Bihar Orissa 953. 1924 (Repr. ed., 3: 998. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 413. 1960.

Fl. & Fr.: September - December.

Distrib.: Gaya, Munger, Palamau, Patna.

AVENA L.

Avena sativa L., Sp. Pl. 79. 1753; Hook. *f.*, Fl. Brit. India 7: 275. 1896; Haines, Bot. Bihar Orissa 954. 1924 (Repr. ed., 3: 999. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 434. 1960.

Fl. & Fr.: November - March.

Distrib.: Cultivated.

Avena sterilis L. subsp. **ludoviciana** (Dur.) Gill. & Magne, Fl. Fr. ed. 3. 532. 1875. *Avena ludoviciana* Dur. in Bull. Soc. Linn. Bord. 20: 41. 1855; Bor, Grass. Burm. Ceyl. Ind. Pak. 434. 1960.

Fl. & Fr.: November - February.

Distrib.: Palamau.

AXONOPUS P. Beauv.

Axonopus compressus (Sw.) P. Beauv., Ess. Agrost. 12(154). 167. 1812; Bor, Grass. Burm. Ceyl. Ind. Pak. 278. 1960. *Milium compressum* Sw., Prodr. 24. 1788.

Distrib.: Sahibganj (Jha and Varma in Indian Bot. Repr. 10: 45. 1991).

BAMBUSA Schreb., *nom. cons.*

Bambusa arundinacea (Retz.) Willd., Sp. Pl. 2: 245. 1799; Gamble in Hook. f., Fl. Brit. India 7: 395. 1896; Haines, Bot. Bihar Orissa 950. 1924 (Repr. ed., 3: 995. 1961). *Bambos arundinacea* Retz., Observ. Bot. 5: 24. 1789.

Fl. & Fr.: Once in life.

Distrib.: Gumla, Singhbhum.

Bambusa balcooa Roxb., Fl. Ind. 2: 196. 1832; Gamble in Hook. f., Fl. Brit. India 7: 391. 1896; Haines, Bot. Bihar Orissa 949. 1924 (Repr. ed., 3: 994. 1961).

Distrib.: Cultivated. Purnia.

Bambusa glaucescens (Willd.) Sieb. ex Munro in Trans. Linn. Soc. London 26: 89. 1868. *Ludolfia glaucescens* Willd. in Ges. Nat. Fr. Berl. Mag. 2: 320. 1808. *Bambusa nana* Roxb., Fl. Ind. 2: 199. 1832; Gamble in Hook. f., Fl. Brit. India 7: 390. 1896; Haines, Bot. Bihar Orissa 950. 1924 (Repr. ed., 3: 995. 1961).

Distrib.: Cultivated.

Bambusa tulda Roxb., Fl. Ind. 2: 193. 1832; Gamble in Hook. f., Fl. Brit. India 7: 387. 1896; Haines, Bot. Bihar Orissa 948. 1924 (Repr. ed., 3: 993. 1961). *B. nutans* Wallich ex Munro in Trans. Linn. Soc. London 26: 92. 1868; Gamble in Hook. f., Fl. Brit. India 7: 387. 1896; Haines, Bot. Bihar Orissa 949. 1924 (Repr. ed., 3: 994. 1961).

Distrib.: Ranchi, Sahibganj.

Bambusa vulgaris Schrad. in Wendl., Collect. Pl. 2: 26. t. 47. 1810; Gamble in Hook. f., Fl. Brit. India 7: 391. 1896; Haines, Bot. Bihar Orissa 950. 1924 (Repr. ed., 3: 995. 1961).

Distrib.: Cultivated.

BOTHRIOCHLOA Kuntze

Bothriochloa bladhii (Retz.) S.T. Blake in Proc. R. Soc. Queensland 80: 62. 1969. *Andropogon bladhii* Retz., Observ. Bot. 2: 27. 1781. *Amphilophis glabra* (Roxb.) Stapf in Prain, Fl. Trop. Afr. 9: 172. 1917; Haines, Bot. Bihar Orissa 1028. 1924 (Repr. ed., 3: 1075. 1961).

Fl. & Fr.: October - January.

Distrib.: Throughout the state.

Bothriochloa insculpta (Hochst. ex A. Rich.) A. Camus in Ann. Soc. Linn. Lyon 1930, n.s. 76: 165. 1931; Bor, Grass. Burm. Ceyl. Ind. Pak. 107. 1960. *Andropogon insculptus* Hochst. ex A. Rich., Tent. Fl. Abyss. 2: 458. 1851. *A. pertusus* Willd. var. *insculptus* (Hochst. ex A. Rich.) Hook. f., Fl. Brit. India 7: 174. 1896.

Fl. & Fr.: August - December.

Distrib.: Palamau.

Bothriochloa ischaemum (L.) King in Contr. Biol. Lab. Sci. Soc. China, Bot. 10: 201. 1936; Bor, Grass. Burm. Ceyl. Ind. Pak. 108. 1960. *Andropogon ischaemum* L., Sp. Pl. 1047. 1753; Hook. f., Fl. Brit. India 7: 171. 1896.

Fl. & Fr.: August - November.

Distrib.: North Bihar.

Bothriochloa kuntzeana (Hack.) Henr. in Blumea 3: 456. 1940; Bor, Grass. Burm. Ceyl. Ind. Pak. 108. 1960. *Andropogon kuntzeanus* Hack. in A. & C. DC., Monogr. Phan. 6: 478. 1889. *Amphilophis kuntzeana* (Hack.) Haines, Bot. Bihar Orissa 1031. 1924 (Repr. ed., 3: 1078. 1961).

Fl. & Fr.: December - February.

Distrib.: Giridih, Santal Pargana, Singhbhum.

Bothriochloa pertusa (L.) A. Camus in Ann. Soc. Linn. Lyon 1930, n.s. 76: 164. 1931; Bor, Grass. Burm. Ceyl. Ind. Pak. 109. 1960. *Holcus pertusus* L., Mant. Pl. 301. 1771. *Andropogon pertusus* (L.) Willd., Sp. Pl. 4: 922. 1806; Hook. f., Fl. Brit. India 7: 1173. 1896. *Amphilophis pertusa*

(L.) Nash *ex* Stapf in Agric. News W. Ind. 15: 179. 1916; Haines, Bot. Bihar Orissa 1030. 1924 (Repr. ed., 3: 1077. 1961).

Fl. & Fr.: October - December.

Distrib.: Gaya, Hazaribagh, Munger, Ranchi, Santal Pargana, Singhbhum.

BRACHIARIA Griseb.

Brachiaria brizantha (Hochst. *ex* A. Rich.) Stapf in Prain, Fl. Trop. Afr. 9: 531. 1919; Bor, Grass. Burm. Ceyl. Ind. Pak. 281. 1960. *Panicum brizanthum* Hochst. *ex* A. Rich., Tent. Fl. Abyss. 2: 363. 1851.

Fl. & Fr.: May - June.

Distrib.: Bihar (*s.l.*)

Brachiaria distachya (L.) Stapf in Prain, Fl. Trop. Afr. 9: 565. 1919; Bor, Grass. Burm. Ceyl. Ind. Pak. 281. 1960; Haines, Bot. Bihar Orissa 1004. 1924 (Repr. ed., 3: 1050. 1961). *Panicum distachyum* L., Mant. Pl. 183. 1771; Hook. *f.*, Fl. Brit. India 7: 37. 1896.

Fl. & Fr.: July - December.

Distrib.: Deoghar, Hazaribagh, Palamau, Santal Pargana, West Champaran.

Brachiaria eruciformis (Sm.) Griseb. in Ledeb., Fl. Ross. 4: 469. 1853; Bor, Grass. Burm. Ceyl. Ind. Pak. 283. 1960. *Panicum eruciforme* Sm. in Sibth. & Sm., Fl. Graeca 1: 44. t. 59. 1806. *P. isachne* Roth *ex* Roem. & Schult., Syst. Veg. 2: 458. 1817; Hook. *f.*, Fl. Brit. India 7: 28. 1896. *Brachiaria isachne* (Roth *ex* Roem. & Schult.) Stapf in Prain, Fl. Trop. Afr. 9: 552. 1919; Haines, Bot. Bihar Orissa 1004. 1924 (Repr. ed., 3: 1050. 1961).

Fl. & Fr.: September - November.

Distrib.: Sahibganj, Singhbhum.

Brachiaria kurzii (Hook. *f.*) A. Camus in Lecomte, Fl. Indo-Chine 7: 438. 1922; Haines, Bot. Bihar Orissa 1005. 1924 (Repr. ed., 3: 1051. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 283. 1960. *Panicum kurzii* Hook. *f.*, Fl. Brit. India 7: 38. 1896.

Fl. & Fr.: July - November.

Distrib.: Hazaribagh, Singhbhum.

Brachiaria miliiformis (J.S. Presl ex C.B. Presl) A. Chase in Contrib. U. S. Natl. Herb. 22: 35. 1920; Bor, Grass. Burm. Ceyl. Ind. Pak. 283. 1960. *Panicum miliiforme* J.S. Presl ex C.B. Presl, Reliq. Haenk. 1: 300. 1830.

Fl. & Fr.: June - September.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 437. 1998).

Brachiaria mutica (Forssk.) Stapf in Prain, Fl. Trop. Afr. 9: 526. 1919; Bor, Grass. Burm. Ceyl. Ind. Pak. 284. 1960. *Panicum muticum* Forssk., Fl. Aegypt.-Arab. 20. 1775; Hook. f., Fl. Brit. India 7: 34. 1896.

Fl. & Fr.: August - September.

Distrib.: West Champaran.

Brachiaria ramosa (L.) Stapf in Prain, Fl. Trop. Afr. 9: 542. 1919; Haines, Bot. Bihar Orissa 1005. 1924 (Repr. ed., 3: 1051. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 284. 1960. *Panicum ramosum* L., Mant. Pl. 29. 1767; Hook. f., Fl. Brit. India 7: 36. 1896.

Fl. & Fr.: May - December.

Distrib.: Hazaribagh, Patna, Purnia, Santal Pargana, West Champaran.

Brachiaria reptans (L.) Gard. & C.E. Hubb. in Hook., Ic. Pl. sub t. 3363. 1938; Bor, Grass. Burm. Ceyl. Ind. Pak. 285. 1960. *Panicum reptans* L., Syst. Nat. ed. 10. 870. 1759. *P. prostratum* Lam., Ill. 1: 171. 1791 & Encycl. 4: 730. 1797; Hook. f., Fl. Brit. India 7: 33. 1896. *Urochloa reptans* Stapf in Prain, Fl. Trop. Afr. 9: 601. 1919; Haines, Bot. Bihar Orissa 1003. 1924 (Repr. ed., 3: 1049. 1961).

Fl. & Fr.: July - December.

Distrib.: Bhagalpur, Deoghar, Gaya, Munger, Patna, Santal Pargana, West Champaran.

Brachiaria subquadrifera (Trin.) Hitchc. in Lingnan Sci. J. 7: 214. 1931; Bor, Grass. Burm. Ceyl. Ind. Pak. 286. 1960. *Panicum subquadrifera* Trin., Gram. Panic. 145. 1826.

Fl. & Fr.: November - January.

Distrib.: Chota Nagpur (Banerjee and Pat in Bull. Bot. Surv. India 12: 70-72. 1970).

CAPILLIPEDIUM Stapf

Capillipedium assimile (Steud.) A. Camus in Lecomte, Fl. Indo-Chine 7: 314. 1922; Haines, Bot. Bihar Orissa 1028. 1924 (Repr. ed., 3: 1074. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 110. 1960. *Andropogon assimilis* Steud. in Zoll., Syst. Verz. 58. 1854 & in Syn. Pl. Glum. 1: 397. 1854; Hook. f., Fl. Brit. India 7: 179. 1896.

Fl. & Fr.: October - December.

Distrib.: Chota Nagpur, Giridih, Hazaribagh, Patna, Sahibganj, West Champaran.

Capillipedium huegelii (Hack.) Stapf in Hook., Ic. Pl. sub t. 3085. 1922; Bor, Grass. Burm. Ceyl. Ind. Pak. 111. 1960. *Andropogon huegelii* Hack. in A. & C. DC., Monogr. Phan. 6: 492. 1889; Hook. f., Fl. Brit. India 7: 180. 1896.

Fl. & Fr.: September - November.

Distrib.: Patna.

Capillipedium parviflorum (R. Br.) Stapf in Prain, Fl. Trop. Afr. 9: 169. 1917; Haines, Bot. Bihar Orissa 1027. 1924 (Repr. ed., 3: 1074. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 112. 1960. *Holcus parviflorus* R. Br., Prodr. 199. 1810. *Andropogon micranthus* Kunth, Rev. Gram. 1: 165. 1829; Hook. f., Fl. Brit. India 7: 178. 1896.

Fl. & Fr.: September - October.

Distrib.: Giridih, Hazaribagh, West Champaran.

CENCHRUS L.

Cenchrus biflorus Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 238. 1820; Bor, Grass. Burm. Ceyl. Ind. Pak. 287. 1960. *C. catharticus* Delile, Cat. Hort. Monsp. 1838: 4. 1839 & in Linnaea 13: in Litt. - Bericht 103. 1839; Hook. f., Fl. Brit. India 7: 90. 1896.

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

Cenchrus ciliaris L., Mant. Pl. 302. 1771; Bor, Grass. Burm. Ceyl. Ind. Pak. 287. 1960.

Fl. & Fr.: September - December.

Distrib.: Patna, Purnia, Santal Pargana.

Cenchrus echinatus L., Sp. Pl. 1050. 1753; Bor, Grass. Burm. Ceyl. Ind. Pak. 289. 1960.

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

Cenchrus pennisetiformis Hochst. & Steud. *ex* Steud., Syn. Pl. Glum. 1: 109. 1854; Bor, Grass. Burm. Ceyl. Ind. Pak. 289. 1960. *Pennisetum cenchroides* var. *echinoides* (Wight *ex* Steud.) Hook. *f.*, Fl. Brit. India 7: 88. 1896.

Fl. & Fr.: August - November.

Distrib.: Palamau.

Cenchrus setigerus Vahl, Enum. Pl. 2: 395. 1806; Bor, Grass. Burm. Ceyl. Ind. Pak. 290. 1960. *C. biflorus auct. non* Roxb., 1820: Hook. *f.*, Fl. Brit. India 7: 89. 1896.

Fl. & Fr.: August - November.

Distrib.: Santal Pargana, Singhbhum.

CENTOTHECA Desv.

Centotheca lappacea (L.) Desv. in Nouv. Bull. Sci. Soc. Philom. Paris 2: 189. 1810; Hook. *f.*, Fl. Brit. India 7: 332. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 457. 1960. *Cenchrus lappaceus* L., Sp. Pl. ed. 2. 1488. 1763.

Fl. & Fr.: December - February.

Distrib.: Singhbhum.

CHIONACHNE R. Br.

Chionachne koenigii (Spreng.) Thwaites, Enum. Pl. Zeyl. 357. 1864; Bor, Grass. Burm. Ceyl. Ind. Pak. 262. 1960. *Coix koenigii* Spreng., Syst. Veg. 1: 239. 1825. *Polytoca barbata* (Roxb.) Stapf ex Hook. f., Fl. Brit. India 7: 102. 1896; Haines, Bot. Bihar Orissa 1062. 1924 (Repr. ed., 3: 1110. 1961).

Fl. & Fr.: August - October.

Distrib.: Palamau, Ranchi, Santal Pargana, Sahibganj.

Chionachne semiteres (Benth.) Henr. in Meded. Rijks Herb. n. 67, 16. 1931; Bor, Grass. Burm. Ceyl. Ind. Pak. 263. 1960. *Polytoca semiteres* Benth. in Benth. & Hook. f., Gen. Pl. 3: 1113. 1883; Hook. f., Fl. Brit. India 7: 101. 1896.

Fl. & Fr.: September - December.

Distrib.: Sahibganj (Jha and Varma in Indian Bot. Repr. 10: 45. 1991).

CHLORIS Sw.

Chloris barbata Sw., Fl. Ind. Occ. 1: 200. 1797; Hook. f., Fl. Brit. India 7: 292. 1896; Haines, Bot. Bihar Orissa 969. 1924 (Repr. ed., 3: 1014. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 465. 1960.

Fl. & Fr.: October - December.

Distrib.: Palamau, Purnia, Santal Pargana, West Champaran.

Chloris dolichostachya Lagasca, Gen. Sp. Pl. 5. 1816; Bor, Grass. Burm. Ceyl. Ind. Pak. 466. 1960. *C. incompleta* Roth, Nov. Pl. Sp. 60. 1821; Hook. f., Fl. Brit. India 7: 290. 1896; Haines, Bot. Bihar Orissa 968. 1924 (Repr. ed., 3: 1013. 1961).

Fl. & Fr.: October - December.

Distrib.: Bhagalpur, Hazaribagh.

Chloris montana Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 331. 1820; Hook. f., Fl. Brit. India 7: 292. 1896; Haines, Bot. Bihar Orissa 969. 1924 (Repr. ed., 3: 1014. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 466. 1960.

Fl. & Fr.: September - October.

Distrib.: Sahibganj.

Chloris virgata Sw., Fl. Ind. Occ. 1: 203. 1797; Hook. f., Fl. Brit. India 7: 291. 1896; Haines, Bot. Bihar Orissa 968. 1924 (Repr. ed., 3: 1014. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 468. 1960.

Fl. & Fr.: September - November.

Distrib.: Gaya, Munger, Palamau, Ranchi, Sahibganj.

CHRYSOPOGON Trin., *nom. cons.*

Chrysopogon aciculatus (Retz.) Trin., Fund. Agrost. 188. 1822; Haines, Bot. Bihar Orissa 1035. 1924 (Repr. ed., 3: 1083. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 115. 1960. *Andropogon aciculatus* Retz., Observ. Bot. 5: 22. 1789; Hook. f., Fl. Brit. India 7: 188. 1896.

Fl. & Fr.: July - November.

Distrib.: Deoghar, Koderma, Ranchi, West Champaran.

Chrysopogon fulvus (Spreng.) Chiov., Fl. Somalia 1: 327. 1929; Bor, Grass. Burm. Ceyl. Ind. Pak. 116. 1960. *Pollinia fulva* Spreng., Pugill. 2: 10. 1815. *Andropogon monticola* Roem. & Schult., Syst. Veg. 2, Mant. 3: 665. 1827; Hook. f., Fl. Brit. India 7: 192. 1896. *Chrysopogon montanus* Trin. ex Neue, Entdeck. 2: 93. 1821; Haines, Bot. Bihar Orissa 1037. 1924 (Repr. ed., 3: 1084. 1961).

Fl. & Fr.: September - December.

Distrib.: Hazaribagh, Palamau, Sahibganj, West Champaran.

Chrysopogon gryllus (L.) Trin., Fund. Agrost. 188. 1822; Bor, Grass. Burm. Ceyl. Ind. Pak. 117. 1960. *Andropogon gryllus* L., Cent. Pl. 2: 33. 1756.

Fl. & Fr.: July - November.

Distrib.: Singhbhum.

Chrysopogon hamiltonii (Hook. f.) Haines, Bot. Bihar Orissa 1036. 1924 (Repr. ed., 3: 1084. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 117. 1960. *Andropogon hamiltonii* Hook. f., Fl. Brit. India 7: 190. 1896.

Fl. & Fr.: August - October.

Distrib.: Munger. Endemic.

Chrysopogon lancearius (Hook. *f.*) Haines, Bot. Bihar Orissa 1036. 1924 (Repr. ed., 3: 1083. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 118. 1960. *Andropogon lancearius* Hook. *f.*, Fl. Brit. India 7: 190. 1896.

Fl. & Fr.: September - December.

Distrib.: Champaran, Gaya, Hazaribagh, Lohardaga, Munger, Palamau, Ranchi, Singhbhum.

Chrysopogon orientalis (Desv.) A. Camus in Lecomte, Fl. Indo - Chine 7: 332. 1922; Bor, Grass. Burm. Ceyl. Ind. Pak. 118. 1960. *Rhaphis orientalis* Desv., Opusc. 69. 1831.

Fl. & Fr.: October - November.

Distrib.: Chota Nagpur.

Chrysopogon polyphyllus (Hack. *ex* Hook. *f.*) Blatt. & McCann in J. Bombay Nat. Hist. Soc. 32: 416. 1928; Bor, Grass. Burm. Ceyl. Ind. Pak. 118. 1960. *Andropogon polyphyllus* Hack. *ex* Hook. *f.*, Fl. Brit. India 7: 194. 1896.

Fl. & Fr.: September - December.

Distrib.: Chota Nagpur.

Chrysopogon serrulatus Trin. in Mem. Acad. Sci. Pétersb. ser. 6, 2: 318. 1832; Bor, Grass. Burm. Ceyl. Ind. Pak. 118. 1960. *Andropogon monticola* Schult. var. *trinii* Hook. *f.*, Fl. Brit. India 7: 193. 1896.

Fl. & Fr.: October - November.

Distrib.: Hazaribagh.

CLEISTACHNE Benth.

Cleistachne sorghoides Benth. in Hook., Icon. Pl. 14: t. 1379. 1882; Bor, Grass. Burm. Ceyl. Ind. Pak. 119. 1960.

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

COELACHNE R. Br.

Coelachne simpliciuscula (Wight & Arnott ex Steud.) Munro ex Benth. in J. Linn. Soc. London (Bot.) 19: 93. 1881; Bor, Grass. Burm. Ceyl. Ind. Pak. 576. 1960. *Panicum simpliciusculum* Wight & Arnott ex Steud., Syn. Pl. Glum. 1: 96. 1854. *Coelachne pulchella* sensu Haines, Bot. Bihar Orissa 954. 1924 (Repr. ed., 3: 999. 1961), non R. Br., 1810.

Fl. & Fr.: November - December.

Distrib.: Palamau, Ranchi, Singhbhum.

COELORACHIS Brongn.

Coelorachis striata (Nees ex Steud.) A. Camus in Ann. Soc. Linn. Lyon n.s. 68: 197. 1921; Bor, Grass. Burm. Ceyl. Ind. Pak. 121. 1960. *Rottboellia striata* Nees ex Steud., Syn. Pl. Glum. 1: 361. 1854; Hook. f., Fl. Brit. India 7: 157. 1896.

Fl. & Fr.: October - December.

Distrib.: Chota Nagpur.

COIX L.

Coix aquatica Roxb., Fl. Ind. 3: 571. 1832; Hook. f., Fl. Brit. India 7: 100. 1896; Haines, Bot. Bihar Orissa 1064. 1924 (Repr. ed., 3: 1112. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 264. 1960.

Fl. & Fr.: October - January.

Distrib.: Munger, Sahibganj.

Coix gigantea Koen. ex Roxb., Fl. Ind. 3: 570. 1832; Haines, Bot. Bihar Orissa 1064. 1924 (Repr. ed., 3: 1112. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 264. 1960. *C. lacryma-jobi* L. var. *gigantea* (Roxb.) Stapf ex Hook. f., Fl. Brit. India 7: 100. 1896.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Purnia.

Coix lacryma-jobi L., Sp. Pl. 972. 1753; Hook. f., Fl. Brit. India 7: 100. 1896; Haines, Bot. Bihar Orissa 1063. 1924 (Repr. ed., 3: 1111. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 264. 1960.

Fl. & Fr.: September - February.

Distrib.: Palamau, Purnia, Ranchi, Singhbhum, West Champaran.

CRYPISIS Aiton, *nom. cons.*

Crypsis schoenoides (L.) Lam., *Illustr.* 1: 166. t. 42. 1791; Bor, Grass. Burm. Ceyl. Ind. Pak. 622. 1960. *Phleum schoenoides* L., *Sp. Pl.* 60. 1753. *Heleochloa schoenoides* (L.) Host, *Ic. Gram. Austr.* 1: 23. t. 30. 1801; Hook. *f.*, *Fl. Brit. India* 7: 235. 1896.

Fl. & Fr.: December - February.

Distrib.: Muzaffarpur, Patna.

CYMBOPOGON Spreng.

Cymbopogon caesius (Nees ex Hook. & Arnott) Stapf in *Bull. Misc. Inform. Kew* 1906: 341. 1906; Bor, Grass. Burm. Ceyl. Ind. Pak. 125. 1960. *Andropogon caesius* Nees ex Hook. & Arnott, *Bot. Beech. Voy.* 244. 1838. *A. schoenanthus* L. var. *caesius* (Nees ex Hook. & Arnott) Hack. in A. & C. DC., *Monogr. Phan.* 6: 610. 1889; Hook. *f.*, *Fl. Brit. India* 7: 205. 1896.

Fl. & Fr.: October - November.

Distrib.: Chota Nagpur.

Cymbopogon citratus (DC.) Stapf in *Bull. Misc. Inform. Kew* 1906: 357. 1906; Bor, Grass. Burm. Ceyl. Ind. Pak. 126. 1960. *Andropogon citratus* DC., *Cat. Hort. Monsp.* 78. 1813.

Fl. & Fr.: October - December.

Distrib.: Cultivated.

Cymbopogon flexuosus (Nees ex Steud.) Wats. in *Atkins., Gaz. N. W. Prov. Ind.* 392. 1882; Bor, Grass. Burm. Ceyl. Ind. Pak. 127. 1960. *Andropogon flexuosus* Nees ex Steud., *Syn. Pl. Glum.* 1: 388. 1854. *A. nardus* L. subsp. *flexuosus* (Nees) Hack. in A. & C. DC., *Monogr. Phan.* 6: 603. 1889; Hook. *f.*, *Fl. Brit. India* 7: 207. 1896.

Fl. & Fr.: October - December.

Distrib.: Munger, Ranchi, Sahibganj.

Cymbopogon gidarba (Buch.-Ham. ex Hook. f.) Haines, Bot. Bihar Orissa 1048. 1924 (Repr. ed., 3: 1096. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 128. 1960. *Andropogon gidarba* Buch.-Ham. ex Hook. f., Fl. Brit. India 7: 208. 1896.

Fl. & Fr.: October - November.

Distrib.: Gaya, Hazaribagh, Koderma, Munger, West Champaran.

Cymbopogon jwarancusa (Jones) Schult., Syst. Veg. 2, Mant. 458. 1824; Haines, Bot. Bihar Orissa 1045. 1924 (Repr. ed., 3: 1093. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 128. 1960. *Andropogon jwarancusa* Jones in Asiat. Res. 4: 109. 1795; Hook. f., Fl. Brit. India 7: 203. 1896.

Fl. & Fr.: April - August.

Distrib.: Patna, West Champaran.

Cymbopogon khasianus (Hack.) Stapf ex Bor in Indian For. Rec. (Bot.) 1: 3, 92. 1938 & Grass. Burm. Ceyl. Ind. Pak. 128. 1960. *Andropogon nardus* L. var. *khasianus* Hack. in A. & C. DC., Monogr. Phan. 6: 603. 1889; Hook. f., Fl. Brit. India 7: 206. 1896.

Fl. & Fr.: October - December.

Distrib.: Gaya.

Cymbopogon martinii (Roxb.) Wats. in Atkins., Gaz. N. W. Prov. Ind. 392. 1882; Haines, Bot. Bihar Orissa 1046. 1924 (Repr., ed. 3: 1093. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 129. 1960. *Andropogon martinii* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 280. 1820. *A. schoenanthus* L. var. *martinii* Hook. f., Fl. Brit. India 7: 204. 1896.

Fl. & Fr.: October - December.

Distrib.: Throughout the state.

Cymbopogon microstachys (Hook. f.) Soenarko in Reinwardtia 9: 364. 1977. *Andropogon nardus* L. var. *microstachys* Hook. f., Fl. Brit. India 7: 207. 1896. *Cymbopogon flexuosus* (Nees ex Steud.) Wats. var. *microstachys* (Hook. f.) Bor in J. Bombay Nat. Hist. Soc. 52: 162. 1954 & Grass. Burm. Ceyl. Ind. Pak. 127. 1960.

Fl. & Fr.: October - December.

Distrib.: Santal Pargana.

Cymbopogon microtheca (Hook. f.) A. Camus in Rev. Bot. Appl. 1: 284. 1921; Haines, Bot. Bihar Orissa 1047. 1924 (Repr., ed. 3: 1095. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 129. 1960. *Andropogon microtheca* Hook. f., Fl. Brit. India 7: 208. 1896.

Fl. & Fr.: October - December.

Distrib.: West Champaran.

Cymbopogon nardus (L.) Rendle in Cat. Welw., Afr. Pl. 2: 155. 1899; Haines, Bot. Bihar Orissa 1046. 1924 (Repr. ed., 3: 1094. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 130. 1960. *Andropogon nardus* L., Sp. Pl. 1046. 1753; Hook. f., Fl. Brit. India 7: 206. 1896.

Fl. & Fr.: September - December.

Distrib.: Munger, Ranchi, Santal Pargana, West Champaran.

Cymbopogon pendulus (Nees ex Steud.) Wats. in Atkins., Gaz. N. W. Prov. Ind. 392. 1882; Bor, Grass. Burm. Ceyl. Ind. Pak. 131. 1960. *Andropogon pendulus* Nees ex Steud., Syn. Pl. Glum. 1: 388. 1854.

Fl. & Fr.: October - December.

Distrib.: Bhagalpur.

CYNODON L.C. Rich., *nom. cons.*

Cynodon arcuatus J.S. Presl ex C.B. Presl, Reliq. Haenk. 1: 290. 1830; Bor, Grass. Burm. Ceyl. Ind. Pak. 469. 1960.

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Sahibganj.

Cynodon barberi Rang. & Tad. in J. Bombay Nat. Hist. Soc. 24: 846. 1916; Bor, Grass. Burm. Ceyl. Ind. Pak. 469. 1960.

Fl. & Fr.: August - November.

Distrib.: Sahibganj.

Cynodon dactylon (L.) Pers., Syn. Pl. 1: 85. 1805; Hook. f., Fl. Brit. India 7: 288. 1896; Haines, Bot. Bihar Orissa 966. 1924 (Repr. ed., 3: 1012. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 469. 1960. *Panicum dactylon* L., Sp. Pl. 58. 1753.

Fl. & Fr.: Almost throughout the year.

Distrib.: Throughout the state.

CYRTOCOCCUM Stapf

Cyrtococcum oxyphyllum (Steud.) Stapf in Hook., Icon. Pl. sub t. 3096. 1922; Bor, Grass. Burm. Ceyl. Ind. Pak. 291. 1960. *Panicum oxyphyllum* Steud., Syn. Pl. Glum. 1: 65. 1854. *P. pilipes* Nees & Arn. ex Buese in Miq., Pl. Jungh. 3: 376. 1854; Hook. f., Fl. Brit. India 7: 57. 1896.

Fl. & Fr.: January - March.

Distrib.: Singhbhum.

Cyrtococcum patens (L.) A. Camus in Bull. Mus. Hist. Nat. Paris 27: 118. 1921; Bor, Grass. Burm. Ceyl. Ind. Pak. 292. 1960. *Panicum patens* L., Sp. Pl. 58. 1753; Hook. f., Fl. Brit. India 7: 57. 1896.

Fl. & Fr.: August - October.

Distrib.: Munger, Purnia, Singhbhum.

Cyrtococcum trigonum (Retz.) A. Camus in Bull. Mus. Hist. Nat. Paris 27: 118. 1921; Bor, Grass. Burm. Ceyl. Ind. Pak. 292. 1960. *Panicum trigonum* Retz., Observ. Bot. 3: 9. 1783; Hook. f., Fl. Brit. India 7: 56. 1896.

Fl. & Fr.: November - February.

Distrib.: Sahibganj (Jha and Varma in J. Bombay Nat. Hist. Soc. 91: 166. 1994).

DACTYLOCTENIUM Willd.

Dactyloctenium aegyptium (L.) Willd., Enum. Hort. Berol. 1029. 1809; Bor, Grass. Burm. Ceyl. Ind. Pak. 489. 1960. *Cynosurus aegyptius* L., Sp. Pl. 72. 1753. *Eleusine aegyptia* (L.) Desf., Fl. Atlant. 1: 85. 1798; Hook. f., Fl. Brit. India 7: 295. 1896; Haines, Bot. Bihar Orissa 970. 1924 (Repr. ed., 3: 1016. 1961).

Fl. & Fr.: August - March.

Distrib.: Throughout the state.

Dactyloctenium aristatum Link, Hort. Berol. 1: 59. 1827; Bor, Grass. Burm. Ceyl. Ind. Pak. 489. 1960.

Fl. & Fr.: July - October.

Distrib.: Chota Nagpur.

Dactyloctenium scindicum Boiss., Diagn. 2, 4: 131. 1859; Bor, Grass. Burm. Ceyl. Ind. Pak. 489. 1960.

Fl. & Fr.: September - January.

Distrib.: Singhbhum.

DENDROCALAMUS Nees

Dendrocalamus giganteus Munro in Trans. Linn. Soc. London 26: 150. 1868; Gamble in Hook. *f.*, Fl. Brit. India 7: 406. 1896.

Distrib.: Cultivated.

Dendrocalamus hamiltonii Nees & Arnott ex Munro in Trans. Linn. Soc. London 26: 151. 1868; Gamble in Hook. *f.*, Fl. Brit. India 7: 405. 1896; Haines, Bot. Bihar Orissa 947. 1924 (Repr. ed., 3: 992. 1961).

Fl. & Fr.: November - April.

Distrib.: West Champaran.

Dendrocalamus strictus (Roxb.) Nees in Linnaea 9: 476. 1834; Gamble in Hook. *f.*, Fl. Brit. India 7: 404. 1896; Haines, Bot. Bihar Orissa 947. 1924 (Repr. ed., 3: 992. 1961). *Bambos stricta* Roxb., Pl. Corom. 1: 58. t. 80. 1795.

var. **sericeus** (Munro) Gamble, Man. Indian Timb. 751. 1902; Haines, Bot. Bihar Orissa 947. 1924 (Repr. ed., 3: 992. 1961). *Dendrocalamus sericeus* Munro in Trans. Linn. Soc. London 26: 148. 1868; Gamble in Hook. *f.*, Fl. Brit. India 7: 404. 1896.

Fl. & Fr.: November - June.

Distrib.: Hazaribagh. Endemic.

var. **strictus**

Fl. & Fr.: November - June.

Distrib.: Palamau, Patna, Sahibganj, West Champaran.

DESMOSTACHYA Stapf

Desmostachya bipinnata (L.) Stapf in Dyer, Fl. Cap. 7: 632. 1900; Bor, Grass. Burm. Ceyl. Ind. Pak. 491. 1960. *Briza bipinnata* L., Syst. Nat. ed. 10. 2: 875. 1759. *Eragrostis cynosuroides* (Retz.) P. Beauv., Ess. Agrost. 71, 162. 1812; Hook. f., Fl. Brit. India 7: 324. 1896. *Desmostachya cynosuroides* Stapf ex Haines, Bot. Bihar Orissa 962. 1924 (Repr. ed., 3: 1007. 1961).

Fl. & Fr.: May - November.

Distrib.: Deoghar, Gaya, Koderma, Munger, Palamau, Ranchi, Sahibganj, West Champaran.

DICHANTHIUM Willemet

Dichanthium annulatum (Forssk.) Stapf in Prain, Fl. Trop. Afr. 9: 178. 1917; Haines, Bot. Bihar Orissa 1039. 1924 (Repr. ed., 3: 1087. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 133. 1960. *Andropogon annulatus* Forssk., Fl. Aegypt.-Arab. 173. 1775; Hook. f., Fl. Brit. India 7: 196. 1896.

Fl. & Fr.: August - November.

Distrib.: Bhagalpur, Gaya, Muzaffarpur, Palamau, Patna, Purnia, Santal Pargana, Singhbhum, West Champaran.

Dichanthium aristatum (Poir.) C.E. Hubb. in Bull. Misc. Inform. Kew 1939: 654. 1939; Bor, Grass. Burm. Ceyl. Ind. Pak. 134. 1960. *Andropogon aristatus* Poir. in Lam., Encycl. 1: 585. 1810. *A. caricosus* L. var. *mollicomus* (Kunth) Hack. in A. & C. DC., Monogr. Phan. 6: 569. 1889; Hook. f., Fl. Brit. India 7: 196. 1896.

Fl. & Fr.: November - March.

Distrib.: Hazaribagh, Koderma, Palamau.

Dichanthium caricosum (L.) A. Camus in Bull. Mus. Hist. Nat. Paris 27: 549. 1921; Haines, Bot. Bihar Orissa 1039. 1924 (Repr. ed., 3: 1086. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 134. 1960. *Andropogon caricosus* L., Sp. Pl. ed. 2. 1480. 1763; Hook. f., Fl. Brit. India 7: 196. 1896.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Muzaffarpur, Palamau, Patna.

DIECTOMIS Kunth

Diectomis fastigiata (Sw.) Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. 1: 193. t. 64. 1816; Haines, Bot. Bihar Orissa 1042. 1924 (Repr. ed., 3: 1089. 1961; Bor, Grass. Burm. Ceyl. Ind. Pak. 135. 1960. *Andropogon fastigiatus* Sw., Prodr. 26. 1788; Hook. f., Fl. Brit. India 7: 167. 1896.

Fl. & Fr.: September - December.

Distrib.: Gaya, Hazaribagh, Koderma, Lohardaga, Palamau, Ranchi.

DIGITARIA Haller

Digitaria abludens (Roem. & Schult.) Veldk. in Blumea 21: 53. 1973. *Panicum abludens* Roem. & Schult., Syst. Veg. 2: 457. 1817. *Paspalum pedicellare* Trin. ex Hook. f., Fl. Brit. India 7: 19. 1896. *Digitaria pedicellaris* (Trin. ex Hook. f.) Prain, Bengal Pl. 1181. 1903 (Repr. ed., 2: 890. 1963). *D. granularis* (Trin. ex Spreng.) Henr., Monogr. Gen. Digitaria 302. 1950; Bor, Grass. Burm. Ceyl. Ind. Pak. 301. 1960.

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Palamau, Patna, Sahibganj, Singhbhum.

Digitaria bicornis (Lam.) Roem. & Schult. ex Loud., Hort. Brit. 24: n. 1578. 1830; Bor, Grass. Burm. Ceyl. Ind. Pak. 299. 1960. *Paspalum bicorne* Lam., Illustr. 1: 176. 1791.

Fl. & Fr.: July - October.

Distrib.: Gaya, Koderma, Palamau, Ranchi.

Digitaria ciliaris (Retz.) Koel., Descr. Gram. 27. 1802. *Panicum ciliare* Retz., Observ. Bot. 4: 16. 1786. *Digitaria biformis* Willd., Enum. Pl. Hort. Berol. 92. 1809; Bor, Grass. Burm. Ceyl. Ind. Pak. 299. 1960. *Paspalum sanguinale* Lam. var. *ciliare* (Retz.) Hook. f., Fl. Brit. India 7: 15. 1896.

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Koderma, Muzaffarpur, Palamau, Patna, West Champaran.

Digitaria cruciata (Nees ex Steud.) A. Camus in Lecomte, Fl. Indo-Chine 7: 399. 1922; Bor, Grass. Burm. Ceyl. Ind. Pak. 300. 1960. *Panicum cruciatum* Nees ex Steud., Syn. Pl. Glum. 1: 39. 1854. *Paspalum sanguinale* Lam. var. *cruciatum* (Nees ex Steud.) Hook. f., Fl. Brit. India 7: 14. 1896.

Fl. & Fr.: September - November.

Distrib.: Hazaribagh.

Digitaria longiflora (Retz.) Pers., Syn. Pl. 1: 85. 1805; Haines, Bot. Bihar Orissa 1008. 1924 (Repr. ed., 3: 1054. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 302. 1960. *Paspalum longiflorum* Retz., Observ. Bot. 4: 15. 1786.

Fl. & Fr.: July - December.

Distrib.: Hazaribagh, Palamau, Purnia, Saran, West Champaran.

Digitaria radicata (C.B. Presl) Miq., Fl. Ind. Bat. 3: 437. 1857. *Panicum radicosum* C.B. Presl, Reliq. Haenk. 1: 297, 1830.

Fl. & Fr.: August - October.

Distrib.: Palamau.

Digitaria sanguinalis (L.) Scop., Fl. Carn. ed. 2. 1: 52. 1772; Haines, Bot. Bihar Orissa 1007. 1924 (Repr. ed., 3: 1053. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 304. 1960. *Panicum sanguinale* L., Sp. Pl. 57. 1753. *Paspalum sanguinale* (L.) Lam., Illustr. 1: 176. 1791; Hook. f., Fl. Brit. India 7: 13. 1896.

Fl. & Fr.: September - November.

Distrib.: Throughout the state.

Digitaria setigera Roth ex Roem. & Schult., Syst. Veg. 2: 474. 1817; Bor, Grass. Burm. Ceyl. Ind. Pak. 305. 1960. *Panicum pruriens* Trin., Gram. Panic. 77. 1826. *Paspalum sanguinale* Lam. var. *extensum* Hook. f., Fl. Brit. India 7: 15. 1896.

Fl. & Fr.: July - October.

Distrib.: Deoghar, Hazaribagh, Munger, Palamau, Sahibganj.

Digitaria siamensis Henr., Monogr. Gen. Digitaria 692. 1950; Bor, Grass. Burm. Ceyl. Ind. Pak. 305. 1960.

Fl. & Fr.: August - December.

Distrib.: Godda, Sahibganj.

Digitaria stricta Roth ex Roem. & Schult., Syst. Veg. 2: 474. 1817; Bor, Grass. Burm. Ceyl. Ind. Pak. 305. 1960. *Paspalum royleanum* Nees ex Hook. f., Fl. Brit. India 7: 18. 1896. *Digitaria royleana* Prain, Bengal Pl. 1182. 1903; Haines, Bot. Bihar Orissa 1008. 1924 (Repr. ed., 3: 1055. 1961).

var. **denudata** (Link) Henr., Monogr. Gen. Digitaria 175. 1950. *Digitaria denudata* Link, Hort. Berol. 1: 222. 1827.

Distrib.: Ranchi, Santal Pargana.

var. **stricta**

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Muzaffarpur, Palamau, Sahibganj, West Champaran.

Digitaria thwaitesii (Hack.) Henr. in Blumea 1: 101. 1934. *Panicum thwaitesii* Hack. in Ost. Bot. Z. 51: 334. 1901.

Distrib.: Bihar (Jain *et al.* in J. Bombay Nat. Hist. Soc. 72: 758-773. 1975).

DIMERIA R. Br.

Dimeria connivens Hack. in A. & C. DC., Monogr. Phan. 6: 689. 1889; Hook. f., Fl. Brit. India 7: 104. 1896; Haines, Bot. Bihar Orissa 1016. 1924 (Repr. ed., 3: 1062. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 140. 1960.

Fl. & Fr.: October - December.

Distrib.: Palamau, Ranchi, Singhbhum.

Dimeria hohenackeri Hochst. ex Miq. in Verh. Ned. Inst. 3, 4: 35. 1851; Hook. f., Fl. Brit. India 7: 103. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 142. 1960.

Fl. & Fr.: September - February.

Distrib.: Chota Nagpur (Banerjee and Pal in Bull. Bot. Surv. India 12: 70-72. 1970).

Dimeria ornithopoda Trin., Fund. Agrost. 167. t. 14. 1820; Hook. *f.*, Fl. Brit. India 7: 104. 1896; Haines, Bot. Bihar Orissa 1016. 1924 (Repr. ed., 3: 1062. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 142. 1960.

var. **gracillima** Bor in Kew Bull. 1952: 576. 1952 & Grass. Burm. Ceyl. Ind. Pak. 144. 1960.

Distrib.: Parasnath (Bor, 1952). Endemic.

var. **ornithopoda**

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Singhbhum.

Dimeria pubescens Hack. in A. & C. DC., Monogr. Phan. 6: 83. 1889; Hook. *f.*, Fl. Brit. India 7: 105. 1896.

Distrib.: Bihar (Jain *et al.* in J. Bombay Nat. Hist. Soc. 72: 758-773. 1975).

DINEBRA Jacq.

Dinebra retroflexa (Vahl) Panz. in Denkschr. Acad. Wiss. Munchen 270. t. 12. 1814; Bor, Grass. Burm. Ceyl. Ind. Pak. 491. 1960. *Cynosurus retroflexus* Vahl, Symb. Bot. 2: 20. 1791. *Dinebra arabica* Jacq., Fragm. 77. t. 121. f. 1. 1809; Hook. *f.*, Fl. Brit. India 7: 297. 1896; Haines, Bot. Bihar Orissa 971. 1924 (Repr. ed., 3: 1016. 1961).

Distrib.: Bihar (*s.l.*).

DIPLACHNE P. Beauv.

Diplachne fusca (L.) P. Beauv. ex Roem. & Schult., Syst. Veg. 2: 615. 1817; Hook. *f.*, Fl. Brit. India 7: 329. 1896; Haines, Bot. Bihar Orissa 962. 1924 (Repr. ed., 3: 1008. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 492. 1960. *Festuca fusca* L., Syst. Veg. ed. 10. 2: 876. 1759.

Fl. & Fr.: December - February.

Distrib.: Sasaram.

ECHINOCHLOA P. Beauv.

Echinochloa colona (L.) Link, Hort. Berol. 2: 209. 1833; Haines, Bot. Bihar Orissa 997. 1924 (Repr. ed., 3: 1043. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 308. 1960. *Panicum colonum* L., Syst. Nat. ed. 10. 2: 870. 1759; Hook. f., Fl. Brit. India 7: 32. 1896.

Fl. & Fr.: July - December.

Distrib.: Throughout the state.

Echinochloa crus-galli (L.) P. Beauv., Ess. Agrost. 53, 761. 1812; Haines, Bot. Bihar Orissa 998. 1924 (Repr. ed., 3: 1044. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 310. 1960. *Panicum crus-galli* L., Sp. Pl. 56: 1753; Hook. f., Fl. Brit. India 7: 30. 1896, *p.p.*

var. crus-galli

Fl. & Fr.: August - November.

Distrib.: Palamau, Sahibganj, Singhbhum.

Echinochloa frumentacea Link, Hort. Berol. 1: 204. 1827; Bor, Grass. Burm. Ceyl. Ind. Pak. 311. 1960. *Panicum crus-galli* (L.) P. Beauv. var. *frumentaceum* Hook. f., Fl. Brit. India 7: 31. 1896; Haines, Bot. Bihar Orissa 998. 1924 (Repr. ed., 3: 1044. 1961). - *Sawan*.

Fl. & Fr.: August - December.

Distrib.: Munger, Singhbhum.

Echinochloa stagnina (Retz.) P. Beauv., Ess. Agrost. 53, 161, 171. 1812; Bor, Grass. Burm. Ceyl. Ind. Pak. 311. 1960. *Panicum stagninum* Retz., Observ. Bot. 5: 17. 1789. *P. crus-galli auct. non L.*, 1753; Hook. f., Fl. Brit. India 7: 30. 1896, *p.p.*

Fl. & Fr.: August - December.

Distrib.: Palamau, Sahibganj, West Champaran.

ELEUSINE Gaertn.

Eleusine coracana (L.) Gaertn., Fruct. Sem. Pl. 1: 8. t. 1. f. 11. 1789; Hook. f., Fl. Brit. India 7: 294. 1896; Haines, Bot. Bihar Orissa 970. 1924

(Repr. ed., 3: 1015. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 492. 1960. *Cynosurus coracanus* L., Syst. Nat. ed. 10. 2: 875. 1759. - *Kode, Ragi*.

Fl. & Fr.: September - November.

Distrib.: Cultivated throughout the state.

Eleusine indica (L.) Gaertn., Fruct. Sem. Pl. 1: 8. 1789; Hook. *f.*, Fl. Brit. India 7: 293. 1896; Haines, Bot. Bihar Orissa 970. 1924 (Repr. ed., 3: 1015. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 493. 1960. *Cynosurus indicus* L., Sp. Pl. 72. 1753.

Fl. & Fr.: June - November.

Distrib.: Gaya, Hazaribagh, Palamau, Patna, Ranchi, Santal Pargana, West Champaran.

ELYTROPHORUS P. Beauv.

Elytrophorus spicatus (Willd.) A. Camus in Lecomte, Fl. Indo - Chine 7: 547. 1923; Bor, Grass. Burm. Ceyl. Ind. Pak. 493. 1960. *Dactylis spicata* Willd. in Ges. Naturf. Freunde Berlin, Neue Schrift. 3: 416. 1801. *Elytrophorus articulatus* P. Beauv., Ess. Agrost. 67. t. 14. f. 2. 1812; Haines, Bot. Bihar Orissa 963. 1924 (Repr. ed., 3: 1008. 1961).

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Lohardaga, Palamau, Purnia, Ranchi, Singhbhum, West Champaran.

ERAGROSTIELLA Bor

Eragrostiella bifaria (Vahl) Bor in Indian For. 66: 270. 1940 & Grass. Burm. Ceyl. Ind. Pak. 494. 1960. *Poa bifaria* Vahl, Symb. Bot. 2: 19. 1791. *Eragrostis coromandeliana* (Koen. ex Rottl.) Trin. in Mem. Acad. Sci. Pétersb. ser. 6, 1: 415. 1830; Stapf in Hook. *f.*, Fl. Brit. India 7: 326. 1896; Haines, Bot. Bihar Orissa 961. 1924 (Repr. ed., 3: 1006. 1961).

Fl. & Fr.: September - December.

Distrib.: Hazaribagh, Patna, Purnia, Ranchi, West Champaran.

Eragrostiella brachyphylla (Stapf) Bor in Indian For. 66: 270. 1940 & Grass. Burm. Ceyl. Ind. Pak. 494. 1960. *Eragrostis brachyphylla* Stapf

in Hook. *f.*, Fl. Brit. India 7: 327. 1896; Haines, Bot. Bihar Orissa 961. 1924 (Repr. ed., 3: 1007. 1961).

Fl. & Fr.: August - September.

Distrib.: Hazaribagh, Munger, Singhbhum.

Eragrostiella leioptera (Stapf) Bor in Indian For. 66: 270. 1940 & Grass. Burm. Ceyl. Ind. Pak. 495. 1960. *Eragrostis leioptera* Stapf in Hook. *f.*, Fl. Brit. India 7: 325. 1896.

Fl. & Fr.: October - December.

Distrib.: Purnia.

Eragrostiella nardoides (Trin.) Bor in Indian For. 66: 270. 1940 & Grass. Burm. Ceyl. Ind. Pak. 495. 1960. *Eragrostis nardoides* Trin. in Mem. Acad. Sci. Pétersb. ser. 6, 1: 415. 1830; Stapf in Hook. *f.*, Fl. Brit. India 7: 326. 1896; Haines, Bot. Bihar Orissa 961. 1924 (Repr. ed., 3: 1006. 1961).

Fl. & Fr.: August - October.

Distrib.: Gaya, Hazaribagh, Palamau.

ERAGROSTIS Wolf

Eragrostis aspera (Jacq.) Nees, Fl. Afr. Austr. 408. 1841; Stapf in Hook. *f.*, Fl. Brit. India 7: 314. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 501. 1960. *Poa aspera* Jacq., Hort. Vindob. 3: 32. t. 56. 1776.

Fl. & Fr.: August - November.

Distrib.: Sahibganj (Varma and Jha in J. Bombay Nat. Hist. Soc. 89: 147. 1992).

Eragrostis atrovirens (Desf.) Trin. ex Steud., Nom. Bot. ed. 2. 1: 562. 1840; Bor, Grass. Burm. Ceyl. Ind. Pak. 503. 1960. *Poa atrovirens* Desf., Fl. Atlant. 1: 73. t. 14. 1798.

Fl. & Fr.: August - November.

Distrib.: Godda, Palamau, Sahibganj.

Eragrostis cilianensis (All.) Vignolo - Lutati ex F.T. Hubb. in Philipp. J. Sci. C, Bot. 8: 159. 1913; Bor, Grass. Burm. Ceyl. Ind. Pak. 503. 1960. *Poa cilianensis* All., Fl. Pedem. 2: 246. t. 91. f. 2. 1785. *Eragrostis major*

Host, Gram. Austr. 4: 14. t. 24. 1809; Stapf in Hook. *f.*, Fl. Brit. India 7: 320. 1896; Haines, Bot. Bihar Orissa 959. 1924 (Repr. ed., 3: 1005. 1961).

Fl. & Fr.: February - December.

Distrib.: Bhagalpur, Gaya, Munger, Palamau, Purnia, Ranchi.

Eragrostis ciliaris (L.) R. Br. in Tuckey, Narr. Exp. Congo, App. 478. 1818; Stapf in Hook. *f.*, Fl. Brit. India 7: 314. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 506. 1960. *Poa ciliaris* L., Syst. Nat. ed. 10. 2: 875. 1759.

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Palamau.

Eragrostis ciliata (Roxb.) Nees, Agrost. Bras. 512. 1829; Stapf in Hook. *f.*, Fl. Brit. India 7: 313. 1896; Haines, Bot. Bihar Orissa 956. 1924 (Repr. ed., 3: 1001. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 506. 1960. *Poa ciliata* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 336. 1820.

Fl. & Fr.: July - December.

Distrib.: Hazaribagh, Singhbhum, West Champaran.

Eragrostis coerctata Stapf in Hook. *f.*, Fl. Brit. India 7: 313. 1896; Haines, Bot. Bihar Orissa 956. 1924 (Repr. ed., 3: 1001. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 507. 1960.

Fl. & Fr.: July - February.

Distrib.: Throughout the state.

Eragrostis diarrhena (Schult.) Steud., Syn. Pl. Glumac. 1: 266. 1854; Bor, Grass. Burm. Ceyl. Ind. Pak. 507. 1960. *Poa diarrhena* Schult., Syst. Veg. 2, Mant. 616. 1927. *Eragrostis interrupta auct. non* (R. Br.) P. Beauv., 1812; Stapf in Hook. *f.*, Fl. Brit. India 7: 316. 1896 *incl. var. koenigii* Stapf, *l.c.*

Fl. & Fr.: October - March.

Distrib.: Gaya, Hazaribagh, Lohardaga, Purnia, Ranchi, Sahibganj, West Champaran.

Eragrostis gangetica (Roxb.) Steud., Syn. Pl. Glum. 1: 266. 1854; Haines, Bot. Bihar Orissa 958. 1924 (Repr. ed., 3: 1004. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 508. 1960. *Poa gangetica* Roxb., Fl. Ind. (Carey &

Wallich ed.) 1: 341. 1820. *Eragrostis stenophylla* Hochst. ex Miq. in Verh. Konink. - Ned. Inst. 3, 4: 39. 1851, *p.p.*; Stapf in Hook. *f.*, Fl. Brit. India 7: 318. 1896.

Fl. & Fr.: April - December.

Distrib.: Throughout the state.

Eragrostis japonica (Thunb.) Trin. in Mem. Acad. Sci. Pétersb. ser. 6, 1: 405. 1831; Bor, Grass. Burm. Ceyl. Ind. Pak. 509. 1960. *Poa japonica* Thunb., Fl. Jap. 51. 1784. *Eragrostis interrupta* var. *tenuissima* Stapf in Hook. *f.*, Fl. Brit. India 7: 316. 1896; Haines, Bot. Bihar Orissa 958. 1924 (Repr. ed., 3: 1003. 1961).

Fl. & Fr.: September - January.

Distrib.: Hazaribagh, Palamau, Ranchi, Sahibganj, West Champaran.

Eragrostis maderaspatana Bor, Grass. Burm. Ceyl. Ind. Pak. 509. 1960.

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur.

Eragrostis minor Host, Gram. Austr. 4: 15. 1809; Stapf in Hook. *f.*, Fl. Brit. India 7: 321. 1896; Haines, Bot. Bihar Orissa 960. 1924 (Repr. ed., 3: 1005. 1961). *E. poaeoides* P. Beauv., Ess. Agrost. 162. 1812; Bor, Grass. Burm. Ceyl. Ind. Pak. 512. 1960. *E. pappiana* Chiov. in Ann. Ist. Bot. Roma 8: 371. 1908; Bor, Grass. Burm. Ceyl. Ind. Pak. 511. 1960.

Fl. & Fr.: April - October.

Distrib.: East Champaran, Gaya, Munger, Palamau, Sahibganj, Sasaram, West Champaran.

Eragrostis nigra Nees ex Steud., Syn. Pl. Glum. 1: 267. 1854; Stapf in Hook. *f.*, Fl. Brit. India 7: 324. 1896; Haines, Bot. Bihar Orissa 1251, 1258. 1924 (Repr. ed., 3: 1305, 1312. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 511. 1960.

Fl. & Fr.: August - November.

Distrib.: Palamau.

Eragrostis nutans (Retz.) Nees ex Steud., Nom. Bot. ed. 2. 563. 1840; Bor, Grass. Burm. Ceyl. Ind. Pak. 511. 1960. *Poa nutans* Retz., Observ. Bot. 4: 19. 1786. *Eragrostis elegantula* Nees ex Steud., Syn. Pl. Glum. 1: 266. 1854; Stapf in Hook. f., Fl. Brit. India 7: 318. 1896.

Fl. & Fr.: October - December.

Distrib.: Palamau, Ranchi, West Champaran.

Eragrostis pilosa (L.) P. Beauv., Ess. Agrost. 71, 162, 175. 1812; Stapf in Hook. f., Fl. Brit. India 7: 323. 1896; Haines, Bot. Bihar Orissa 960. 1924 (Repr. ed., 3: 1006. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 512. 1960. *Poa pilosa* L., Sp. Pl. 68. 1753.

Fl. & Fr.: August - January.

Distrib.: Bhagalpur, Gaya, Hazaribagh, Palamau, Patna, Purnia, Ranchi, Saran.

Eragrostis riparia (Willd.) Nees, Agrost. Bras. 512. 1829; Bor, Grass. Burm. Ceyl. Ind. Pak. 513. 1960. *Poa riparia* Willd. in Ges. Natur. Freunde Berlin, Neue Schr. 4: 185. 1803. *Eragrostis tenella* var. *riparia* (Willd.) Stapf in Hook. f., Fl. Brit. India 7: 315. 1896.

Fl. & Fr.: October - December.

Distrib.: Godda (Jha and Varma in Indian Bot. Repr. 10: 45. 1991).

Eragrostis tenella (L.) P. Beauv. ex Roem. & Schult., Syst. Veg. 2: 576. 1817; Stapf in Hook. f., Fl. Brit. India 7: 315. 1896; Haines, Bot. Bihar Orissa 956. 1924 (Repr. ed., 3: 1001. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 513. 1960. *Poa tenella* L., Sp. Pl. 69. 1753.

Fl. & Fr.: August - January.

Distrib.: Throughout the state.

Eragrostis tenuifolia Hochst. ex Steud., Syn. Pl. Glum. 1: 268. 1854; Stapf in Hook. f., Fl. Brit. India 7: 322. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 514. 1960.

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Palamau.

Eragrostis tremula Hochst. ex Steud., Syn. Pl. Glum. 1: 269. 1854; Stapf in Hook. f., Fl. Brit. India 7: 320. 1896; Haines, Bot. Bihar Orissa 960. 1924 (Repr. ed., 3: 1005. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 514. 1960.

Fl. & Fr.: August - December.

Distrib.: Gaya, Hazaribagh, Koderma, Ranchi, Sasaram, Singhbhum, West Champaran.

Eragrostis unioides (Retz.) Nees ex Steud., Syn. Pl. Glum. 1: 264. 1854; Bor, Grass. Burm. Ceyl. Ind. Pak. 515. 1960. *Poa unioides* Retz., Observ. Bot. 5. 19. 1789. *Eragrostis amabilis* Stapf in Hook. f., Fl. Brit. India 7: 317. 1896, non Wight & Arnott ex Nees, 1838; Haines, Bot. Bihar Orissa 958. 1924 (Repr. ed., 3: 1003. 1961).

Fl. & Fr.: August - December.

Distrib.: Throughout the state.

Eragrostis viscosa (Retz.) Trin. in Mem. Acad. Sci. Pétersb. ser. 6, 1: 397. 1830; Haines, Bot. Bihar Orissa 957. 1924 (Repr. ed., 3: 1002. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 515. 1960. *Poa viscosa* Retz., Observ. Bot. 4: 20. 1786.

Fl. & Fr.: September - December.

Distrib.: Patna, Ranchi (Haines, l.c.).

Eragrostis zeylanica Nees & Mey. in Nov. Act. Nat. Cur. 19, Suppl. 1: 204. 1843; Bor, Grass. Burm. Ceyl. Ind. Pak. 515. 1960. *E. elongata* Stapf in Hook. f., Fl. Brit. India 7: 319. 1896, non Jacq., 1813; Haines, Bot. Bihar Orissa 959. 1924 (Repr. ed., 3: 1004. 1961).

Fl. & Fr.: August - October.

Distrib.: Singhbhum.

EREMOPOGON Stapf

Eremopogon foveolatus (Del.) Stapf in Prain, Fl. Trop. Afr. 9: 183. 1917; Bor, Grass. Burm. Ceyl. Ind. Pak. 148. 1960. *Andropogon foveolatus* Del., Fl. d'Egypte 16: t. 8. f. 2. 1812; Hook. f., Fl. Brit. India 7: 168. 1896. *Hypogynium foveolatum* (Del.) Haines, Bot. Bihar Orissa 1041. 1924 (Repr. ed., 3: 1089. 1961).

Fl. & Fr.: March - December.

Distrib.: Hazaribagh, Palamau, Singhbhum.

ERIOCHLOA Humb., Bonpl. & Kunth

Eriochloa procera (Retz.) C.E. Hubb. in Bull. Misc. Inform. Kew 1930: 256. 1930; Bor, Grass. Burm. Ceyl. Ind. Pak. 312. 1960. *Agrostis procera* Retz., Observ. Bot. 4: 19. 1786. *Eriochloa polystachya* Hook. f., Fl. Brit. India 7: 20. 1896, non Humb., Bonpl. & Kunth, 1816. *E. ramosa* Kuntze, Revis. Gen. Pl. 2: 775. 1891; Haines, Bot. Bihar Orissa 1006. 1924 (Repr. ed., 3: 1052. 1960).

Fl. & Fr.: August - December.

Distrib.: East Champaran, Muzaffarpur, Purnia, Sahibganj, West Champaran.

EUCLASTA Franch.

Euclasta clarkei (Hack.) T.A. Cope in Kew Bull. 35: 704. 1980. *Andropogon clarkei* Hack. in Ost. Bot. Z. 41: 49. 1891; Hook. f., Fl. Brit. India 7: 197. 1896. *Dichanthium clarkei* (Hack.) Haines, Bot. Bihar Orissa 1040. 1924 (Repr. ed., 3: 1087. 1961). *Indochloa clarkei* (Hack.) Bor in Kew Bull. 1954: 76. 1954 & Grass. Burm. Ceyl. Ind. Pak. 171. 1960.

Fl. & Fr.: September - October.

Distrib.: Hazaribagh. Endemic.

EULALIA Kunth

Eulalia fastigiata (Nees ex Steud.) Haines, Bot. Bihar Orissa 1014. 1924 (Repr. ed., 3: 1061. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 155. 1960. *Saccharum fastigiatum* Nees ex Steud., Syn. Pl. Glum. 1: 409. 1855. *Erianthus fastigiatus* Nees ex Steud., Syn. Pl. Glum. 1: 409. 1855; Hook. f., Fl. Brit. India 7: 125. 1896.

Fl. & Fr.: October - December.

Distrib.: Singhbhum.

Eulalia leschenaultiana (Decne.) Ohwi in Bull. Tokyo Sci. Mus. No. 18: 2. 1947; Bor, Grass. Burm. Ceyl. Ind. Pak. 155. 1960. *Andropogon*

leschenaultianus Decne., Herb. Timor Descr. 29. 1835. *Pollinia cumingii* Nees in Hook., Kew J. Bot. 2: 98. 1850; Hook. f., Fl. Brit. India 7: 114. 1896. *Eulalia cumingii* (Nees) A. Camus in Lecomte, Fl. Indo Chine 7: 250. 1922; Haines, Bot. Bihar Orissa 1018. 1924 (Repr. ed., 3: 1065. 1961).

Fl. & Fr.: October - November.

Distrib.: Hazaribagh, Ranchi, Singhbhum.

Eulalia trispicata (Schult.) Henr. in Blumea 3: 453. 1940; Bor, Grass. Burm. Ceyl. Ind. Pak. 157. 1960. *Andropogon trispicatus* Schult., Syst. Veg. 2, Mant. 452. 1824. *Pollinia argentea* Trin. in Bull. Sci. Acad. Pétersb. ser. 6, 1: 71. 1830; Hook. f., Fl. Brit. India 7: 111. 1896. *Eulalia argentea* Brongn. in Duperr., Voy. Coquille Bot. 2: 2, 92. 1830; Haines, Bot. Bihar Orissa 1018. 1924 (Repr. ed., 3: 1064. 1961).

Fl. & Fr.: October - January.

Distrib.: Hazaribagh, Singhbhum, West Champaran.

EULALIOPSIS Honda

Eulaliopsis binata (Retz.) C.E. Hubb. in Hook., Icon. Pl. sub t. 3262. 1935; Bor, Grass. Burm. Ceyl. Ind. Pak. 158. 1960. *Andropogon binatus* Retz., Observ. Bot. 5: 21. 1789. *Ischaemum angustifolium* (Trin.) Hack. in DC., Monogr. Phan. 6: 241. 1889; Hook. f., Fl. Brit. India 7: 129. 1896. *Pollinidium angustifolium* (Trin.) Haines, Bot. Bihar Orissa 1020. 1924 (Repr. ed., 3: 1066. 1961).

Fl. & Fr.: February - July.

Distrib.: Bhagalpur, Hazaribagh, Koderma, Sahibganj, Singhbhum, West Champaran.

GARNOTIA Brongn.

Garnotia tenella (Arnott ex Miq.) Jan. in Fedde, Repert. 17: 86. 1921. *Berghausia tenella* Arnott ex Miq. in Verh. Konink. Nederl. Inst. 3, 4: 34. 1851. *Garnotia stricta auct. non Brongn.*, 1831; Hook. f., Fl. Brit. India 7: 243. 1896; Haines, Bot. Bihar Orissa 975. 1924 (Repr. ed., 3: 1021. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 569. 1960.

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Koderma, Palamau.

GYMNOPOGON P. Beauv.

Gymnopogon delicatulus (C.B. Clarke ex Hook. f.) Bor, Grass. Burm. Ceyl. Ind. Pak. 472. 1960. *Chloris delicatula* C.B. Clarke ex Hook. f., Fl. Brit. India 7: 290. 1896; Haines, Bot. Bihar Orissa 968. 1924 (Repr. ed., 3: 1013. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Ranchi.

HEMARTHRIA R. Br.

Hemarthria compressa (L. f.) R. Br., Prodr. 207. 1810; Haines, Bot. Bihar Orissa 1061. 1924 (Repr. ed., 3: 1109. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 161. 1960. *Rottboellia compressa* L. f., Suppl. Pl. 114. 1782; Hook. f., Fl. Brit. India 7: 153. 1896.

Fl. & Fr.: July - October.

Distrib.: Munger, Purnia, Singhbhum.

Hemarthria protensa Steud., Syn. Pl. Glum. 1: 359. 1854; Haines, Bot. Bihar Orissa 1061. 1924 (Repr. ed., 3: 1109. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 161. 1960. *Rottboellia protensa* (Steud.) Hack. in A. & C. DC., Monogr. Phan. 6: 289. 1889; Hook. f., Fl. Brit. India 7: 153. 1896.

Fl.: March - May.

Distrib.: Santal Pargana (Haines, l.c.).

HETEROPOGON Pers.

Heteropogon contortus (L.) P. Beauv. ex Roem. & Schult., Syst. Veg. 2: 836. 1817; Haines, Bot. Bihar Orissa 1040. 1924 (Repr. ed., 3: 1088. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 163. 1960. *Andropogon contortus* L., Sp. Pl. 1045. 1753.

Fl. & Fr.: September - January.

Distrib.: Throughout the state.

Heteropogon melanocarpus (Ell.) Benth. in J. Linn. Soc. London (Bot.) 19: 71. 1881; Bor, Grass. Burm. Ceyl. Ind. Pak. 165. 1960.

Andropogon melanocarpus Ell., Sketch. Bot. S. Carol. 1: 146. 1816; Hook. f., Fl. Brit. India 7: 200. 1896.

Fl. & Fr.: October - December.

Distrib.: Palamau.

Heteropogon polystachyos (Roxb.) Schult., Syst. Veg. 2, Mant. 460. 1824; Bor, Grass. Burm. Ceyl. Ind. Pak. 165. 1960. *Andropogon polystachyos* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 265. 1820; Hook. f., Fl. Brit. India 7: 202. 1896.

Fl. & Fr.: August - December.

Distrib.: Chota Nagpur.

Heteropogon ritchiei (Hook. f.) Blatt. & McCann in J. Bombay Nat. Hist. Soc. 32: 623. 1928; Bor, Grass. Burm. Ceyl. Ind. Pak. 165. 1960. *Andropogon ritchiei* Hook. f., Fl. Brit. India 7: 201. 1896.

Fl. & Fr.: August - January.

Distrib.: Chota Nagpur.

HORDEUM L.

Hordeum vulgare L., Sp. Pl. 84. 1753; Hook. f., Fl. Brit. India 7: 371. 1896; Haines, Bot. Bihar Orissa 964. 1924 (Repr. ed., 3: 1009. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 677. 1960. - *Jau*.

Fl. & Fr.: January - March.

Distrib.: Cultivated. Chota Nagpur, West Champaran.

HYGRORYZA L.

Hygroryza aristata (Retz.) Nees ex Wight & Arnott in Edinb. New Phil. J. 15: 380. 1833; Hook. f., Fl. Brit. India 7: 95. 1896; Haines, Bot. Bihar Orissa 981. 1924 (Repr. ed., 3: 1027. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 597. 1960. *Pharus aristatus* Retz., Observ. Bot. 5: 23. 1789.

Fl. & Fr.: August - October.

Distrib.: Gaya, Purnia, Ranchi, Sahibganj, Singhbhum, West Champaran.

HYMENACHNE P. Beauv.

Hymenachne pseudointerrupta C. Muell. in Bot. 2. 19: 333. 1861; Bor, Grass. Burm. Ceyl. Ind. Pak. 313. 1960. *Panicum myurus* Hook. f., Fl. Brit. India 7: 39. 1896, non Lam., 1791. *Hymenachne myurus* P. Beauv., Ess. Agrost. 49. 1812; Haines, Bot. Bihar Orissa 991. 1924 (Repr. ed., 3: 1037. 1961).

Fl. & Fr.: October - November.

Distrib.: Sahibganj, West Champaran.

HYPARRHENIA Anderss. ex Fourn.

Hyparrhenia griffithii Bor in Indian For. Rec. (Bot.) 1: 92. 1938 & Grass. Burm. Ceyl. Ind. Pak. 167. 1960. *Andropogon filipendulus* Hook. f., Fl. Brit. India 7: 210. 1896, non Hochst., 1846, p.p.

Fl. & Fr.: August - October.

Distrib.: Chota Nagpur.

IMPERATA Cyr.

Imperata cylindrica (L.) Raeuschel., Nom. Bot. ed. 3. 10. 1797; Bor, Grass. Burm. Ceyl. Ind. Pak. 169. 1960. *Lagurus cylindricus* L., Syst. Nat. ed. 10. 878. 1759. *Imperata arundinacea* Cyr., Pl. Rar. Neap. 2: 26. t. 11. 1792; Hook. f., Fl. Brit. India 7: 106. 1896; Haines, Bot. Bihar Orissa 1015. 1924 (Repr. ed., 3: 1061. 1961).

Fl. & Fr.: August - June.

Distrib.: Hazaribagh, Muzaffarpur, Palamau, Patna, West Champaran.

ISACHNE R. Br.

Isachne albens Trin., Sp. Gram. 1, Ic. t. 85. 1826; Hook. f., Fl. Brit. India 7: 22. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 579. 1960.

Fl. & Fr.: August - November.

Distrib.: Singhbhum.

Isachne dispar Trin., Sp. Gram. 1, Ic. t. 86. 1826; Hook. f., Fl. Brit. India 7: 26. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 580. 1960.

Fl. & Fr.: October - November.

Distrib.: West Champaran.

Isachne elegans Dalz. in Dalz. & Gibs., Bombay Fl. 291. 1861; Hook. *f.*, Fl. Brit. India 7: 23. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 580. 1960.

Fl. & Fr.: August - December.

Distrib.: Santal Pargana.

Isachne globosa (Thunb.) Kuntze, Revis. Gen. Pl. 2: 778. 1891; Bor, Grass. Burm. Ceyl. Ind. Pak. 580. 1960. *Milium globosum* Thunb., Fl. Jap. 49. 1784. *Isachne australis* R. Br., Prodr. 196. 1810; Hook. *f.*, Fl. Brit. India 7: 24. 1896; Haines, Bot. Bihar Orissa 984. 1924 (Repr. ed., 3: 1030. 1961).

Fl. & Fr.: September - December.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum.

Isachne miliacea Roth ex Roem. & Schult., Syst. Veg. 3: 476. 1817; Hook. *f.*, Fl. Brit. India 7: 25. 1896; Haines, Bot. Bihar Orissa 984. 1924 (Repr. ed., 3: 1030. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 582. 1960.

Fl. & Fr.: September - November.

Distrib.: Purnia, Singhbhum.

Isachne pulchella Roth ex Roem. & Schult., Syst. Veg. 2: 476. 1817; Bor, Grass. Burm. Ceyl. Ind. Pak. 582. 1960.

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

ISCHAEMUM L.

Ischaemum duthlei Stapf ex Bor in Kew Bull. 1950: 188. 1950 & Grass. Burm. Ceyl. Ind. Pak. 178. 1960.

Fl. & Fr.: November - February.

Distrib.: Ranchi, Singhbhum.

Ischaemum hirtum Hack. in A. & C. DC., Monogr. Phan. 6: 228. 1889, *p.p.*; Hook. *f.*, Fl. Brit. India 7: 135. 1896; Haines, Bot. Bihar Orissa

1022. 1924 (Repr. ed., 3: 1069. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 179. 1960.

Fl. & Fr.: August - October.

Distrib.: Palamau, Ranchi, Singhbhum.

Ischaemum impressum Hack. in A. & C. DC., Monogr. Phan. 6: 210. 1889; Hook. *f.*, Fl. Brit. India 7: 132. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 180. 1960.

Fl. & Fr.: August - October.

Distrib.: Singhbhum.

Ischaemum indicum (Houtt.) Merr. in J. Arnold Arbor. 19: 320. 1938; Bor, Grass. Burm. Ceyl. Ind. Pak. 180. 1960. *Phleum indicum* Houtt., Nat. Hist. 2, 13: 198. t. 90. f. 2. 1782. *Ischaemum ciliare* Retz., Observ. Bot. 6: 36. 1791; Hook. *f.*, Fl. Brit. India 7: 133. 1896; Haines, Bot. Bihar Orissa 1022. 1924 (Repr. ed., 3: 1068. 1961).

subvar. indicum

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Lohardaga, Palamau, Ranchi.

subvar. malacophyllum (Hochst. ex Steud.) Bor, Grass. Burm. Ceyl. Ind. Pak. 180. 1960. *Andropogon malacophyllus* Hochst. ex Steud., Syn. Pl. Glum. 1: 372. 1854. *Ischaemum ciliare* var. *malacophyllum* (Hochst. ex Steud.) Hack. in A. & C. DC., Monogr. Phan. 6: 226. 1889; Hook. *f.*, Fl. Brit. India 7: 134. 1896; Haines, Bot. Bihar Orissa 1022. 1924 (Repr. ed., 3: 1069. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh.

subvar. villosum (Nees) Bor, Grass. Burm. Ceyl. Ind. Pak. 180. 1960. *Spodiopogon villosus* Nees in Hook. & Arnott, Bot. Beech. Voy. 242. 1838. *Ischaemum ciliare* var. *villosum* (Nees) Hack. in A. & C. DC., Monogr. Phan. 6: 227. 1889; Hook. *f.*, Fl. Brit. India 7: 134. 1896; Haines, Bot. Bihar Orissa 1022. 1924 (Repr. ed., 3: 1069. 1961).

Fl. & Fr.: October - December.

Distrib.: Lohardaga.

Ischaemum nilagiricum Hack. in Oest. Bot. Z. 51: 150. 1901; Bor, Grass. Burm. Ceyl. Ind. Pak. 183. 1960.

Fl. & Fr.: August - October.

Distrib.: Palamau.

Ischaemum rugosum Salisb., Ic. Stirp. Rar. 1, t. 1. 1791; Hook. *f.*, Fl. Brit. India 7: 127. 1896; Haines, Bot. Bihar Orissa 1021. 1924 (Repr. ed., 3: 1068. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 184. 1960.

Fl. & Fr.: August - December.

Distrib.: Deoghar, Hazaribagh, Palamau, Purnia, Ranchi, Sahibganj, Singhbhum, West Champaran.

Ischaemum timorense Kunth, Rev. Gram. 1: 369. t. 98. 1830; Hook. *f.*, Fl. Brit. India 7: 136. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 185. 1960.

Fl. & Fr.: September - November.

Distrib.: Ranchi.

ISEILEMA Anderss.

Iseilema anthephoroides Hack. in A. & C. DC., Monogr. Phan. 6: 683. 1889; Hook. *f.*, Fl. Brit. India 7: 219. 1896; Haines, Bot. Bihar Orissa 1054. 1924 (Repr. ed., 3: 1101. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 187. 1960.

Fl. & Fr.: October - December.

Distrib.: Palamau.

Iseilema holei Haines, Bot. Bihar Orissa 5: 1055. 1924 (Repr. ed., 3: 1103. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 188. 1960.

Fl.: October.

Distrib.: Palamau. Endemic.

Iseilema laxum Hack. in A. & C. DC., Monogr. Phan. 6: 682. 1889; Hook. f., Fl. Brit. India 7: 218. 1896; Haines, Bot. Bihar Orissa 1054. 1924 (Repr. ed., 3: 1102. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 188. 1960.

Fl. & Fr.: August - December.

Distrib.: Gaya, Hazaribagh, Palamau, Patna, West Champaran.

Iseilema prostratum (L.) Anderss. in Nov. Act. Soc. Sci. Upsal. 3, 2: 251. 1856; Bor, Grass. Burm. Ceyl. Ind. Pak. 188. 1960. *Andropogon prostratus* L., Mant. Pl. 304. 1771. *Iseilema wightii* Anderss. in Nov. Act. Soc. Sci. Upsal. 3, 2: 251. 1856; Hook. f., Fl. Brit. India 7: 218. 1896; Haines, Bot. Bihar Orissa 1055. 1924 (Repr. ed., 3: 1103. 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Muzaffarpur, Palamau, Singhbhum.

LEERSIA Soland. ex Sw., *nom. cons.*

Leersia hexandra Sw., Prodr. 21. 1788; Hook. f., Fl. Brit. India 7: 94. 1896; Haines. Bot. Bihar Orissa 981. 1924 (Repr. ed., 3: 1026. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 599. 1960.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Purnia, Ranchi, West Champaran.

LEPTOCHLOA P. Beauv.

Leptochloa chinensis (L.) Nees in Syll. Ratisb. 1: 4. 1824; Hook. f., Fl. Brit. India 7: 299. 1896; Haines, Bot. Bihar Orissa 972. 1924 (Repr. ed., 3: 1017. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 516. 1960. *Poa chinensis* L., Sp. Pl. 69. 1753.

Fl. & Fr.: July - December.

Distrib.: Gaya, Muzaffarpur, Palamau, Patna, West Champaran.

Leptochloa panicea (Retz.) Ohwi in Bot. Mag. Tokyo 55: 311. 1941; Bor, Grass. Burm. Ceyl. Ind. Pak. 517. 1960. *Poa panicea* Retz., Observ. Bot. 3: 11. 1783. *Leptochloa filiformis auct. non P. Beauv.*, 1812: Hook. f., Fl. Brit. India 7: 298. 1896; Haines, Bot. Bihar Orissa 972. 1924 (Repr. ed., 3: 1017. 1961).

Fl. & Fr.: July - December.

Distrib.: Gaya, Patna, Sahibganj, West Champaran.

LOLIUM L.

Lolium perenne L., Sp. Pl. 83. 1753; Hook. *f.*, Fl. Brit. India 7: 365. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 545. 1960.

Fl. & Fr.: February - May.

Distrib.: Patna.

Lolium temulentum L., Sp. Pl. 83. 1753; Hook. *f.*, Fl. Brit. India 7: 364. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 546. 1960.

Fl. & Fr.: March - May.

Distrib.: Patna, West Champaran.

LOPHOPOGON Hack.

Lophopogon kingii Hook. *f.*, Fl. Brit. India 7: 149. 1896; Haines, Bot. Bihar Orissa 1025. 1924 (Repr. ed., 3: 1071. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 190. 1960.

Fl.: October.

Distrib.: Munger. Endemic.

Lophopogon tridentatus (Roxb.) Hack. in Engler & Prantl, Pflanzenf. 2(2): 26. 1887; Hook. *f.*, Fl. Brit. India 7: 149. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 190. 1960. *Andropogon tridentatus* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 261. 1820.

Fl. & Fr.: October - January.

Distrib.: Godda (Jha and Varma in Indian Bot. Repr. 10: 46. 1991).

MELANOCENCHRIS Nees

Melanocenchris Jacquemontii Jaub. & Spach, Ill. Pl. Orient. 4: 36. t. 325. 1851; Bor, Grass. Burm. Ceyl. Ind. Pak. 473. 1960. *Gracilea royleana* Hook. *f.*, Fl. Brit. India 7: 284. 1896; Haines, Bot. Bihar Orissa 965. 1924 (Repr. ed., 3: 1010. 1961).

Fl. & Fr.: October - December.

Distrib.: Gaya, Palamau.

MICROCHLOA R. Br.

Microchloa indica (L. f.) P. Beauv., Ess. Agrost. 20. 1812; Bor, Grass. Burm. Ceyl. Ind. Pak. 473. 1960. *Nardus indica* L. f., Suppl. Pl. 105. 1782. *Microchloa setacea* R. Br., Prodr. 208. 1810; Hook. f., Fl. Brit. India 7: 283. 1896; Haines, Bot. Bihar Orissa 964. 1924 (Repr. ed., 3: 1010. 1961).

Fl. & Fr.: August - December.

Distrib.: Gaya, Palamau, Ranchi.

Microchloa kunthii Desv., Opusc. 75. 1831; Bor, Grass. Burm. Ceyl. Ind. Pak. 474. 1960.

Fl. & Fr.: October - December.

Distrib.: West Champaran.

MICROSTEGIUM Nees

Microstegium ciliatum (Trin.) A. Camus in Ann. Soc. Linn. Lyon, n.s. 68: 201. 1921; Bor, Grass. Burm. Ceyl. Ind. Pak. 193. 1960. *Pollinia ciliata* Trin. in Mem. Acad. Sci. Pétersb. ser. 6, 2: 306. 1832; Hook. f., Fl. Brit. India 7: 116. 1896; Haines, Bot. Bihar Orissa 1019. 1924 (Repr. ed., 3: 1066. 1961).

Fl. & Fr.: October - November.

Distrib.: Giridih, Hazaribagh, Palamau, Ranchi, Singhbhum.

MNESITHEA Kunth

Mnesithea clarkei (Hack.) Koning & Sosef in Blumea 31: 290. 1986. *Rottboellia clarkei* Hack. in Oest. Bot. Z. 41: 8. 1891; Hook. f., Fl. Brit. India 7: 156. 1896. *Manisuris clarkei* (Hack.) Bor ex Sant. in Rec. Bot. Surv. India 16(1): 357. 1953; Bor, Grass. Burm. Ceyl. Ind. Pak. 191. 1960.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Singhbhum.

Mnesithea granularis (L.) Koning & Sosef in Blumea 31: 295. 1986. *Cenchrus granularis* L., Mant. Pl. 575. 1771. *Manisuris granularis* (L.) L. f., Nov. Gram. Gen. 40. 1779; Hook. f., Fl. Brit. India 7: 159. 1896; Haines, Bot. Bihar Orissa 1057. 1924 (Repr. ed., 3: 1105. 1961). *Hackelochloa granularis* (L.) Kuntze, Revis. Gen. Pl. 2: 776. 1891; Bor, Grass. Burm. Ceyl. Ind. Pak. 159. 1960.

Fl. & Fr.: October - December.

Distrib.: Throughout the state.

Mnesithea laevis (Retz.) Kunth, Rev. Gram. 1: 154. 1829; Bor, Grass. Burm. Ceyl. Ind. Pak. 197. 1960. *Rottboellia laevis* Retz., Observ. Bot. 3: 11. 1783. *R. perforata* Roxb., Pl. Corom. 2: 43. t. 182. 1798; Hoek. f., Fl. Brit. India 7: 158. 1896. *Mnesithea perforata* (Roxb.) Haines, Bot. Bihar Orissa 1060. 1924 (Repr. ed., 3: 1108. 1961).

var. **cochinchinensis** (Lour.) Koning & Sosef in Blumea 31: 286. 1986. *Phleum cochinchinensis* Lour., Fl. Cochinch. 1: 48. 1790. *Ophiuros monostachyus* J.S. Presl ex C.B. Presl, Reliq. Haenk. 1: 330. 1830; Haines, Bot. Bihar Orissa 1059. 1924 (Repr. ed., 3: 1107. 1961).

Fl. & Fr.: September - November.

Distrib.: Palamau, Sahibganj.

var. **laevis**

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Munger, Palamau.

NEYRAUDIA Hook. f.

Neyraudia arundinacea (L.) Henr. in Meded. Herb. Leiden no. 58: 8. 1929 in Obs.; Bor, Grass. Burm. Ceyl. Ind. Pak. 518. 1960. *Aristida arundinacea* L., Mant. Pl. 186. 1771. *Neyraudia madagascariensis* (Kunth) Hook. f., Fl. Brit. India 7: 305. 1896. *Triraphis madagascariensis* Hook. f.; Haines, Bot. Bihar Orissa 952. 1924 (Repr. ed., 3: 997. 1961).

Fl. & Fr.: October - December.

Distrib.: Santal Pargana.

Neyraudia reynaudiana (Kunth) Keng *ex* Hitchc. in Amer. J. Bot. 21: 131. 1934; Bor, Grass. Burm. Ceyl. Ind. Pak. 518. 1960. *Arundo reynaudiana* Kunth, Rev. Gram. 1: 275. t. 49. 1830. *Neyraudia madagascariensis* var. *zollingeri* Hook. f., Fl. Brit. India 7: 305. 1896.

Fl. & Fr.: September - November.

Distrib.: North Bihar.

OPHIUROS Gaertn. f.

Ophiuros exaltatus (L.) Kuntze, Revis. Gen. Pl. 2: 780. 1891; Bor, Grass. Burm. Ceyl. Ind. Pak. 199. 1960. *Aegilops exaltata* L., Mant. Pl. 575. 1771. *Ophiuros corymbosus* Gaertn. f., Suppl. Carp. 3: 4. t. 181. 1805; Hook. f., Fl. Brit. India 7: 160. 1896; Haines, Bot. Bihar Orissa 1058. 1924 (Repr. ed., 3: 1106. 1961).

Fl. & Fr.: August - November.

Distrib.: Purnia.

Ophiuros megaphyllus Stapf *ex* Haines, Bot. Bihar Orissa 1058. 1924 (Repr. ed., 3: 1106. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 199. 1960.

Fl. & Fr.: October - December.

Distrib.: Palamau.

OPLISMENUS P. Beauv.

Oplismenus burmannii (Retz.) P. Beauv., Ess. Agrost. 54, 168, 169. 1812; Hook. f., Fl. Brit. India 7: 68. 1896; Haines, Bot. Bihar Orissa 999. 1924 (Repr. ed., 3: 1045. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 317. 1960. *Panicum burmannii* Retz., Observ. Bot. 3: 10. 1783.

Fl. & Fr.: September - December.

Distrib.: Deoghar, Gaya, Hazaribagh, Muzaffarpur, Palamau, Patna, Purnia, West Champaran.

Oplismenus compositus (L.) P. Beauv., Ess. Agrost. 54, 168, 169. 1812; Hook. f., Fl. Brit. India 7: 66. 1896; Haines, Bot. Bihar Orissa 999. 1924 (Repr. ed., 3: 1045. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 317. 1960. *Panicum compositum* L., Sp. Pl. 57. 1753.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Purnia, Sahibganj, Singhbhum, West Champaran.

OROPETIUM Trin.

Oropetium thomaeum (L. f.) Trin., Fund. Agrost. 98. t. 3. 1822; Hook. f., Fl. Brit. India 7: 366. 1896; Haines, Bot. Bihar Orissa 964. 1924 (Repr. ed., 3: 1009. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 474. 1960. *Nardus thomaea* L. f., Suppl. Pl. 105. 1782.

Fl. & Fr.: September - October.

Distrib.: Gaya, Munger.

Oropetium villosulum Stapf ex Bor in Kew Bull. 1949: 571. 1950 & Grass. Burm. Ceyl. Ind. Pak. 474. 1960.

Fl. & Fr.: September - October.

Distrib.: Godda (Jha and Varma in Indian Bot. Repr. 10: 46. 1991).

ORYZA L.

Oryza meyeriana subsp. **granulata** (Nees & Arnott ex Hook. f.) Tateoka in Curtis, Bot. Mag. 75: 460. 1962. *Oryza granulata* Nees & Arnott ex Hook. f., Fl. Brit. India 7: 93. 1896; Haines, Bot. Bihar Orissa 980. 1924 (Repr. ed., 3: 1026. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 604. 1960.

Fl. & Fr.: October - November.

Distrib.: Hazaribagh, Sahibganj.

Oryza minuta J.S. Presl ex C.B. Presl, Reliq. Haenk. 1: 208. 1830; Bor, Grass. Burm. Ceyl. Ind. Pak. 605. 1960.

Distrib.: Bihar (Jain *et al.* in J. Bombay Nat. Hist. Soc. 72: 758-773. 1975).

Oryza rufipogon Griff., Notul. 3: 5. 1851; Bor, Grass. Burm. Ceyl. Ind. Pak. 605. 1960.

Fl. & Fr.: September - October.

Distrib.: West Champaran.

Oryza sativa L., Sp. Pl. 333. 1753; Hook. *f.*, Fl. Brit. India 7: 92. 1896; Haines, Bot. Bihar Orissa 980. 1924 (Repr. ed., 3: 1025. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 605. 1960.

Fl. & Fr.: September - October.

Distrib.: Cultivated throughout the state.

PANICUM L.

Panicum antidotale Retz., Observ. Bot. 4: 17. 1786; Hook. *f.*, Fl. Brit. India 7: 52. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 322. 1960.

Fl. & Fr.: September - October.

Distrib.: Hazaribagh.

Panicum atrosanguineum Hochst. ex A. Rich., Tent. Fl. Abyss. 2: 375. 1851; Bor, Grass. Burm. Ceyl. Ind. Pak. 322. 1960. *P. hydaspicum* Edgew. in J. Linn. Soc. London (Bot.) 6: 207. 1862; Hook. *f.*, Fl. Brit. India 7: 48. 1896.

Fl. & Fr.: August - October.

Distrib.: Singhbhum.

Panicum auritum Presl ex Nees, Agrost. Bras. 176. 1829; Hook. *f.*, Fl. Brit. India 7: 40. 1896; Haines, Bot. Bihar Orissa 996. 1924 (Repr. ed., 3: 1042. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 324. 1960.

Fl. & Fr.: July - November.

Distrib.: Munger, Palamau.

Panicum brevifolium L., Sp. Pl. 59. 1753; Bor, Grass. Burm. Ceyl. Ind. Pak. 324. 1960. *P. ovalifolium* Poir. in Lam., Encycl. 4: 279. 1816; Hook. *f.*, Fl. Brit. India 7: 44. 1896.

Fl. & Fr.: September - November.

Distrib.: Chota Nagpur.

Panicum cambogiense Balansa in Morot, J. de Bot. 4: 142. 1890; Bor, Grass. Burm. Ceyl. Ind. Pak. 325. 1960. *P. caesium* Nees in Hook., Kew J. Bot. 2: 97. 1850, *non* Nees, 1836; Hook. *f.*, Fl. Brit. India 7: 48. 1896; Haines, Bot. Bihar Orissa 994. 1924 (Repr. ed., 3: 1040. 1961).

Fl. & Fr.: August - October.

Distrib.: Sahibganj.

Panicum elegantissimum Hook. *f.*, Fl. Brit. India 7: 52. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 325. 1960.

Fl. & Fr.: August - December.

Distrib.: Sahibganj (Jha and Varma in J. Bombay Nat. Hist. Soc. 90(2): 316-317. 1993).

Panicum maximum Jacq., Icon. Pl. Rar. 1: t. 13. 1781-1786 & Coll. Bot. 1: 76. 1786; Hook. *f.*, Fl. Brit. India 7: 49. 1896; Haines, Bot. Bihar Orissa 995. 1924 (Repr. ed., 3: 1041. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 327. 1960.

Fl. & Fr.: May - October.

Distrib.: Bhagalpur, Palamau, Ranchi.

Panicum miliaceum L., Sp. Pl. 58. 1753; Hook. *f.*, Fl. Brit. India 7: 45. 1896; Haines, Bot. Bihar Orissa 993. 1924 (Repr. ed., 3: 1038. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 327. 1960.

Fl. & Fr.: August - December.

Distrib.: Darbhanga.

Panicum notatum Retz., Observ. Bot. 4: 18. 1786; Bor, Grass. Burm. Ceyl. Ind. Pak. 701. 1960. *P. montanum* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 315. 1820; Hook. *f.*, Fl. Brit. India 7: 53. 1896; Haines, Bot. Bihar Orissa 996. 1924 (Repr. ed., 3: 1042. 1961).

Fl. & Fr.: August - November.

Distrib.: Throughout the state.

Panicum paludosum Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 310. 1820; Bor, Grass. Burm. Ceyl. Ind. Pak. 329. 1960. *P. proliferum auct. non* Lam., 1797; Hook. *f.*, Fl. Brit. India 7: 50. 1896; Haines, Bot. Bihar Orissa 995. 1924 (Repr. ed., 3: 1041. 1961).

Fl. & Fr.: August - November.

Distrib.: Deoghar, East Champaran, Hazaribagh, Munger, Palamau, Patna, Purnia, West Champaran.

Panicum psilopodium Trin., Gram. Panic. 217. 1826; Hook. *f.*, Fl. Brit. India 7: 46. 1896; Haines, Bot. Bihar Orissa 993. 1924 (Repr. ed., 3: 1039. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 329. 1960.

Fl. & Fr.: July - November.

Distrib.: Hazaribagh, Patna, Singhbhum.

Panicum repens L., Sp. Pl. ed. 2. 87. 1762; Hook. *f.*, Fl. Brit. India 7: 49. 1896; Haines, Bot. Bihar Orissa 994. 1924 (Repr. ed., 3: 1040. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 330. 1960.

Fl. & Fr.: July - December.

Distrib.: Hazaribagh, Munger, Purnia, Ranchi, West Champaran.

Panicum sumatrense Roth ex Roem. & Schult., Syst. Veg. 2: 434. 1817; Bor, Grass. Burm. Ceyl. Ind. Pak. 701. 1960. *P. miliare* Lam., Illustr. 1: 173. 1791; Hook. *f.*, Fl. Brit. India 7: 46. 1896; Haines, Bot. Bihar Orissa 993. 1924 (Repr. ed., 3: 1039. 1961).

Fl. & Fr.: August - October.

Distrib.: Hazaribagh, Lohardaga, Sahibganj, Singhbhum.

Panicum trypheron Schult., Syst. Veg. 2, Mant. 244. 1824; Hook. *f.*, Fl. Brit. India 7: 47. 1896; Haines, Bot. Bihar Orissa 995. 1924 (Repr. ed., 3: 1041. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 331. 1960.

Fl. & Fr.: September - December.

Distrib.: Hazaribagh, Munger, Muzaffarpur, Palamau, Purnia, Ranchi, Rohtas, Sahibganj.

Panicum virgatum L., Sp. Pl. 59. 1753; Bor, Grass. Burm. Ceyl. Ind. Pak. 331. 1960.

Fl. & Fr.: August - October.

Distrib.: Chota Nagpur.

Panicum walense Mez in Engler, Bot. Jahrb. 34: 146. 1904, 'watense'. *P. humile* Nees ex Steud., Syn. Pl. Glum. 1: 84. 1854, *non* Thunb. ex Trin., 1826; Hook. *f.*, Fl. Brit. India 7: 48. 1896; Haines, Bot. Bihar Orissa 996. 1924 (Repr. ed. 3: 1042. 1961). *P. austroasiaticum* Ohwi in Act. Phytotax. Geobot. 2: 45. 1942; Bor, Grass. Burm. Ceyl. Ind. Pak. 324. 1960.

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Palamau, Patna, Purnia, Sahibganj.

PASPALIDIUM Stapf

Paspalidium flavidum (Retz.) A. Camus in Lecomte, Fl. Indo - Chine 7: 419. 1922; Haines, Bot. Bihar Orissa 1001. 1924 (Repr. ed., 3: 1047. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 333. 1960. *Panicum flavidum* Retz., Observ. Bot. 4: 15. 1786; Hook. f., Fl. Brit. India 7: 28. 1896.

Fl. & Fr.: June - November.

Distrib.: Deoghar, East Champaran, Hazaribagh, Muzaffarpur, Palamau, Patna, Purnia, Sahibganj, Singhbhum, West Champaran.

Paspalidium geminatum (Forssk.) Stapf in Prain, Fl. Trop. Afr. 9: 583. 1920; Haines, Bot. Bihar Orissa 1002. 1924 (Repr. ed., 3: 1048. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 333. 1960. *Panicum geminatum* Forssk., Fl. Aegypt.-Arab. 18. 1775. *P. paspaloides* Pers., Syn. Pl. 1: 81. 1805; Hook. f., Fl. Brit. India 7: 30. 1896.

Fl. & Fr.: September - November.

Distrib.: Singhbhum.

Paspalidium punctatum (Burm. f.) A. Camus in Lecomte, Fl. Indo-Chine 7: 419. 1922; Haines, Bot. Bihar Orissa 1001. 1924 (Repr. ed., 3: 1047. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 333. 1960. *Panicum punctatum* Burm. f., Fl. Ind. 26. 1768; Hook. f., Fl. Brit. India 7: 29. 1896.

Fl. & Fr.: September - November.

Distrib.: Gaya, Palamau, Santal Pargana.

PASPALUM L.

Paspalum paspalodes (Michx.) Scribner in Mem. Torr. Bot. Cl. 5: 29. 1894, "*paspaloides*"; Bor, Grass. Burm. Ceyl. Ind. Pak. App. II. 1973 (Repr. ed.). *Digitaria paspalodes* Michx., Fl. Bor. Am. 1: 46. 1803. *Paspalum distichum* auct. non L., 1759; Hook. f., Fl. Brit. India 7: 12. 1896.

Fl. & Fr.: August - January.

Distrib.: Muzaffarpur, Palamau, Patna.

Paspalum scrobiculatum L., Mant. Pl. 29. 1767; Hook. *f.*, Fl. Brit. India 7: 10. 1896; Haines, Bot. Bihar Orissa 1000. 1924 (Repr. ed., 3: 1046. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 340. 1960.

Fl. & Fr.: July - December.

Distrib.: Deoghar, East Champaran, Gaya, Munger, Muzaffarpur, Palamau, Purnia, Sahibganj, West Champaran.

Paspalum vaginatum Sw., Prodr. 21. 1788; Bor, Grass. Burm. Ceyl. Ind. Pak. 341. 1960.

Fl. & Fr.: July - November.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 459. 1998).

PENNISETUM L.C. Rich. ex Pers.

Pennisetum americanum (L.) K. Schum. in Engler, Pflanzenw. Oest. Afr. 51. c. t. 4. f. A. & B. 1895; Bor in Reich. *f.*, Iran. 70: 503. 1970. *Panicum americanum* L., Sp. Pl. 56. 1753. *Pennisetum typhoideum* L.C. Rich. in Pers., Syn. Pl. 1: 72. 1805; Hook. *f.*, Fl. Brit. India 7: 82. 1896; Haines, Bot. Bihar Orissa 985. 1924 (Repr. ed., 3: 1031. 1961). *P. typhoides* (Burm. *f.*) Stapf & C.E. Hubb. in Kew Bull. 1933: 271. 1933; Bor, Grass. Burm. Ceyl. Ind. Pak. 350. 1960. - *Bajra*.

Fl. & Fr.: September - November.

Distrib.: Cultivated.

Pennisetum glaucum (L.) R. Br., Prodr. 195. 1810. *Panicum glaucum* L., Sp. Pl. 56. 1753. *Setaria glauca* (L.) P. Beauv., Ess. Agrost. 51, 169, 178. 1812; Hook. *f.*, Fl. Brit. India 7: 78. 1896; Haines, Bot. Bihar Orissa 988. 1924 (Repr. ed., 3: 1034. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 360. 1960.

Fl. & Fr.: August - December.

Distrib.: Throughout the state.

Pennisetum hohenackeri Hochst. ex Steud., Syn. Pl. Glum. 1: 103. 1854; Bor, Grass. Burm. Ceyl. Ind. Pak. 344. 1960. *P. alopecuros* Steud., Syn. Pl. Glum. 1: 102. 1854, *non* Jacq., 1844; Hook. *f.*, Fl. Brit. India 7: 84. 1896.

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

Pennisetum hordeoides (Lam.) Steud., Syn. Pl. Glum. 1: 103. 1854; Bor, Grass. Burm. Ceyl. Ind. Pak. 345. 1960. *Panicum hordeoides* Lam., Illustr. 1: 170. 1791. *Pennisetum parviflorum* Trin., Gram. Panic. 65. 1826; Hook. f., Fl. Brit. India 7: 86. 1896; Haines, Bot. Bihar Orissa 986. 1924 (Repr. ed., 3: 1031. 1961).

Fl. & Fr.: November - December.

Distrib.: Hazaribagh, Koderma, Patna.

Pennisetum orientale L.C. Rich. in Pers., Syn. Pl. 1: 72. 1805; Hook. f., Fl. Brit. India 7: 86. 1896; Haines, Bot. Bihar Orissa 986. 1924 (Repr. ed., 3: 1031. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 345. 1960.

Fl. & Fr.: September - October.

Distrib.: Hazaribagh.

Pennisetum pedicellatum Trin. in Mem. Acad. Sci. Pétersb. ser. 6, 3: 184. 1834; Hook. f., Fl. Brit. India 7: 86. 1896; Haines, Bot. Bihar Orissa 986. 1924 (Repr. ed., 3: 1032. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 346. 1960.

Fl. & Fr.: October - November.

Distrib.: Gaya, Giridih, Hazaribagh, Patna, Ranchi.

Pennisetum polystachion (L.) Schult., Syst. Veg. Mant. 2: 146. 1824; Bor, Grass. Burm. Ceyl. Ind. Pak. 346. 1960. *Panicum polystachion* L., Syst. Nat. ed. 10. 2: 870. 1759.

Fl. & Fr.: October - December.

Distrib.: Santal Pargana.

Pennisetum purpureum Schumach., Beskr. Guin. Pl. 44. 1827; Bor, Grass. Burm. Ceyl. Ind. Pak. 348. 1960.

Distrib.: Introduced for fodder. Bhagalpur.

Pennisetum setosum (Sw.) L.C. Rich. in Pers., Syn. Pl. 1: 72. 1805; Hook. f., Fl. Brit. India 7: 87. 1896; Haines, Bot. Bihar Orissa 986. 1924

(Repr. ed., 3: 1032. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 348. 1960. *Cenchrus setosus* Sw., Prodr. 26. 1788.

Fl. & Fr.: October - December.

Distrib.: Deoghar, Hazaribagh, Sahibganj.

Pennisetum triflorum Nees ex Steud., Syn. Pl. Glum. 1: 107. 1854; Bor in Reichb. *f.*, Fl. Iran. 70: 503. 1970. *P. orientale* L.C. Rich. var. *triflorum* (Nees ex Steud.) Stapf ex Hook. *f.*, Fl. Brit. India 7: 86. 1896.

Fl. & Fr.: August - November.

Distrib.: Chota Nagpur.

PEROTIS Aiton

Perotis indica (L.) Kuntze, Revis. Gen. Pl. 2: 787. 1891; Bor, Grass. Burm. Ceyl. Ind. Pak. 611. 1960. *Anthoxanthum indicum* L., Sp. Pl. 28. 1753. *Perotis latifolia* Aiton, Hortus Kew. ed. 1. 1: 85. 1789; Hook. *f.*, Fl. Brit. India 7: 98. 1896; Haines, Bot. Bihar Orissa 978. 1924 (Repr. ed., 3: 1024 1961).

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Koderma, Ranchi, West Champaran.

PHALARIS L.

Phalaris arundinacea L., Sp. Pl. 55. 1753; Hook. *f.*, Fl. Brit. India 7: 221. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 615. 1960.

Fl. & Fr.: January - March.

Distrib.: East Champaran.

Phalaris minor Retz., Observ. Bot. 3: 8. 1783; Hook. *f.*, Fl. Brit. India 7: 221. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 616. 1960.

var. minor

Fl. & Fr.: February - March.

Distrib.: Bhagalpur, Palamau, West Champaran.

var. **nepalensis** (Trin.) Bor, Grass. Burm. Ceyl. Ind. Pak. 616. 1960.
Phalaris nepalensis Trin., Sp. Gram. Ic. t. 80. 1828.

Distrib.: Central Himalaya (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 247. 1989).

PHRAGMITES Adans.

Phragmites karka (Retz.) Trin. ex Steud., Nom. Bot. ed. 2: 324. 1841;
Hook. f., Fl. Brit. India 7: 304. 1896; Haines, Bot. Bihar Orissa 952. 1924
(Repr. ed., 3: 997. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 416. 1960.
Arundo karka Retz., Observ. Bot. 4: 21. 1786.

Fl. & Fr.: July - December.

Distrib.: Throughout the state.

POAL.

Poa annua L., Sp. Pl. 68. 1753; Bor, Grass. Burm. Ceyl. Ind. Pak. 555. 1960.

Fl. & Fr.: October - November.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 461. 1998).

POGONATHERUM P. Beauv.

Pogonatherum crinitum (Thunb.) Kunth, Enum. Pl. 1: 478. 1833;
Hook. f., Fl. Brit. India 7: 141. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 200. 1960. *Andropogon crinitus* Thunb., Fl. Jap. 40. t. 7. 1784.

Fl. & Fr.: December - January.

Distrib.: Ranchi, Singhbhum.

Pogonatherum paniceum (Lam.) Hack. in Allg. Bot. Z. 12: 178. 1906;
Bor, Grass. Burm. Ceyl. Ind. Pak. 202. 1960. *Saccharum paniceum* Lam.,
Encycl. 1: 595. 1785 & Illustr. 12: 155. t. 40. f. 3. 1791. *Pogonatherum*
saccharoideum P. Beauv., Ess. Agrost. 176, 177. 1812; Hook. f., Fl. Brit.
India 7: 141. 1896; Haines, Bot. Bihar Orissa 1017. 1924 (Repr. ed., 3:
1063. 1961).

Fl. & Fr.: December - March.

Distrib.: Hazaribagh, Singhbhum, West Champaran.

POLYPOGON Desf.

Polypogon fugax Nees *ex* Steud., Syn. Pl. Glum. 1: 184. 1854; Bor, Grass. Burm. Ceyl. Ind. Pak. 403. 1960.

Fl. & Fr.: February - April.

Distrib.: North Bihar.

Polypogon monspeliensis (L.) Desf., Fl. Atl. 1: 67. 1798; Hook. *f.*, Fl. Brit. India 7: 245. 1896; Haines, Bot. Bihar Orissa 976. 1924 (Repr. ed., 3: 1021. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 403. 1960. *Alopecurus monspeliensis* L., Sp. Pl. 61. 1753.

Fl. & Fr.: February - April.

Distrib.: Bhagalpur, Hazaribagh, Ranchi, West Champaran.

POLYTOCA R. Br.

Polytoca digitata (L. *f.*) Druce in Rep. Bot. Exch. Cl. Brit. Is. 4: 641. 1916; Bor, Grass. Burm. Ceyl. Ind. Pak. 267. 1960. *Apluda digitata* L. *f.*, Suppl. Pl. 434. 1782. *Polytoca bracteata* R. Br. in Benn. & R. Br., Pl. Jav. Rar. 20. t. 5. 1838; Hook. *f.*, Fl. Brit. India 7: 101. 1896; Haines, Bot. Bihar Orissa 1062. 1924 (Repr. ed., 3: 1110. 1961).

Fl. & Fr.: October - November.

Distrib.: Purnia.

PSEUDOBRACHIARIA Launert

Pseudobrachiaria deflexa (Schum.) Launert in Mitt. Bot. Staatssamml. Munchen 8: 158. 1970. *Panicum deflexum* Schum., Beskr. Guin. Pl. 63. 1827. *Brachiaria deflexa* (Schum.) C.E. Hubb. *ex* Robyns in Bull. Jard. Brux. 9: 181. 1932; Bor, Grass. Burm. Ceyl. Ind. Pak. 281. 1960.

Fl. & Fr.: September - October.

Distrib.: Santal Pargana.

PSEUDOPOGONATHERUM A. Camus

Pseudopogonatherum contortum (Brongn.) A. Camus in Lecomte, Fl. Indo Chine 7: 255. 1922; Bor, Grass. Burm. Ceyl. Ind. Pak. 204. 1960. *Pogonatherum contortum* Brongn. in Duperr., Voy. Coq. Bot. 90 & 17. 1831. *Pollinia articulata* Trin. in Bull. Sci. Acad. Pétersb. ser. 6. 1: 71. 1836; Hook. f., Fl. Brit. India 7: 109. 1896. *Puliculum articulata* Stapf ex Haines, Bot. Bihar Orissa 1018. 1924 (Repr. ed., 3: 1065. 1961).

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Singhbhum.

PSEUDORAPHIS Griff.

Pseudoraphis brunoniana Griff., Notul. 3: 29. 1851; Bor, Grass. Burm. Ceyl. Ind. Pak. 353. 1960. *Chamaeraphis spinescens* var. *brunoniana* (Griff.) Hook. f., Fl. Brit. India 7: 62. 1896.

Fl. & Fr.: January - March.

Distrib.: Patna.

Pseudoraphis minuta (Mez) Pilger in Notizbl. Bot. Gart. Berlin 10: 210. 1928; Bor, Grass. Burm. Ceyl. Ind. Pak. 353. 1960. *Chamaeraphis minuta* Mez in Notizbl. Bot. Gart. Berlin 7: 48. 1917. *C. gracilis auct. non* Hack., 1885; Hook. f., Fl. Brit. India 7: 62. 1896.

Fl. & Fr.: October - December.

Distrib.: Santal Pargana.

Pseudoraphis spinescens (R. Br.) Vickery in Proc. Roy. Soc. Queensl. 62, n. 7. 69. 1952; Bor, Grass. Burm. Ceyl. Ind. Pak. 353. 1960. *Panicum spinescens* R. Br., Prodr. 193. 1810. *Chamaeraphis spinescens* (R. Br.) Poir. in Lam., Encycl. 2: 189. 1811; Hook. f., Fl. Brit. India 7: 62. 1896.

Fl. & Fr.: October - December.

Distrib.: Gaya.

PSEUDOSORGHUM A. Camus

Pseudosorghum fasciculare (Roxb.) A. Camus in Bull. Mus. Hist. Nat. Paris 26: 662. 1920; Bor, Grass. Burm. Ceyl. Ind. Pak. 205. 1960.

Andropogon fascicularis Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 269. 1820; Hook. f., Fl. Brit. India 7: 177. 1896. *Sorghum fasciculare* (Roxb.) Haines, Bot. Bihar Orissa 1034. 1924 (Repr. ed., 3: 1082. 1961).

Fl. & Fr.: November - December.

Distrib.: Koderma, Palamau, Singhbhum.

ROTTBOELLIA L. f.

Rottboellia cochinchinensis (Lour.) W.D. Clayton in Kew Bull. 35: 817. 1981. *Stegosia cochinchinensis* Lour., Fl. Cochinch. 1: 51. 1790. *Rottboellia exaltata* L. f., Suppl. Pl. 114. 1782, *non* (L.) L. f., 1779; Hook. f., Fl. Brit. India 7: 156. 1896; Haines, Bot. Bihar Orissa 1059. 1924 (Repr. ed., 3: 1107. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 206. 1960.

Fl. & Fr.: October - November.

Distrib.: Hazaribagh, Koderma, Ranchi, Sahibganj.

SACCHARUM L.

Saccharum arundinaceum Retz., Observ. Bot. 4: 14. 1786; Hook. f., Fl. Brit. India 7: 119. 1896, *p.p.*; Haines, Bot. Bihar Orissa 1012. 1924, *p.p.* (Repr. ed., 3: 1059. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 211. 1960.

Fl. & Fr.: October - December.

Distrib.: Darbhanga, Hazaribagh, Koderma, Palamau, West Champaran.

Saccharum bengalense Retz., Observ. Bot. 5: 16. 1789; Bor, Grass. Burm. Ceyl. Ind. Pak. 211. 1960. *S. arundinaceum auct. non* Retz., 1786; Hook. f., Fl. Brit. India 7: 119. 1896, *p.p.*

Fl. & Fr.: October - December.

Distrib.: West Champaran.

Saccharum fallax Balansa in Morot, J. de Bot. 4: 80. 1890. *Erianthus chrysothrix* Hack. in Oest. Bot. Z. 41: 6. 1891; Hook. f., Fl. Brit. India 7: 125. 1896. *Narenga fallax* (Balansa) Bor in Kew Bull. 1948: 162. 1948 & Grass. Burm. Ceyl. Ind. Pak. 198. 1960.

Fl. & Fr.: October - December.

Distrib.: Singhbhum.

Saccharum narenga (Nees ex Steud.) Hack. in A. & C. DC., Monogr. Phan. 6: 119. 1889; Haines, Bot. Bihar Orissa 1013. 1924 (Repr. ed., 3: 1060. 1961). *Eriochrysis narenga* Nees ex Steud., Syn. Pl. Glum. 1: 411. 1855; Hook. f., Fl. Brit. India 7: 120. 1896. *Narenga porphyrocoma* (Hance ex Trin.) Bor in Indian For. 66: 267. 1940 & Grass. Burm. Ceyl. Ind. Pak. 198. 1960.

Fl. & Fr.: August - November.

Distrib.: Hazaribagh, Ranchi, Singhbhum, West Champaran.

Saccharum officinarum L., Sp. Pl. 54. 1753; Hook. f., Fl. Brit. India 7: 118. 1896; Haines, Bot. Bihar Orissa 1012. 1924 (Repr. ed., 3: 1058. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 212. 1960.

Fl. & Fr.: February - April.

Distrib.: Cultivated.

Saccharum procerum Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 248. 1820; Bor, Grass. Burm. Ceyl. Ind. Pak. 213. 1960. *S. arundinaceum auct. non Retz.*, 1786; Hook. f., Fl. Brit. India 7: 119. 1896, *p.p.*; Haines, Bot. Bihar Orissa 1012. 1924, *p.p.* (Repr. ed., 3: 1059. 1961).

Fl. & Fr.: October - November.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 463. 1998).

Saccharum ravennae (L.) Murr., Syst. Veg. 88. 1774; Haines, Bot. Bihar Orissa 1014. 1924 (Repr. ed., 3: 1060. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 213. 1960. *Andropogon ravennae* L., Sp. Pl. ed. 2. 1481. 1763. *Erianthus ravennae* (L.) P. Beauv., Ess. Agrost. 14. 1812; Hook. f., Fl. Brit. India 7: 121. 1896.

Fl. & Fr.: October - February.

Distrib.: Chota Nagpur.

Saccharum sinense Roxb., Pl. Corom. t. 232. 1819; Bor, Grass. Burm. Ceyl. Ind. Pak. 212. 1960.

Distrib.: Cultivated.

Saccharum spontaneum L., Mant. Pl. 183. 1771; Hook. f., Fl. Brit. India 7: 118. 1896; Haines, Bot. Bihar Orissa 1011. 1924 (Repr. ed., 3: 1057. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 214. 1960. - *Kaans*.

Fl. & Fr.: August - November.

Distrib.: Throughout the state.

SACCIOLEPIS Nash

Sacciolepis indica (L.) A. Chase in Proc. Biol. Soc. Wash. 21: 8. 1908; Haines, Bot. Bihar Orissa 990. 1924 (Repr. ed., 3: 1036. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 357. 1960. *Aira indica* L., Sp. Pl. 1753 in "Errata" *Panicum indicum* L., Mant. Pl. 184. 1771, non Mill., 1768; Hook. f., Fl. Brit. India 7: 41. 1896.

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Ranchi, Sahibganj.

Sacciolepis interrupta (Willd.) Stapf in Prain, Fl. Trop. Afr. 9: 757. 1920; Haines, Bot. Bihar Orissa 991. 1924 (Repr. ed., 3: 1036. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 358. 1960. *Panicum interruptum* Willd., Sp. Pl. 1: 341. 1798; Hook. f., Fl. Brit. India 7: 40. 1896.

Fl. & Fr.: October - November.

Distrib.: Lohardaga, Ranchi.

Sacciolepis myosuroides (R. Br.) A. Camus in Lecomte, Fl. Indo-Chine 7: 460. 1922; Haines, Bot. Bihar Orissa 990. 1924 (Repr. ed., 3: 1036. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 358. 1960. *Panicum myosuroides* R. Br., Prodr. 189. 1810.

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Ranchi, Singhbhum, West Champaran.

SCHIZACHYRIUM Nees

Schizachyrium brevifolium (Sw.) Nees ex Buse in Miq., Pl. Jungh. 359. 1854; Haines, Bot. Bihar Orissa 1042. 1924 (Repr. ed., 3: 1090. 1961);

Bor, Grass. Burm. Ceyl. Ind. Pak. 215. 1960. *Andropogon brevifolius* Sw., Prodr. 26. 1788; Hook. f., Fl. Brit. India 7: 165. 1896.

Fl. & Fr.: October - December.

Distrib.: Bhagalpur, Hazaribagh, Koderma, Munger, Patna, Purnia, Ranchi, Sahibganj, West Champaran.

Schizachyrium delavayi (Hack.) Bor in Indian For. Rec. (Bot.) 1: 95. 1938 & Grass. Burm. Ceyl. Ind. Pak. 215. 1960. *Andropogon delavayi* Hack. in A. & C. DC., Monogr. Phan. 6: 404. 1889. *A. bootanensis* Hook. f., Fl. Brit. India 7: 166. 1896.

Distrib.: E. & C. Himalaya (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 257. 1989).

Schizachyrium exile (Hochst.) Pilger in Engler, Bot. Jahrb. 54: 284. 1917; Haines, Bot. Bihar Orissa 1043. 1924 (Repr. ed., 3: 1090. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 216. 1960. *Andropogon exilis* Hochst. in Flora 27: 241. 1844.

Fl. & Fr.: October - December.

Distrib.: Gaya, Hazaribagh, Singhbhum.

SCHIZOSTACHYUM Nees

Schizostachyum pergracile (Munro) R. Majumdar in Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 282. 1989. *Cephalostachyum pergracile* Munro in Trans. Linn. Soc. London 26: 141. 1863; Gamble in Hook. f., Fl. Brit. India 7: 413. 1896; Haines, Bot. Bihar Orissa 946. 1924 (Repr. ed., 3: 991. 1961).

Fl. & Fr.: September - November.

Distrib.: Singhbhum.

SCHOENEFELDIA Kunth

Schoenefeldia gracilis Kunth, Rev. Gram. 1: 283. t. 53. 1830; Bor, Grass. Burm. Ceyl. Ind. Pak. 474. 1960. *Chloris pallida* (Edgew.) Hook. f., Fl. Brit. India 7: 289. 1896; Haines, Bot. Bihar Orissa 967. 1924 (Repr. ed., 3: 1013. 1961).

Fl. & Fr.: September - November.

Distrib.: Hazaribagh.

SCLEROSTACHYA (Anderss. ex Hack.) A. Camus

Sclerostachya fusca (Roxb.) A. Camus in Lecomte, Fl. Indo-Chine 7: 243. 1922; Bor, Grass. Burm. Ceyl. Ind. Pak. 217. 1960. *Saccharum fuscum* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 241. 1820; Hook. f., Fl. Brit. India 7: 120. 1896.

Fl. & Fr.: February - April.

Distrib.: Muzaffarpur, Patna.

SEHIMA Forssk.

Sehima nervosum (Rottler) Stapf in Prain, Fl. Trop. Afr. 9: 36. 1917; Haines, Bot. Bihar Orissa 1023. 1924 (Repr. ed., 3: 1069. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 218. 1960. *Andropogon nervosus* Rottler apud Willd. in Verh. Ges. Naturf. Freund. Berlin, Neve Schr. 4: 218. 1806. *Ischaemum laxum* R. Br., Prodr. 205. 1810; Hook. f., Fl. Brit. India 7: 136. 1896.

Fl. & Fr.: September - November.

Distrib.: Hazaribagh, Palamau, Ranchi, Singhbhum.

Sehima sulcatum (Hack.) A. Camus in Bull. Mus. Hist. Nat. Paris 27: 373. 1921; Bor, Grass. Burm. Ceyl. Ind. Pak. 219. 1960. *Ischaemum sulcatum* Hack. in A. & C. DC., Monogr. Phan. 6: 248. 1889; Hook. f., Fl. Brit. India 7: 137. 1896.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh.

SETARIA P. Beauv.

Setaria barbata (Lam.) Kunth, Rev. Gram. 1: 47. 1829; Bor, Grass. Burm. Ceyl. Ind. Pak. 360. 1960. *Panicum barbatum* Lam., Illustr. 1: 171. 1791. *P. rhachitrichum* Hochst. in Flora 27: 254. 1844; Hook. f., Fl. Brit. India 7: 56. 1896.

Fl. & Fr.: August - October.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 465. 1998).

Setaria homonyma (Steud.) Chiov. in Nuovo Giorn. Bot. Ital. n.s. 26: 78. 1919; Bor, Grass. Burm. Ceyl. Ind. Pak. 361. 1960. *Panicum homonymum* Steud., Syn. Pl. Glum. 1: 48. 1854. *P. rhachitrichum auct. non* Hochst., 1844: Hook. f., Fl. Brit. India 7: 56. 1896. *Setaria rhachitricha* T. Cooke, Fl. Bombay Pres. 2: 919. 1908 (Repr. ed., 3: 435. 1967); Haines, Bot. Bihar Orissa 988. 1924 (Repr. ed., 3: 1033. 1961).

Fl. & Fr.: October - November.

Distrib.: Ranchi.

Setaria intermedia Roem. & Schult., Syst. Veg. 2: 489. 1817; Hook. f., Fl. Brit. India 7: 79. 1896; Haines, Bot. Bihar Orissa 989. 1924 (Repr. ed., 3: 1035. 1961). *S. tomentosa* (Roxb.) Kunth, Rev. Gram. 1: 47. 1829; Bor, Grass. Burm. Ceyl. Ind. Pak. 365. 1960.

Fl. & Fr.: August - October.

Distrib.: Deoghar, Gaya, Hazaribagh, Muzaffarpur, Ranchi, Singhbhum.

Setaria italica (L.) P. Beauv., Ess. Agrost. 51, 170, 178. 1812; Hook. f., Fl. Brit. India 7: 78. 1896; Haines, Bot. Bihar Orissa 988. 1924 (Repr. ed., 3: 1034. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 362. 1960. *Panicum italicum* L., Sp. Pl. 56. 1753.

Fl. & Fr.: August - February.

Distrib.: Darbhanga, Munger, Muzaffarpur, Singhbhum, West Champaran.

Setaria palmifolia (Koen.) Stapf in J. Linn. Soc. London (Bot.) 42: 186. 1914; Bor, Grass. Burm. Ceyl. Ind. Pak. 363. 1960. *Panicum palmifolium* Koen. in Ges. Naturf. 23: 208. 1788.

Fl. & Fr.: September - November.

Distrib.: Hazaribagh.

Setaria paniculifera (Steud.) Fourn. ex Hemsl. in Biol. Centr. Amer. Bot. 3: 505. 1885; Bor, Grass. Burm. Ceyl. Ind. Pak. 363. 1960. *Panicum paniculiferum* Steud., Syn. Pl. Glum. 1: 54. 1854.

Distrib.: West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 465. 1998).

Setaria plicata (Lam.) T. Cooke, Fl. Pres. Bombay 2: 919. 1908. (Repr. ed., 3: 434. 1967); Haines, Bot. Bihar Orissa 987. 1924 (Repr. ed. 3: 1033. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 364. 1960. *Panicum plicatum* Lam., Encycl. 4: 736. 1797; Hook. f., Fl. Brit. India 7: 55. 1896.

Fl. & Fr.: September - December.

Distrib.: Hazaribagh, Singhbhum.

Setaria pumila (Poir.) Roem. & Schult., Syst. Veg. 2: 891. 1817. *Panicum pumilum* Poir. in Lam., Encycl. 4: 273. 1816. *Setaria pallidifusca* (Schumach.) Stapf & C.E. Hubb. in Bull. Misc. Inform. Kew 1930: 259. 1930; Bor, Grass. Burm. Ceyl. Ind. Pak. 363. 1960.

Fl. & Fr.: August - November.

Distrib.: Palamau, Ranchi, West Champaran.

Setaria verticillata (L.) P. Beauv., Ess. Agrost. 51, 178. 1812; Hook. f., Fl. Brit. India 7: 80. 1896; Haines, Bot. Bihar Orissa 989. 1924 (Repr. ed., 3: 1035. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 365. 1960. *Panicum verticillatum* L., Sp. Pl. ed. 2. 82. 1762.

Fl. & Fr.: September - October.

Distrib.: Deoghar, Gaya, Hazaribagh, Palamau, Sahibganj.

Setaria viridis (L.) P. Beauv., Ess. Agrost. 51, 171, 178. 1812; Hook. f., Fl. Brit. India 7: 80. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 365. 1960. *Panicum viride* L., Syst. Nat. ed. 10. 2: 870. 1759.

Fl. & Fr.: August - November.

Distrib.: Dumka (Jha and Varma in J. Bombay Nat. Hist. Soc. 90: 133. 1993).

SORGHUM Moench, *nom. cons.*

Sorghum arundinaceum (Desv.) Stapf in Prain, Fl. Trop. Afr. 9: 114. 1917. *Rhaphis arundinacea* Desv., Opusc. 69. 1831. *Andropogon stapfii* Hook. f., Fl. Brit. India 7: 184. 1896. *Sorghum stapfii* (Hook. f.) Fischer in Gamble, Fl. Pres. Madras 1735. 1934 (Repr. ed., 3: 1203. 1967); Bor, Grass. Burm. Ceyl. Ind. Pak. 246. 1960.

Fl. & Fr.: October - December.

Distrib.: Chota Nagpur.

Sorghum bicolor (L.) Moench, Meth. 207. 1794; Bor, Grass. Burm. Ceyl. Ind. Pak. 228. 1960. *Holcus bicolor* L., Mant. Pl. 301. 1771.

Fl. & Fr.: August - October.

Distrib.: Cultivated.

Sorghum cernuum Host, Gram. Austr. 4: 2. t. 3. 1809; Bor, Grass. Burm. Ceyl. Ind. Pak. 231. 1960.

var. **cernuum**

Fl. & Fr.: September - December.

Distrib.: Cultivated.

var. **globosum** (Hack.) Snowden in Bull. Misc. Inform. Kew 1935: 251. 1935; Bor, Grass. Burm. Ceyl. Ind. Pak. 231. 1960. *Andropogon sorghum* subsp. *sativus* var. *globosus* Hack. in DC., Monogr. Phan. 6: 517. 1889.

Fl. & Fr.: August - December.

Distrib.: Cultivated.

var. **yemense** (Koern.) Snowden in Bull. Misc. Inform. Kew 1935: 251. 1935; Bor, Grass. Burm. Ceyl. Ind. Pak. 231. 1960. *Andropogon sorghum* var. *yemensis* Koern. in Bull. Herb. Boiss. 2, app. 2: 11. 1894.

Fl. & Fr.: September - December.

Distrib.: Cultivated.

Sorghum conspicuum Snowden var. **orientale** Snowden in Bull. Misc. Inform. Kew 1935: 226. 1935; Bor, Grass. Burm. Ceyl. Ind. Pak. 232. 1960.

Distrib.: Cultivated.

var. **usaramense** (Buese & Pilger) Snowden in Bull. Misc. Inform. Kew 1935: 227. 1935; Bor, Grass. Burm. Ceyl. Ind. Pak. 232. 1960. *Andropogon sorghum* var. *usaramense* Buese & Pilger in Engler, Bot. Jahrb. 32: 184. 1902.

Distrib.: Cultivated.

Sorghum controversum (Steud.) Snowden in J. Linn. Soc. London (Bot.) 55: 210. 1955; Bor, Grass. Burm. Ceyl. Ind. Pak. 222. 1960. *Andropogon controversus* Steud., Syn. Pl. Glum. 1: 391. 1854.

Fl. & Fr.: October - November.

Distrib.: Santal Pargana.

Sorghum halepense (L.) Pers., Syn. Pl. 1: 101. 1805; Haines, Bot. Bihar Orissa 1033. 1924 (Repr. ed., 3: 1080. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 222. 1960. *Holcus halepensis* L., Sp. Pl. 1047. 1753. *Andropogon halepensis* (L.) Brot., Fl. Lusit. 1: 89. 1804; Hook. f., Fl. Brit. India 7: 182. 1896.

Fl. & Fr.: October - December.

Distrib.: Munger, Patna, Singhbhum.

Sorghum miliiforme (Hack.) Snowden in Bull. Misc. Inform. Kew 1935: 237. 1935; Bor, Grass. Burm. Ceyl. Ind. Pak. 239. 1960. *Andropogon sorghum* subsp. *sativus* var. *miliiformis* Hack. in A. & C. DC., Monogr. Phan. 6: 518. 1889.

var. **miliiforme**

Distrib.: Cultivated.

var. **rotundulum** Snowden in Bull. Misc. Inform. Kew 1935: 237. 1935; Bor, Grass. Burm. Ceyl. Ind. Pak. 239. 1960.

Distrib.: Cultivated.

Sorghum nervosum Bess. ex Schult. in Roem. & Schult., Syst. Veg. 2: Mant. 669. 1827; Bor, Grass. Burm. Ceyl. Ind. Pak. 239. 1960.

Distrib.: Cultivated.

Sorghum nitidum (Vahl) Pers., Syn. Pl. 1: 101. 1805; Haines, Bot. Bihar Orissa 1034. 1924 (Repr. ed., 3: 1081. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 245. 1960. *Holcus nitidus* Vahl, Symb. Bot. 2: 102. 1791. *Andropogon serratus* Thunb., Fl. Jap. 41. 1784; Hook. f., Fl. Brit. India 7: 185. 1896.

Fl. & Fr.: September - December.

Distrib.: Giridih, Hazaribagh, Singhbhum.

Sorghum roxburghii Stapf var. **nanum** Snowden in Bull. Misc. Inform. Kew 1935: 228. 1935; Bor, Grass. Burm. Ceyl. Ind. Pak. 241. 1960.

Distrib.: Cultivated.

Sorghum vulgare Pers., Syn. Pl. 1: 101. 1805; Haines, Bot. Bihar Orissa 1033. 1924 (Repr. ed., 3: 1081. 1961).- *Jowar*.

Fl. & Fr.: September - November.

Distrib.: Cultivated.

SPOROBOLUS R. Br.

Sporobolus coromandelianus (Retz.) Kunth, Rev. Gram. 1: 68. 1829; Hook. f., Fl. Brit. India 7: 252. 1896; Haines, Bot. Bihar Orissa 975. 1924 (Repr. ed., 3: 1020. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 627. 1960. *Agrostis coromandeliana* Retz., Observ. Bot. 4: 19. 1786.

Distrib.: Patna (Haines, l.c.)

Sporobolus indicus (L.) R. Br. var. **diander** (Retz.) Jovet & Guedes in Bull. Centre Et. Rech. Sc. Biarritz. 7: 65. 1968 & in Taxon 22: 163. 1973. *Agrostis diandra* Retz., Observ. Bot. 5: 19. 1789. *Sporobolus diander* (Retz.) P. Beauv., Ess. Agrost. 26, 147, 178. 1812; Hook. f., Fl. Brit. India 7: 247. 1896; Haines, Bot. Bihar Orissa 973. 1924 (Repr. ed., 3: 1019. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 629. 1960.

Fl. & Fr.: September - January.

Distrib.: Deoghar, Hazaribagh, Ranchi, Sahibganj, Singhbhum, West Champaran.

var. **fertilis** (Steud.) Jovet & Guedes in Bull. Centre Et. Rech. Sc. Biarritz 7: 50. 1968 & in Taxon 22: 163. 1973. *Agrostis fertilis* Steud., Syn. Pl. Glum. 170. 1855. *Sporobolus indicus auct. non* (L.) R. Br., 1810; Hook. f., Fl. Brit. India 7: 247. 1896; Haines, Bot. Bihar Orissa 974. 1924 (Repr. ed., 3: 1019. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 630. 1960.

Fl. & Fr.: November - February.

Distrib.: Palamau, Singhbhum.

Sporobolus piliferus (Trin.) Kunth, Enum. Pl. 1: 211. 1833; Hook. *f.*, Fl. Brit. India 7: 251. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 632. 1960. *Vilfa pilifera* Trin., Diss. Bot. 157. 1824.

Fl. & Fr.: September - November.

Distrib.: Chota Nagpur.

Sporobolus tetragonus Bor in Kew Bull. 1949: 251. 1949 & Grass. Burm. Ceyl. Ind. Pak. 633. 1960. *S. pulchellus auct. non R. Br.*, 1810: Hook. *f.*, Fl. Brit. India 7: 252. 1896; Haines, Bot. Bihar Orissa 975. 1924 (Repr. ed., 3: 1020. 1961).

Fl. & Fr.: September - October.

Distrib.: Hazaribagh, Lohardaga, Munger, Ranchi.

Sporobolus tremulus (Willd.) Kunth, Rev. Gram. 1: 67. 1829; Hook. *f.*, Fl. Brit. India 7: 250. 1896; Haines, Bot. Bihar Orissa 974. 1924 (Repr. ed., 3: 1020. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 633. 1960. *Agrostis tremula* Willd., Sp. Pl. 1: 372. 1798.

Fl. & Fr.: May - December.

Distrib.: Patna (Haines, *l.c.*)

Sporobolus wallichii Munro ex Trim. in J. Bot. 27: 171. 1889; Hook. *f.*, Fl. Brit. India 7: 248. 1896; Haines, Bot. Bihar Orissa 974. 1924 (Repr. ed., 3: 1019. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 634. 1960.

Fl. & Fr.: August - January.

Distrib.: Munger, Sahibganj.

STENOTAPHRUM Trin.

Stenotaphrum dimidiatum (L.) Brongn. in Duperr., Bot. Voy. Coq. 127. 1831; Bor, Grass. Burm. Ceyl. Ind. Pak. 366. 1960. *Panicum dimidiatum* L., Sp. Pl. 57. 1753. *Stenotaphrum glabrum* Trin., Fund. Agrost. 176. 1822; Hook. *f.*, Fl. Brit. India 7: 90. 1896.

Distrib.: Plains of India (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 265. 1989).

THEMEDA Forssk.

Themeda arundinacea (Roxb.) Ridl. in Trans. Linn. Soc. London 2, 3: 401. 1893; Haines, Bot. Bihar Orissa 1052. 1924 (Repr. ed., 3: 1100. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 250. 1960. *Anthistiria arundinacea* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 256. 1820. *A. gigantea* Cav. subsp. *arundinacea* (Roxb.) Hack. in A. & C. DC., Monogr. Phan. 6: 674. 1889; Hook. f., Fl. Brit. India 7: 217. 1896.

Fl. & Fr.: October - December.

Distrib.: Palamau, West Champaran.

Themeda caudata (Nees) A. Camus in Lecomte, Fl. Indo-Chine 7: 364. 1922; Haines, Bot. Bihar Orissa 1052. 1924 (Repr. ed., 3: 1100. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 250. 1960. *Anthistiria caudata* Nees in Hook. & Arnott, Bot. Beechey Voy. 245. 1838. *A. gigantea* subsp. *caudata* (Nees) Hack. in A. & C. DC., Monogr. Phan. 6: 676. 1889, *p.p.*; Hook. f., Fl. Brit. India 7: 217. 1896.

Fl. & Fr.: August - December.

Distrib.: Hazaribagh, Lohardaga, Palamau.

Themeda hookeri (Griseb.) A. Camus in Bull. Mus. Hist. Nat. Paris 26: 425. 1920; Bor, Grass. Burm. Ceyl. Ind. Pak. 251. 1960. *Anthistiria hookeri* Griseb. in Goetting. Nachr. 91. 1868; Hook. f., Fl. Brit. India 7: 216. 1896.

Distrib.: E. to C. Himalaya (Karthikeyan *et al.*, Fl. Ind. Enum. Monocot. 269. 1989).

Themeda laxa (Anderss.) A. Camus in Bull. Mus. Hist. Nat. Paris 26: 423. 1920; Haines, Bot. Bihar Orissa 1051. 1924 (Repr. ed., 3: 1099. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 251. 1960. *Anthistiria laxa* Anderss. in Nov. Act. Sci. Upsal. 3, 2: 243. 1856; Hook. f., Fl. Brit. India 7: 213. 1896.

Fl. & Fr.: October - December.

Distrib.: Hazaribagh, Santal Pargana.

Themeda quadrivalvis (L.) Kuntze, Revis. Gen. Pl. 2: 794. 1891; Haines, Bot. Bihar Orissa 1050. 1924 (Repr. ed., 3: 1098. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 252. 1960. *Andropogon quadrivalvis* L. in Murr., Syst. Veg. ed. 13. 758. 1774. *Anthistiria ciliata* L. f., Suppl. Pl. 113. 1782; Hook. f., Fl. Brit. India 7: 213. 1896.

var. **helferi** (Hack.) Bor, Grass. Burm. Ceyl. Ind. Pak. 252. 1960. *Themeda helferi* Hack. in A. & C. DC., Monogr. Phan. 6: 665. 1889.

Fl. & Fr.: August - May.

Distrib.: Santal Pargana.

var. **quadrivalvis**

Fl. & Fr.: August - May.

Distrib.: Deoghar, Gaya, Hazaribagh, Koderma, Palamau, Ranchi, Sahibganj.

Themeda strigosa (Buch.-Ham. ex Hook. f.) A. Camus in Bull. Mus. Hist. Nat. Paris 26: 423. 1920; Haines, Bot. Bihar Orissa 1051. 1924 (Repr. ed., 3: 1099. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 252. 1960. *Anthistiria strigosa* Buch.-Ham. ex Hook. f., Fl. Brit. India 7: 214. 1896.

Fl. & Fr.: October - December.

Distrib.: Purnia.

Themeda tremula (Nees ex Steud.) Hack. in A. & C. DC., Monogr. Phan. 6: 667. 1889; Bor, Grass. Burm. Ceyl. Ind. Pak. 254. 1960. *Anthistiria tremula* Nees ex Steud., Syn. Pl. Glum. 1: 401. 1855; Hook. f., Fl. Brit. India 7: 214. 1896.

Fl. & Fr.: October - December.

Distrib.: Santal Pargana.

Themeda triandra Forssk., Fl. Aegypt.-Arab. 123 & 178. 1775; Bor, Grass. Burm. Ceyl. Ind. Pak. 254. 1960. *Anthistiria imberbis* Retz., Observ. Bot. 3: 11. 1783; Hook. f., Fl. Brit. India 7: 211. 1896. *Themeda imberbis* (Retz.) T. Cooke, Fl. Pres. Bombay 2: 993. 1908 (Repr. ed., 3: 513. 1967); Haines, Bot. Bihar Orissa 1049. 1924 (Repr. ed., 3: 1097. 1961).

Fl. & Fr.: October - April.

Distrib.: Hazaribagh, Lohardaga, Ranchi, Singhbhum.

Themeda villosa (Poir.) A. Camus in Lecomte, Fl. Indo-Chine 7: 364. 1922; Bor, Grass. Burm. Ceyl. Ind. Pak. 254. 1960. *Anthistiria villosa* Poir. in Lam., Encycl. 1: 396. 1814. *A. gigantea* subsp. *villosa* (Poir.) Hack. in DC., Monogr. Phan. 6: 675. 1889; Hook. f., Fl. Brit. India 7: 217. 1896.

Fl. & Fr.: October - December.

Distrib.: Giridih, Hazaribagh.

THYSANOLAENA Nees

Thysanolaena maxima (Roxb.) Kuntze, Revis. Gen. Pl. 2: 794. 1891; Bor, Grass. Burm. Ceyl. Ind. Pak. 650. 1960. *Agrostis maxima* Roxb., Fl. Ind. (Carey & Wallich ed.) 1: 319. 1820. *Thysanolaena agrostis* Nees in Edinb. New Phil. J. 18: 180. 1835; Hook. f., Fl. Brit. India 7: 61. 1896; Haines, Bot. Bihar Orissa 982. 1924 (Repr. ed., 3: 1027. 1961). - *Phuljharu*.

Fl. & Fr.: January - June.

Distrib.: Hazaribagh, Palamau, Patna, Ranchi, Sahibganj, West Champaran.

TRAGUS Hall., *nom. cons.*

Tragus roxburghii Panigr. in Kew Bull. 29: 496. 1974. *T. racemosus* Hook. f., Fl. Brit. India 7: 97. 1896, *non* Scop., 1777; Haines, Bot. Bihar Orissa 979. 1924 (Repr. ed., 3: 1024. 1961). *T. biflorus auct. non* Schult., 1824; Bor, Grass. Burm. Ceyl. Ind. Pak. 682. 1960.

Fl. & Fr.: July - September.

Distrib.: Singhbhum, West Champaran.

TRIPOGON Roem. & Schult.

Tripogon bromoides Roem. & Schult., Syst. Veg. 2: 600. 1817; Hook. f., Fl. Brit. India 7: 287. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 521. 1960.

Fl. & Fr.: September - November.

Distrib.: Chota Nagpur.

Tripogon capillatus Jaub. & Spach, Ill. Pl. Or. 4: 47. t. 332. 1851; Hook. f., Fl. Brit. India 7: 285. 1896; Haines, Bot. Bihar Orissa 966. 1924 (Repr. ed., 3: 1011. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 521. 1960.

Fl. & Fr.: September - October.

Distrib.: Hazaribagh.

Tripogon filiformis Nees ex Steud., Syn. Pl. Glum. 1: 301. 1854; Hook. f., Fl. Brit. India 7: 288. 1896; Bor, Grass. Burm. Ceyl. Ind. Pak. 521. 1960.

Fl. & Fr.: September - October.

Distrib.: Hazaribagh.

Tripogon jacquemontii Stapf in Bull. Misc. Inform. Kew 1892: 85. 1892; Hook. *f.*, Fl. Brit. India 7: 286. 1896; Haines, Bot. Bihar Orissa 966. 1924 (Repr. ed., 3: 1011. 1961); Bor, Grass. Burm. Ceyl. Ind. Pak. 522. 1960.

Fl. & Fr.: October - November.

Distrib.: Singhbhum.

TRIPSACUM L.

Tripsacum laxum Nash in N. Am. Fl. 17: 81. 1909; Bor, Grass. Burm. Ceyl. Ind. Pak. 268. 1960.

Distrib.: Cultivated. West Champaran (Bhattacharyya and Sarkar, Fl. W. Champaran 468. 1998).

TRITICUM L.

Triticum aestivum L., Sp. Pl. 85. 1753; Bor, Grass. Burm. Ceyl. Ind. Pak. 679. 1960. *T. vulgare* Vill., Hist. Pl. Dauph. 2: 153. 1787; Hook. *f.*, Fl. Brit. India 7: 367. 1896. *T. sativum* Lam., Fl. Franc. 3: 625. 1778; Haines, Bot. Bihar Orissa 963. 1924 (Repr. ed., 3: 1009. 1961).

Fl. & Fr.: January - April.

Distrib.: Cultivated throughout the state.

UROCHLOA P. Beauv.

Urochloa panicoides P. Beauv., Ess. Agrost. 53. t. 11. f. 1. 1812; Bor, Grass. Burm. Ceyl. Ind. Pak. 372. 1960. *Panicum javanicum* Poir. in Lam., Encycl. 4: 274. 1816; Hook. *f.*, Fl. Brit. India 7: 35. 1896. *Urochloa helopus* Stapf ex Haines, Bot. Bihar Orissa 1002. 1924 (Repr. ed., 3: 1048. 1961).

Fl. & Fr.: August - March.

Distrib.: Palamau, Patna, Singhbhum.

Urochloa setigera (Retz.) Stapf in Prain, Fl. Trop. Afr. 9: 598. 1920; Haines, Bot. Bihar Orissa 1003. 1924 (Repr. ed., 3: 1049. 1961). *Panicum*

setigerum Retz., *Observ. Bot.* 4: 15. 1786; Hook. *f.*, *Fl. Brit. India* 7: 36. 1896. *Brachiaria setigera* (Retz.) C.E. Hubb. in Hook., *Icon. Pl.* 34: sub t. 3363. 1938; Bor, *Grass. Burm. Ceyl. Ind. Pak.* 286. 1960.

Fl. & Fr.: September - February.

Distrib.: Chota Nagpur.

VETIVERIA Bory

Vetiveria zizanioides (L.) Nash in Small, *Fl. South East U. S.* 67. 1903; Haines, *Bot. Bihar Orissa* 1032. 1924 (*Repr. ed.*, 3: 1079. 1961); Bor, *Grass. Burm. Ceyl. Ind. Pak.* 258. 1960. *Phalaris zizanioides* L., *Mant. Pl.* 183. 1771. *Andropogon squarrosus* L. *f.*, *Suppl. Pl.* 433. 1782; Hook. *f.*, *Fl. Brit. India* 7: 186. 1896.

Fl. & Fr.: August - January.

Distrib.: Throughout the state.

ZEA L.

Zea mays L., *Sp. Pl.* 971. 1753; Hook. *f.*, *Fl. Brit. India* 7: 102. 1896; Haines, *Bot. Bihar Orissa* 1065. 1924 (*Repr. ed.*, 3: 1113. 1961); Bor, *Grass. Burm. Ceyl. Ind. Pak.* 270. 1960. - *Makai*.

Fl. & Fr.: May - October.

Distrib.: Cultivated throughout the state.

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