

**SELECTED POISONOUS PLANTS
FROM THE
TRIBAL AREAS OF INDIA**

**K. THOTHATHRI, RATNA SEN,
D. C. PAL & H. A. MOLLA**

BOTANICAL SURVEY OF INDIA

**SELECTED POISONOUS PLANTS
FROM THE
TRIBAL AREAS OF INDIA**

**SELECTED POISONOUS PLANTS
FROM THE
TRIBAL AREAS OF INDIA**

**K. THOTHATHRI, RATNA SEN,
D. C. PAL & H. A. MOLLA**



BOTANICAL SURVEY OF INDIA

Published by :

The Director
Botanical Survey of India
P-8, Brabourne Road
Calcutta 700 001

Date of Publication :

25th November, 1985

Price :

Printed by :

M/s IMPRINTA
243/2B Acharya Prafulla Chandra Road
Calcutta 700 006

CONTENTS

	<i>Page</i>
Foreword	
Introduction	
Abbreviations	
Enumeration of Selected Poisonous Plants	1
References	59
Appendix	60
List of Illustrations	63
List of Maps showing distribution	64
Index to Scientific names	77
Index to Local names	80

FOREWORD

Botanical Survey of India is mainly engaged in inventorising the plant wealth of the country in the form of floras. It has been estimated that 15-18 thousand flowering plants are present in our country. In the spectrum, large number of species are utilised as medicinal plants, food plants and horticultural plants. Quite a few are poisonous including non-flowering plants such as fleshy fungi etc. A knowledge on poisonous plants is important as some of them are used in medicine.

In the present work, the authors have presented an account of selected poisonous plants, giving correct botanical names, local names, supplemented with illustrations and distribution maps wherever possible. Information on some of the plants have been actually gathered from the tribals in the field.

Botanical Survey of India
Calcutta
11th October, 1985

M. P. Nayar
Director

INTRODUCTION

Human knowledge on poisonous plants is by accident, but the primitive man without knowing agriculture and in his quest made use of both plants and animals for his food and in that process of use and error must have known/avoided poisonous plants. But he judiciously used them for his kill to poison his arrow. There is reference to the poisonous plants being harnessed by ancients for amelioration of diseases. Such plants became medicinal and accordingly were referred to in Rig Veda. Many poisonous plants are now-a-days used in Ayurveda, an ancient medical science.

According to Chopra et al. (1949), Poisonous plants are defined as those which as a whole or part, thereof under all or certain conditions and in a manner and in amount likely to be taken or brought into contact with an organism will exert harmful effects or cause death either immediately or by reason of cumulative action of the toxic property due to presence of known or unknown chemical substances in it and not by mechanical action.

The poisonous properties are due to toxic substances such as amines, alkaloids, glucosides, saponins, tannins etc. Recent advances in Phytochemistry have enabled many Indian plants to be screened for active principles.

The poisonous plants are broadly grouped into (1) Plants poison to man and livestock. (2) Plants poison to fishes. (3) Insect repellent plants.

The present account deals with plants commonly met with in the forests inhabited by tribals. The objective is to make people aware of such plants so that their harmful effect can be avoided. For instance the recently introduced and wide spread exotic weed *Parthenium hysterophorus* has been causing, skin affection, which people could avoid if they know the plant correctly with popular name. Hence the book will help the common reader to identify such plants. A small beginning is made with few plants in this book. Detailed accounts of more plants will follow subsequently.

The information furnished here are based on work carried during the ethnobotanical field explorations and the observations recorded here are original. Correct name of the plant, its family, local names, short description, poisonous/medicinal properties etc., are furnished for each plant. They are supported with illustrations and distribution maps.

The plants are arranged alphabetically by their botanical names.

ABBREVIATIONS

As. = Asur	Kash. = Kashmir
Ass. = Assam	Kh. = Khasi
Bash. = Bashahr	Kon. = Konkan
Beng. = Bengali	Ku. = Kui
Bh. = Bhumij	L. = Lodha
Bir. = Birhore	Lep. = Lepcha
Bom. = Bombay	M. = Munda
Can. = Canaries	Mal. = Malyalam
Cut. = Cutch	Mar. = Marathi
D. = Darma	Mik. = Mikir
Derh. = Dehradun	Mir. = Miri
Des. = Description	Mon. = Monpas
Distrib. = Distribution	Nep. = Nepali
Fam. = Family	O. = Oraon
Garh. = Garhwal	On. = Onge
Gar. = Garos	Or. = Orissa
Guj. = Gujarat	Punj. = Punjab
H. = Ho	R. = Rabha
Hal. = Halba	S. = Santhal
Hind. = Hindi	Sik. = Sikkim
Ja. = Jaintea	Tam. = Tamil
Jhil. = Jhilum	Tel. = Telegu
K = Kondh	WI. = Wealth of India

ENUMERATION OF SELECTED POISONOUS PLANTS

Abrus precatorius Linn. Syst. Nat. 472. 1767 (Ed. 12) ; Baker in Hook. f. Fl. Brit. Ind. 2 : 175. 1872 (Fig. 1).

Fam. : Fabaceae.

Local name : Kainch (K.) ; Gurj (On.) ; Kead, Arakead (M.).

Des. : Climbing shrubs ; leaves pinnately compound ; flowers in racemes, pale violet ; fruits pods ; seeds oblong, red/white in colour with black eyes.

Distrib. : Throughout India.

Part : Seeds (Abrin).

Notes : Chewing of seeds is fatal. It causes gastro-intestinal irritation, nausea, vomiting, severe diarrhoea, weakness, rapid pulse rate, trembling of hands, etc. (*Chopra et al.*, 1949).

Aconitum balfourii Stapf in Ann. Roy. Bot. Gard. Calc. 10 : 160. t. 104. 1905.

Fam. : Ranunculaceae.

Local name : Gobriya (D.) ; Banwa (Garh.) ; Gobari (Nep.).

Des. : Herbs with tuberous roots ; leaves alternate, orbicular lobed, flowers in racemes, sepals blue ; fruits follicles.

Distrib. : Alpine and sub-alpine Himalayas from Garhwal to Nepal (Map 1).

Part : Roots (Aconitine, Pseudoaconitine).

Notes : Intake of roots is fatal. It causes paralysis of sensory nerves and depresses the activity of the peripheral terminations of the nervous system (WI. I).

The signs of toxicity include—loss of muscular control, trembling and ultimately respiratory paralysis (*Viswanathan & Joshi*, 1983).

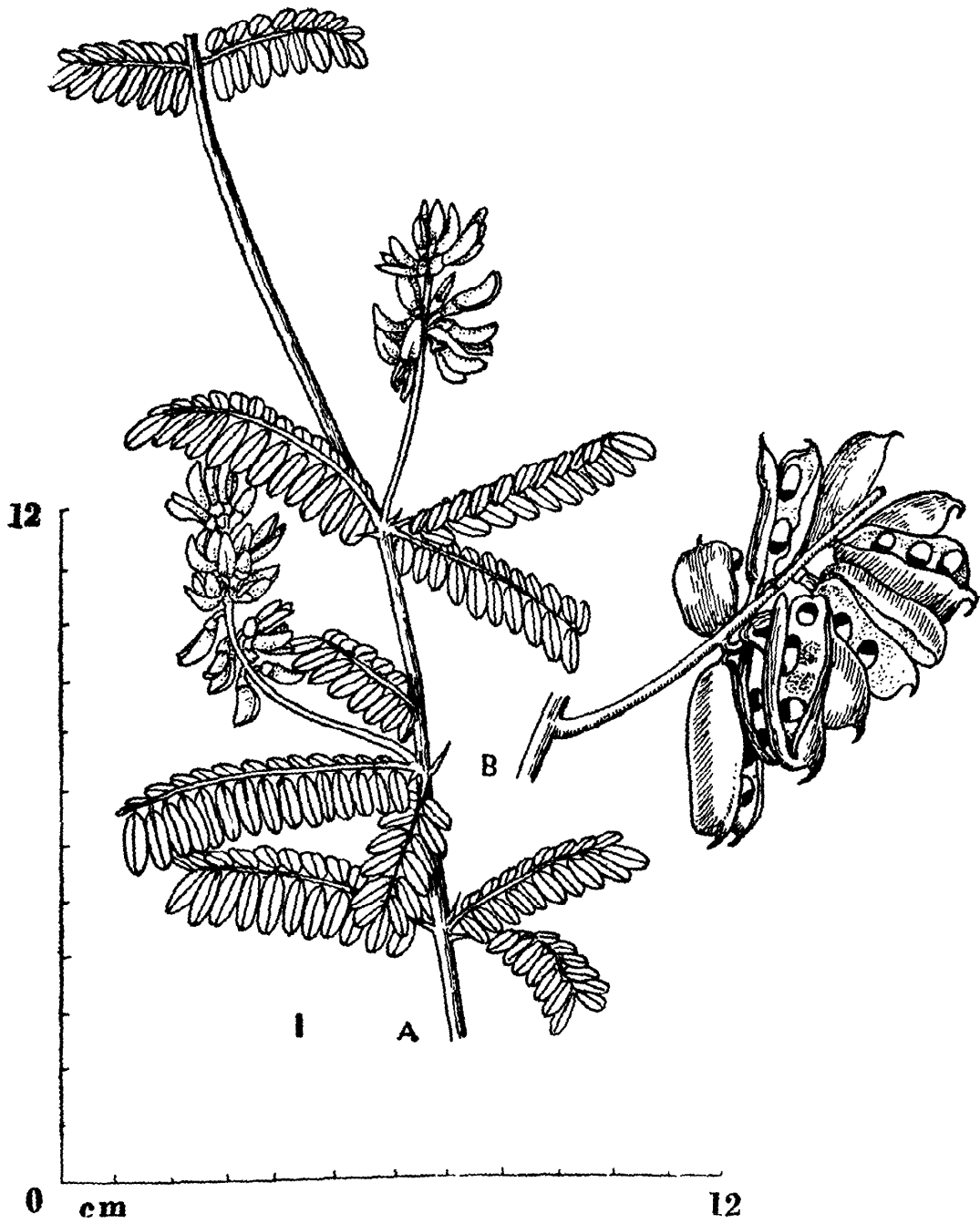


Fig. 1 : *Abrus precatorius* Linn.
A. Habit. B. Fruit.

Aconitum chasmanthum Stapf ex Holmes in Mus. Rep. Pharm. Soc. Great.
Br. 2. 1903 (Fig. 2).

Fam. : Ranunculaceae.

Local name : Mohri, Pium (Jhil.) ; Banbal nag (Kash.).

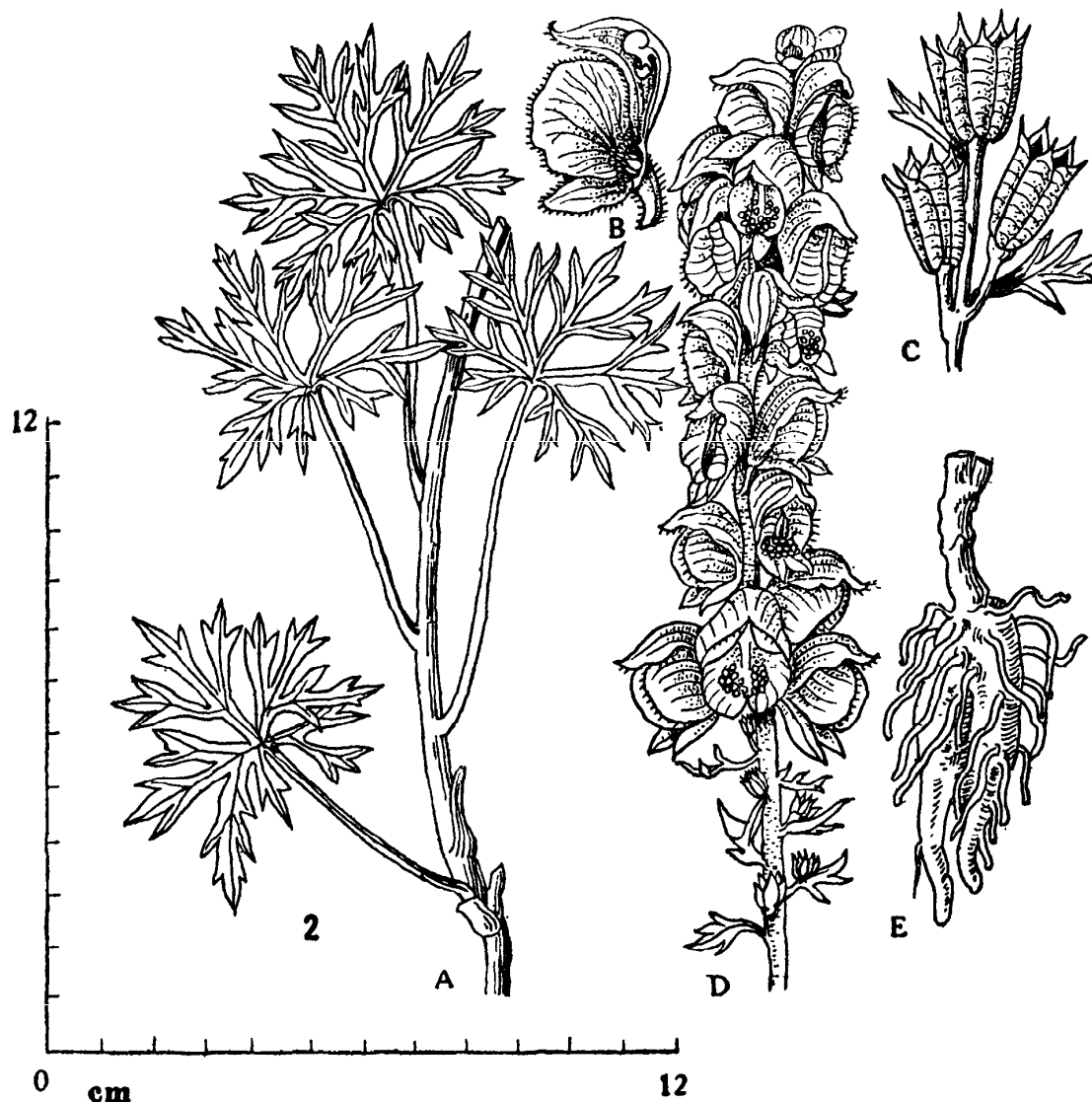


Fig. 2 : *Aconitum chasmanthum* Stapf ex Holmes
A. Habit. B. Flower. C. Fruit. D. Inflorescence. E. Root.

Des. : Herbs with paired tuberous roots ; leaves alternate, simple, palmately lobed ; flowers in racemes ; sepals blue ; fruits follicles.

Distrib. : Alpine and sub-alpine regions of the Western Himalayas. From Chitral to Hazara and Kashmir (Map 1).

Part : Roots (Indaconitine).

Notes : Intake of roots is fatal ; paralysis of sensory nerves ; depresses the activity of the peripheral terminations of the nervous system (WI. I).

Aconitum deinorrhizum Stapf in Ann. Roy. Bot. Gard. Calc. 10 : 158, t. 103. 1905 (Fig. 3).

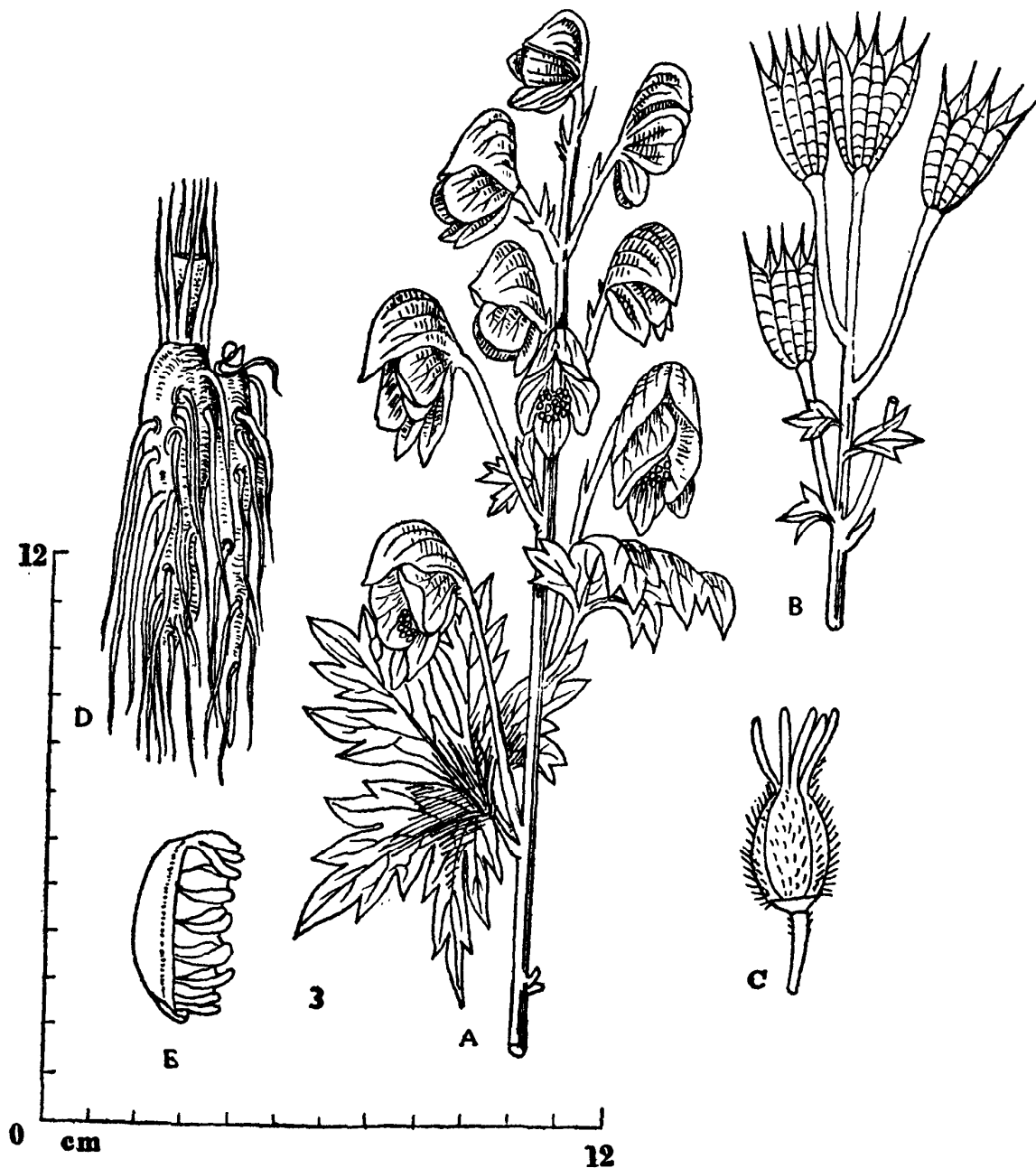


Fig. 3 : *Aconitum deinorrhizum* Stapf
 A. Habit. B. Fruit. C. Ovary. D. Root. E. Seed.

Fam. : Ranunculaceae.

Local name : Moura, Mohra (Bash.).

Des. : Herb with paired tuberous roots ; leaves simple, 5-pedatipartite ; flowers in racemes, sepals blue ; fruits follicles.

Distrib. : Throughout the Himalayas (Map 2).

Part : Roots (Pseudoaconitine).

Notes : Intake of roots is fatal (stimulates and then paralyzes sensory nerves) (WI. I).

Aconitum ferox Wall. ex Seringe in Mus. Helv. 1 : 160. t. 15, f. 43, 44. 1823 ; Hook. f. & Thoms. in Hook. f. Fl. Brit. Ind. 1 : 28. 1872.

Fam. : Ranunculaceae.

Local name : Atisingeeabish, Bikh, Bish (Nep.) ; Nyine (Lep.) ; Bish (Ass.) ; Chandu (Mon.).

Des. : Herbs with paired tuberous roots ; leaves orbicular, simple, 5-pedatipartite ; flowers in racemes, sepals blue ; fruits follicles.

Distrib. : Alpine Himalayas, Assam, Meghalaya, Arunachal Pradesh (Kameng dist.) (Map 2).

Part : Root (Pseudaconitine).

Notes : Intake of roots is fatal (direct effect on nervous system) (WI. I).

A. laciniatum (Bruhl) Stapf in Ann. Roy. Bot. Gard. Calc. 10 : 168. t. 108. 1905 ; Hara, Fl. E. Himalaya, 86. 1966.

Fam. : Ranunculaceae.

Local name : Kalobikhmo (Sik.).

Des. : Herbs with paired tuberous roots ; leaves reniform, 5-pedatipartite ; flowers in racemes, sepals dark red ; fruits follicles.

Distrib. : Alpine and sub-alpine Himalayas of Sikkim (Map 2).

Part : Root (Aconitine).

Notes : Intake of roots is fatal (stimulating and paralyzing the sensory nerves and depressing activity of peripheral terminations of the nervous system) (WI. I).

A. spicatum (Bruhl) Stapf in Ann. Roy. Bot. Gard. Calc. 10 : 165. t. 106. 1905 ; Hara, Fl. E. Himalaya, 86. 1966.

Fam. : Ranunculaceae.

Local name : Bikh, Guiong mot, Shodduk mot (Sik.).

Des. : Herbs with paired tuberous roots ; leaves ovate, 3-partite ; flowers in racemes or panicles, sepals blue ; fruits follicles.

Distrib. : Alpine zone of Sikkim Himalayas (Map 3).

Part : Root (Bikhaconitine).

Notes : Intake of roots is fatal (stimulates and paralyzes the sensory nerves ; depresses the activity of the peripheral terminations of the nervous system (WI. I).

Aleurites moluccana (Linn.) Willd. Sp. Pl. 4 : 590. 1805 ; Hook. f. Fl. Brit. Ind. 5 : 384. 1888.

Fam. : Euphorbiaceae.

Local name : Akroda (Can.) ; Akrota (Cut.) ; Akhoda (Guj.) ; Nattakarottu (Tam.) ; Natakrotu (Tel.).

Des. : Trees ; leaves alternate, simple, long petioled, ovate ; flowers in cymes, white ; fruits about 5 cm in diameter, ovoid ; seeds resemble walnut.

Distrib. : Wild in South India, Assam, Meghalaya, Arunachal Pradesh and Nagaland (Map 3).

Part : Seeds (oil).

Notes : Tribal children like to eat seeds as nut ; eating of cotyledones (raw) however, causes vomiting and involuntary motion of bowels (authentic field report.).

Allamanda cathartica Linn. Mant. 2 : 214, 1771 ; Cooke, Fl. Pres. Bomb. 2 : 207. 1904.

Fam. : Apocynaceae.

Local name : Araba (M.).

Des. : Shrubs ; leaves in whorls, lanceolate ; flowers in racemes, tubular, yellow ; fruits follicles.

Distrib. : An exotic, occurring all over the Indian gardens. Wild in Travancore (Map 3).

Part. : Stem barks (Juice of the stem barks).

Notes: Intake of bark-juice causes vomiting and induce active movement of bowels (*Chopra et al., l.c.*).

Alstonia scholaris (Linn.) R. Br. in Mem. Wern. Nat. Hist. Soc. 1 : 76. 1811 (1810) ; Hook. f. Fl. Brit. Ind. 3 : 642. 1882 (Fig.4).

Fam. : Apocynaceae.

Local name : Chatiani daru (M.) ; Chatian (R.).

Des. : Trees, leaves whorled, simple, oblong elliptic ; flowers in racemes, greenish white ; fruits follicles.

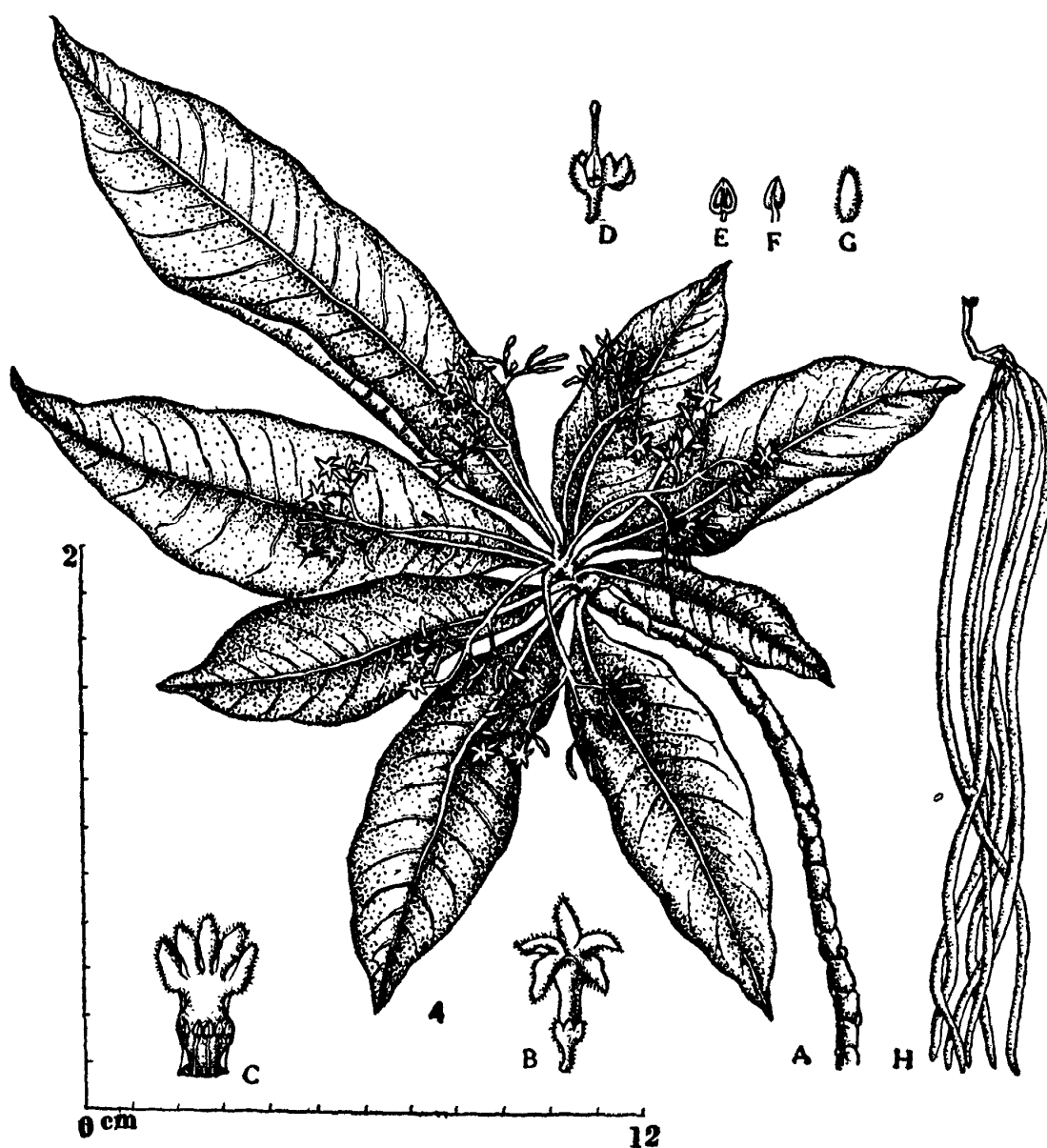


Fig. 4 : *Alstonia scholaris* (Linn.) R. Br.
A. Habit. B. Flower. C. L.S. of flower. D. Gynoceium.
E-F. Anther. G. Ovary. H. Fruit.

Distrib. : All over India (Map 4).

Part : Latex (Echitamine).

Notes : Intake of latex causes toxic effect (WI, I). Externally latex is injurious to eyes. It is reported that the latex, if gets into the eyes causes blindness (authentic field report).

Amanita muscaria (Linn. ex Fr.) Hook. Fl. Scotica 2 : 19. 1821 (Fig. 5).

Fam. : Amanitaceae.

Local name : Bis-chatu (M.).

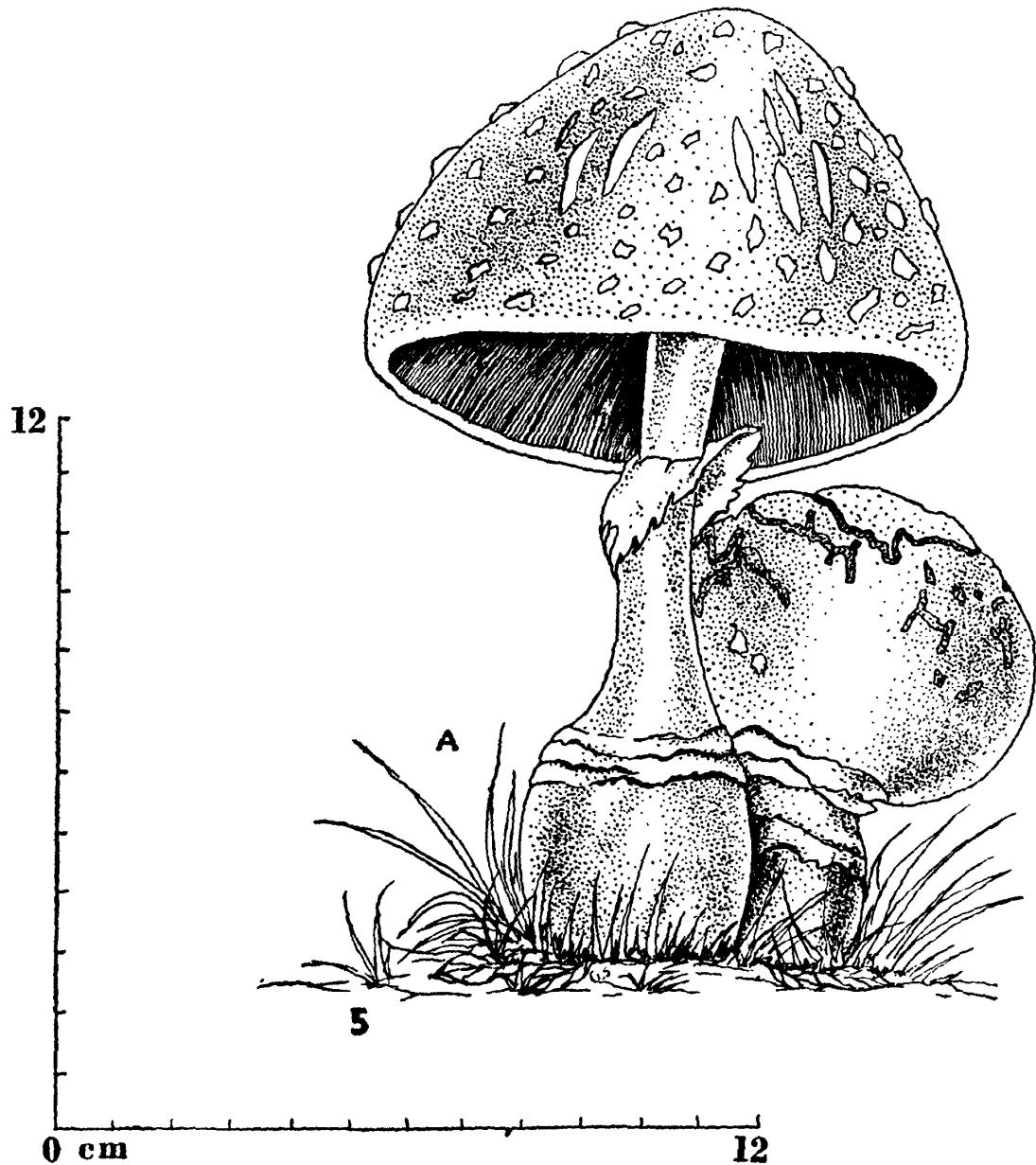


Fig. 5 : *Amanita muscaria* (Linn. ex Fr.) Hook—Habit.

Des. : Mushrooms of 20-25 cm high ; stems white or yellowish, firm, straight, often a little scaly ; cap. 15-20 cm across, scarlet or orange red ; slimy, shiny and dotted with thick white or yellowish wart-like patches ; gills white or yellow.

Distrib. : Growing on woods at medium altitudes in the Himalayan regions.

Part : Whole plant (Cholin, muscarine and mycetoatropine).

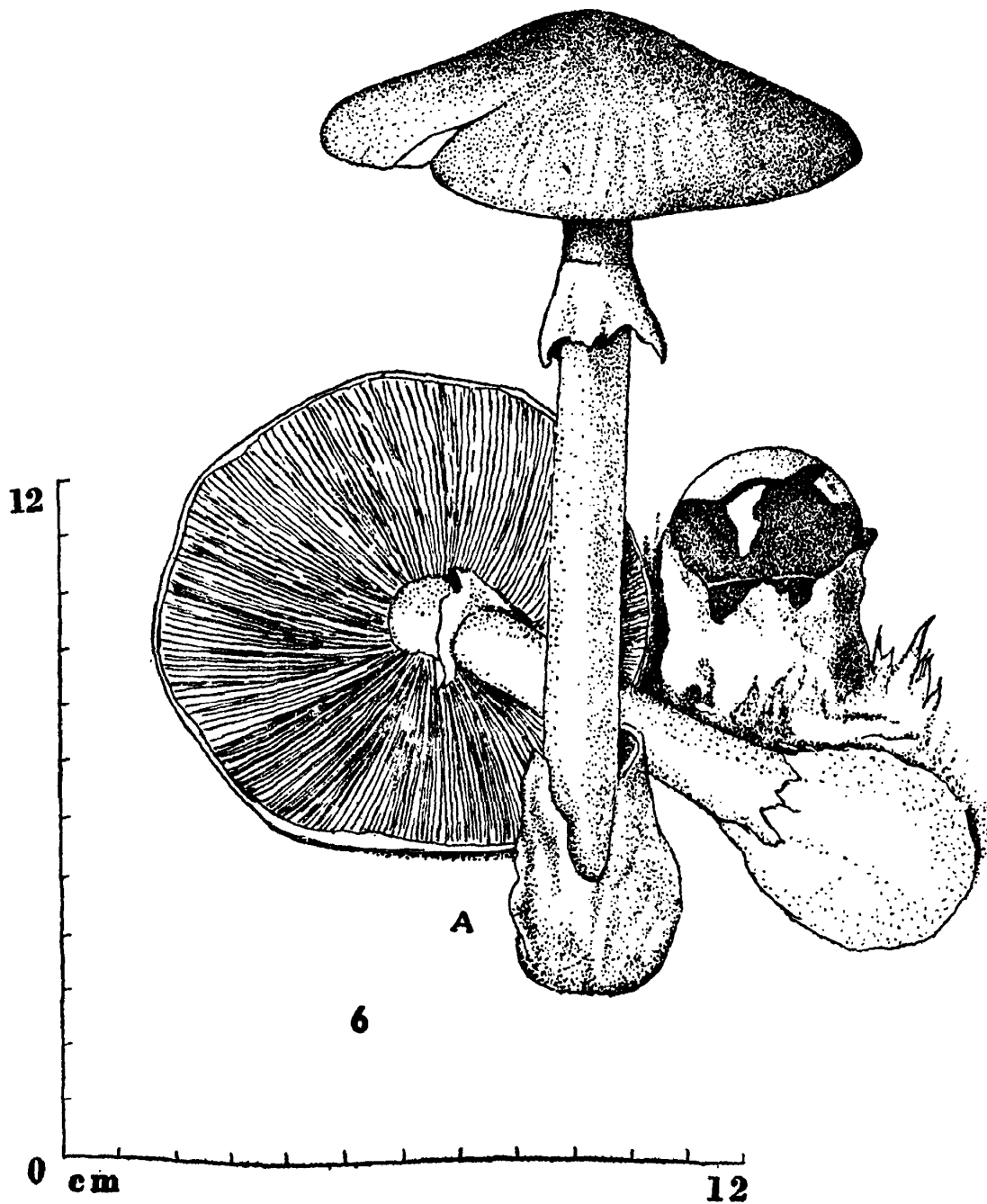


Fig. 6 : *Amanita phalloides* (Vaill ex Fr.) Secr.—Habit.

Notes : The fungus has been used in parts of USSR for the preparation of intoxicating beverages and as fly poisons (*Watt & Breyer-Brandwijk*, 1962).

Amanita phalloides (Vaill. ex Fr.) Secr. in Mycol. Suisse. 1 : 8. 1883.
(Fig. 6).

Fam. : Amanitaceae.

Local name : Bis-chatu (M.).

Des. : Mushrooms with a whitish stalk, often tinged with yellow or green ; ring well-marked, large, white or greenish ; cap fleshy whitish ; gills crowded, white often with a greenish or yellowish reflection.

Distrib. : Greater parts of India.

Part. : Whole plant (Phalloidine).

Notes : Kondh, Santals and Oraons report that intake of this mushroom as food is fatal (authentic field report).

Anacardium occidentale Linn. Sp. Pl. 383. 1753 ; Hook. f. Fl. Brit. Ind. 2 : 20. 1876 (Fig. 7).

Fam. : Anacardiaceae.

Local name : Ote rai (M.).

Des. : Trees ; leaves alternate, simple, obovate ; flowers in panicles, yellow with pink stripes ; fruits drupes with nuts.

Distrib. : Coastal districts of India, Andaman and Nicobar Islands (Map 5).

Part : Pericarp of fruits (oil contains cardol and anacardic acid), and juice of plants.

Notes : Tribals of Bihar, Orissa and West Bengal report that the oil is corrosive, causing blisters on skins, inflammation of eyes and the juice is injurious to eyes (authentic field report).

Antiaris toxicaria (Pers.) Lesch. in Ann. Mus. Par. 16 : 478. 1810 ; Hook. f. Fl. Brit. Ind. 5 : 537. 1887.

Fam. : Moraceae.

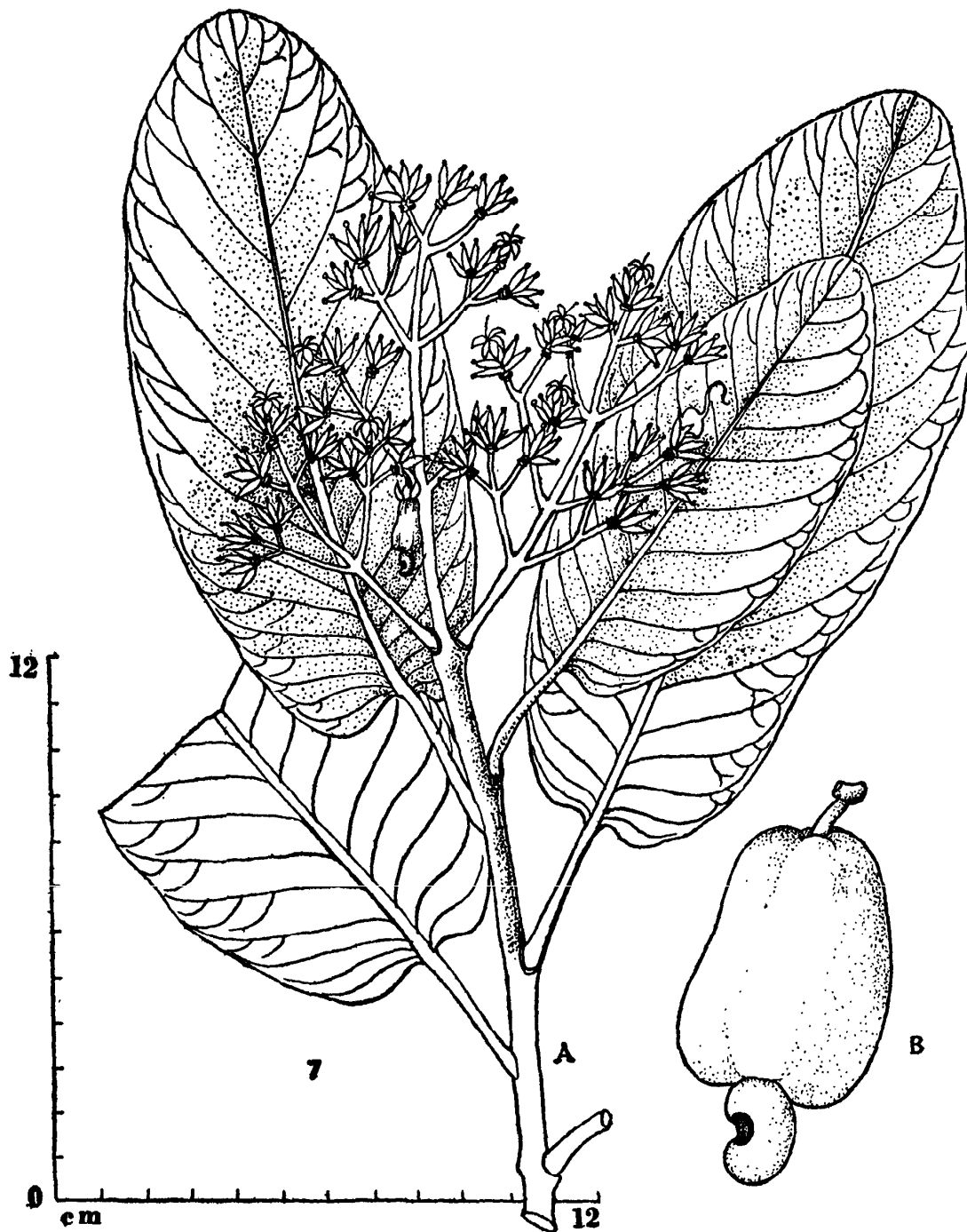


Fig. 7 : *Anacardium occidentale* Linn.
A. Habit. B. Fruit.

Local name : Karwat (Mar.) ; Nettavil (Tam.) ; Ajjanapatte (Can.).

Des. : Trees ; leaves alternate, elliptic-oblong, subcordate ; flowers monoecious, males crowded on the surface of an axillary pedunculate receptacle, female solitary ; fruits red, velvety, pyriform, one-seeded.

Distrib. : Western Ghats (Map 5).

Part : Latex (α - antiaria), sap.

Notes : Latex proves fatal only when it reaches the blood stream. The sap in large doses acts as a myocardial poison (W.I. I).

Argemone mexicana Linn. Sp. Pl. 508. 1753 ; Hook. f. & Thoms. in Hook. f. Fl. Brit. Ind. 1 : 117. 1872 (Fig. 8).

Fam. : Papaveraceae.

Local name : Bukla kata (O.) ; Bakula, Rangaini, Bakula Janum (M.) ; Bukla Kanta (S.).

Des. : Prickly herbs with yellow latex ; leaves alternate, simple, pinnatifid ; flowers solitary yellow ; fruits capsules ; seeds like black mustard.

Distrib. : A native of Mexico but naturalised in India (Map 5).

Part : Seeds (seed-oil).

Notes : Intake of the seed oil causes symptoms of epidemic dropsy. Intake of raw seeds causes spitting and vomiting, diarrhoea followed by oedema of feet and legs and intense pain all over the body (*Chopra et al.*, l.c.). Cattle avoid the plant (authentic field report).

Arisaema tortuosum (Wall.) Sch. in Schott & Endl. Melet. Bot. 17 : 1832 ; Hook. f. Fl. Brit. Ind. 6 : 502. 1893.

Fam. : Araceae.

Local name : Huring chakkad (M.).

Des. : Herbs with corms ; leaves compound ; flowers in spadix, unisexual ; fruits berries.

Distrib. : Himalayas, (Ranchi district, Bihar) and Western Ghats (Map 6).

Part : Corms and plants.

Notes : Both corms and plants are acrid. Mundas and Oraons reported that intake of these parts cause inflammation of mucous membrane (authentic field report).

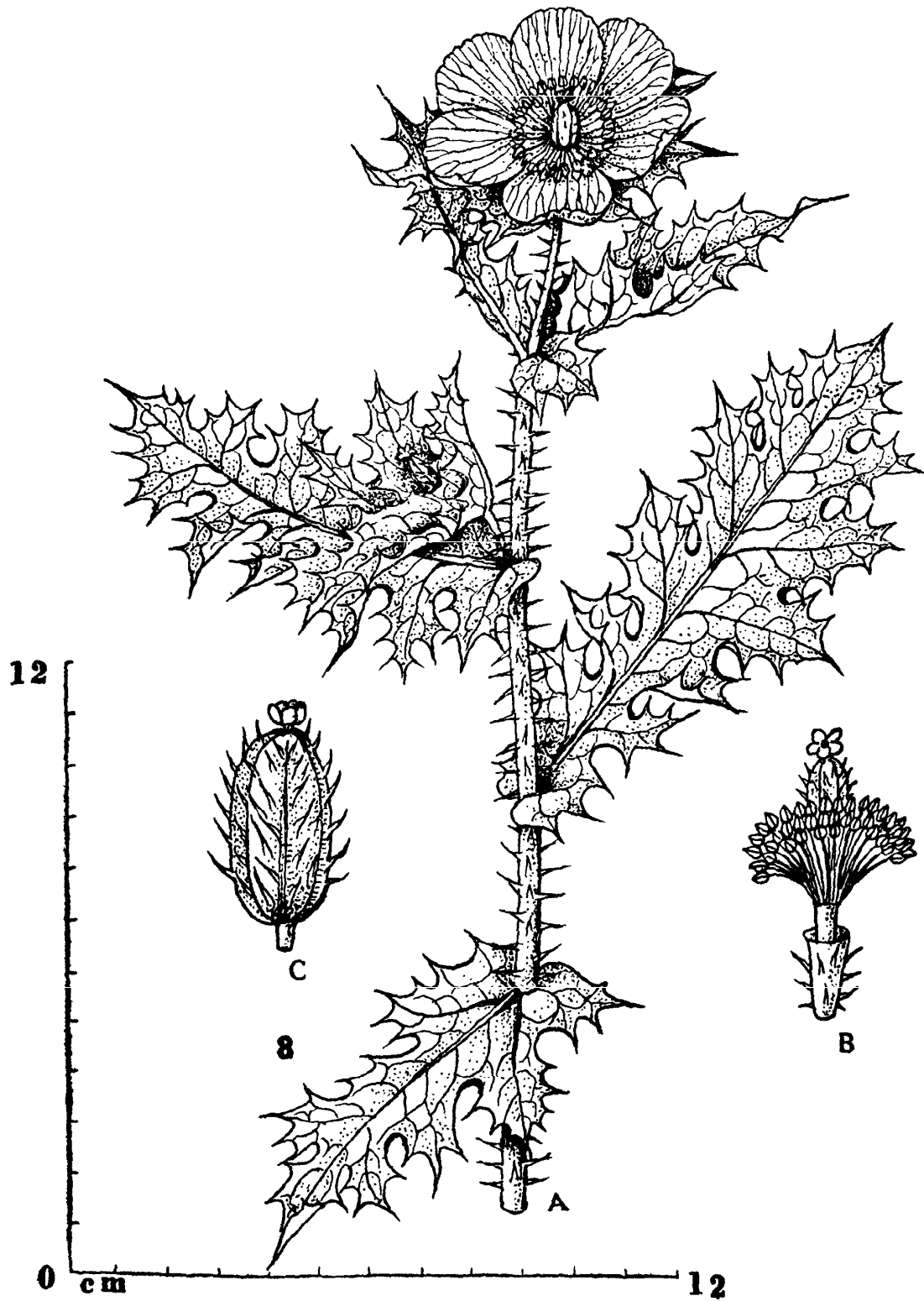


Fig. 8 : *Argemone mexicana* Linn.
A. Habit. B. Flower. C. Fruit.

Artemisia nilagirica (Clarke) Pamp. in *Nouv. Giorn. Bot. Ital.* 33 : 452. 1926. *A. vulgaris* var. *nilagirica* Clarke in *Comp. Ind.* 162. 1876.

Fam. : Asteraceae.

Local name : Titipati (Nep.) ; Jangli bhang (R.) ; Nilum (Mon.) ; Kheb-bija (Gar.).

Des. : Under shrubs ; leaves deeply lobed ; flowers in spike-like paniced racemes, white ; fruits achenes.

Distrib. : Found throughout mountain tracts of India. North Bengal, Sikkim (Map 7).

Part : Whole plant.

Notes : Intake of leaves and the flower tops is poisonous (epileptiform of convulsions, profuse sweating with the odour of garlic, violent contractions of uterus, abortion) (*Chopra et al.*, l.c.). Field report supports the fact. Tribals of Jalpaiguri district use plants as narcotic (authentic field report).

Calotropis gigantea (Linn.) R. Br. in *Hort. Kew* 2 : 78, 1811 (2 ed.) ; *Hook. f. Fl. Brit. Ind.* 4 : 17. 1883 (Fig. 9).

Fam. : Asclepiadaceae.

Local name : Akuan (O.) ; Palati (M.) ; Akon (Mir.) ; Akond (Bh.).

Des. : Shrubs ; leaves opposite, simple obvoate ; flowers in cymes, purplish or white ; fruits follicles.

Distrib. : All over India (Map 7).

Part : Latex and leaves (Gigantin and resinols).

Notes : Intake of latex is fatal. According to the tribals of plains the latex is injurious to eyes. It is also poisonous to fishes (authentic field report).

Cannabis sativa Linn. *Sp. Pl.* 1027. 1753 ; *Hook. f. Fl. Brit. Ind.* 5 : 487. 1883 (Fig. 10).

Fam. : Cannabinaceae.

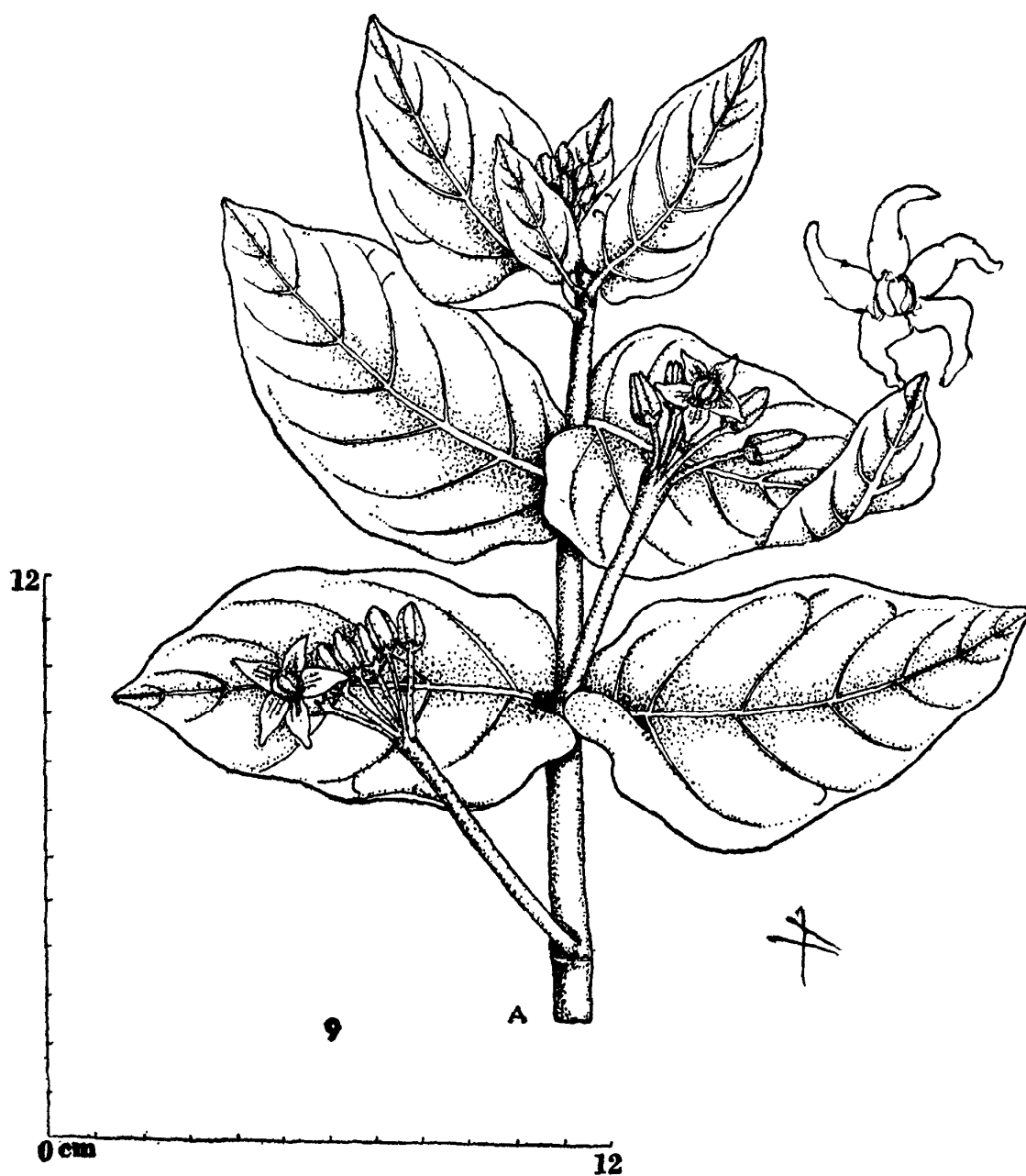


Fig. 9 : *Calotropis gigantea* (Linn.) R. Br.—Habit.

Local name : Ganja (M.).

Des. : Herbs with angular stem ; leaves alternate, simple, palmately lobed ; flowers in panicles, unisexual ; fruits achenes.

Distrib. : Sub-Himalayan tracts, Bihar, West Bengal, Orissa and South India (Map 8).

Part : Dried flowers and fruiting tops of female plants.

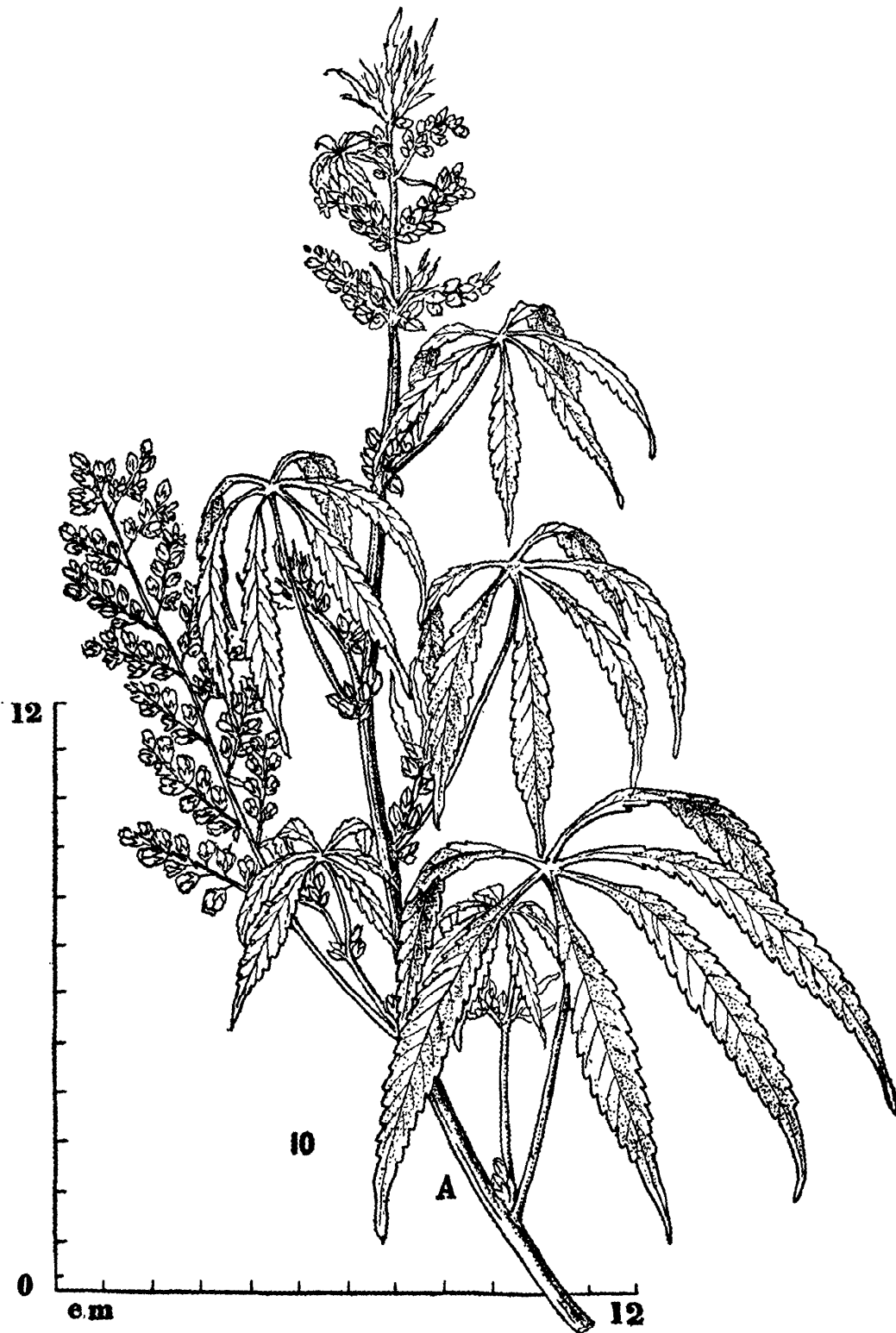


Fig. 10: *Cannabis sativa* Linn.—Habit.

Notes : Strong narcotic ; smoking causes hallucination, and loss of control on central nervous system (WI. II).

Casearia elliptica Willd. Sp. Pl. 2 : 628. 1800 ; Clarke in Hook. f. Fl. Brit. Ind. 2 : 593. 1879 (Fig. 11).

Fam. : Flacourtiaceae.

Local name : Biri (O.) ; Bir churchu, Churchu daru (M.).

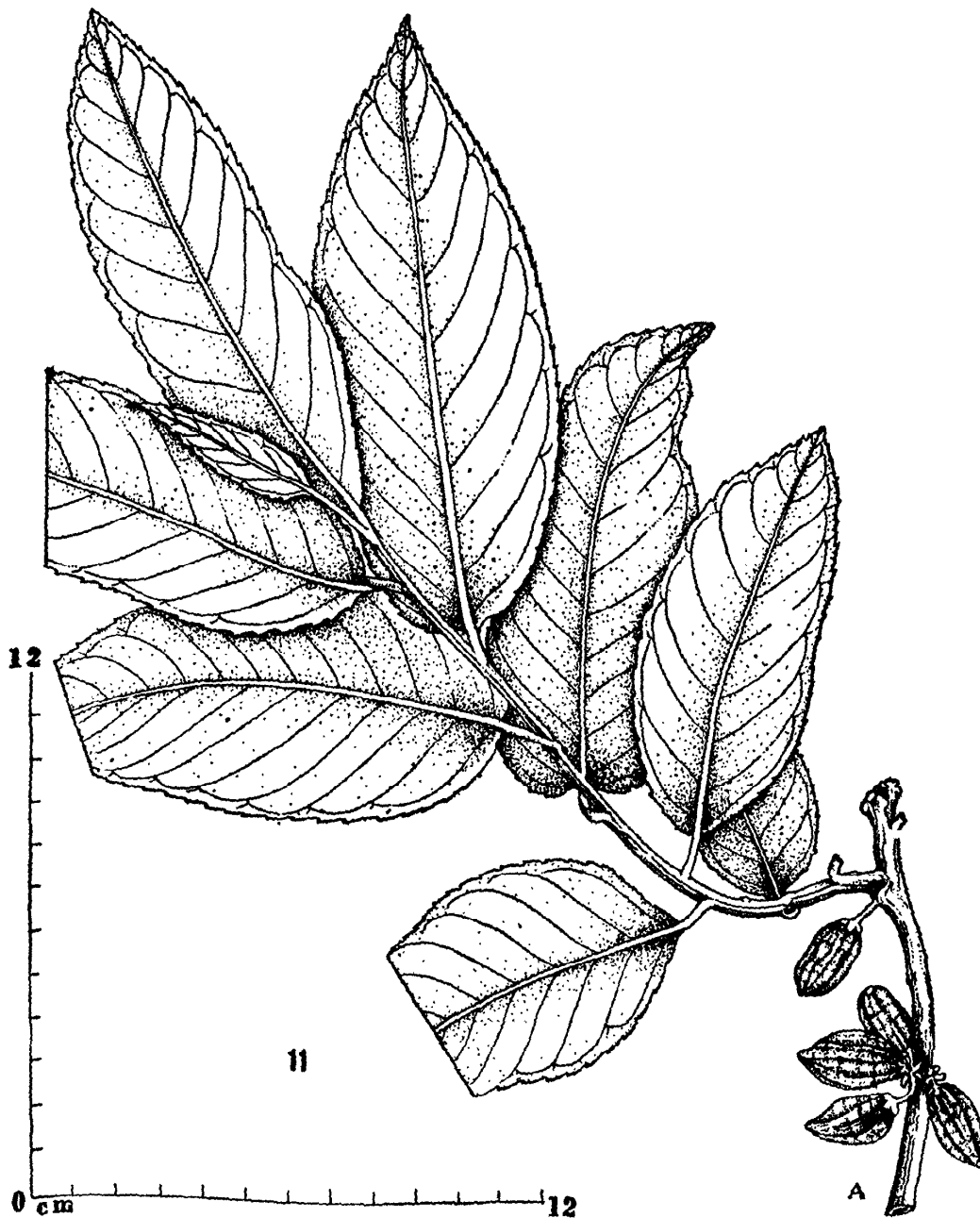


Fig. 11 : *Casearia elliptica* Willd.—Habit.

Des. : Small trees ; leaves alternate, simple lanceolate ; flowers in axillary fascicles, greenish yellow ; fruits capsules.

Distrib. : All over India (Map 8).

Part : Fruits (juice).

Notes : Intake of juice of fruits is poisonous. It causes breathing trouble and unconsciousness. Birhor, Mech, Oraon, Munda and Santal use the fruits for poisoning fish (authentic field report).

Catharanthus pusillus (Murr.) Don, Gen. Syst. 4 : 95. 1837-38. *Vinca pusilla* Murr. Novi Comment Soc. Regial Sci. Gott. 3 : 66. 1773 ; Hook. f. Fl. Brit. Ind. 3 : 640. 1882.

Fam. : Apocynaceae.

Local name : Milagaipoondu (Tam.) ; Kapavila (Mal.).

Des. : Herbs ; leaves opposite, lanceolate ; flowers axillary, white, solitary or in pairs ; fruits follicles ; seeds black.

Distrib. : Western Himalayas, Upper Gangetic Plain, Bihar, West Bengal, Orissa, Andhra Pradesh, Maharashtra and Gujarat (Map 9).

Part : Whole plant.

Notes : Plant is toxic to cattle causing temporary blindness with urticarial rashes all over the body (WI. VI). It is reported from Orissa that it causes temporary madness of livestock (authentic field report).

C. roseus (Linn.) Don, Gen. Syst. 4 : 95. 1837-38 ; Hook. f. Fl. Brit. Ind. 3 : 640. 1882 (Fig. 12).

Fam. : Apocynaceae.

Local name : Baro-masiya (Nep. & O.).

Des. : Undershrubs ; leaves opposite, simple, ovate ; flowers in axillary pairs, rosy/white ; fruits follicles.

Distrib. : Both wild and cultivated throughout India.

Part : Whole plant (Amorphous alkaloid).

Notes : Intake of plant juice is poisonous. It contains an amorphous alkaloid which acts as poison to heart (*Chopra et al.*, l.c.).

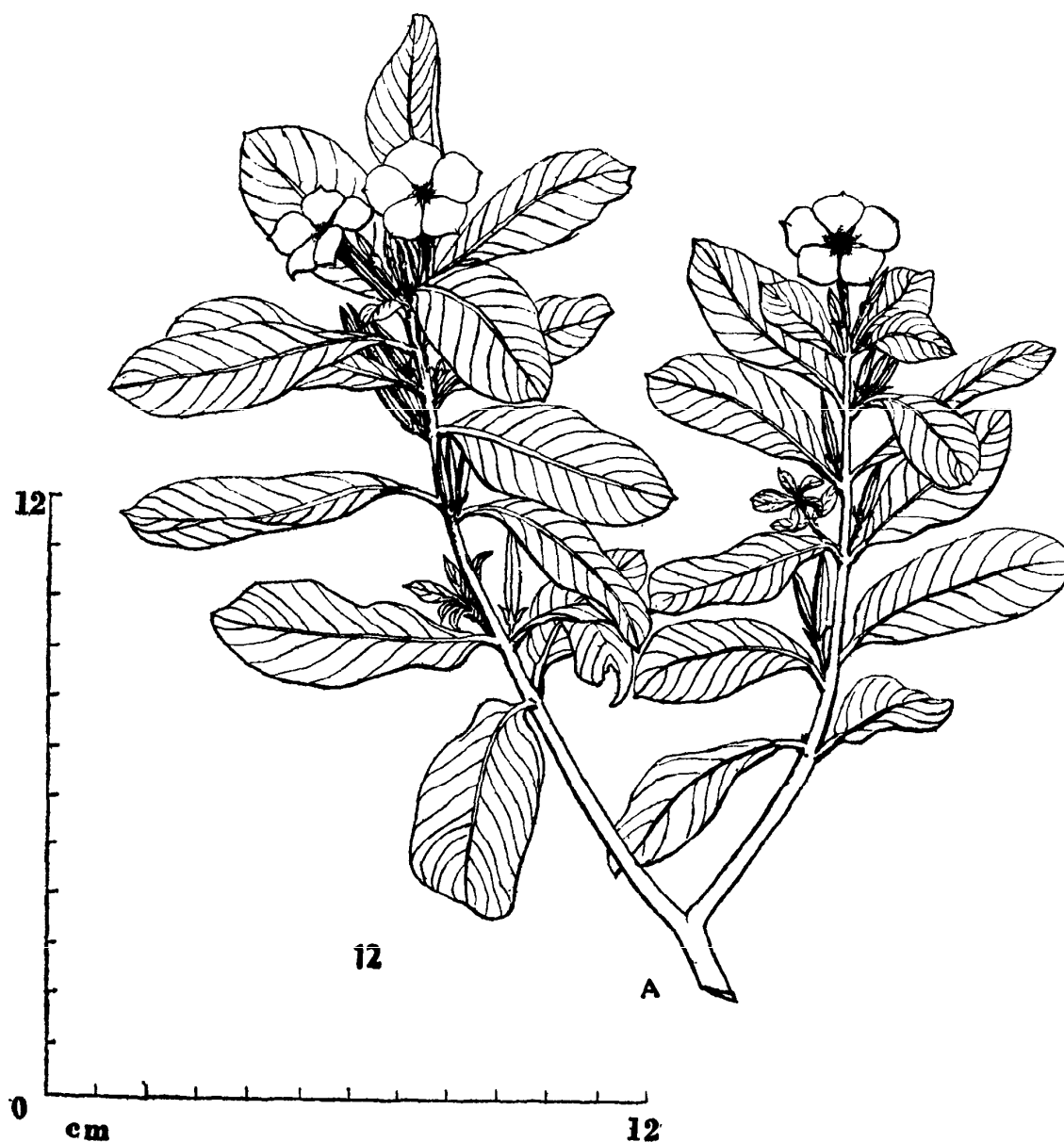


Fig. 12 : *Catharanthus roseus* (Linn.) Don—Habit.

Cerbera manghas Linn. Sp. Pl. 208. 1753 ; Hook. f. Fl. Brit. Ind. 3 : 645. 1882.

Fam. : Apocynaceae.

Local name : Garji (Can.) ; Kalachedi (Tam.) ; Garaunda, Garna (Punj.) ; Hindaramba (Tel.).

Des. : Shrubs with milky latex ; leaves alternate, lanceolate ; flowers in paniculate cymes, white ; fruits drupes.

Distrib. : Common in the tidal forest of mainland and Andaman & Nicobar Islands.

Part : Seed kernels (Glycosides cerberin & Cerberoside) and latex.

Notes : Intake of seed kernel results in severe vomiting, purging and collapse (W.I. II). The latex causes blindness if it gets into the eyes (*Viswanathan & Joshi* l.c.).

Cleistanthus collinus (Roxb.) Benth & Hook. f. *Gen. Plant.* 3 : 268. 1880-83 ; *Hook. f. Fl. Brit. Ind.* 5 : 274. 1887 (Fig. 13).

Fam. : Euphorbiaceae.

Local name : Kargelo daru (M.) ; Parashu (O.).

Des. : Small deciduous trees ; leaves simple, ovate ; male flowers in racemes, female solitary ; fruits capsules, trilobed.

Distrib. : Madhya Pradesh, South India and Gangetic Plains.

Part : Leaves, roots and especially the fruits and root-bark (oduvin).

Notes : Intake of roots, leaves, fruits and barks by any chance is poisonous and acts as violent gastro-intestinal irritant (*Chopra et al.*, l.c.). Most of the tribal people of plains take root-bark for suicidal purpose. They also use it for poisoning their arrow-blades (authentic field report).

Clematis gouriana Roxb. ex DC. *Syst.* 1 : 138. 1817 ; *Hook. f. & Thoms.* in *Hook. f. Fl. Brit. Ind.* 1 : 4. 1872.

Fam. : Ranunculaceae.

Local name : Moriel, Morvel, Ranjai (Bom.) ; Telejadari (Can.) ; Belkangu, Belkum (Dehr.) ; Boromojhanti, Idiya (Or.).

Des. : Climbers ; leaves opposite, pinnately compound, leaflets ovate ; flowers in panicles, greenish white ; fruits achenes.

Distrib. : Western Himalayas and hilly districts throughout India.

Part : Leaves and stems.

Notes : Plants have acrid poisoning principle. Juice of fresh leaves and stems is vesicant and produce blisters (*Chopra et al.*, l.c.).

Cuscuta reflexa Roxb. in *Pl. Cor.* 2 : 3. t. 104. 1798 ; *Clarke* in *Hook. f. Fl. Brit. Ind.* 4 : 225. 1884 (Fig. 14).

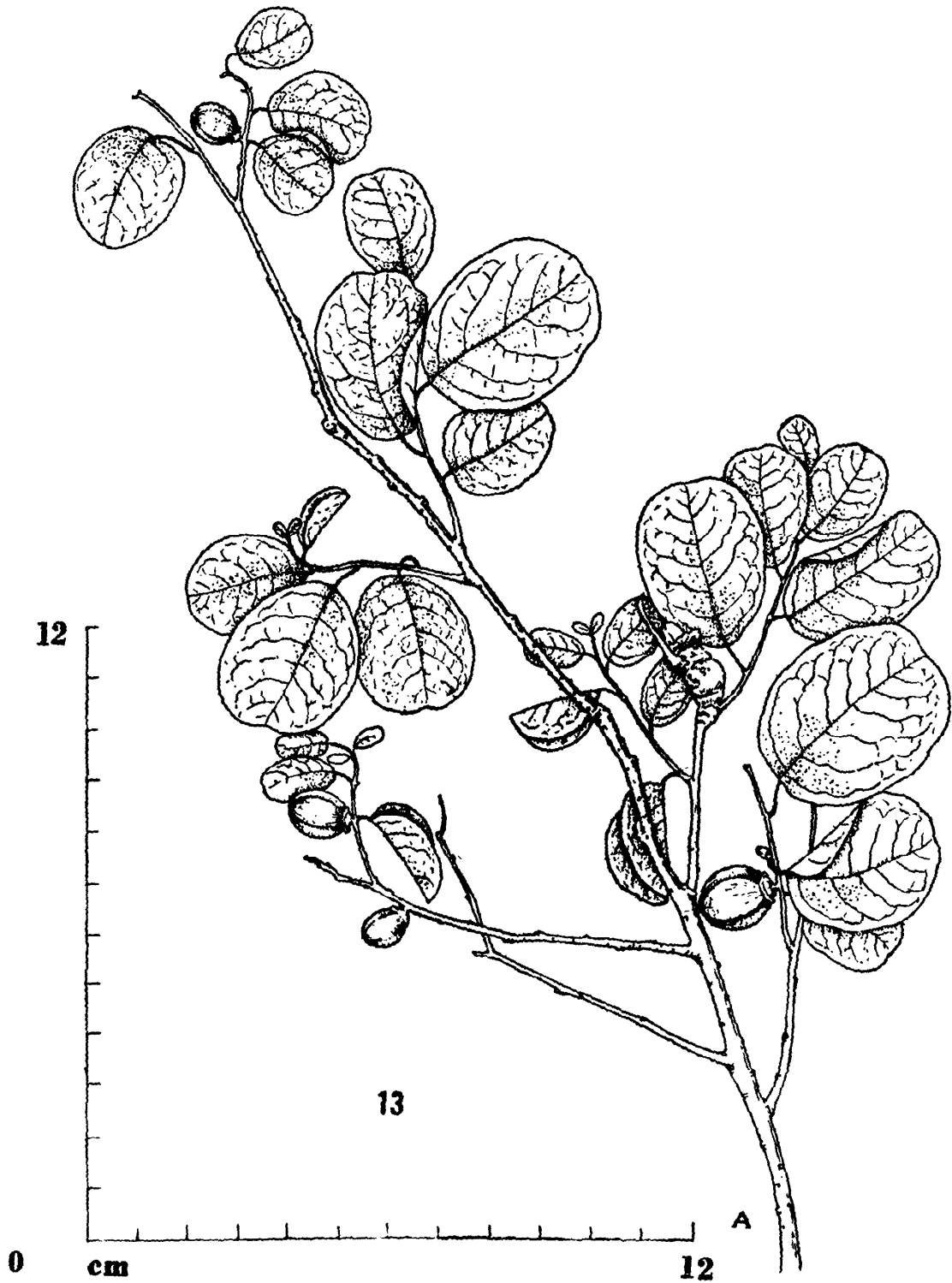


Fig. 13 : *Cleistanthus collinus* (Roxb.) Benth. & Hook. f.—Habit

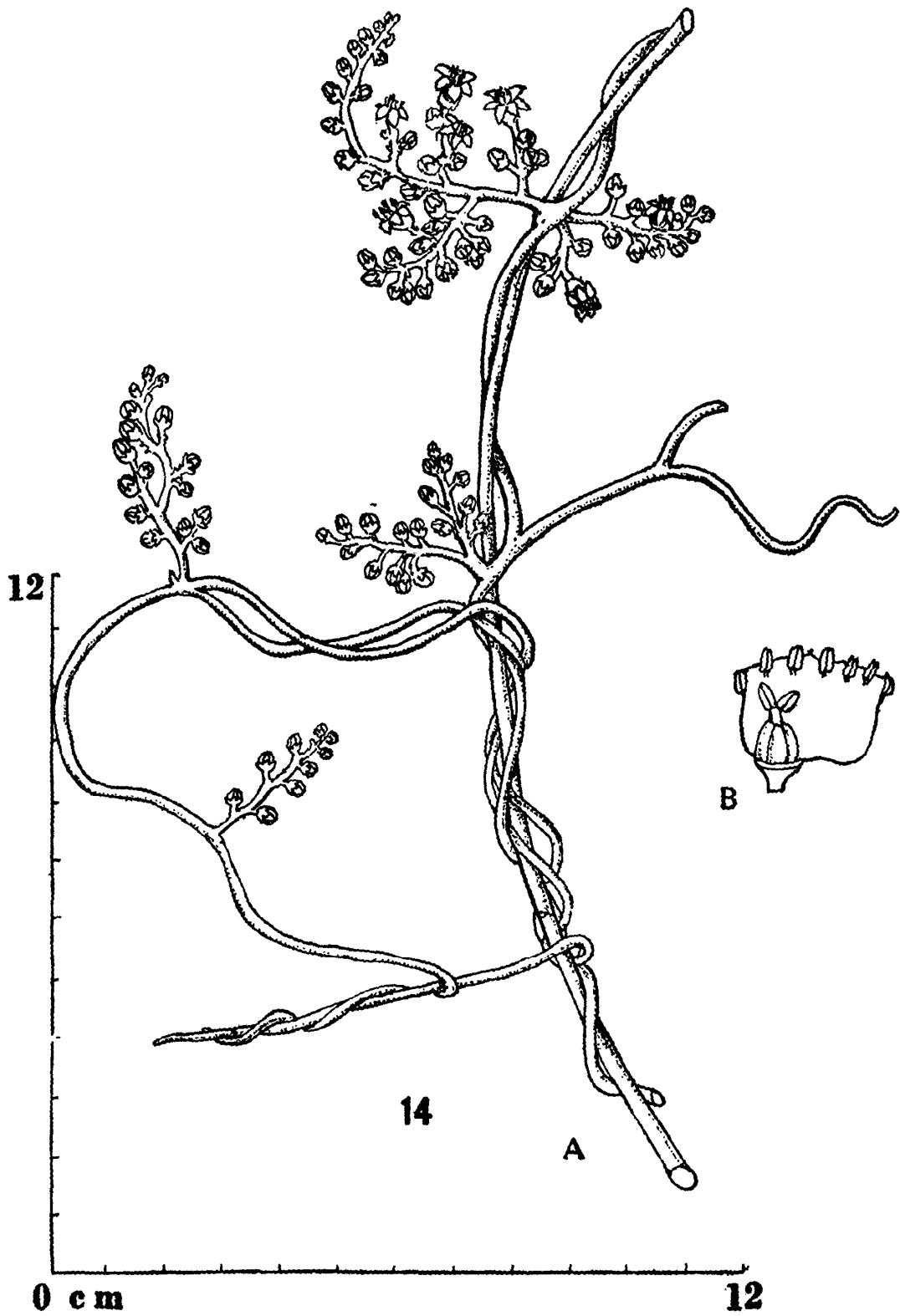


Fig. 14 : *Cuscuta reflexa* Roxb.
A. Habit. B. Flower parts.

Fam. : Convolvulaceae.

Local name : Xoxro banda (O.) ; Ara roanr, Ambar bail (M.).

Des. : Parasitic climber with yellowish fleshy stems ; flowers pinkish ; fruits capsules.

Distrib. : Throughout India.

Part : Whole plant.

Notes : Intake of plant juice is poisonous. It causes depression with nausea and vomiting, followed by abortion in case of females (*Chopra et al.*, l.c.). The Lodha use the plants as feed to their enemy's livestock for killing purpose (authentic field report).

Datura metel Linn. Sp. Pl. 179. 1753 ; Clarke in Hook. f. Fl. Brit. Ind. 4 : 243. 1883 (Fig. 15).

Fam. : Solanaceae.

Local name : Dhatura (Beng.) ; Dutura (Bom.) ; Vellummattai (Tam.).

Des. : Undershrubs ; leaves alternate, simple, triangular-ovate, irregularly toothed ; flowers solitary, white ; fruits capsules, spiny.

Distrib. : Throughout India.

Part : Leaves and seeds.

Notes : Intake of seeds is highly toxic. Effect of toxicity can be removed by taking juice of *Oxalis corniculata* L. Sometimes Birhors use the seeds as narcotic (authentic field report).

D. stramonium Linn. Sp. Pl. 179. 1753 ; Clarke in Hook. f. Fl. Brit. Ind. 4 : 242. 1883 (Fig. 16).

Fam. : Solanaceae.

Local name : Dhatra (O.) ; Tuntura ba (M.).

Des. : Undershrubs ; leaves alternate, simple, triangular ovate, toothed ; flowers solitary, white ; fruits capsules, thickly covered with sharp spines.

Distrib. : Throughout India.

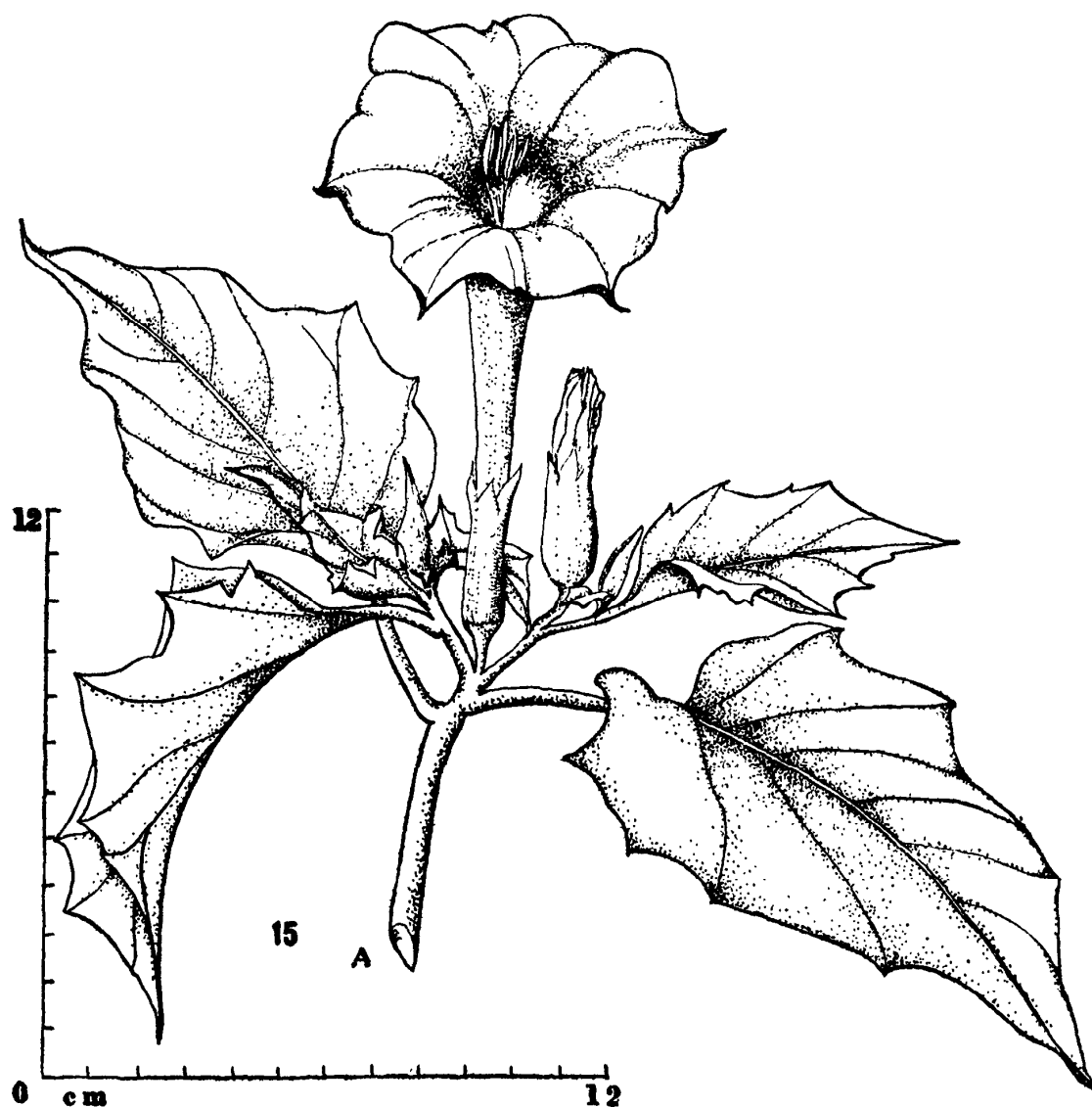


Fig. 15 : *Datura metel* Linn.—Habit.

Part : Leaves, flower and seeds.

Notes : Intake of the leaves, flowers and fruits causes fatal poisoning, dryness of the throat, giddiness, hallucination and staggering ; the voice is unrecognisable and the vision is affected and it finally leads to coma (WI. III).

Dioscorea hispida Dennst. & Schl. Hort. Ind. Malb. 15. 1818 ; Gamble, Fl. Pres. Madr. 3 : 1055. 1957. (Reprinted ed.).

Fam. : Dioscoreaceae.

Local name : Hasa (S.) ; Kanda (L.).

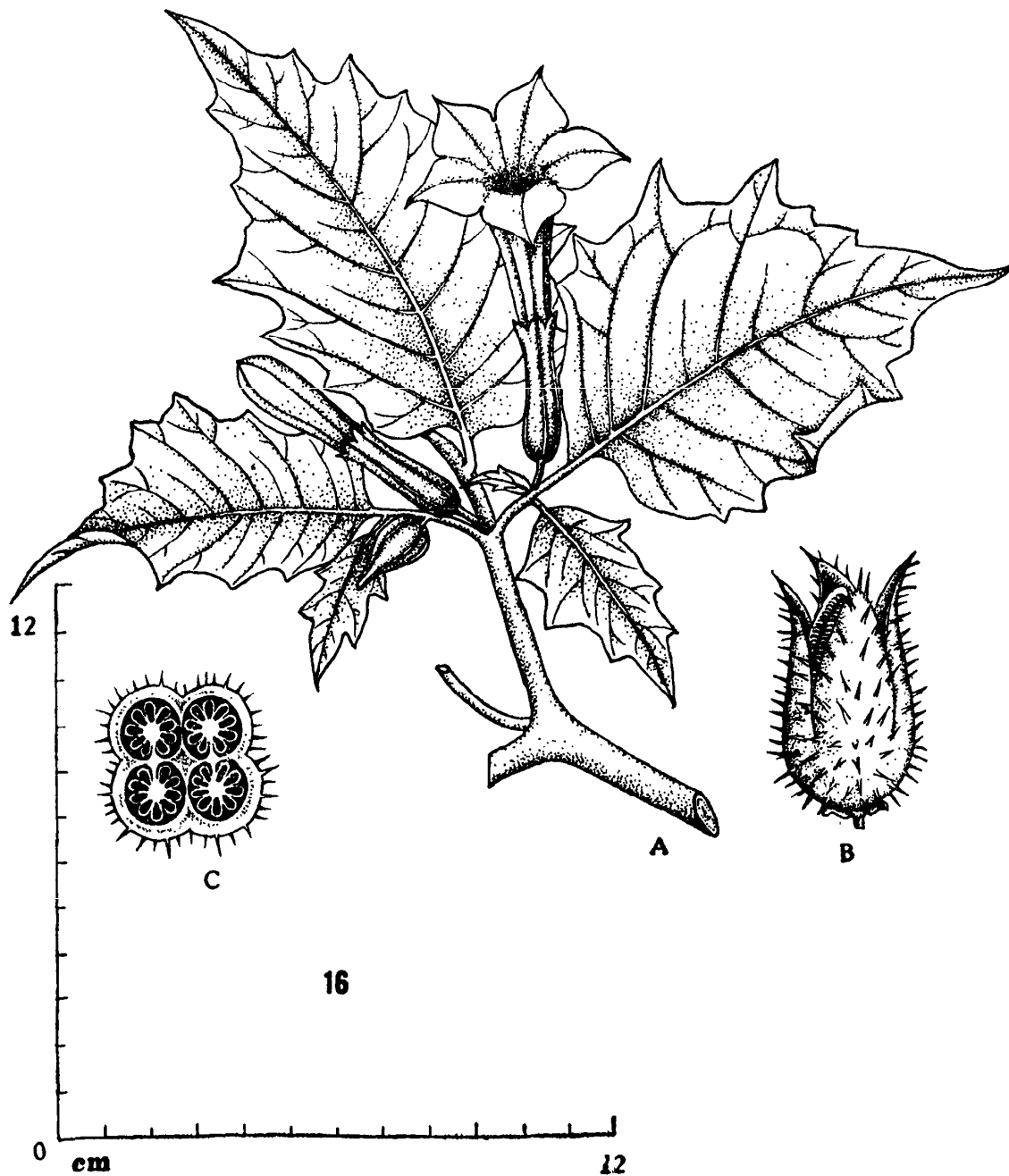


Fig. 16 : *Datura stramonium* Linn.
A. Habit. B. Fruit. C.T.S. of Ovary.

Des. : Twiners with globose tubers and prickly stem, twining to the left ; leaves opposite, trifoliate ; flowers in racemes, unisexual ; fruits capsules.

Distrib. : Rain forests of India (Map 10).

Part : Tubers (Dioscorine).

Notes: Dioscorine is a toxic substance. Intake of tubers in large quantities causes paralysis of the respiratory system and even death (WI. III). Tribals report that intake of tuber creates severe irritation in mouth (authentic field report).

Dioscorea pentaphylla Linn. Sp. Pl. 1032. 1753 ; Hook. f. Fl. Brit. Ind. 6 : 289, 1892 (Fig. 17).

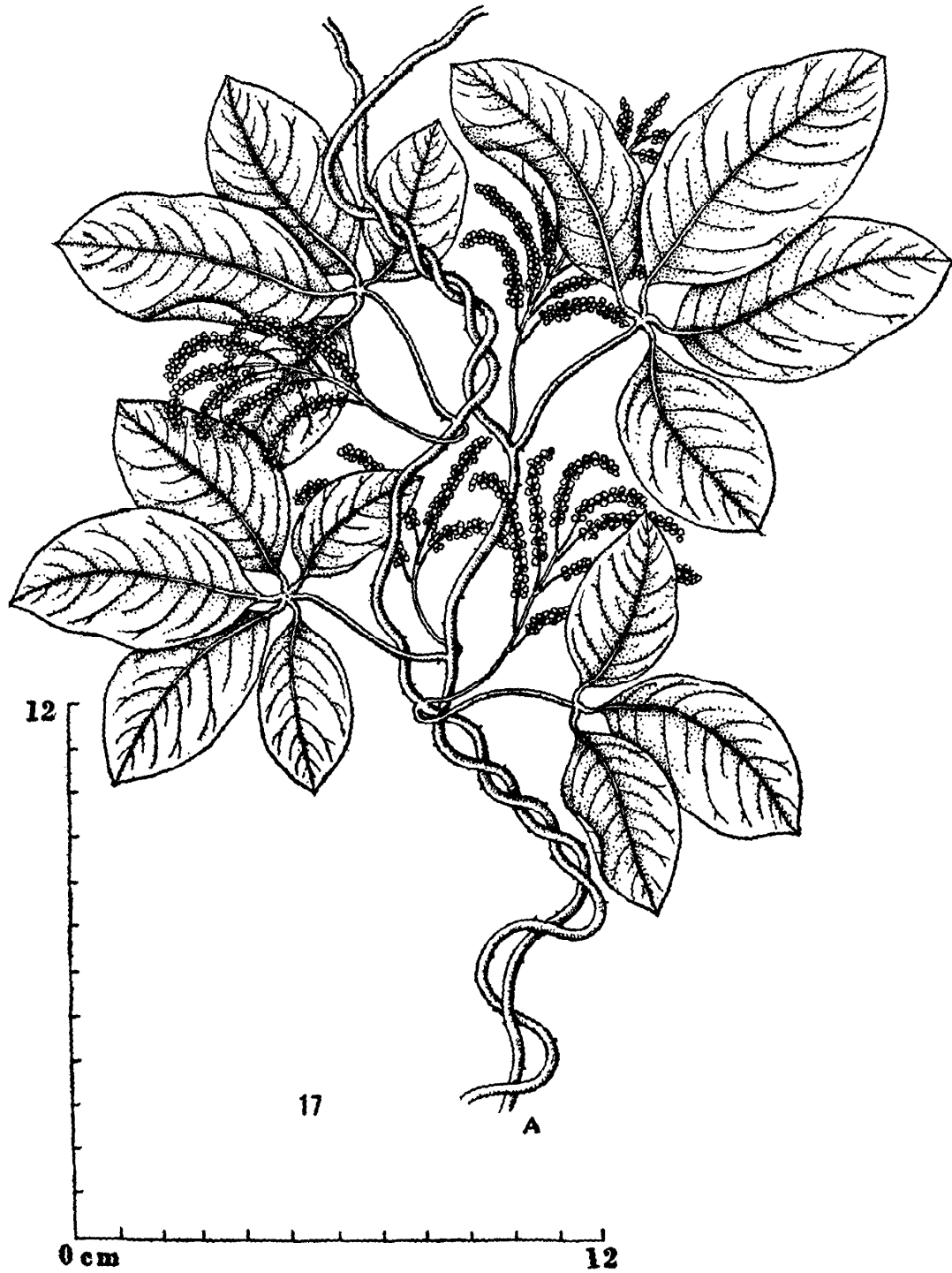


Fig. 17 : *Dioscorea pentaphylla* Linn.—Habit.

Fam. : Dioscoreaceae.

Local name : Achh kanda (O.) ; Huring aru, Itulad sanga, Hasear sanga (M.).

Des. : Twiners with a single tuber and prickly stems, twining left ; leaves opposite, 3-5 foliolate ; flowers in axillary panicles, unisexual ; fruits capsules.

Distrib. : Throughout India and Andaman & Nicobar Islands (Map 10).

Part : Tubers.

Notes : Tribals of hilly regions report that the tubers are acrid and cause inflammation of mucous membrane of mouth (authentic field report).

Entoloma lividum (Bull.) Quel. in Saccardo, P.A. (Ed.) Index Iconum Fungorum 5 : 680, 1887 (Fig. 18).

Fam. : Rhodophyllaceae.

Local name : Sada Bis-chatu (Garh.).

Des. : A fairly large mushroom with a cap between 4 and 17 cm in diameter ; the cap is almost white at first, becoming later light greyish brown, smooth with fine fibrils, later becoming silkly shiny, convex when young, with an incurved edge, later becoming more flattened. The gills are whitish when young later becoming light yellowish. The stem is white at first later turning slightly yellow.

Distrib. : Found here and there in light deciduous woods and pastures.

Part : Mushroom (whole plant).

Notes : Even a small quantity can cause painful vomiting and diarrhoea within 20 to 120 minutes. The mushroom contains neither haemoglutinins nor haemolysins but an intense gastro-intestinal poison which has proved fatal (*Watt & Breyer-Brandwijk, l.c.*).

Euphorbia antiquorum Linn. Sp. Pl. 450. 1753 ; Hook. f. Fl. Brit. Ind. 5 : 255. 1887 (Fig. 19).

Fam. : Euphorbiaceae.

Local name : Elete, Eteke, Sid daru (M.) ; Hiju-araung karbis (Mik).

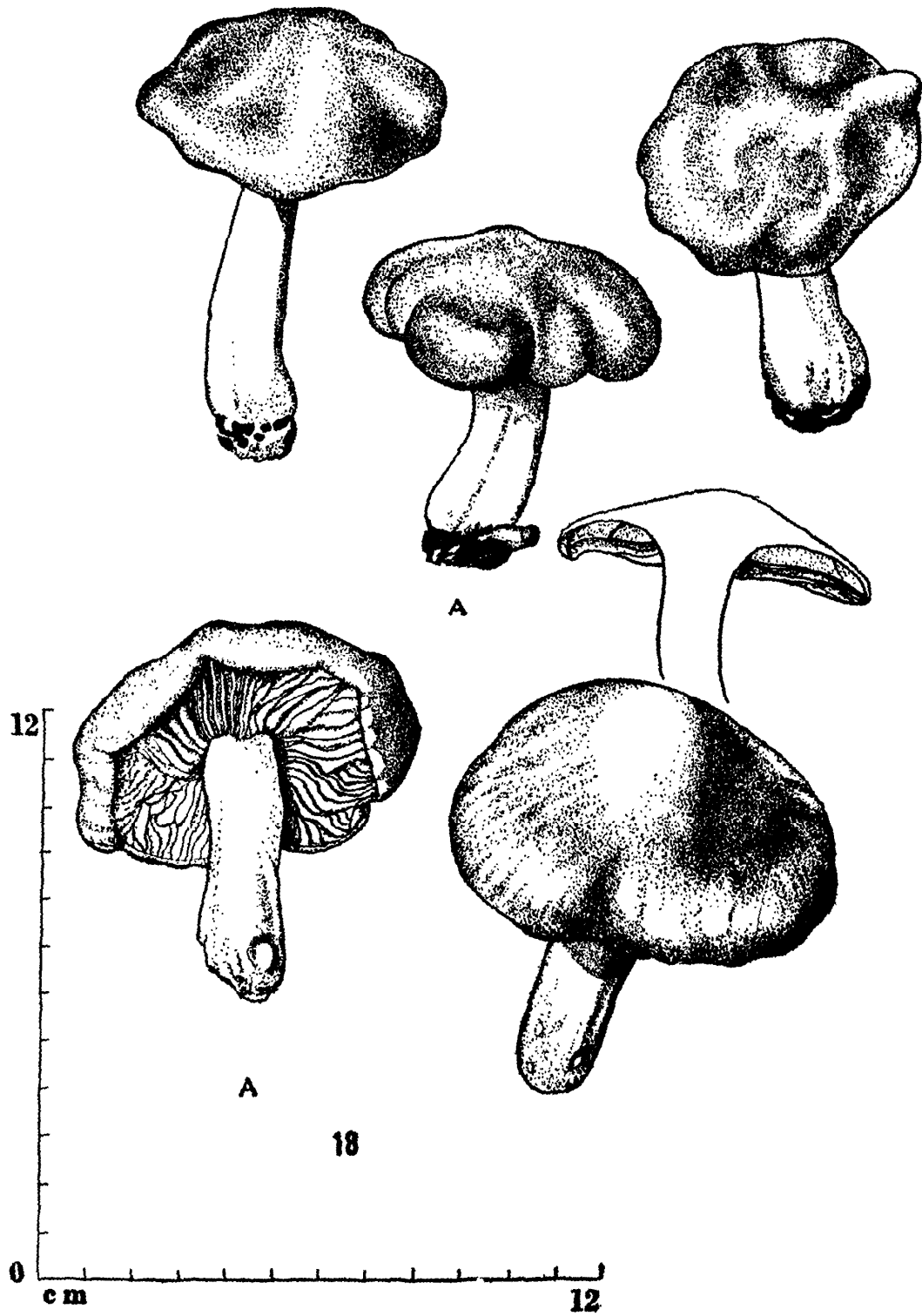


Fig. 18 : *Entoloma lividum* (Bull.) Quel.—Habit.

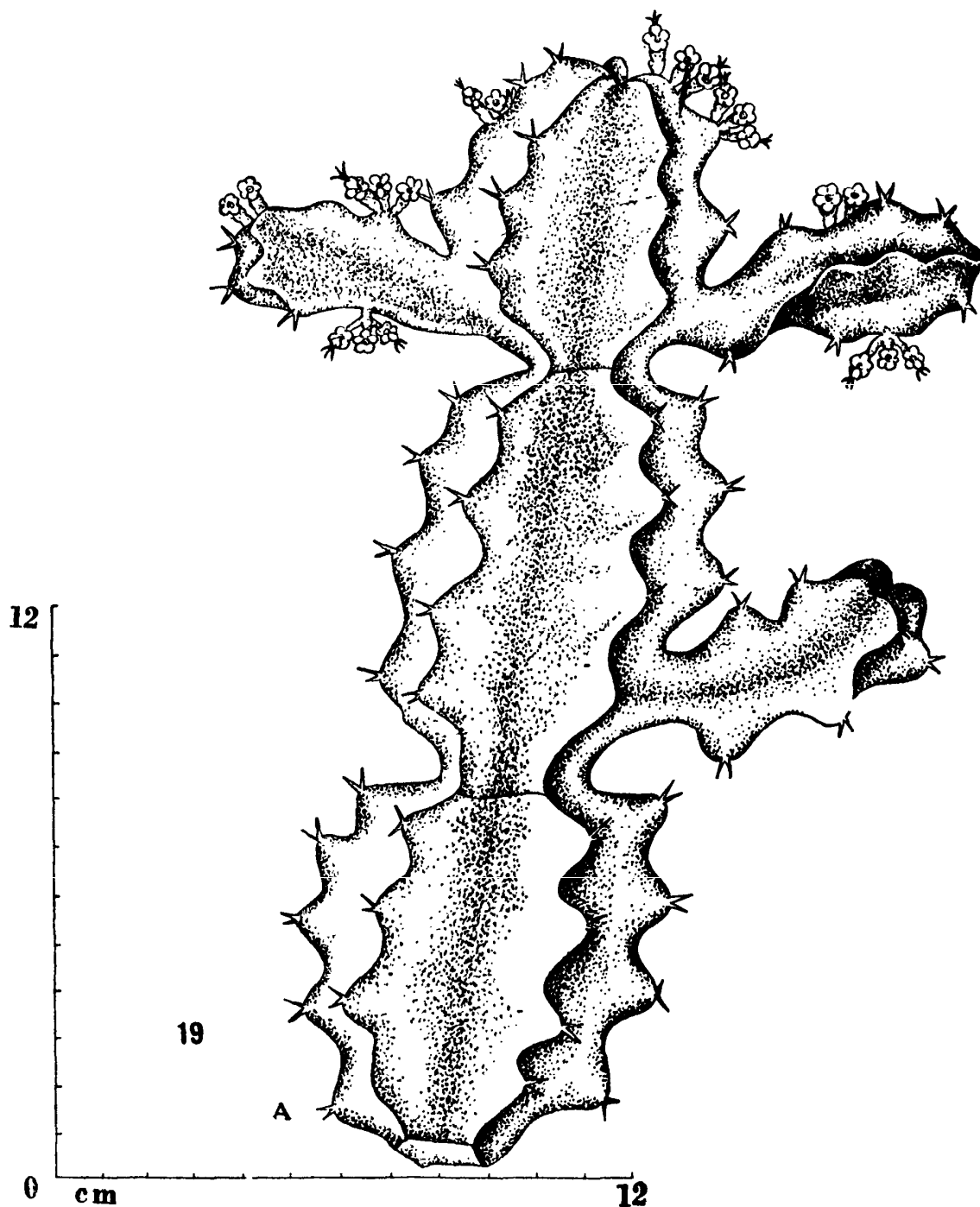


Fig. 19 : *Euphorbia antiquorum* Linn.—Habit.

Des. : Leafless large succulent shrubs ; stems 3-4 winged bearing sharp spines ; flowers in pedunculate cymes, red ; fruits capsules.

Distrib. : Throughout the hotter parts of India (Map 11).

Part : Latex.

Notes : Latex poisonous and injurious to eyes and strong purgative causing diarrhoea. Tribal people of Bihar, Orissa and West Bengal sometimes put stems in palm juice, toddy etc. (authentic field report).

Euphorbia neriiifolia Linn. Sp. Pl. 451. 1753 ; Hook. f. Fl. Brit. Ind. 5 : 255. 1887 (Fig. 20).

Fam. : Euphorbiaceae.

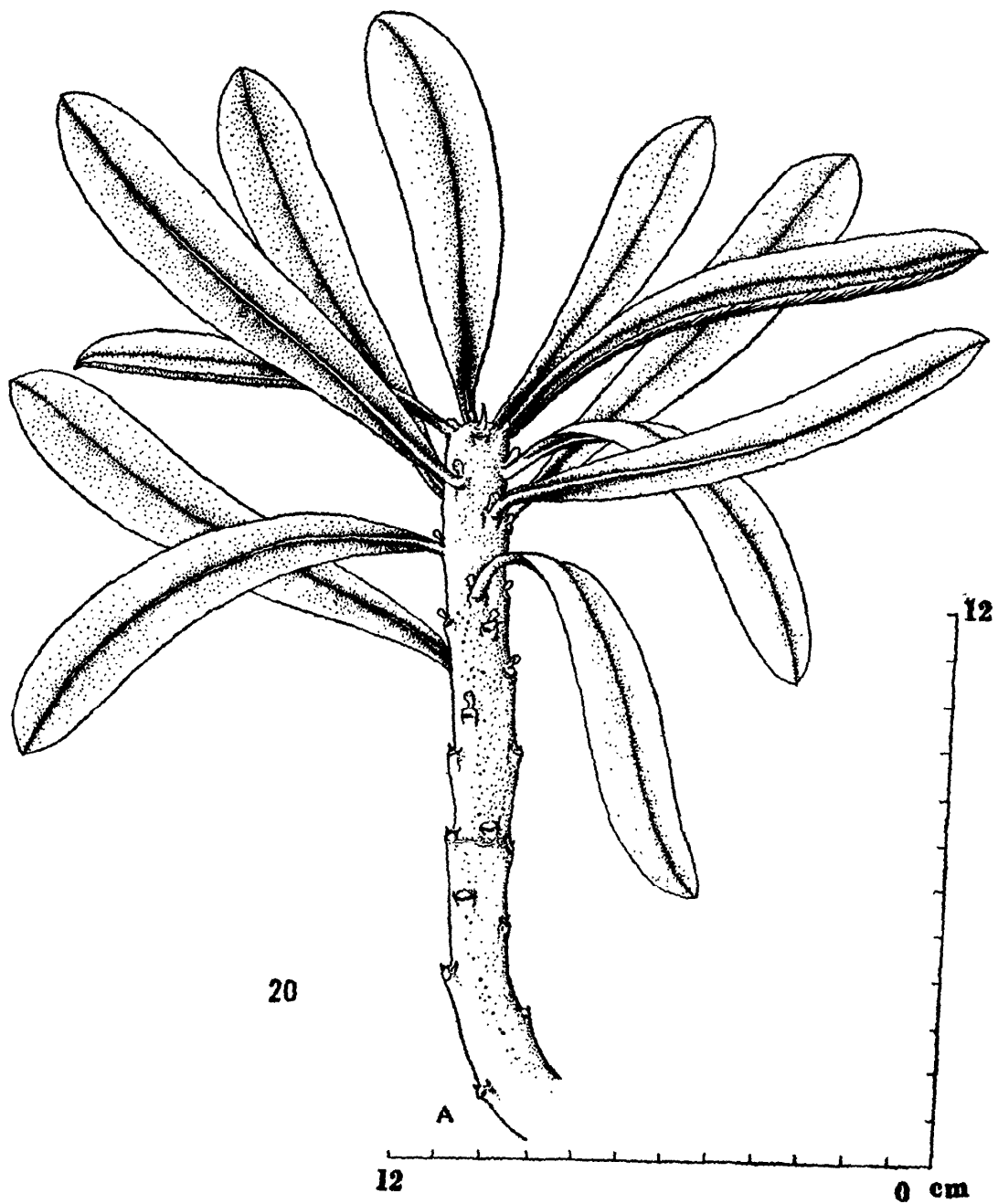


Fig. 20 : *Euphorbia neriiifolia* Linn.—Habit.

Local name : Sid daru (M.).

Des. : Succulent shrubs ; stem with stipular thorns ; leaves fleshy, obovate, oblong ; flowers solitary, bisexual ; fruits capsules.

Distrib. : Throughout India (Map 12).

Part : Latex.

Notes : Latex is acrid, purgative and liable to cause dermatitis (WI. III). Almost all the tribals in plains report that the latex is injurious to eyes (authentic field report).

Euphorbia tirucalli Linn. Sp. Pl. 452. 1753 ; Hook. f. Fl. Brit. Ind. 5 : 254. 1887 (Fig. 21).

Fam. : Euphorbiaceae.

Local name : Konpal (Hind.) ; Lonkasij, Latadaona (Beng.) ; Tirukalli, Kalli (Tam.).

Des. : Tall succulent with terete branches ; leaves scaly ; involucre clustered in the forks of the branchlets ; fruits capsules.

Distrib. : Drier parts of West Bengal and South India (Map 12).

Part : Latex.

Notes : Intake of latex is poisonous. It acts as a purgative in small doses but in large doses it is acrid, irritant and emetic (WI. III). Santals and Lodhas report that the latex is injurious to eyes (authentic field report).

Gloriosa superba Linn. Sp. Pl. 305. 1753 ; Hook.f. Fl. Brit. Ind. 6 : 358. 1892 (Fig. 22).

Fam. : Liliaceae.

Local name : Jhagrahi, Bajhi (O.) ; Chukuru (M.) ; Miriako, Miria-Phulo (K.).

Des. : Climbers with tuberous rhizome ; leaves oblong, whorled ; flowers solitary, greenish ; fruits capsules.

Distrib. : Throughout India (Map 13).

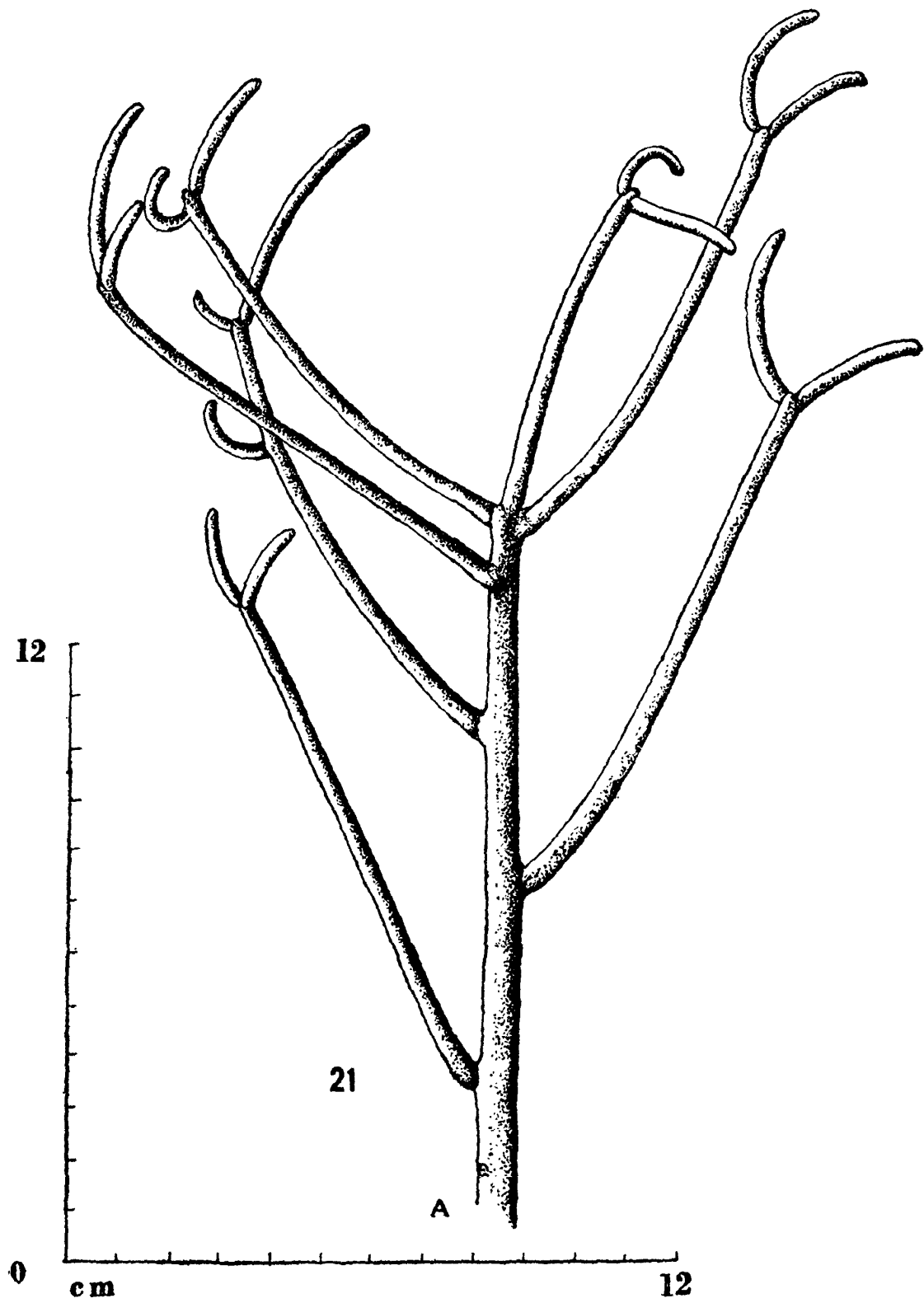


Fig. 21 : *Euphorbia tirucalli* Linn.—Habit.

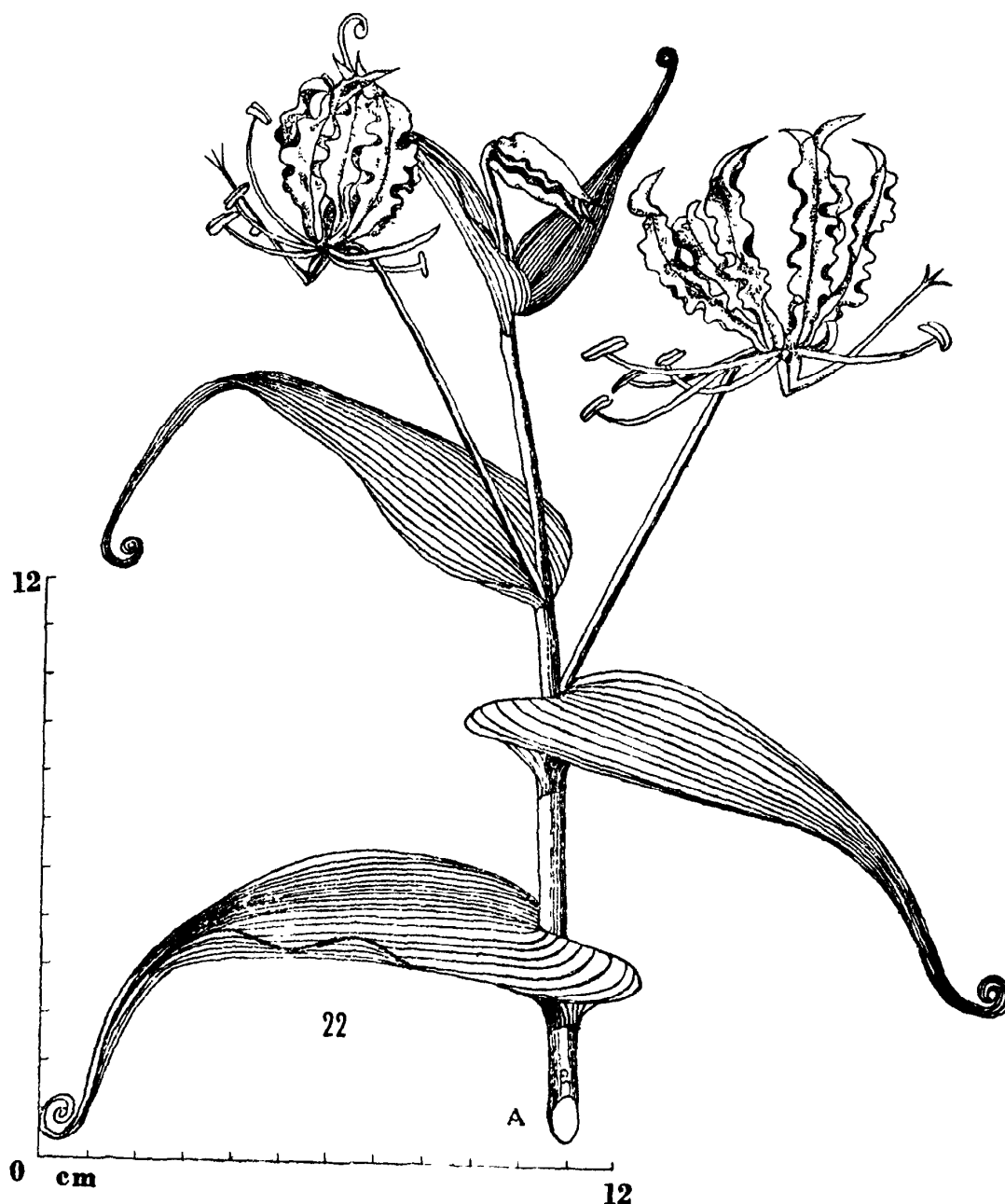


Fig. 22 : *Gloriosa superba* Linn.—Habit.

Part : Tubers (Colchicine).

Notes : Intake of tubers is fatal. It causes gastrointestinal irritation, vomiting and purging (WI. IV). Santals, Oraons and Mundas use the tubers for poisoning arrow blades (authentic field report).

Gnidia glauca (Fresen) Gilg. in Bot. Jahrb. Syst. 19 : 265. 1894. *Lasiophon glaucus* Fresen Flora 21 : 603. 1838 ; Gamble, Fl. Pres. Madr. 2 : 871. 1957 (Reprinted ed.).

Fam. : Thymelaeaceae.

Local name : Ramita, Ramelta, Rami (Mar.) ; Nachinaar (Tam.) ; Nangu, Nanao (Mal.).

Des. : Small trees ; leaves subsessile, oblong-lanceolate ; flowers in dense, terminal, globose heads, yellow ; fruits ellipsoid-oblong, enclosed in the perianth.

Distrib. : South India : hills of Western Ghats from Konkan southwards to Kerala, Nilgiri, Palni and Tinnevely hills (Map 15).

Part : Stem barks and leaves (probably diterpenoids of the daphnetoxin group) (*Viswanathan & Joshi, l.c.*).

Notes : Contact of this plant causes severe burning of eyes, nostrils and face. Bark contains a powerful vesicant resin (*Ibid.*). Barks and leaves are acrid and poisonous. The plant causes dermatitis (WI. VI).

Gyromitra esculenta (Pers.) Fr. in Saccardo, P.A. (Ed.) *Index Iconum Fungorum* 8 : 16. 1890 (Fig. 23).

Fam. : Helvellaceae.

Local name : Kala Bis-chatu (M.).

Des. : Cap chestnut brown to black brown, rarely lighter, between 2 cm and 8 cm in diameter, usually rounded or angularly bulbous, sometimes with remote lobes, the surface having brain-like folds, the inside white and hollow ; stem white or yellowish ; appears early in spring and lasts until May.

Distrib. : In all kinds of woods but particularly in sandy pine wood in hilly regions of India.

Part : Whole mushroom.

Notes : Intake of this fungus causes abdominal disorders followed by jaundice ; the poisoning is attributed to helvelic acid which acts on red blood corpuscles. Blood transfusion is recommended as a cure (WI. IV).

Jatropha curcas Linn. *Sp. Pl.* 1006. 1753 ; Hook. f. *Fl. Brit. Ind.* 5 : 383. 1887.

Fam. : Euphorbiaceae.

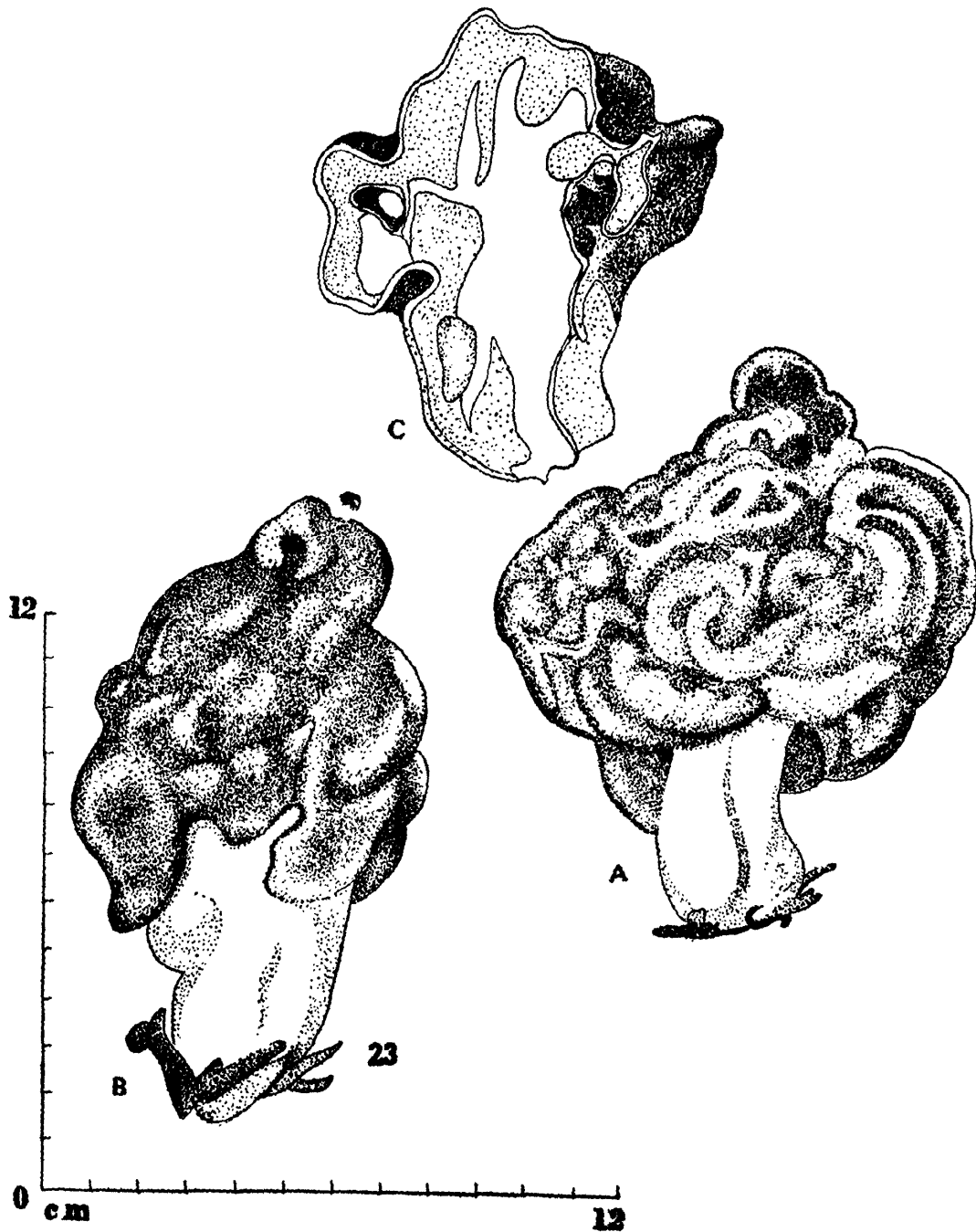


Fig. 23 : *Gyromitra esculenta* (Pers.) Fr.
A-B. Fruit bodies. C. L.S. of Fruit body.

Local name : Erendi (O.) ; Kulajara, Kulabindi, Totkabindi (M.) ; Baghrandi (As.).

Des. : Shrubs ; leaves alternate, simple palmately lobed ; flowers in loose panicles or cymes, yellowish green ; fruits capsules.

Distrib. : All over India (Map 14).

Part : Seeds (Curcine and curcasin).

Notes : Seeds are strong purgative. They seldom produce nausea and vomiting but cause a sense of burning in the stomach (WI. V).

Jatropha gossypifolia Linn. Sp. Pl. 1006. 1753 ; Hook. f. Fl. Brit. Ind. 5 : 383. 1887 (Fig. 24).

Fam. : Euphorbiaceae.

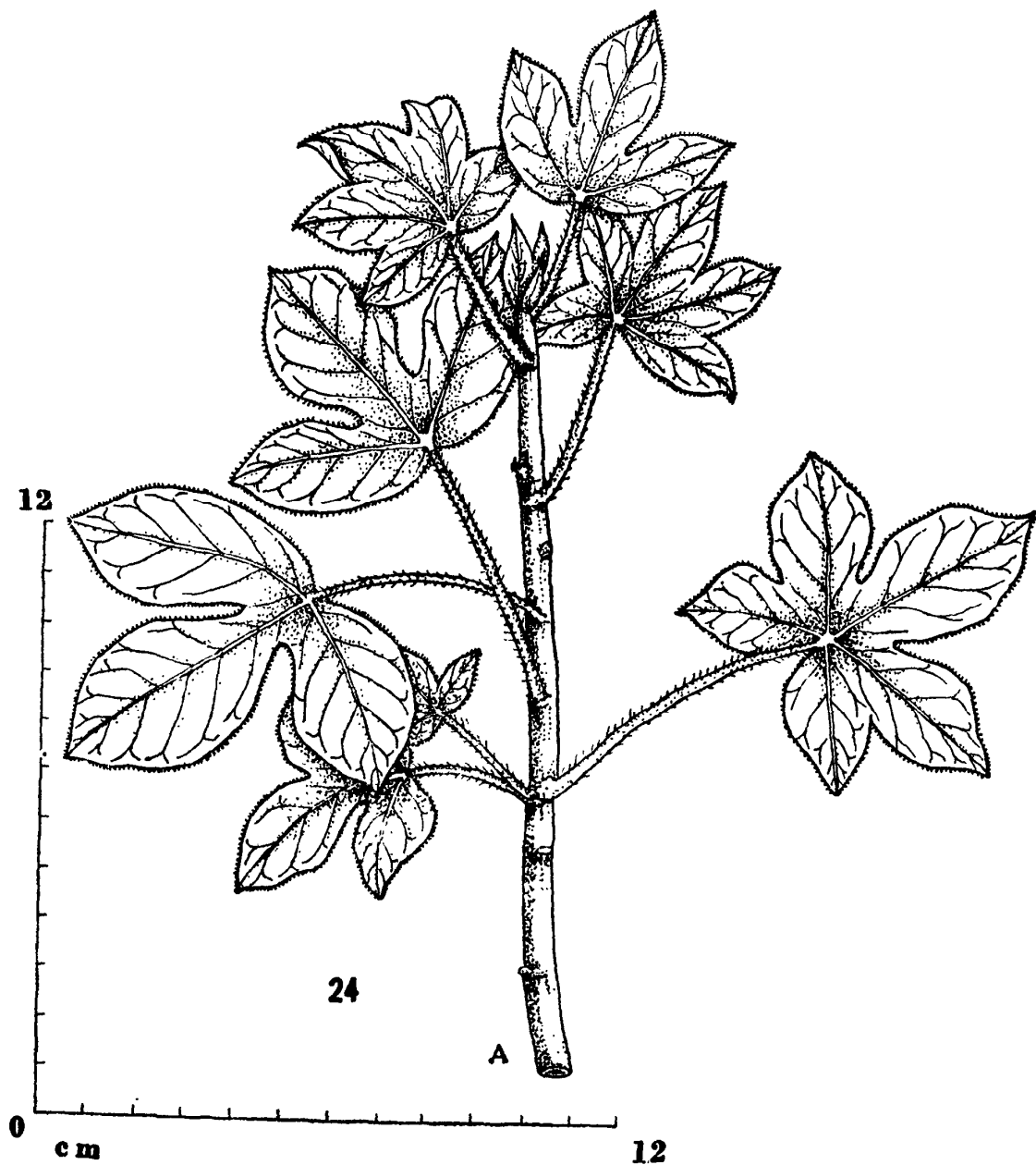


Fig. 24 : *Jatropha gossypifolia* Linn.—Habit.

Local name : Xenso erendi (O.) ; Ara bindi daru, Jara bindi (M.) ; Lalgabjara (Ku., L.).

Des. : Shrubs ; leaves alternate, simple, palmately lobed ; flowers in cymes ; dark red ; fruits capsules.

Distrib. : Throughout India (Map 14).

Part : Stem-bark latex (Jatrophine) and seeds.

Notes : Tribals of Bihar, Orissa and West Bengal report that intake of seed causes severe vomiting (authentic field report).

Laportea crenulata Gaudich. in Freyc. Voy. Bot. 4981. 1829 ; Hook. f. Fl. Brit. Ind. 5 : 550. 1887.

Fam. : Urticaceae.

Local name : Tamot (R.)

Des. : Large shrubs ; leaves with small, highly irritant hairs, ovate ; flowers in racemes, greenish white ; fruits achenes.

Distrib. : Found in the evergreen forests of tropical Himalayas, Assam, Bihar, West Bengal, especially north Bengal. Anamalai hills in Western Ghats of Kerala (Map 15).

Part : Hairs on leaves.

Notes : Contact of this plant causes dermatitis and acute burning sensation in the body. Such an effect lasts for several days and is aggravated when water is applied. In flowering season it produces violent sneezing, sleeplessness and fever (WI. VI). Field report supports the statement.

Lathyrus aphaca Linn. Sp. Pl. 729. 1753 ; Baker in Hook. f. Fl. Brit. Ind. 2 : 197. 1870.

Fam. : Fabaceae.

Local name : Jangli-matar (Hind.) ; Kaibu (Nep.) ; Gagla, Rewan, Rewari (Punj.).

Des. : Herbs ; leaves modified into tendrils ; flowers yellow, axillary ; fruit pods, sickle shaped with 4-6 seeds.

Distrib. : West Bengal, Bihar, Orissa, Madhya Pradesh and Tamilnadu (Nilgiris) (Map 16).

Part : Seeds.

Notes : Intake of ripe seeds produces narcotic effects. It may be considered as one of the possible causes of Lathyrism (WI. VI). This can be prevented by boiling the seeds in water.

Mucuna pruriens (Linn.) DC. Prodr. 2 : 405. 1825 ; Baker in Hook. f. Fl. Brit. Ind. 2 : 187. 1870 (Fig. 25).

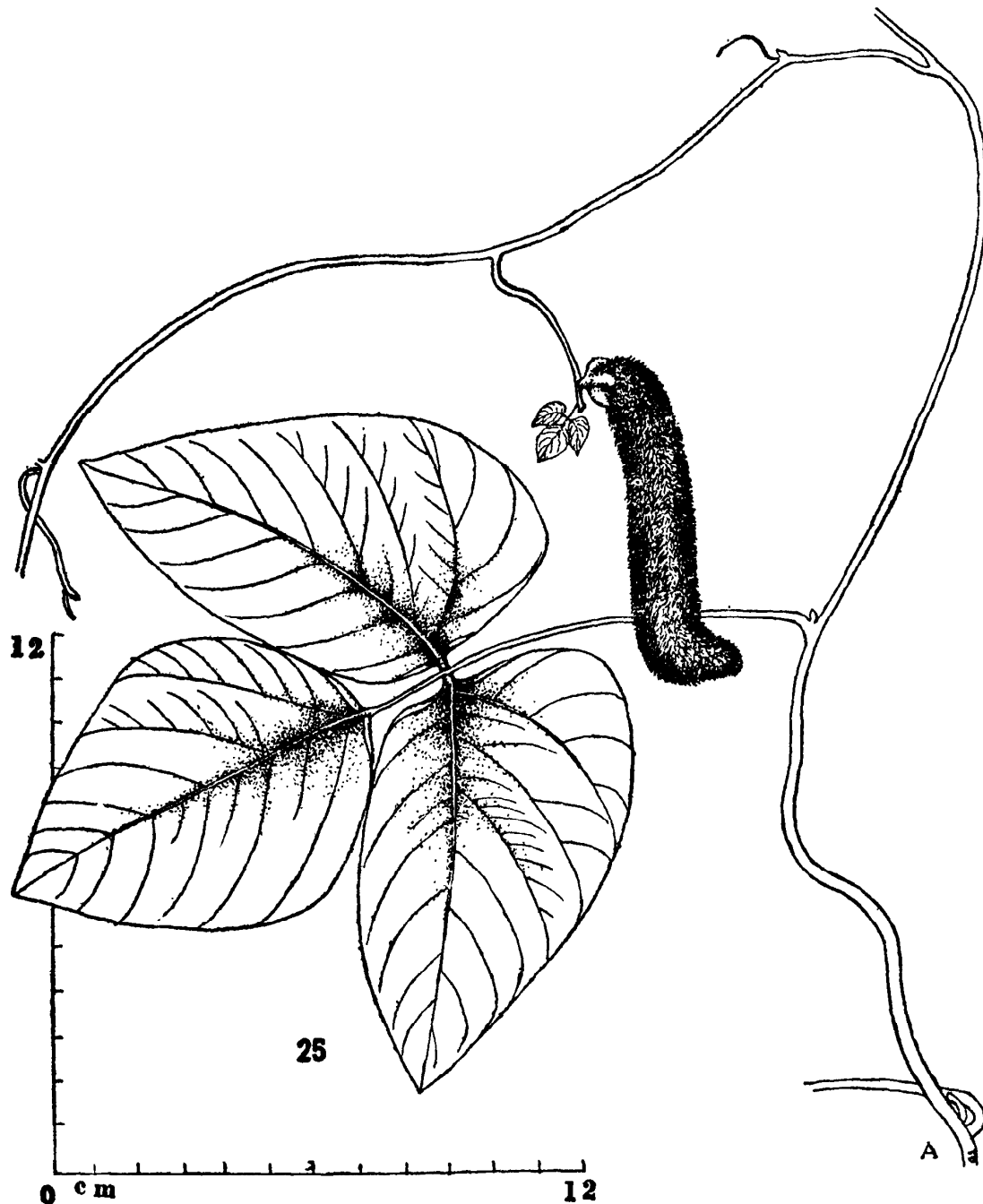


Fig. 25 : *Mucuna pruriens* (Linn.) DC.—Habit.

Fam. : Fabaceae.

Local name : Alkusa (O.) ; Itika (M.) ; Wakmi (Gar.).

Des. : Twiners ; leaves alternate, trifoliate, leaflets ovate ; flowers in axillary racemes, purple ; fruit pods with persistent bristle-like hairs.

Distrib. : Throughout India (Map 17).

Part : Hairs on the fruits.

Notes : Hairs on contact with skin produce intense itching and sometimes causes blister and dermatitis (WI. VI). It is also reported in the field.

Nerium indicum Mill in Gard. Dict. (ed. 8) n. 2. 1781 ; Hook. f. Fl. Brit. Ind. 3 : 655. 1882 (Fig. 26).

Fam. : Apocynaceae.

Local name : Kamili ba (M.) ; Rajbaka (S.).

Des. : Shrubs ; leaves in whorls, linear lanceolate ; flowers in racemes ; fruits follicles.

Distrib. : Throughout India.

Part : Roots, barks and seeds (Neriodorin, Neriodrein and Karabin).

Notes : Karabin is powerful cardiac poison, acting on the heart like digitalin. It also acts on the spinal cord in more or less the same way as strychnine (*Chopra et al.*, l.c.).

Nothapodytes foetida (Wight) Sleumer in Notizbl. Bot. Gart. Berlin Dahlem 15 : 247. 1940. *Mappia foetida* (Wight) Miers. in Ann: Mag. Nat. Hist. Ser. 2. 9 : 395. 1832 ; Gamble Fl. Pres. Madr. 1 : 141. 1957 (Reprinted ed.).

Fam. : Icacinaceae.

Local name : Kalgur, Ghanera (Mar.) ; Arali, Chorla (Tam.) ; Kodsas, Hedare (Can.).

Des. : Small trees ; bark grey wrinkled ; leaves ovate-oblong, crowded towards ends of branches ; flowers in cymes, yellowish ; fruits drupe.

Distrib. : Assam, West Bengal, South India (Map 16).

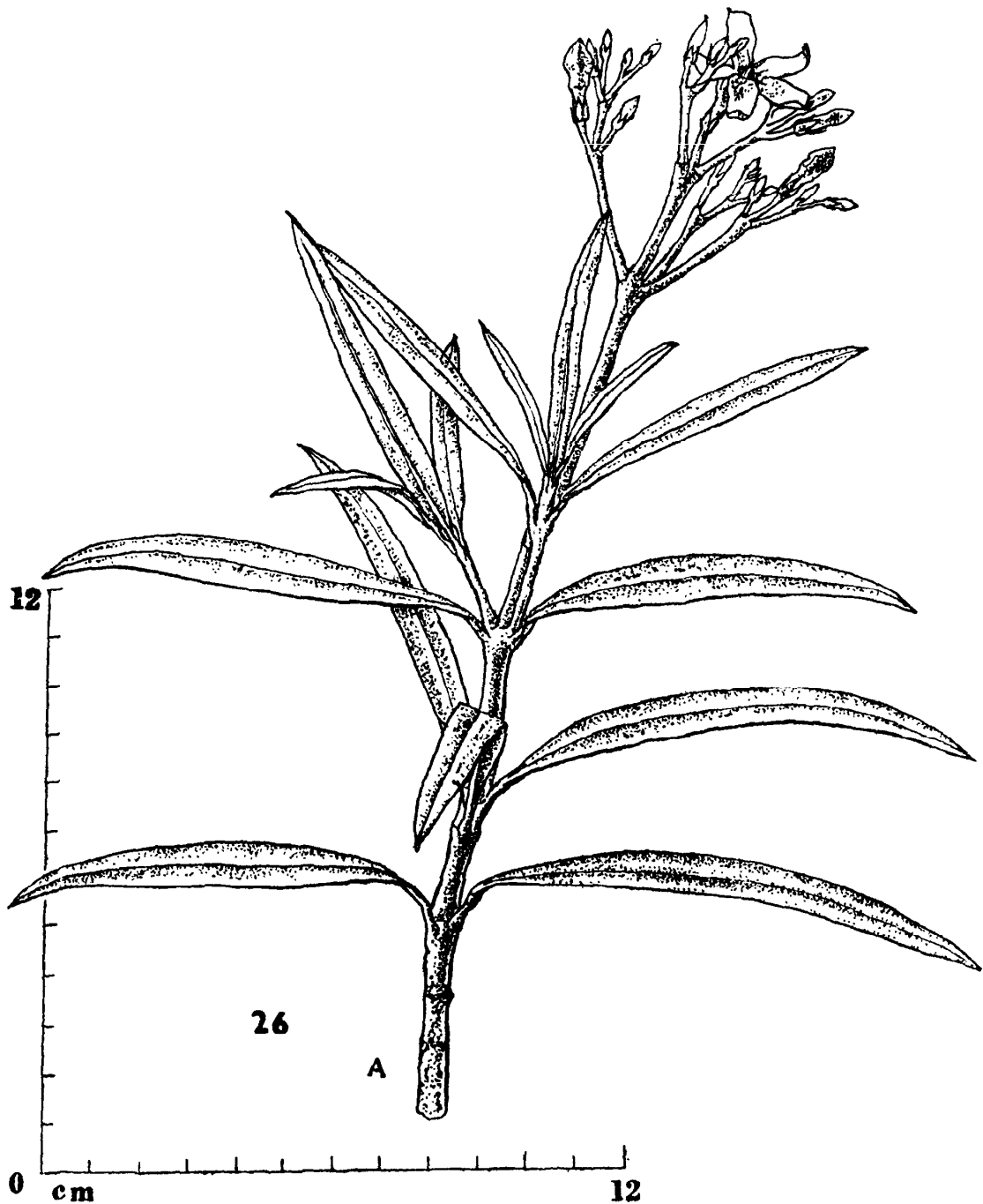


Fig. 26 : *Nerium indicum* Mill.—Habit.

Part : Stems (Camptothecin).

Notes : Intake of the stem juice may cause emesis, hemorrhagia, diarrhoea, dehydration, coma and death as observed in preclinical pharmacological studies of the alkaloid on monkey and dog (*Viswanathan & Joshi, l.c.*).

Papaver somniferum Linn. Sp. Pl. 508. 1753 ; Hook. f. & Thoms. in Hook. f. Fl. Brit. Ind. 1 : 117. 1872 (Fig. 27).

Fam. : Papaveraceae.

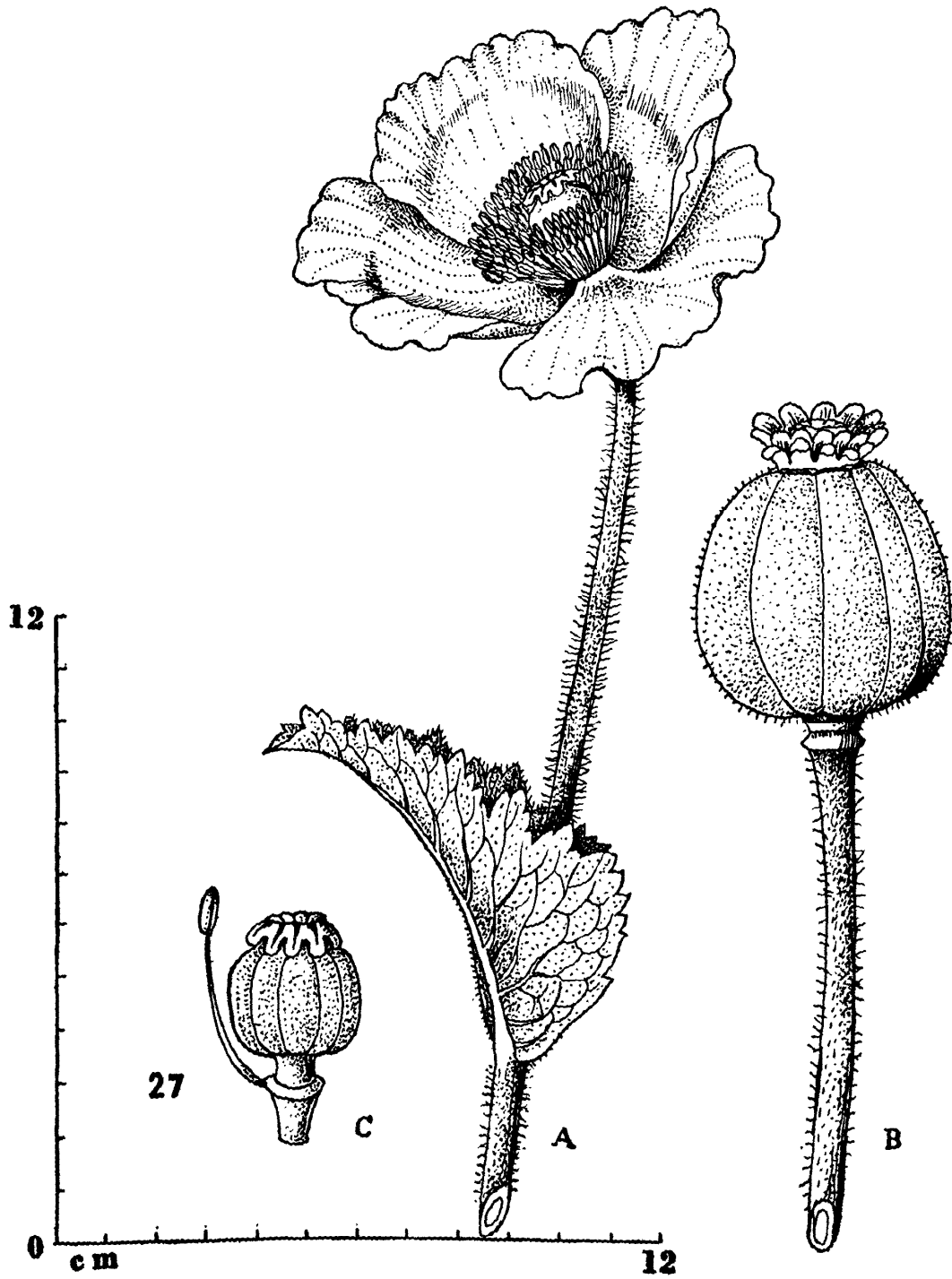


Fig. 27 : *Papaver somniferum* Linn.
A. Habit. B. Fruit. C. Flower parts.

Local name : Aphin (Bom.) ; Afium (Mal.) ; Postaka (Tam.) ; Kosokosa (Tel.).

Des. : Herbs ; leaves alternate, simple, lobed ; flowers solitary, large, white to purple ; fruits capsules.

Distrib. : Punjab, Rajasthan ; cultivated in Central India.

Part : Unripe capsules which yield opium.

Notes : Intake of the latex (opium) in large scale causes fatal poisoning with the following symptoms : flushing of the face, lassitude and giddiness. The pupils are contracted, respiration and pulse are slowed, the patient feels drowsy and passes in to deep sleep leading to coma (*Chopra et al.*, l.c.).

Parthenium hysterophorus Linn. Sp. Pl. 988. 1753 ; Saldana Fl. Hass. Dist. 620. 1976 (Fig. 28).

Fam. : Asteraceae.

Local name : Bish-gach (Beng.).

Des. : Exotic herb ; leaves irregularly dissected ; flowers in capitulum, florets white ; fruits achenes.

Distrib. : Throughout India, as exotic (Map 17).

Part : Whole plant.

Notes : Contact of hairs and pollen cause allergy followed by eruptions on skin. Seeds and plants cause serious outbreak of eczema (*Lonker et al.*, 1974). Plant causes allergic dermatitis on contact (*Prakash et al.*, 1978). Presence of sesquiterpene lactones, parthenin in the trichomes causes eczematous dermatitis (*Viswanathan & Joshi*, l.c.). Calves fed on this weed develop itching and diarrhoea and die within 8-30 days with severe ulceration in the liver, gastro-intestinal tracts and kidney. It poses a danger to the livestock particularly in drought condition (*Narasimhan et al.*, 1977).

Pedilanthus tithymaloides (Linn.) Poit. in Ann. Mus. Par. 19 : 390. 1812 ; Hook. f. Fl. Brit. Ind. 5 : 239. 1887 (Fig. 29).

Fam. : Euphorbiaceae.

Local name : Airi (M.) ; Baire (O.) ; Agia (Gar.).

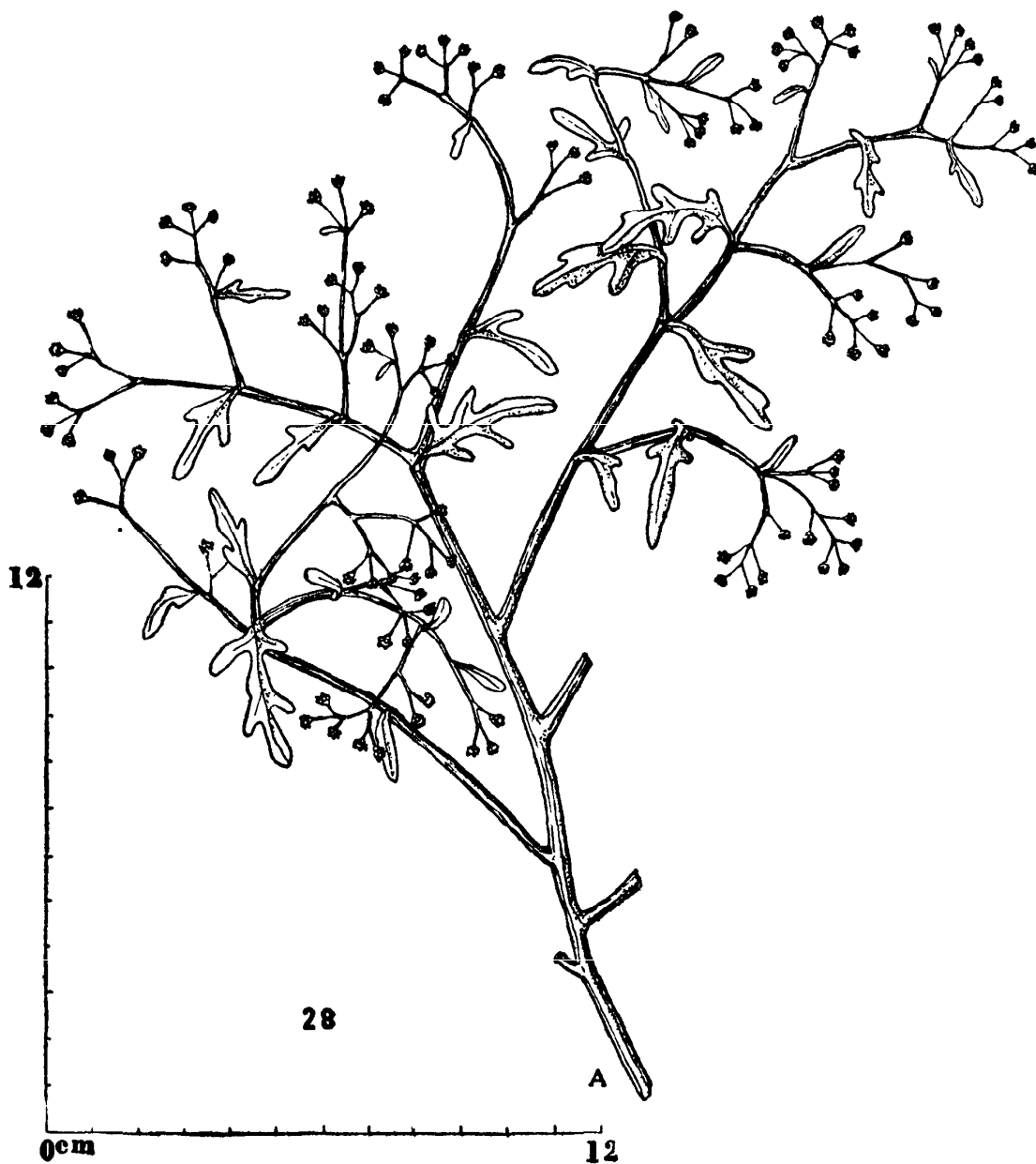


Fig. 28 : *Parthenium hysterophorus* Linn.—Habit.

Des. : Laticiferous shrubs ; leaves alternate, ovate, succulent ; cyathium in terminal crowded cymes, red.

Distrib. : Throughout India. Planted as hedge in gardens.

Part : Roots and latex.

Notes : Root and latex are powerful emetic, irritant with caustic properties (WI. VII). It is reported by Mech, Malpaharias, Santals and Lodhas that the latex is injurious to eyes (authentic field report).

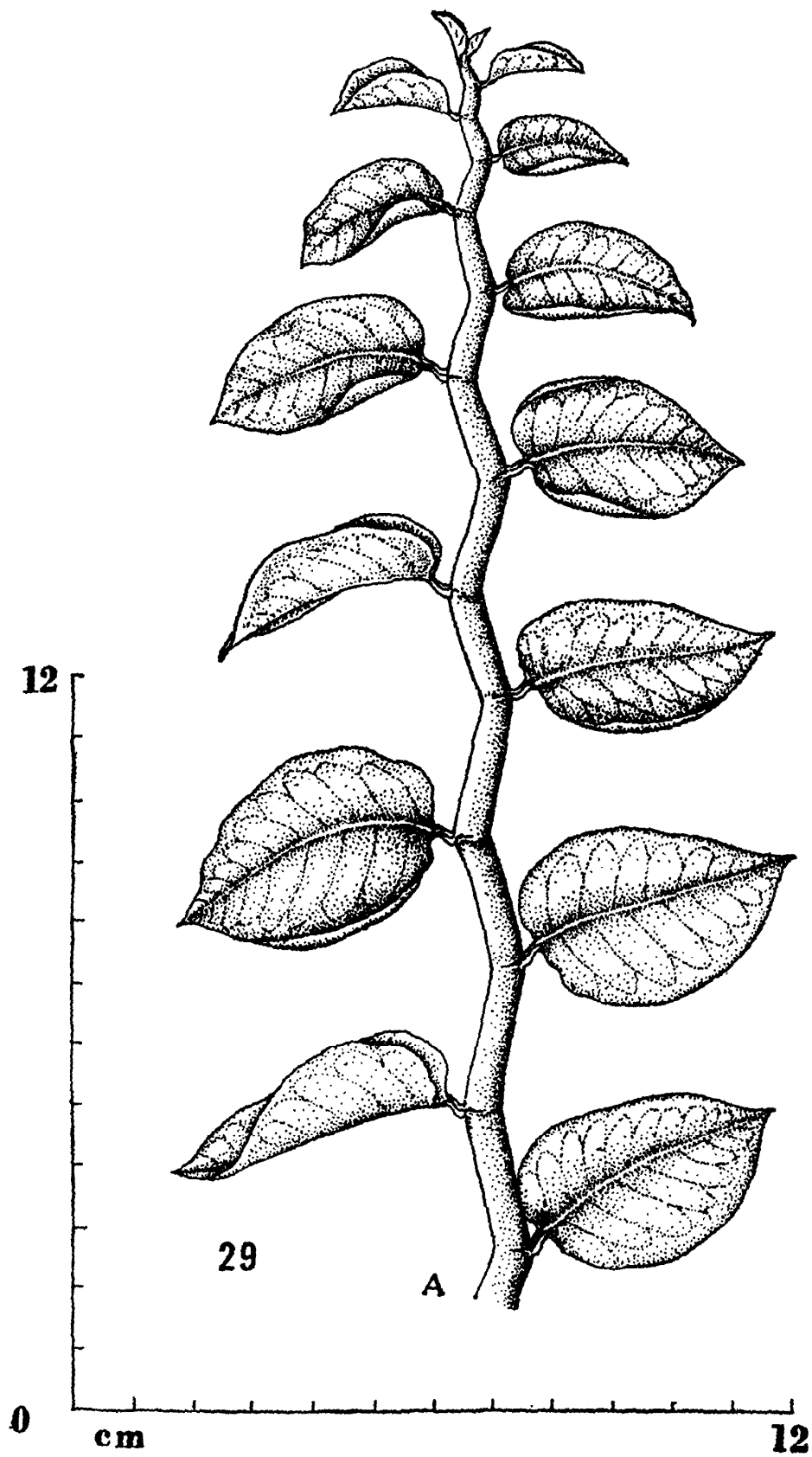


Fig. 29: *Pedilanthus tithymaloides* (Linn.) Poit.—Habit.

Plumbago zeylanica Linn. Sp. Pl. 151. 1753 ; Clarke in Hook. f. Fl. Brit. Ind. 3 : 480. 1882 (Fig. 30).

Fam. : Plumbaginaceae.

Local name : Chitaway (O. & S.) ; Bir kitamuli, Chitur (M.) ; Cita (Hal.) ; Chitwar (As.) ; Sitaparu (K.).

Des. : Herbs ; leaves alternate, simple, ovate ; flowers in spike, white ; fruits capsules.

Distrib. : Wild in West Bengal and South India (Map 18).

Part : Root bark (Plumbagin).

Notes : Root contains plumbagin, a naphthaquinone derivative which is a toxic substance and possesses abortifacient and vesicant properties (WI. VIII). Tribals of Orissa state that the juice of the plant causes blister on skin and sometimes use it when they go out for begging so as to attract the attention of the general public.

Plumeria rubra Linn. Sp. Pl. 209. 1753. *P. auctifolia* Poir in Lamk. Encycl. Suppl. 2 : 667. 1812 ; Gamble, Fl. Pres. Madr. 2 : 577. 1957 (Reprinted ed.).

Fam. : Apocynaceae.

Local name : Lal golainchi (S.) ; Xenso golainchi (O.) ; Ara golainchi (M.).

Des. : Trees ; leaves alternate, lanceolate ; flowers in racemes, white with a yellow centre ; fruits follicles.

Distrib. : Cultivated throughout India.

Part : Milky juice (Plumieric acid) and root-bark.

Notes : Latex and root bark are drastic purgative. The field report from Bihar says that latex is injurious to eyes.

Ranunculus sceleratus Linn. Sp. Pl. 776. 1753 ; Hook. f. ex Thoms. in Hook. f. Fl. Brit. Ind. 1 : 19. 1872 (Fig. 31).

Fam. : Ranunculaceae.

Local name : Bir-mani (M.).

Des. : Herbs ; leaves simple 3-partite with long petiole ; flowers in racemes, pale-yellow ; fruits oblong ovoid.

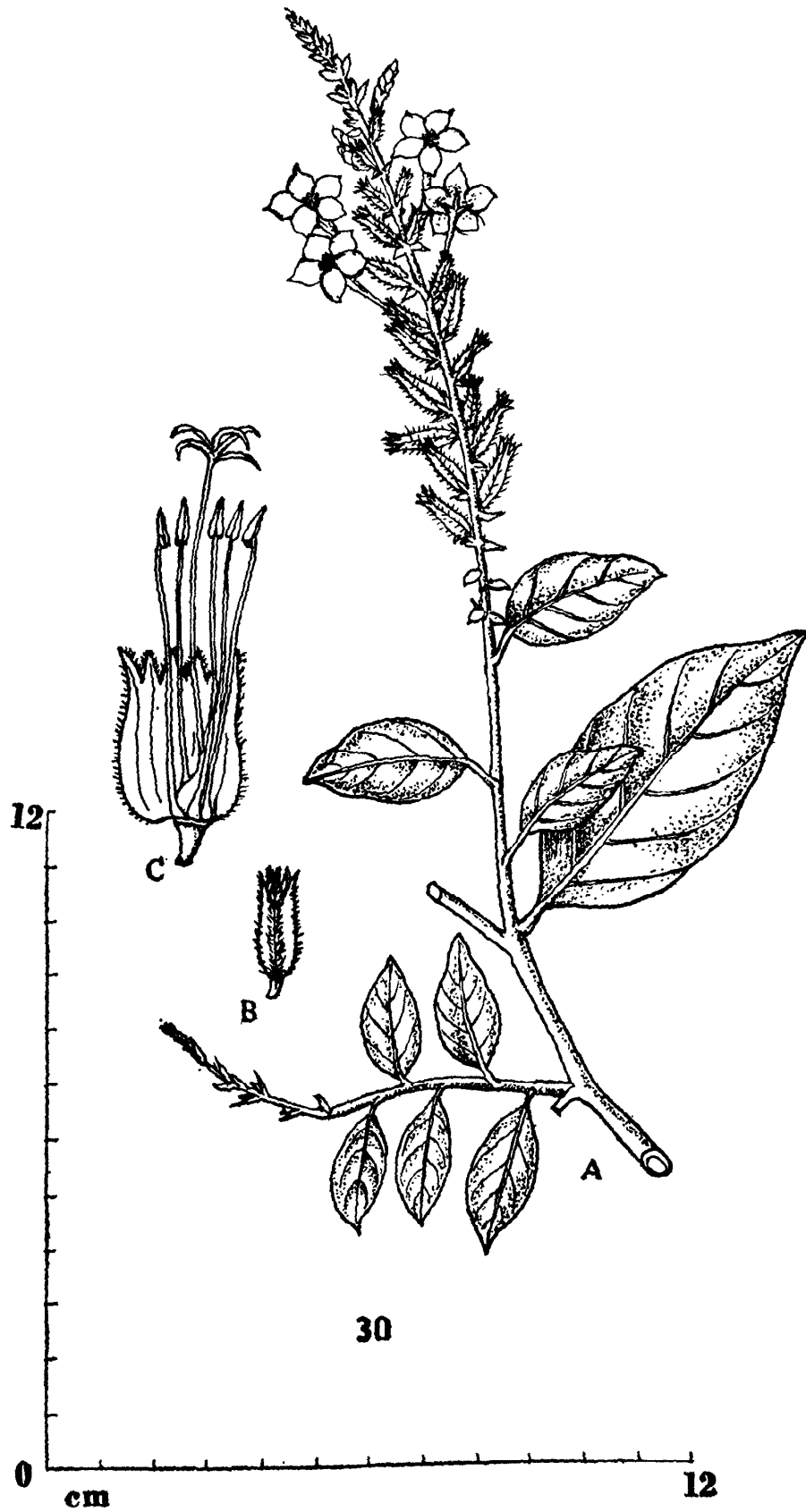


Fig. 30 : *Plumbago zeylanica* Linn.
A. Habit. B. Fruit. C. L.S. of Flower.

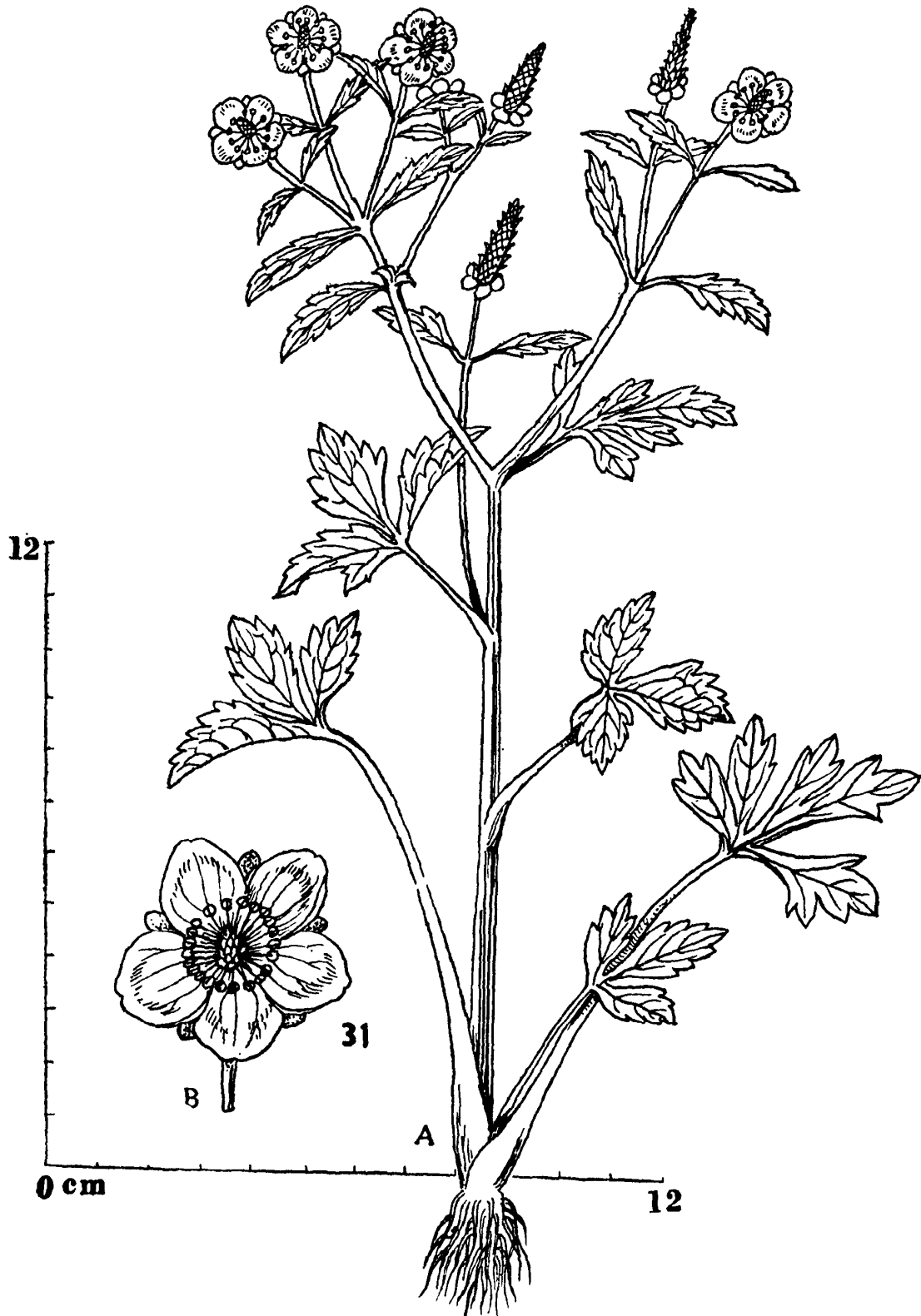


Fig. 31 : *Ranunculus sceleratus* Linn.
A. Habit. B. Flower.

Distrib. : Himalayan regions and Gangetic plains (Map 19).

Part : Whole plant.

Notes : Intake of plant is fatal as it is highly acrid and produces violent irritant effects. Contact with the plant may cause blisters on the skin (*Chopra et al.*, l.c.).

Ricinus communis Linn. Sp. Pl. 1007. 1753 ; Hook. f. Fl. Brit. Ind. 5 : 457. 1887 (Fig. 32).

Fam. : Euphorbiaceae.

Local name : Digherandi (S. & O.) ; Bindi, Risa jaradaru, Ranga bindi, Rangedjara (M.) ; Era (Mir.) ; Karbis (Mik.).

Des. : Shrubs ; leaves alternate, simple, palmately lobed, lobes serrated ; flowers in spikes, unisexual ; fruits capsules.

Distrib. : Throughout India (Map 19).

Part : Seeds (Ricin).

Notes : Intake of seeds (2.5-6 seeds) is fatal with following symptoms namely vomiting, colic, gastroenteritis, oedema and circulatory collapse (WI. IX).

Russula emetica (Schaff.) Fr. in Pers. Obs. Myc. 1 : 100. 1796.

Fam. : Russulaceae.

Local name : Lal Bis-chatu (M.).

Des. : Rosy then blood-red to tawny, campanulate, rugulosus, gills shining white, free or adnate, broad, taste very acrid, common in Beech woods.

Distrib. : Khasi hills and Darjeeling.

Part : Whole plant (Muscarine).

Notes : Intake of the fungus causes gastro-intestinal troubles resulting in nausea, vomiting and diarrhoea (WI. IV).

Semecarpus anacardium Linn. f. Suppl. 182. 1781 ; Hook. f. Fl. Brit. Ind. 2 : 30. 1870 (Fig. 33).

Fam. : Anacardiaceae.

Local name : Bhelwa (S.) ; Kiro (O.) ; Sosa daru (M., H. & Bh.).

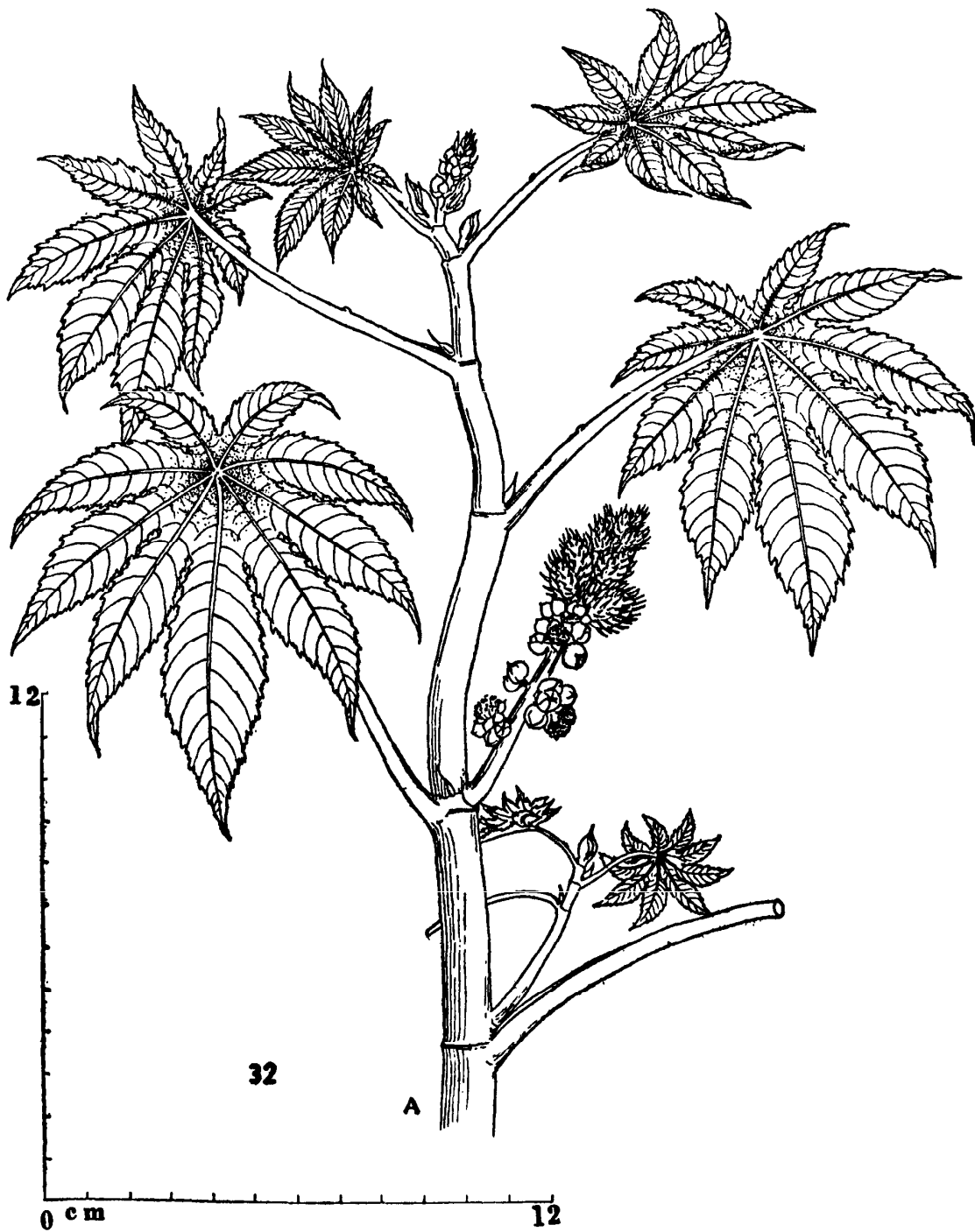


Fig. 32 : *Ricinus communis* Linn.—Habit.

Des. : Trees ; leaves alternate, simple, large, obovate-oblong ; flowers in racemes, greenish yellow ; fruits drupes.

Distrib. : Found in Madhya Pradesh, Assam, Khasi hills of Meghalaya, Gujarat and Tamil Nadu (Map 18).

Part : Latex and fruits.

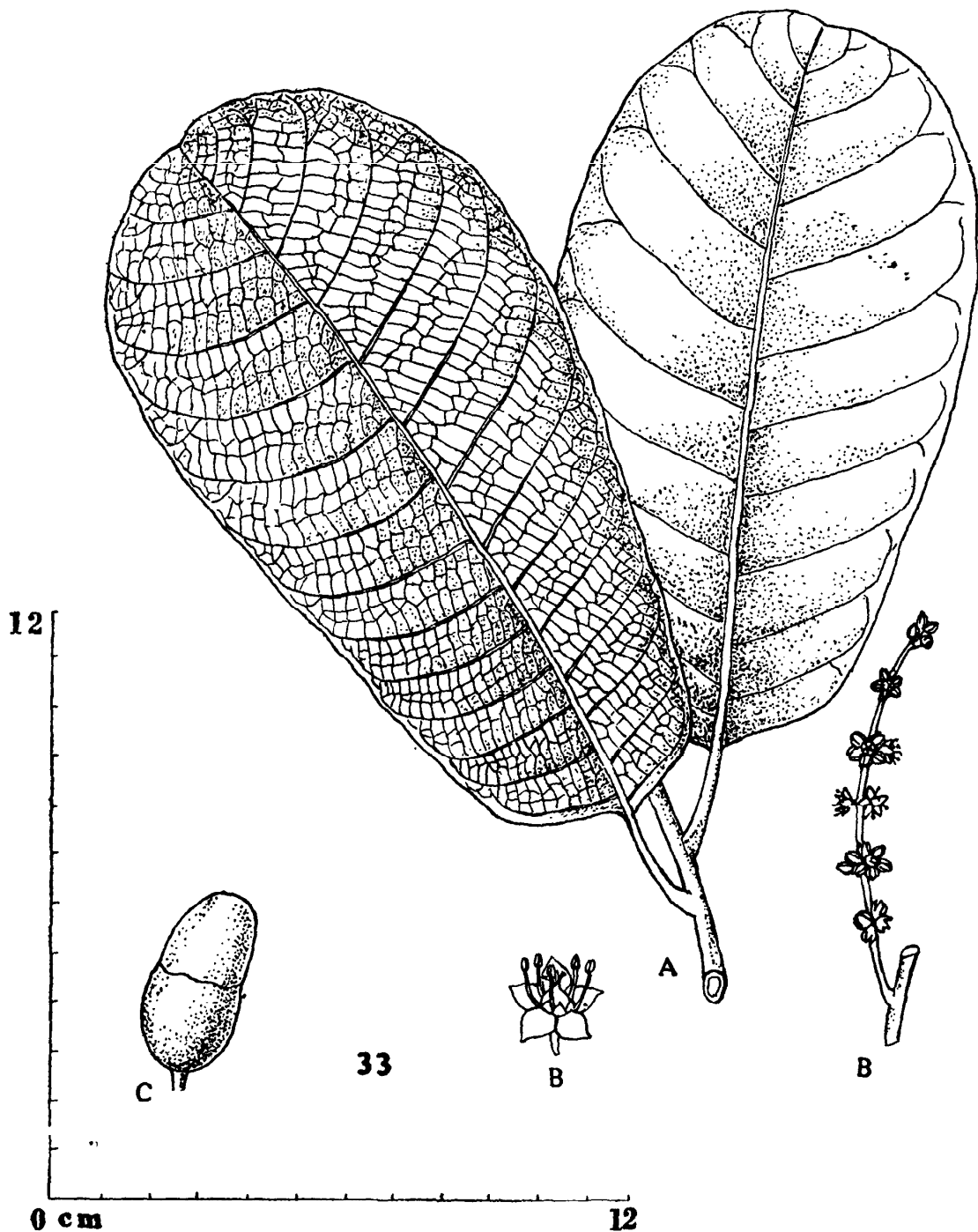


Fig. 33 : *Semecarpus anacardium* Linn.f.
A. Habit. B. Inflorescence and Flowers. C. Fruit.

Notes: Juice of the paricarp is a powerful vesicant and causes eczematous vesicles on body (*Chopra et al.*, l.c.). Juice of fruit produces blisters on skin. In summer if anybody takes rest under the shade of this tree it causes inflammation of eye-lids (authentic field report).

Steudnera virosa (Kunth) Prain, Beng. Plants 2 : 1113. 1903. *S. coloscasioides* Hook. f. Fl. Brit. Ind. 6 : 520. 1894.

Fam. : Araceae.

Local name : Bish kachu (Beng.).

Des. : Herbs with short caudex ; leaves long petioled, ovate, peltate ; flowers in spadix, monoecious ; fruits berries.

Distrib. : Throughout the plains and hilly regions of India (Map 20).

Part : Whole plant ; rhizomes.

Notes : Taking of rhizome sometimes causes fatal effect. It is reported in rural Bengal (authentic field report).

Strychnos nux-vomica Linn. Sp. Pl. 189, 1753 ; Clarke in Hook. f. Fl. Brit. Ind. 4 : 9. 1883 (Fig. 34).

Fam. : Loganiaceae.

Local name : Kuchila (M.).

Des. : Deciduous trees ; leaves opposite, simple, broadly elliptic ; flowers in compound cymes, greenish white ; fruits berries, red when ripe.

Distrib. : Found in the forests of West Bengal, Bihar, Orissa, Karnataka (Konkan) and Tamil Nadu (Map 20).

Part : Seeds, barks, leaves and wood (Strychnine, brucine and strychnicine).

Notes : Intake of the above mentioned plants parts is fatal. Large doses produce tetanic convulsions and death. In lesser doses it may result in mental derangement (WI. X). Seeds are used by Indian tribals for poisoning their arrow blades. Cattle avoid the fruits. Powder of seeds is used for killing wild animals like jackal, cat etc. (authentic field report).

Thevetia peruviana (Pers.) Schum. in Engl. & Prantl, Pflanzenfam. 4 : 11. 159. 1848 (Fig. 35).

Fam. : Apocynaceae.

Local name : Kanai (S. & O.) ; Marang kanaili (Nep.) ; Gohai phul (Kh. & Ja.)

Des. : Shrubs ; leaves spirally arranged, linear ; flowers in terminal cymes, yellow, funnel-shaped ; fruits drupes.

Distrib. : An exotic plant cultivated throughout India.

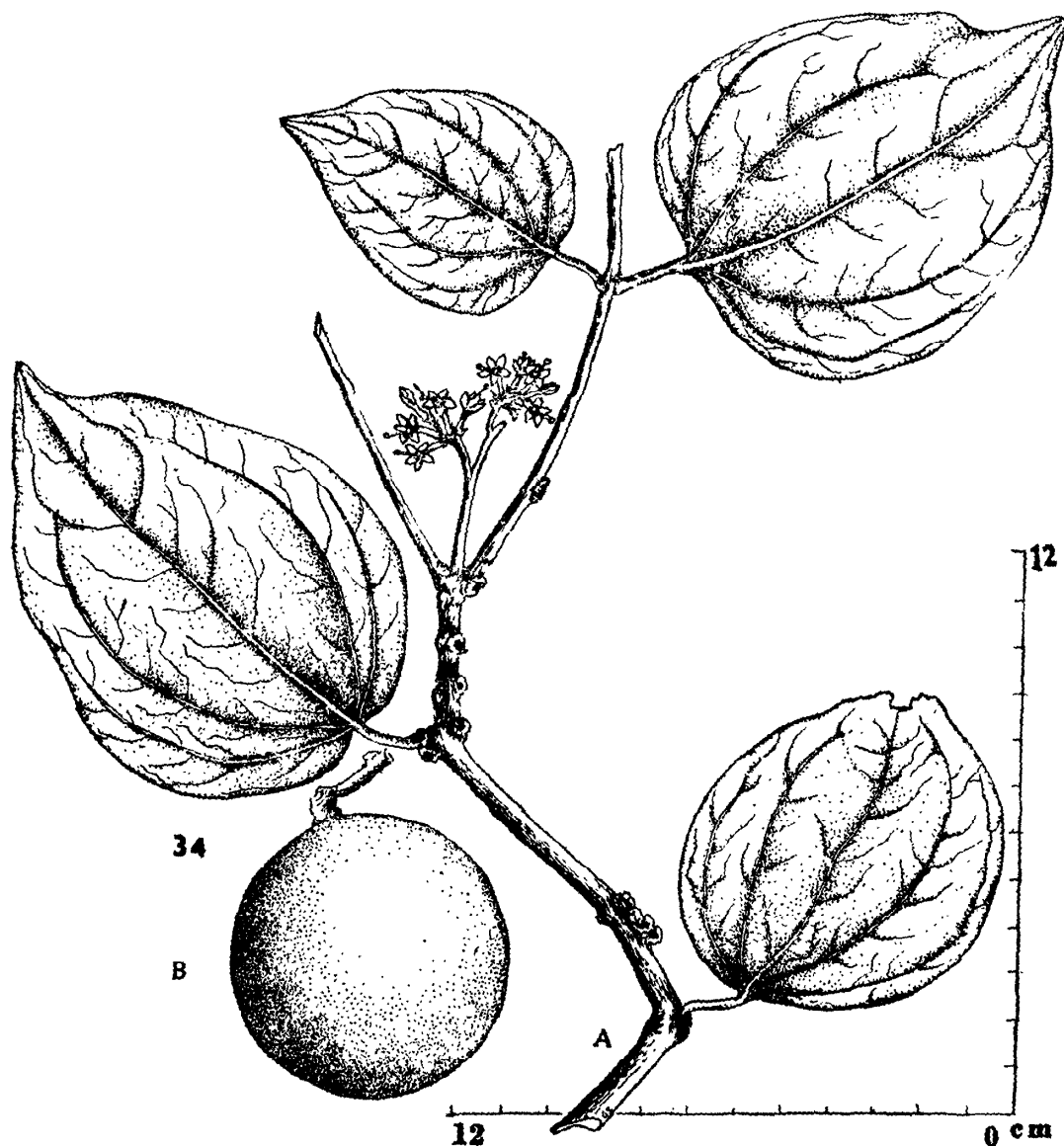


Fig. 34 : *Strychnos nux-vomica* Linn.

A. Habit. B. Fruit.

Part : Milky latex, bark and the seeds.

Notes : Intake of the above mentioned plant parts is fatal with symptoms such as burning sensation in the mouth, tingling of the tongue, vomiting, purging with drowsiness etc. (*Chopra et al.*, l.c.). In Bihar and West Bengal seeds are eaten for committing suicides (authentic field report).

Tragia involucrata Linn. Sp. Pl. 980. 1753 ; Hook. f. Fl. Brit. Ind. 5 : 465. 1888 (Fig. 36).

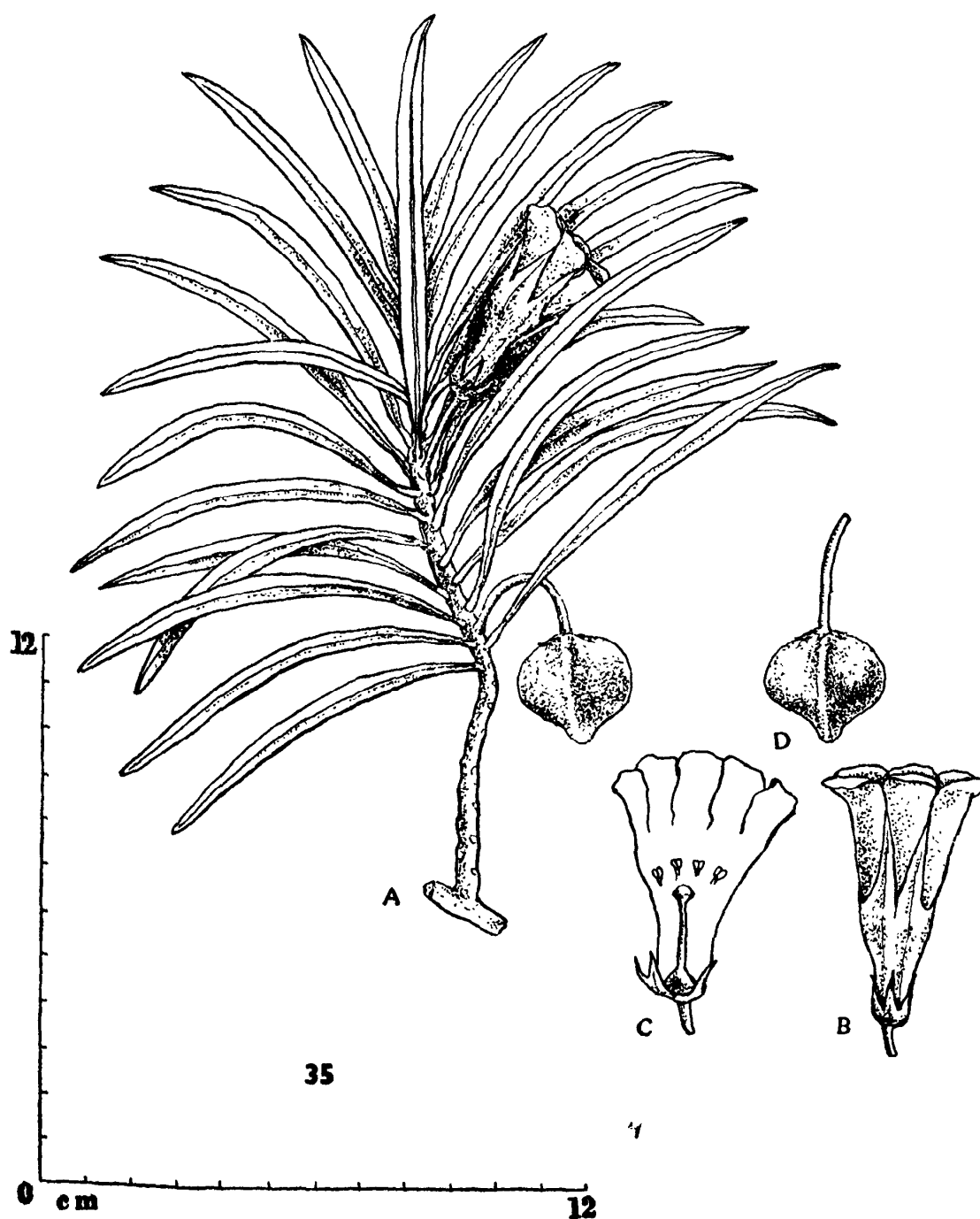


Fig. 35 : *Thevetia peruviana* (Pers.) Schum.
A. Habit. B. Flower. C. L.S. of Flower. D. Fruit.

Fam. : Euphorbiaceae.

Local name : Sengel Sing (M.).

Des. : Twining herbs with hispid stinging hairs ; leaves alternate, simple, serrated ; flowers in racemes, monoecious, yellowish ; fruits capsules.

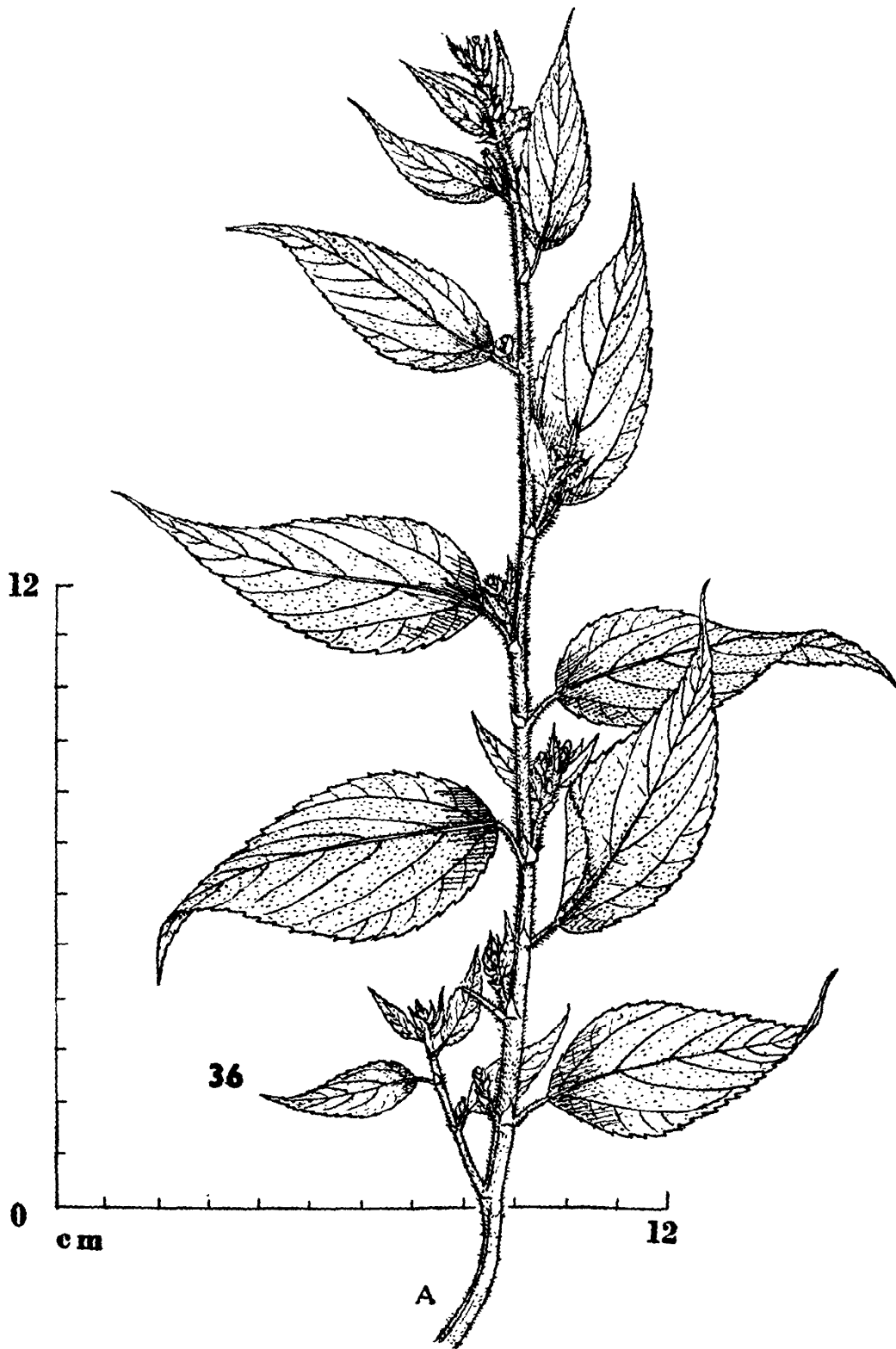


Fig. 36 : *Tragia involucrata* Linn.—Habit.

Distrib. : Throughout India (Map 21).

Part : Hairs on the stems and leaves.

Notes : Contact with skin produces severe irritation (WI. X). Field Report supports the above statement.

Trichosanthes bracteata (Lam.) Voigt in Cat. Hort. Calc. 58. 1845 ;
Clarke in Hook. f. Fl. Brit. Ind. 2 : 607. 1879 (Fig. 37).

Fam. : Cucurbitaceae.

Local name : Marang (M.).

Des. : Climbers ; leaves palmately lobed ; flowers solitary, white ;
fruits berries, bright red when ripe.

Distrib. : Bihar, Orissa and Little Andaman Island (Map 22).

Part : Fruits and roots (Trichosanthin).

Notes : Root has violent purgative properties and used as a cattle-poison (*Chopra et al.*, l.c.).

T. dioica Roxb. Fl. Ind. 3 : 701. 1832 ; Clarke in Hook. f. Fl. Brit.
Ind. 2 : 609. 1879.

Fam. : Cucurbitaceae.

Local name : Parval, Parvar (Hind.) ; Patala (Bom. & Guj.) ;
Kombuppudalai (Tam.) ; Kommupotla (Tel.).

Des. : Climbers ; stem woolly and hispid, leaves alternate ovate-oblong ;
male flowers often paired ; fruits berries.

Distrib. : Common throughout India as cultivated (Map 22).

Part : Roots (Trichosanthin and Colosynthin).

Notes : Intake of root causes fatal poisoning. It is hydragogue and
cathartic (*Chopra et al.*, l.c.). Powder of roots is used for killing wild
animals, namely jungle cat, fox, etc. authentic field report).

Tylophora indica (Burm.) Merr. in Philipp. Journ. Sci. Bot. 19 : 373.
1921. *T. asthmatica* (Linn. f.) W. & A. Contrib. Ind. Bot. 51 : 1834 ;
Hook. f. Fl. Brit. Ind. 4 : 44. 1883 (Fig. 38).

Fam. : Asclepiadaceae.

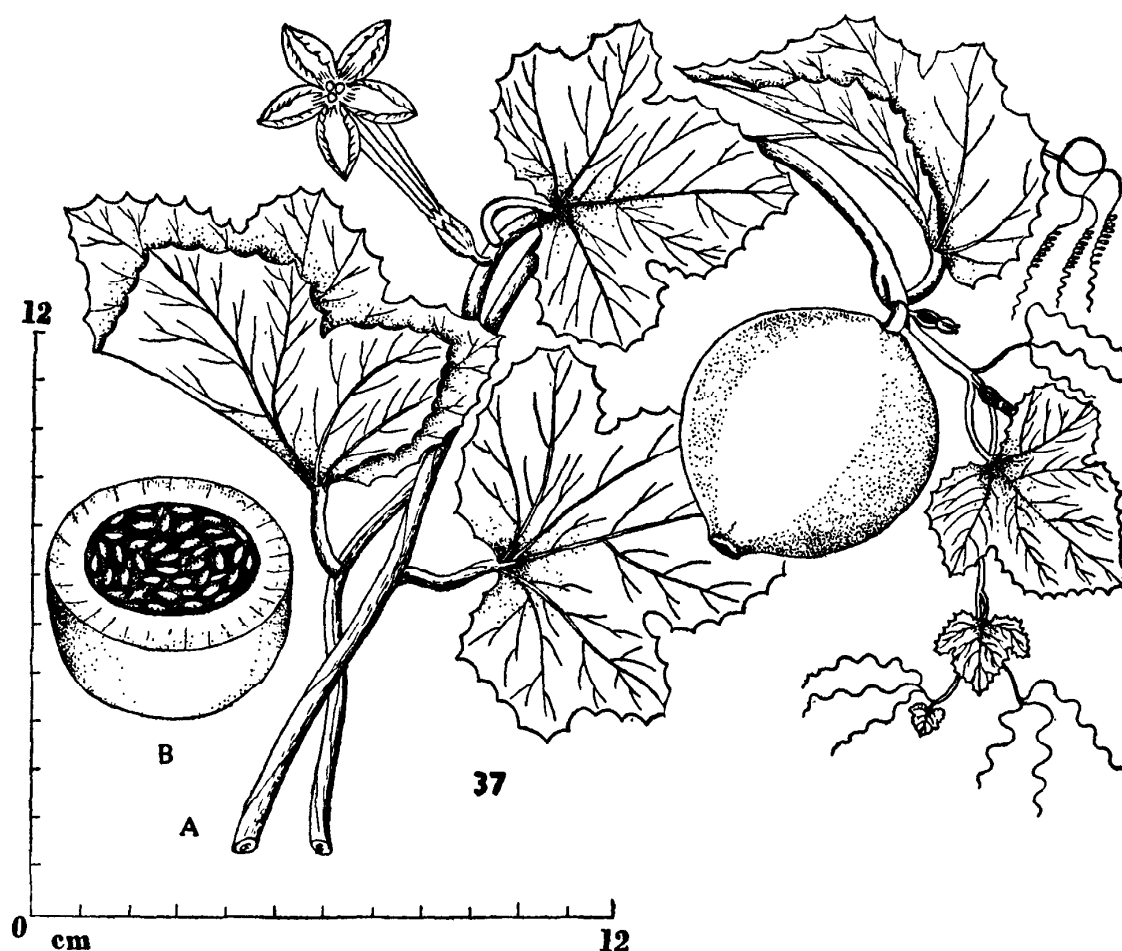


Fig. 37 : *Trichosanthes bracteata* (Lam.) Voigt.
A. Habit. B. T.S. of Fruit.

Local name : Antomul, Anantamul (Beng.) ; Damni (Guj.) ; Nach-Churuppam, Nanjamurichchaan (Tam.).

Des. : Climbers ; leaves elliptic to ovate, simple ; flowers in umbellate cymes, reddish purple ; fruits follicle.

Distrib. : Assam, West Bengal, Orissa, Karnataka (Konkan, Kanara), Tamil Nadu and Kerala (Map 21).

Part : Juice of the plant (Tylophorine).

Notes : Intake of any part of the plant causes fatal poisoning with following symptoms : acrid feeling in the mouth and throat followed by nausea, vomiting, purging and collapse (*Chopra et al.*, l.c.)

Zanthoxylum armatum DC. Prodr. 1 : 727. 1824 ; Hook. f. Fl. Brit. Ind. 1 : 496. 1875 (Fig. 39).

Fam. : Rutaceae.

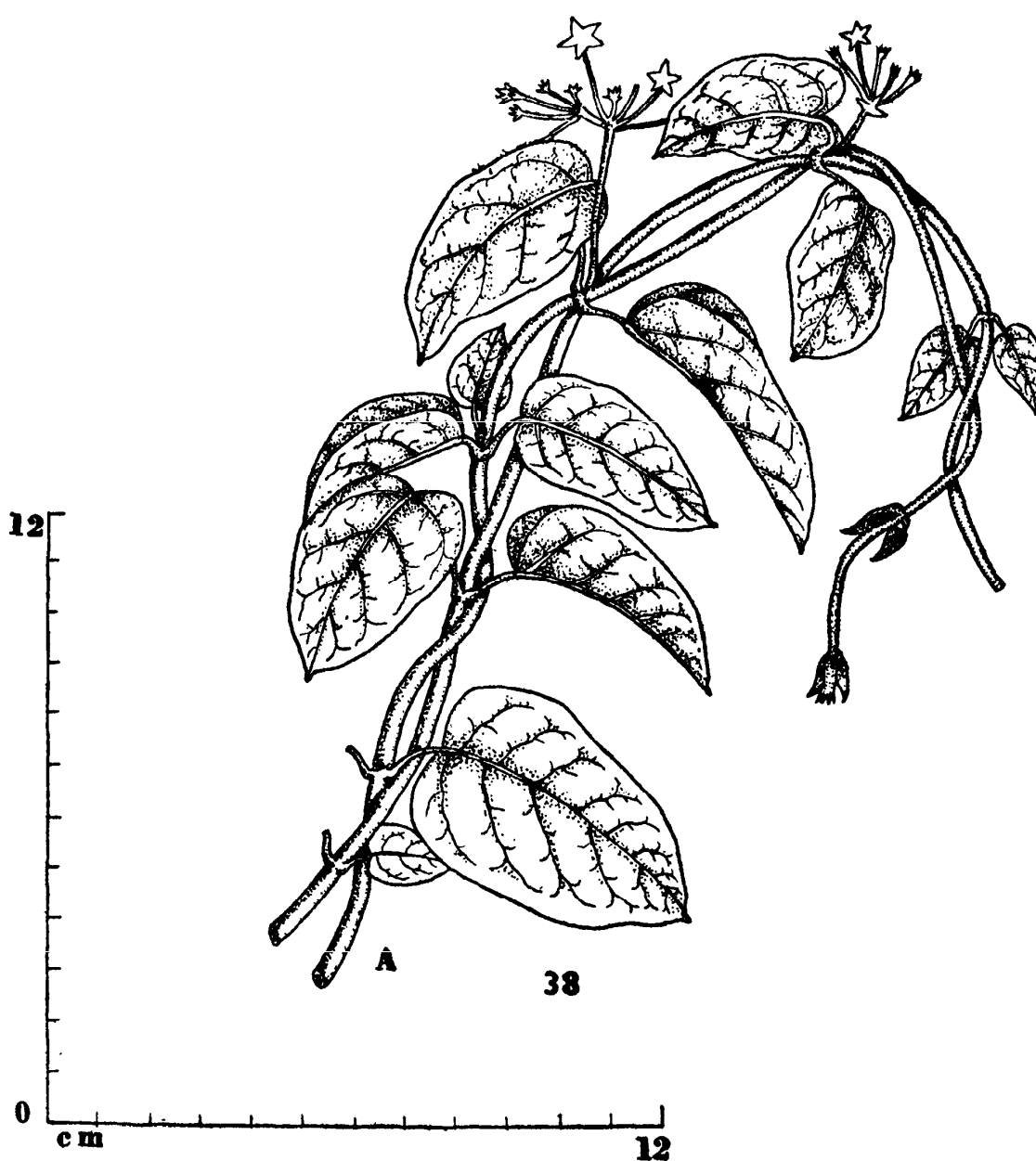


Fig. 38 : *Tylophora indica* (Burm.) Merr. —Habit.

Local name : Gair, Tambul (Beng.); Tundopoda (O.); Tezbal (Garh.); Timba, Timal, Timru (Punj.).

Des. Prickly shrubs; leaves alternate, imparipinnate; flowers in lateral panicles, yellow; fruits drupes.

Distrib. : Found in Meghalaya (Khasia hills), in the hills of Orissa (Ganjam) and Andhra Pradesh (Vishakhapatnam) (Map 23).

Part : Stem barks and fruits.

Notes : Both root and stem bark powder are used for poisoning arrows (WI. XI).

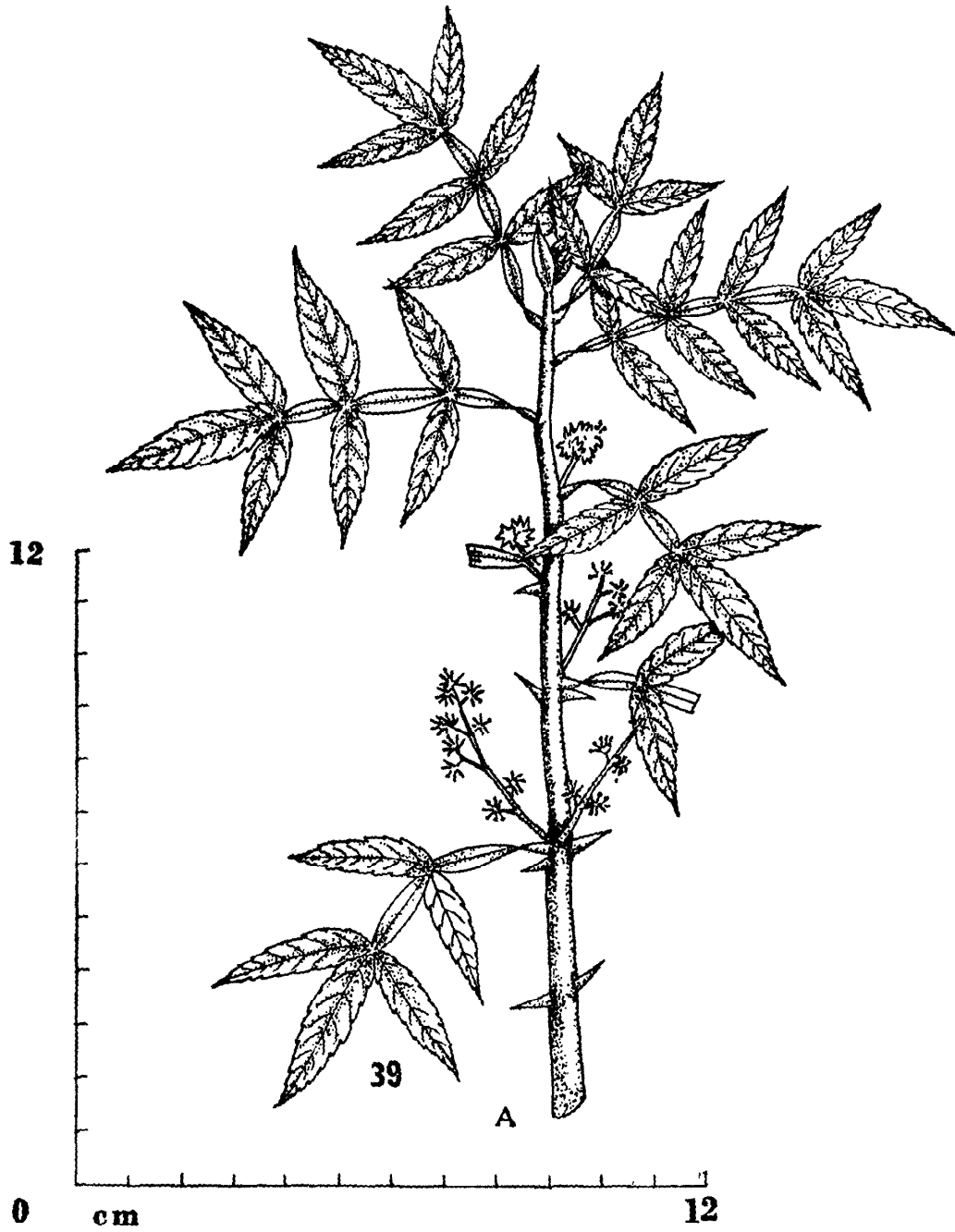


Fig. 39 : *Zanthoxylum armatum* DC.—Habit.

REFERENCES

- | | | |
|--|-----------|--|
| Chopra, R. N., R. L. Bhadwar
and S. Ghosh | 1949 | Poisonous Plants of India, Vol. I.
ICAR. New Delhi. |
| Lonker, A., J. C. Mitchell
and C. D. Calman | 1974 | Seeds of ragwood (<i>Parthenium
hysterophorus</i>) causing eczema.
<i>Trans. St. Johns. Hosp. Derm. Soc.</i>
60 : 43-45. |
| Narashimhan, T. R. et al. | 1977 | Toxicity of <i>Parthenium hystero-
phorus</i> L. to cattle and buffaloes.
<i>Experientia</i> 33 (10) : 1358-1359. |
| Prakash, K. M. et al. | 1978 | <i>Parthenium—Dermatitis. Arogya.</i>
<i>J. Health Sci.</i> 4 (1) : 28-38. |
| Viswanathan, N. and
B. S. Joshi | 1983 | Toxic Constituents of some Indian
Plants. <i>Current Science</i> 52(1) : 1-8. |
| Watt, J. M. and
M. G. Breyer-Brandwijk | 1962 | The medicinal and poisonous plants
of Southern and Eastern Africa,
1125. E. & S. Livingstone Ltd.
Edinburgh & London. |
| Wealth of India | 1947-1976 | A Dictionary of Indian Raw
Materials and Industrial Products
Vol. I-XI. C.S.I. R. New Delhi. |

APPENDIX
INDIAN TRIBES

Andaman and Nicobar Islands

Andamanese ; Jarawas ; Nicobarese, Onges ; Sentinelese ; Shompens.

Andhra Pradesh

Begata ; Bhil Chenchu ; Gadaba ; Gond ; Goudu ; Hill Reddis ; Jatapu ; Kaliunayakam ; Kammara ; Katiunayakan ; Kolam ; Konda Dhora ; Konda Kapus ; Konda Reddis ; Kondhs ; Kotia-Bentho Oriya ; Koya ; Kulia ; Malis ; Manna Dhora ; Mukha Dhora ; Nayaks ; Pardhan ; Porja ; Reddi Dhoras ; Rona ; Savaras ; Sugalis (Lambadis) ; Thoti ; Valmiki ; Yenadis ; Yeru Kulas.

Arunachal Pradesh

Adi ; Aka ; Apatani ; Bangni ; Bangro ; Bugun/Khoa ; Daffa ; Hill Miri ; Khamba ; Khampti ; Mema ; Miji ; Mikir ; Mishmi ; Monpa ; Nocte ; Sherdukpen ; Singpho ; Sulung ; Tangsa ; Wancho ; Yobin.

Assam

Barmans ; Boro-Boro-Kachari ; Chakma ; D̄ori ; Dimasa (Kachari) ; Garo ; Hajong ; Hmar ; Hojai ; Khasi and Jaintia ; Kuki ; Lakher ; Lalung ; Man ; Mech ; Mikir ; Miri ; Mizo ; Nagu ; Pawi ; Rabha ; Sonwal.

Bihar

Asur ; Baiga ; Banjara ; Bathudi ; Bedia ; Bhumij ; Binjhia ; Birhul Birhor ; Birjia ; Chero ; Chik Baraik ; Gond ; Gorait ; Ho ; Karmali ; Kharia ; Kharwar ; Khond ; Kisan ; Kora ; Korwa ; Lohra ; Mahli ; Malp̄aharia ; Munda ; Oraon ; Parhaiya ; Santal ; Sauria Paharia ; Savar

Dadra and Nagar Haveli

Dhodia ; Dubla ; Kathodi ; Kokna ; Koli Dhor ; Naikda ; Varli.

Gujarat

Barda ; Bavacha ; Bharwad ; Bhil ; Charan ; Chaudhri ; Ghodhara ; Dhanka ; Dhodia ; Dubla ; Gamit ; Gond ; Kathodi ; Kokna ; Koli ; Koli Dhor ; Kunbi ; Naikda ; Padhar Puradhi ; Pardhi ; Patelia ; Pomla ; Rabari ; Rathawa ; Siddi ; Vaghri ; Varli ; Vitolia.

Himachal Pradesh

Bhot ; Gaddi ; Gujjar ; Kanura ; Lahaula ; Pangwala.

Karnataka

Barda ; Bavacha ; Bhil ; Bhilala ; Chenchu ; Chodhara ; Gond ; Gowdalu ; Hakkipikki ; Hasalaru ; Iruliga ; Jenu kuruba ; Kadu Kuruba ; Kaniyan ; Kathodi ; Katiunayakam ; Kokna ; Koli Dhor ; Korama ; Kota ; Koya ; Kudiya ; Kuruba ; Kuruman ; Malaikudi ; Malayekandi ; Malasar ; Maleru ; Maratha ; Marati ; Meda ; Naikda ; Palliyan ; Pardhi ; Rathawa ; Sholaga ; Soligaru ; Thoti ; Toda ; Vitolia ; Yerava.

Kerala

Adiyan ; Arandan ; Eravallan ; Hill Pulaya ; Irular ; Kadar ; Kammara ; Kanikaran ; Kutiunayakan ; Kachu Velan ; Konda Reddis ; Koraga ; Kota ; Kudiya ; Kurichchan ; Kuruman ; Kurumbas ; Malakuravan ; Malai Arayan ; Malai Pandarm ; Malai Vedan ; Malasar ; Malayan ; Malayarayar ; Mannan ; Marati ; Mudugar ; Palleyan ; Pallyiar ; Palliyan ; Paniyan Pulayan ; Ulladan ; Urali.

Madhya Pradesh

Agariya ; Andh ; Baiga ; Bhaina ; Bharia-Bhumia ; Bhattra ; Bhil ; Bhilala ; Bhils and Bhilalas ; Bhumiya ; Bhunjia ; Biar ; Binjhar ; Birhul/Birhor, Dhanwar ; Gadaba ; Gond ; Halba ; Kamar ; Karku ; Kawar ; Keer ; Khairwar ; Kharia ; Kol ; Kondhs ; Korku ; Korwa ; Majhi, Majhwar, Mawasi ; Mina ; Mogia ; Munda ; Nagesia ; Nat ; Nihal ; Oraon ; Panika ; Pao ; Pardhan ; Pardhi ; Parja ; Saharia ; Sahariya Saonta ; Saur ; Sawar ; Seharla ; Sonr.

Maharashtra

Andh ; Barda ; Bavacha ; Bhaina ; Bhattra ; Bhil ; Bhunja ; Binjhar ; Birhul/Birhor ; Chodhara ; Dhanka ; Dhanwar ; Dhodia ; Dubla ; Gāmit ; Gond ; Halba ; Kathodi ; Kawar ; Khairwar ; Kokna ; Kol ; Kolan ; Koli Dhor ; Koli Mahadev ; Koli Malhar ; Korku ; Koya ; Nagasia ; Naikda ; Oraon ; Pardhan ; Pardhi ; Patelia ; Pomla ; Rathawa ; Thakur ; Thoti ; Varli ; Vitolia.

Manipur

Aimol ; Anal ; Angami ; Chiru ; Chothe ; Gangte ; Hmar ; Kabui ; Kacha Naga ; Koirao ; Koirang ; Kom ; Lamgang ; Mao ; Maram ; Maring ; Mizo Monsang ; Moyon ; Paite ; Puram ; Ralte ; Sema ; Simte ; Tangkhul ; Thadou ; Vaiphui ; Zou.

Meghalaya

Chakma ; Dimasa (Kachari) ; Garo ; Hajong ; Hmar ; Khasi and Jaintia ; Kuki ; Lakher ; Man (Tai speaking) ; Mikir ; Mizo ; Naga.

Mizoram

Chakma ; Dimasa (Kachari) ; Garo ; Hmar ; Khasi and Jaintia ; Kuki ; Lakher ; Mikir ; Mizo ; Naga ; Pawi.

Nagaland

Adi ; Aka ; Bugur ; Dimasa ; Garo ; Khasi and Jaintia ; Khoa ; Kuki ; Memba ; Mikir ; Mizo ; Naga ; Synteng.

Orissa

Bagata ; Baiga ; Banjara ; Bathudi ; Bhottada ; Bhuiya ; Bhumia ; Bhumij ; Binjhal ; Bhunjia ; Birhul/Birhor ; Bondo Poraja ; Chenchu ; Dal ; Desua Bhumij ; Dharua ; Didayi ; Gadaba ; Gandia ; Gond ; Ho ; Holva ; Jatapu ; Juang ; Kawar ; Kharia ; Kharwar ; Khond ; Kisan ; Kol ; Kolah-kol-Loharas ; Kalha ; Koli/Malhar ; Konda Dhora ; Kora ; Korua ; Kotia ; Koya ; Kulis ; Lodha ; Madia ; Mahali ; Mankidi ; Mankirdia ; Matya ; Mirdhas ; Munda ; Omanatya ; Oraon ; Parenga ; Paroja ; Pentia ; Rajuar ; Santal ; Saora ; Sounti ; Tharua.

Rajasthan

Bhil ; Bhil Mina ; Damor ; Garasia Mina ; Sahariya.

Tamil Nadu

Adiyan ; Aradan ; Irular ; Kadar ; Kammara ; Kanikaran ; Katiunayakan ; Konda Kapus ; Konda Reddis ; Koraga ; Kota ; Kudiya ; Kuruchchan ; Kuruman ; Kurumbas ; Malakkuravan ; Malai Aryan ; Malai Pandaram ; Malayali ; Malasar ; Mudugar ; Palliyar ; Palliyan ; Paniyan ; Pūlayan ; Sholaga ; Toda.

Tripura

Bhil ; Bhutia ; Chaimal ; Chakma ; Garo ; Haram ; Jamatia ; Khasia ; Kuki ; Lepcha ; Mag ; Mizo ; Munda ; Noatia ; Orang ; Riang ; Santal ; Tripuri ; Uchai.

West Bengal

Baiga ; Bedia ; Bhumij ; Bhutia ; Birhul/Birhor ; Chakma ; Chero ; Garo ; Gond ; Gorait ; Hajang ; Ho ; Karmali ; Kharwar ; Khond ; Kisan ; Kora ; Kerwa ; Lepcha ; Lodha ; Lohra ; Mag ; Mahali ; Mal Paharia ; Metch ; Munda ; Mru ; Nagesia ; Oraon ; Parhaiya ; Rabha ; Santal ; Sauria Paharia ; Savar.

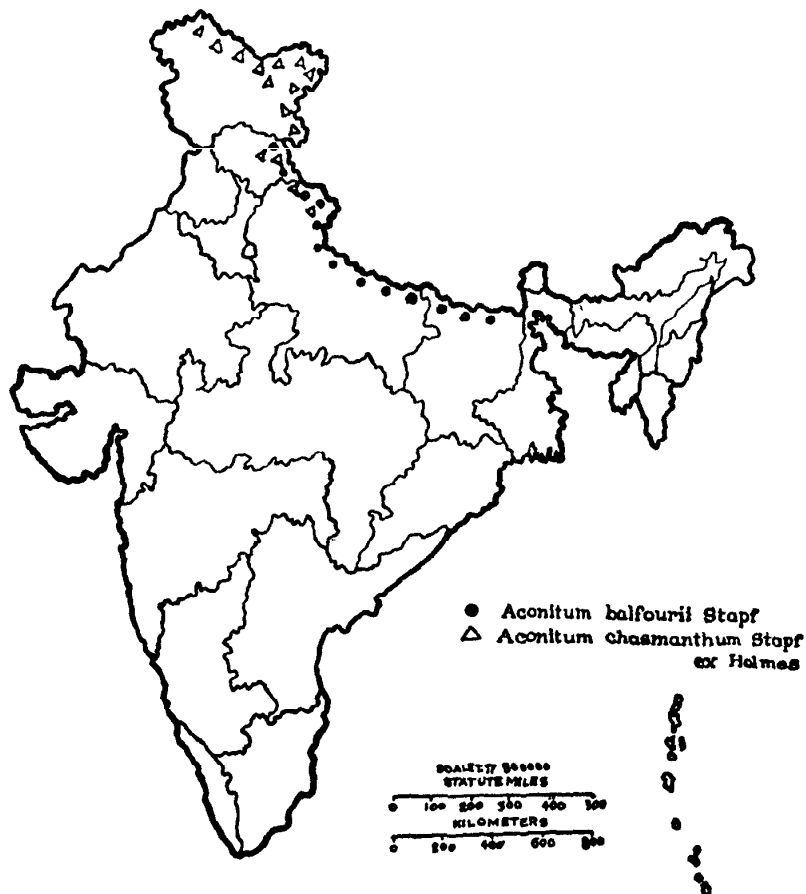
LIST OF ILLUSTRATIONS

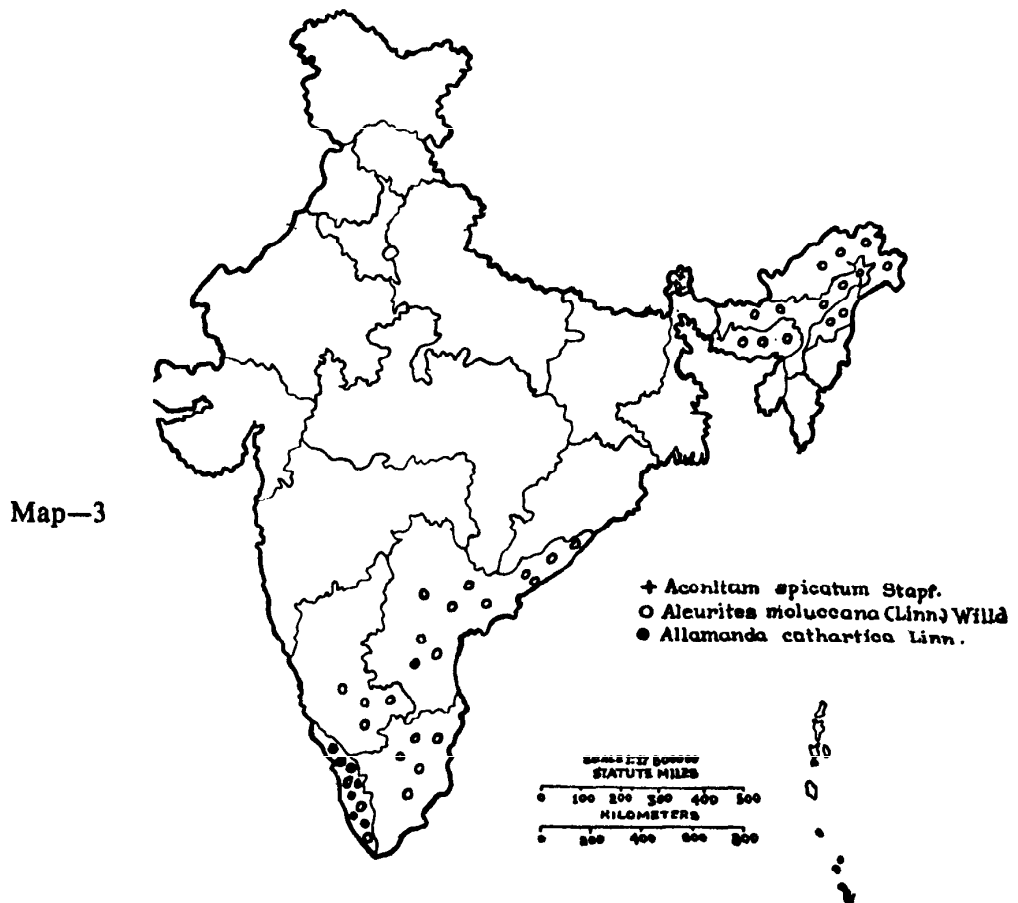
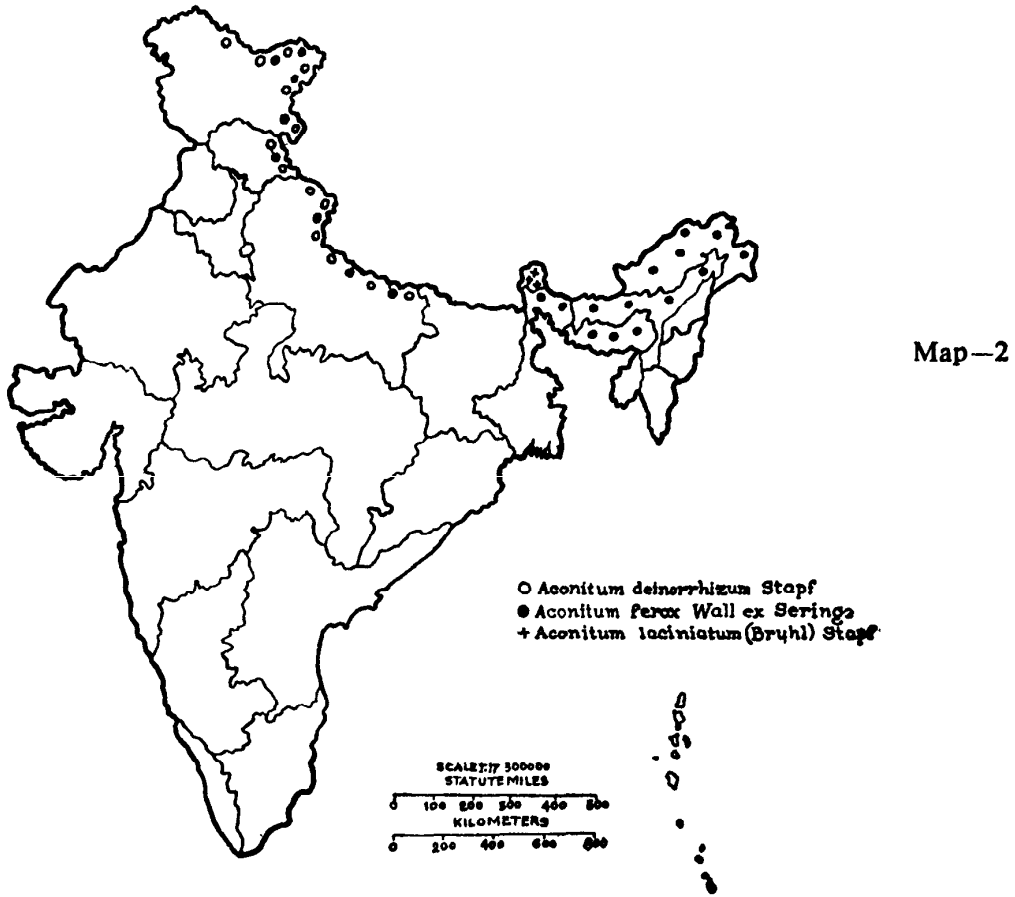
	<i>Page</i>
1. <i>Abrus precatorius</i> in flowers.	2
2. <i>Aconitum chasmanthum</i> in flowers.	3
3. <i>Aconitum deinorrhizum</i> in flowers.	4
4. <i>Alstonia scholaris</i> in flowers.	7
5. <i>Amanita muscaria</i> —fruit body.	8
6. <i>Amanita phalloides</i> —fruit body.	9
7. <i>Anacardium occidentale</i> in flowers.	11
8. <i>Argemone mexicana</i> in flowers.	13
9. <i>Calotropis gigantea</i> in flowers.	15
10. <i>Cannabis sativa</i> in flowers.	16
11. <i>Casearia elliptica</i> with fruits.	17
12. <i>Catharanthus roseus</i> in flowers.	19
13. <i>Cleistanthus collinus</i> with fruits.	21
14. <i>Cuscuta reflexa</i> in flowers.	22
15. <i>Datura metel</i> in flowers.	24
16. <i>Datura stramonium</i> in flowers.	25
17. <i>Dioscorea pentaphylla</i> in flowers.	26
18. <i>Entoloma lividum</i> —fruit body.	28
19. <i>Euphorbia antiquorum</i> in flowers.	29
20. <i>Euphorbia neriifolia</i>	30
21. <i>Euphorbia tirucalli</i>	32
22. <i>Gloriosa superba</i> in flowers.	33
23. <i>Gyromitra esculenta</i> —fruit body.	35
24. <i>Jatropha gossypifolia</i>	36
25. <i>Mucuna pruriens</i> with fruit.	38
26. <i>Nerium indicum</i> in flowers.	40
27. <i>Papaver somniferum</i> in flowers.	41
28. <i>Parthenium hysterophorus</i> in flowers.	43
29. <i>Pedilanthus tithymaloides</i>	44
30. <i>Plumbago zeylanica</i> in flowers.	46
31. <i>Ranunculus sceleratus</i> in flowers.	47
32. <i>Ricinus communis</i> in flowers.	49
33. <i>Semecarpus anacardium</i> in flowers.	50
34. <i>Strychnos nux-vomica</i> in flowers.	52
35. <i>Thevetia peruviana</i> in flowers.	53
36. <i>Tragia involucrata</i> in flowers.	54
37. <i>Trichosanthes bracteata</i> in flowers.	56
38. <i>Tylophora indica</i> in flowers.	57
39. <i>Zanthoxylum armatum</i> in flowers.	58

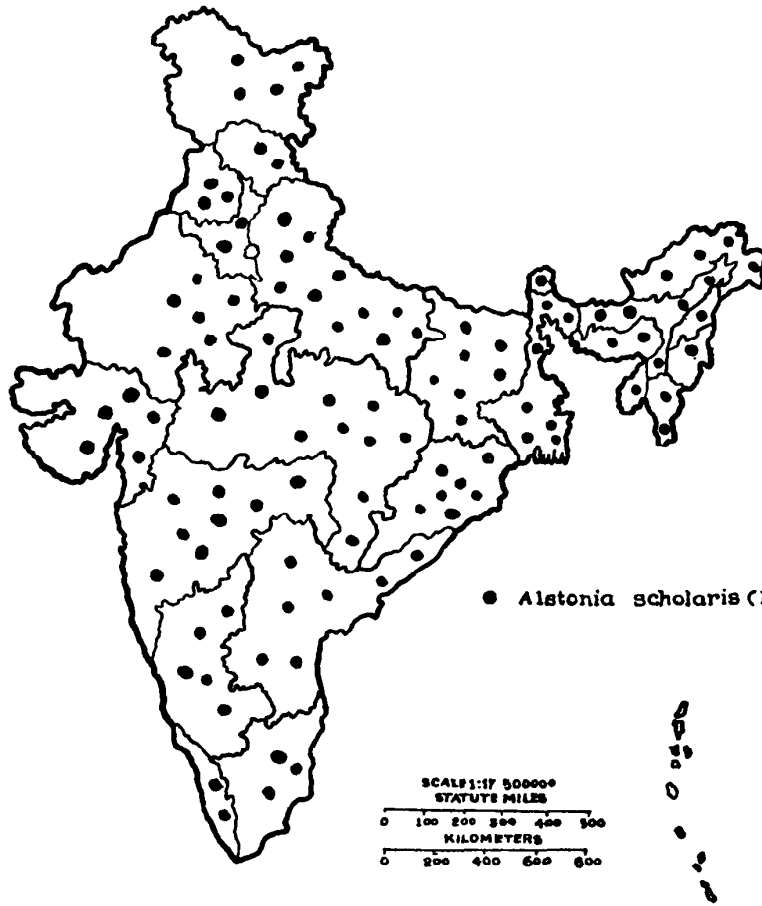
LIST OF MAPS SHOWING THE DISTRIBUTION

- | | |
|---|---|
| 1. <i>Aconitum balfourii</i> Stapf | 12. <i>Euphorbia neriifolia</i> Linn. |
| <i>A. chasmanthum</i> Stapf ex Holmes | <i>E. tirucalli</i> Linn. |
| 2. <i>Aconitum deinorrhizum</i> Stapf | 13. <i>Gloriosa superba</i> Linn. |
| <i>A. ferox</i> Wall ex Seringe | 14. <i>Jatropha curcus</i> Linn. |
| <i>A. laciniatum</i> (Bruhl) Stapf | <i>J. gossypifolia</i> Linn. |
| 3. <i>Aconitum spicatum</i> (Bruhl) Stapf | 15. <i>Laportea crenulata</i> Gaudich. |
| <i>Aleurites moluccana</i> (Linn.) Willd. | <i>Gnidia glauca</i> (Fresen) Gilg. |
| <i>Allamanda cathartica</i> Linn. | 16. <i>Lathyrus aphaca</i> Linn. |
| 4. <i>Alstonia scholaris</i> (Linn.) R. Br. | <i>Nothapodytes foetida</i> (Wight) Sleumer |
| 5. <i>Anacardium occidentale</i> Linn. | 17. <i>Mucuna pruriens</i> (Linn.) DC. |
| <i>Antiaris toxicaria</i> (Pers.) Lesch. | <i>Parthenium hysterophorus</i> Linn. |
| <i>Argemone mexicana</i> Linn. | 18. <i>Plumbago zeylanica</i> Linn. |
| 6. <i>Arisaema tortuosum</i> (Wall.) Sch. | <i>Semecarpus anacardium</i> Linn. f. |
| 7. <i>Artemisia nilagirica</i> (Clarke) Pamp. | 19. <i>Ranunculus sceleratus</i> Linn. |
| <i>Calotropis gigantea</i> (Linn.) R. Br. | <i>Ricinus communis</i> Linn. |
| 8. <i>Cannabis sativa</i> Linn. | 20. <i>Stuednera virosa</i> (Kunth) Prain |
| <i>Casearia elliptica</i> Willd. | <i>Strychnos nux-vomica</i> Linn. |
| 9. <i>Catharanthus pusillus</i> (Murr.) Don | 21. <i>Tragia involucrata</i> Linn. |
| 10. <i>Dioscorea hispida</i> Dennst. | <i>Tylophora indica</i> (Burm.) Merr. |
| <i>D. pentaphylla</i> Linn. | 22. <i>Trichosanthes bracteata</i> (Lam.) Voigt |
| 11. <i>Euphorbia antiquorum</i> Linn. | <i>T. dioica</i> Roxb. |
| | 23. <i>Zanthoxylum armatum</i> DC. |

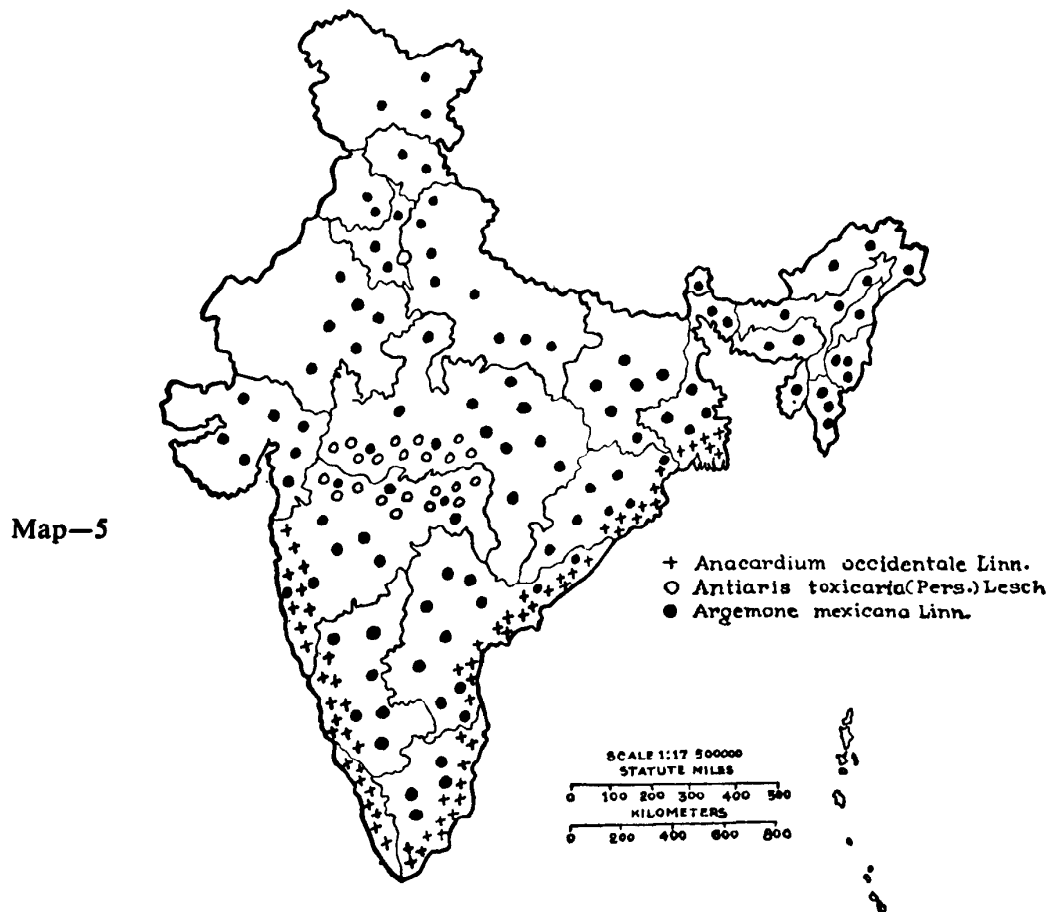
Map-1



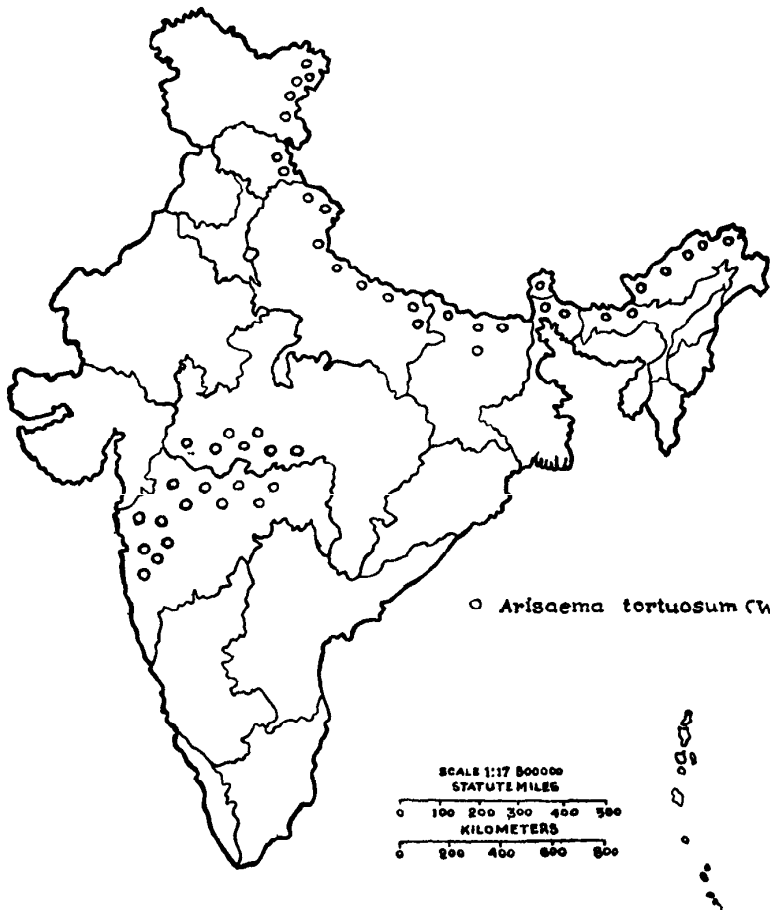




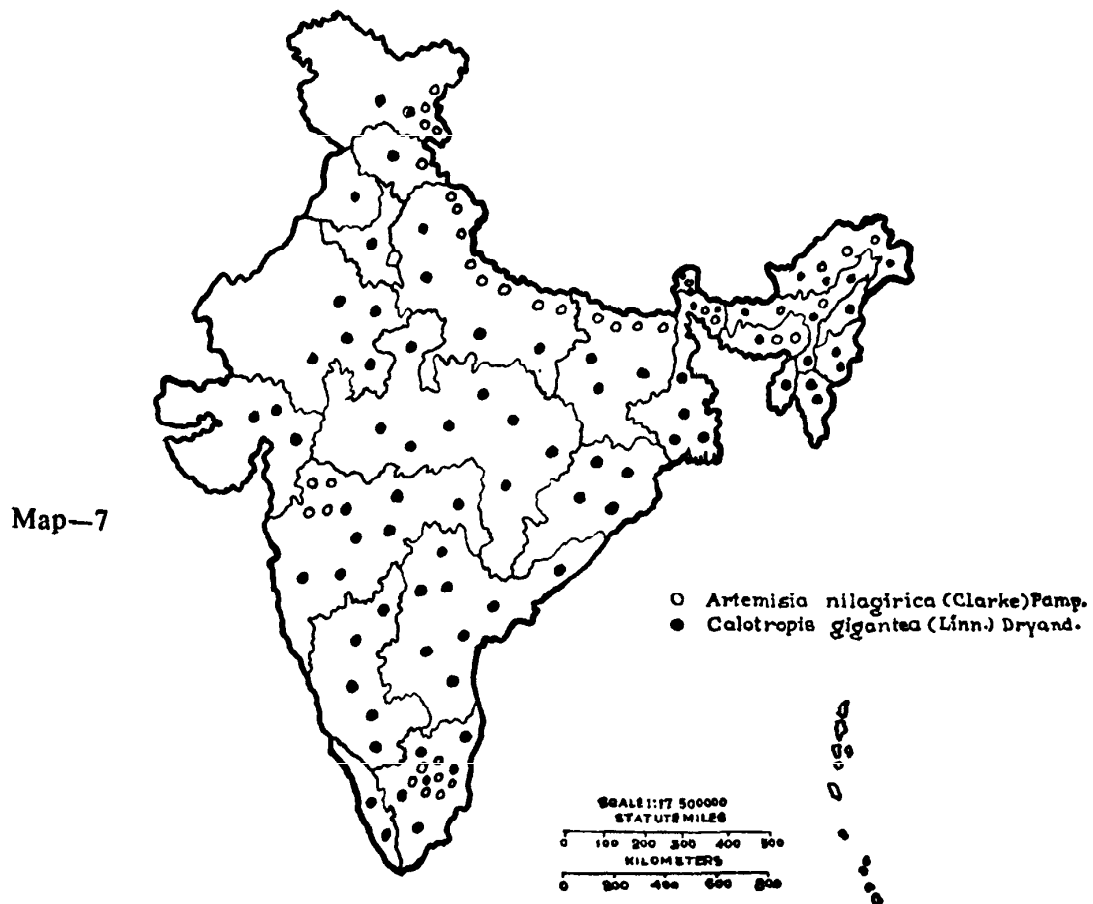
Map—4



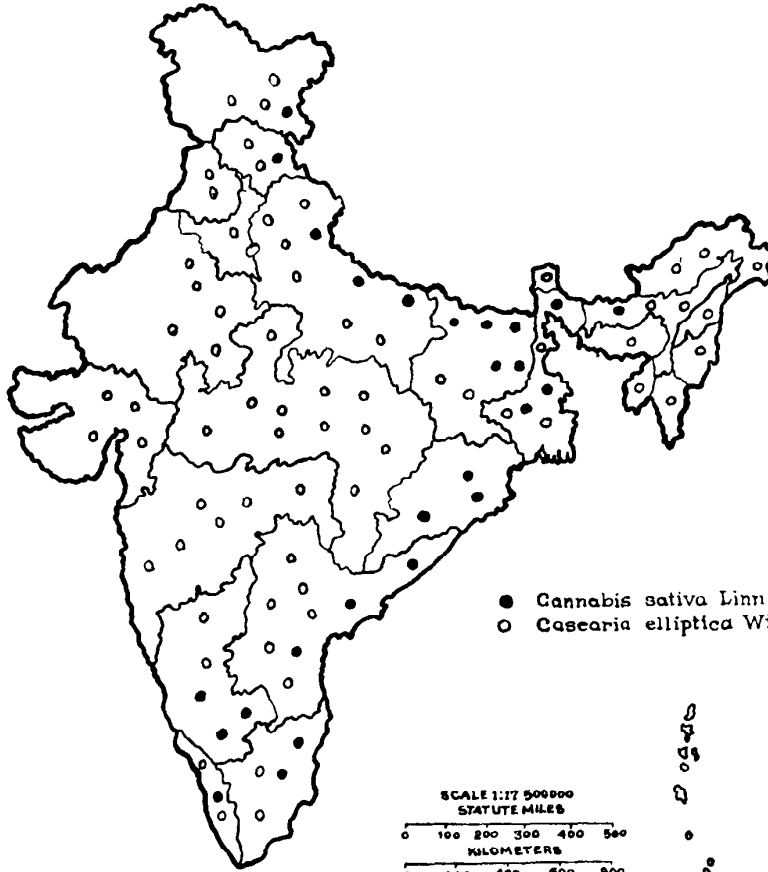
Map—5



Map-6



Map-7

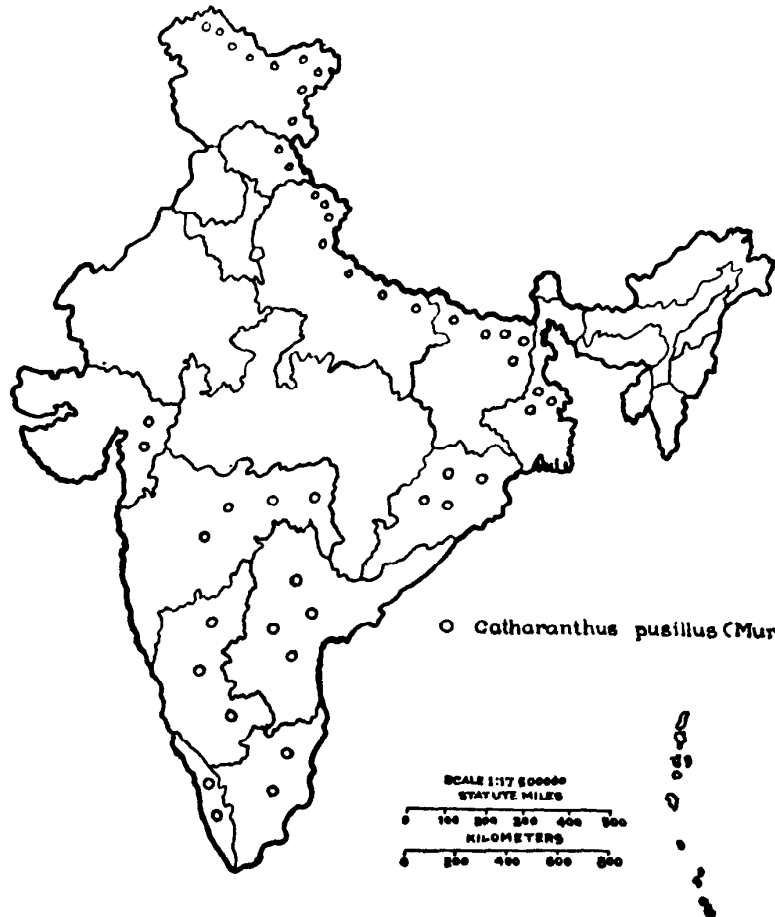


Map—8

● *Cannabis sativa* Linn
○ *Casearia elliptica* Willd.

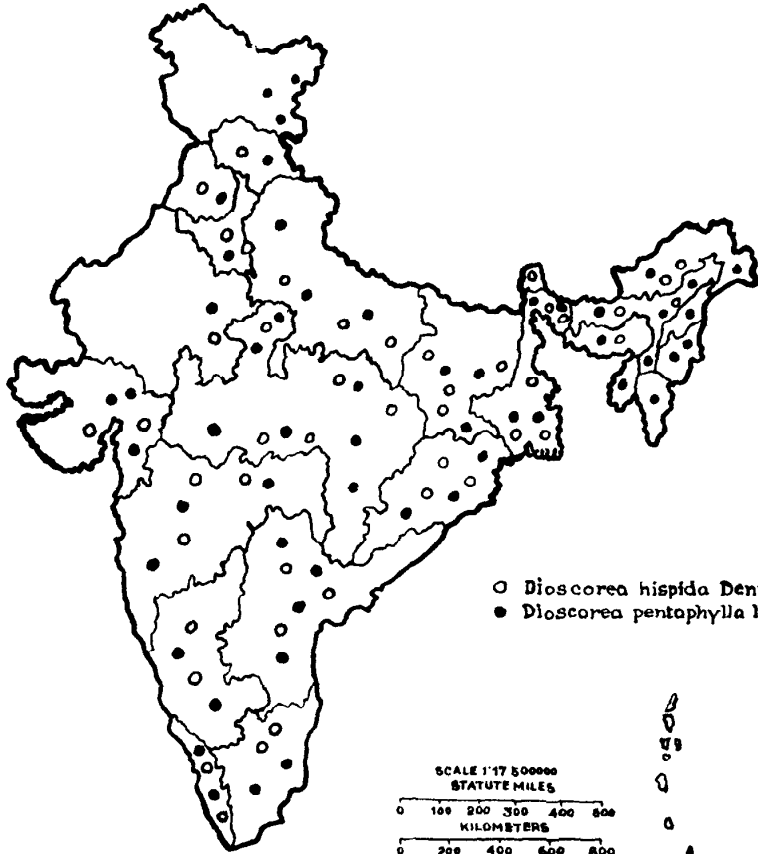
SCALE 1:17 500000
STATUTE MILES
0 100 200 300 400 500
KILOMETERS
0 200 400 600 800

Map—9

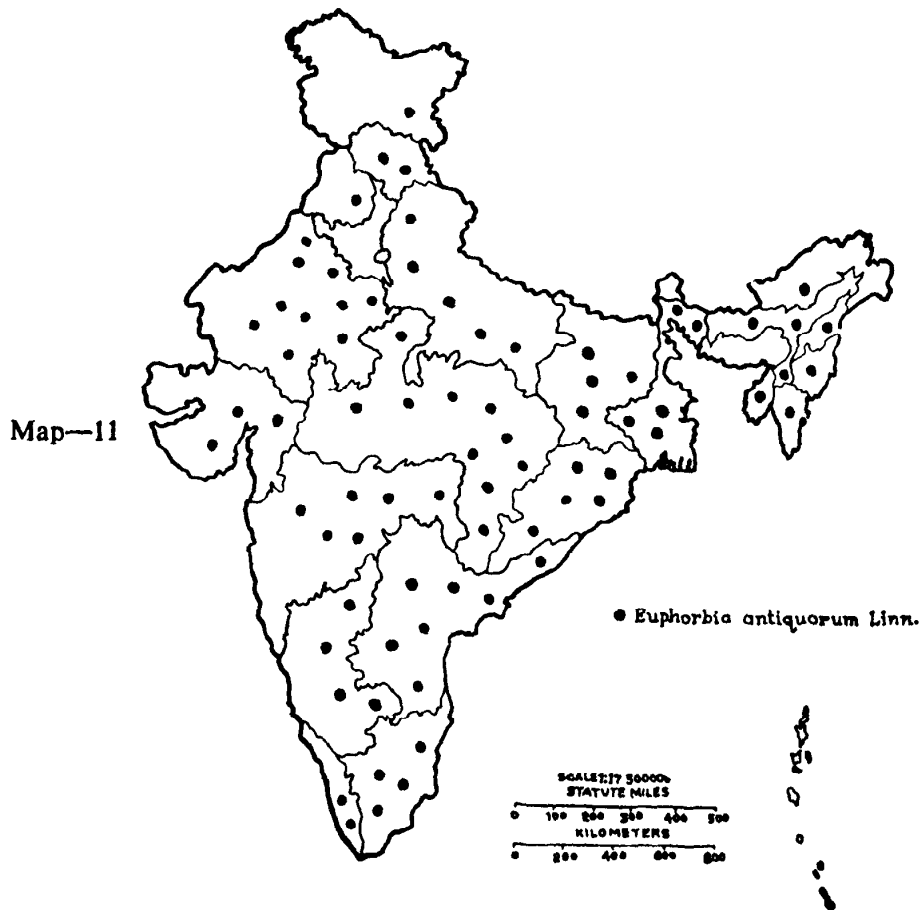


○ *Catharanthus pusillus* (Murr.) Don

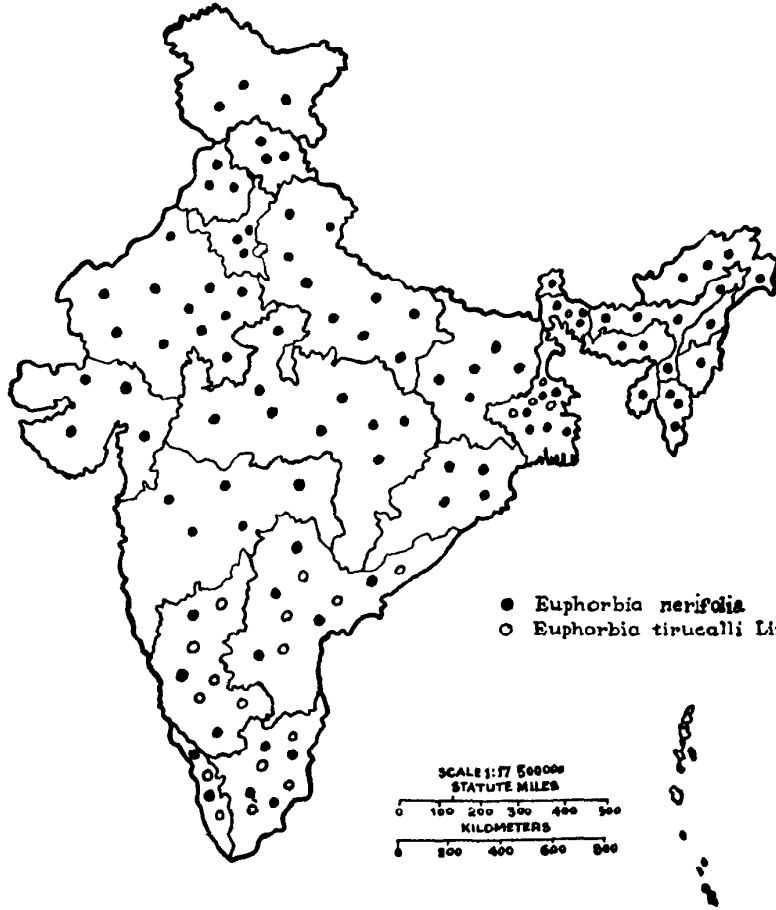
SCALE 1:17 500000
STATUTE MILES
0 100 200 300 400 500
KILOMETERS
0 200 400 600 800



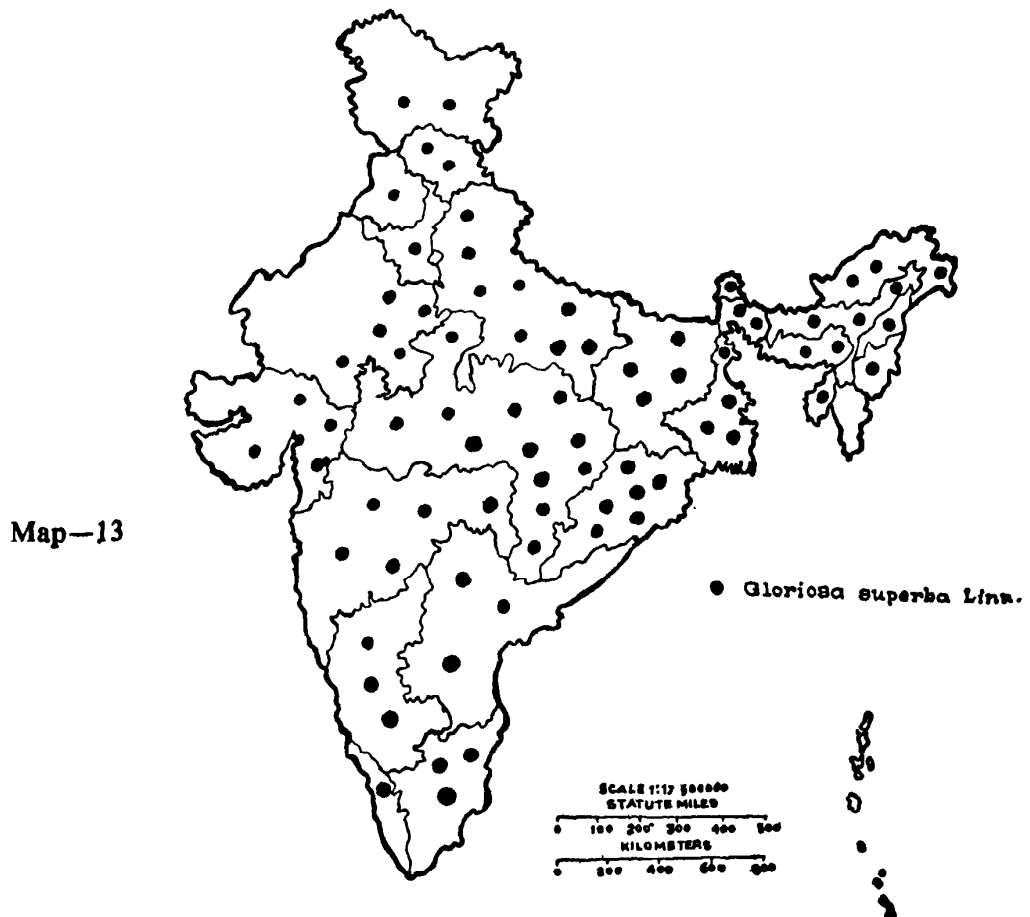
Map—10



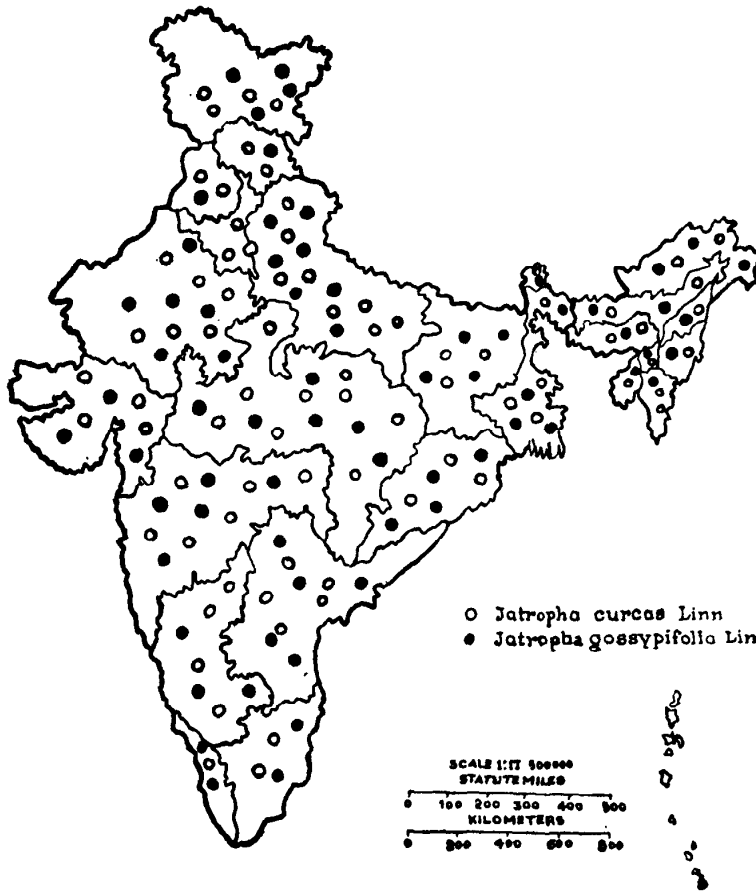
Map—11



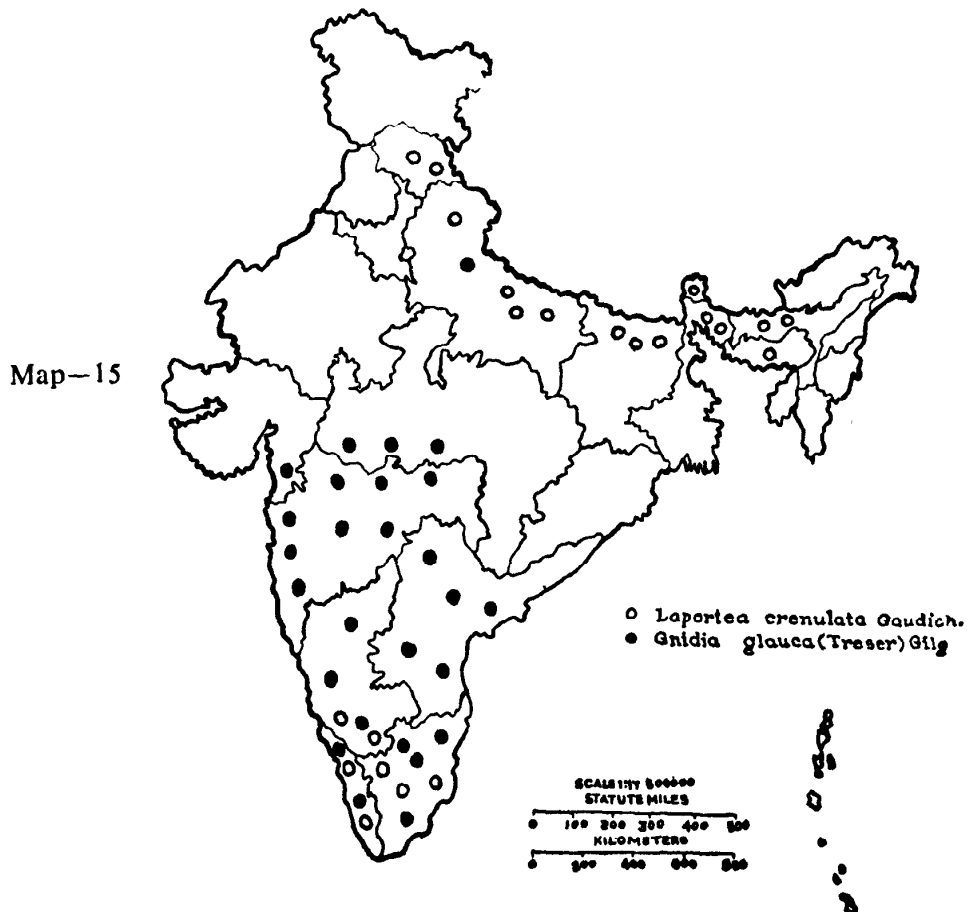
Map—12



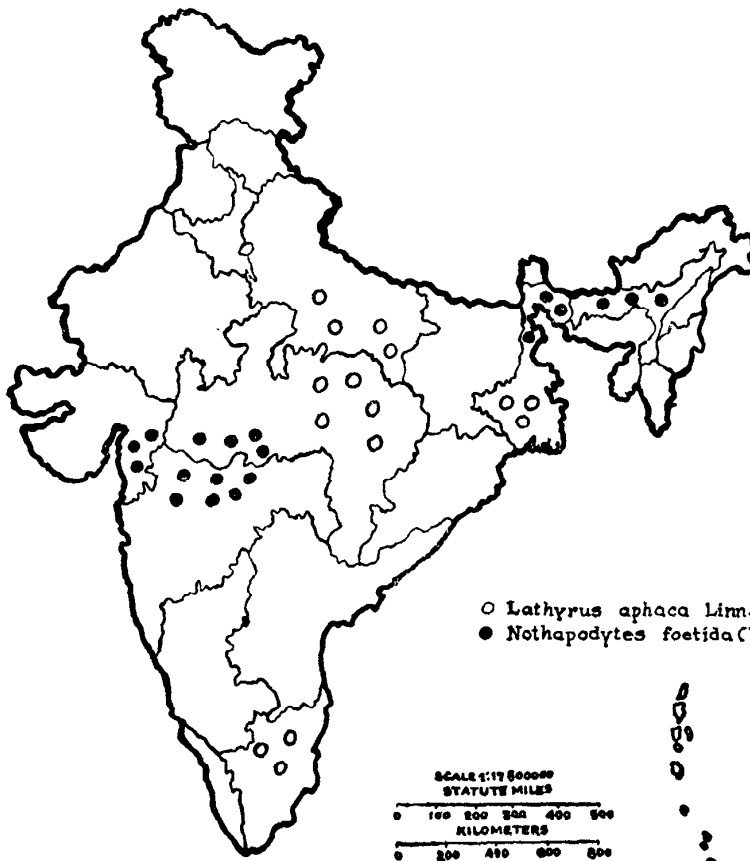
Map—13



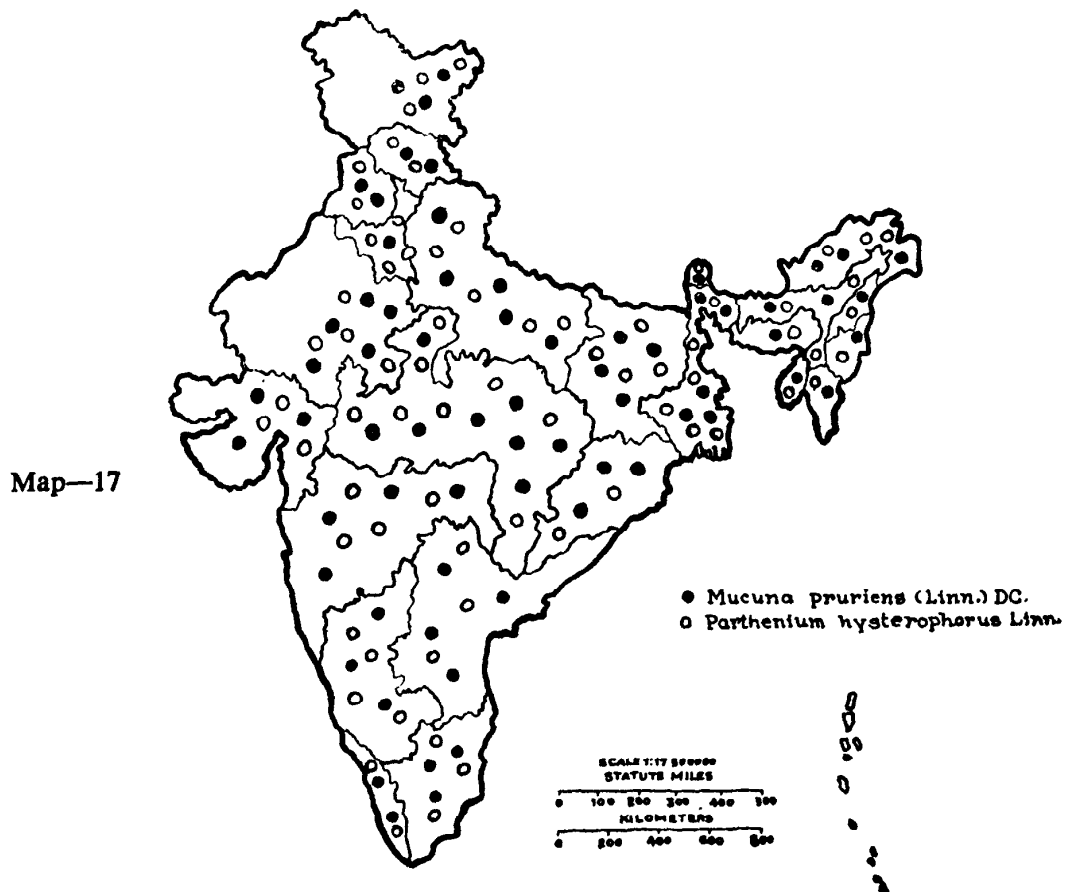
Map-14



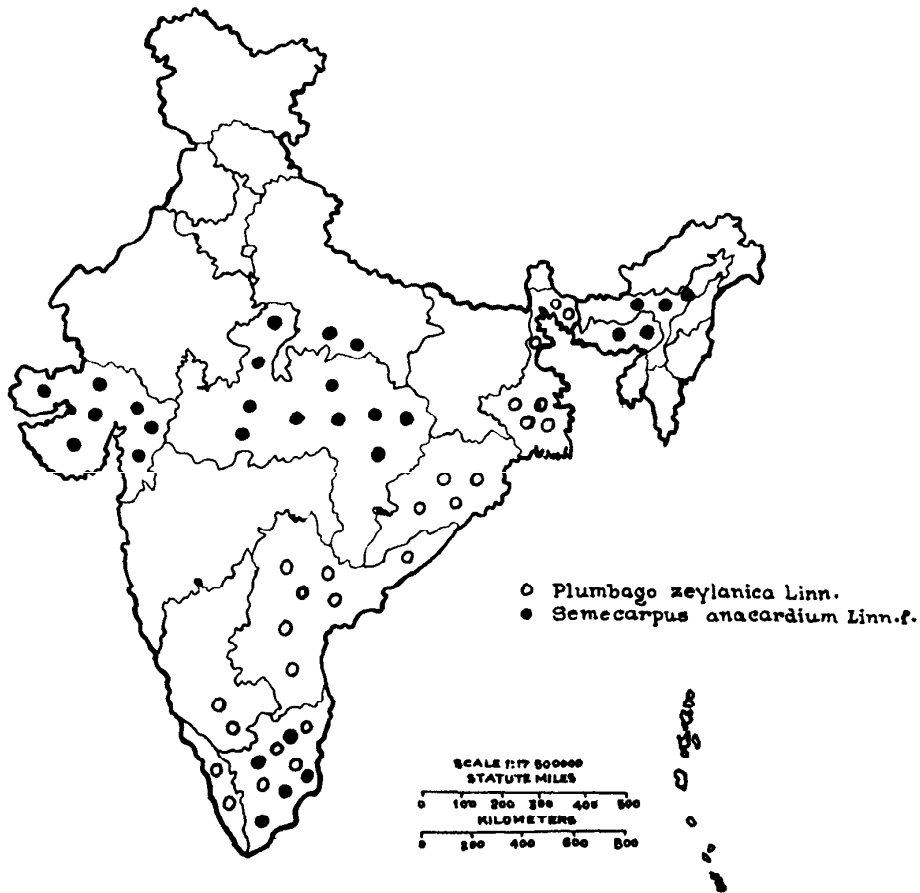
Map-15



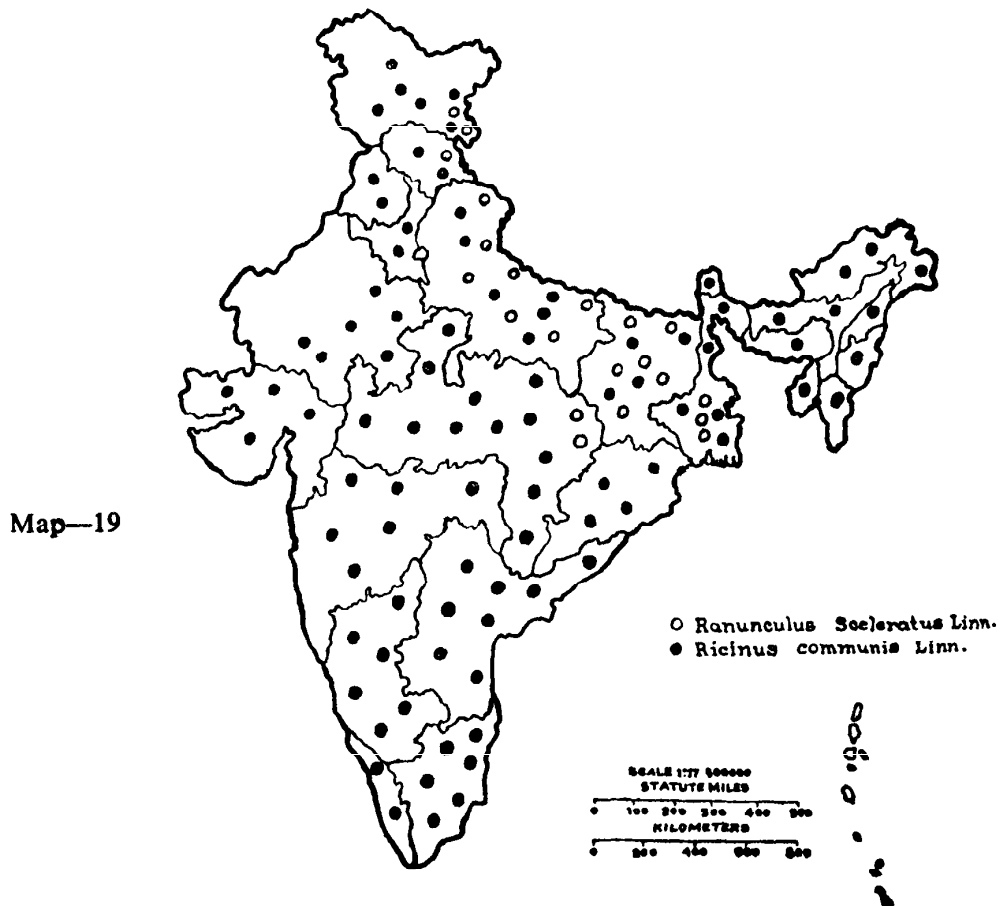
Map—16



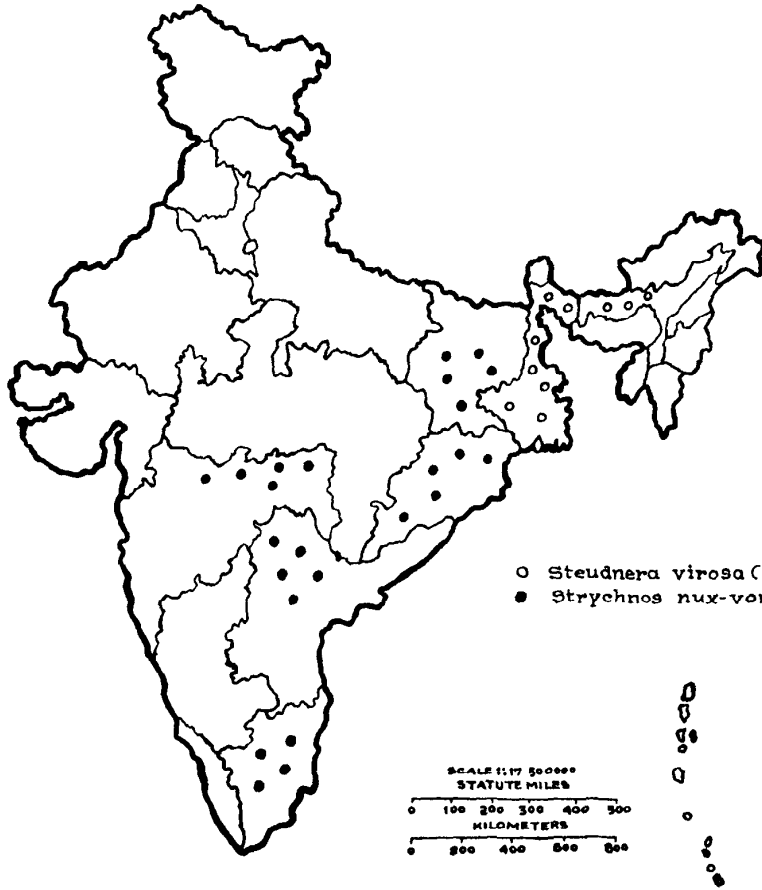
Map—17



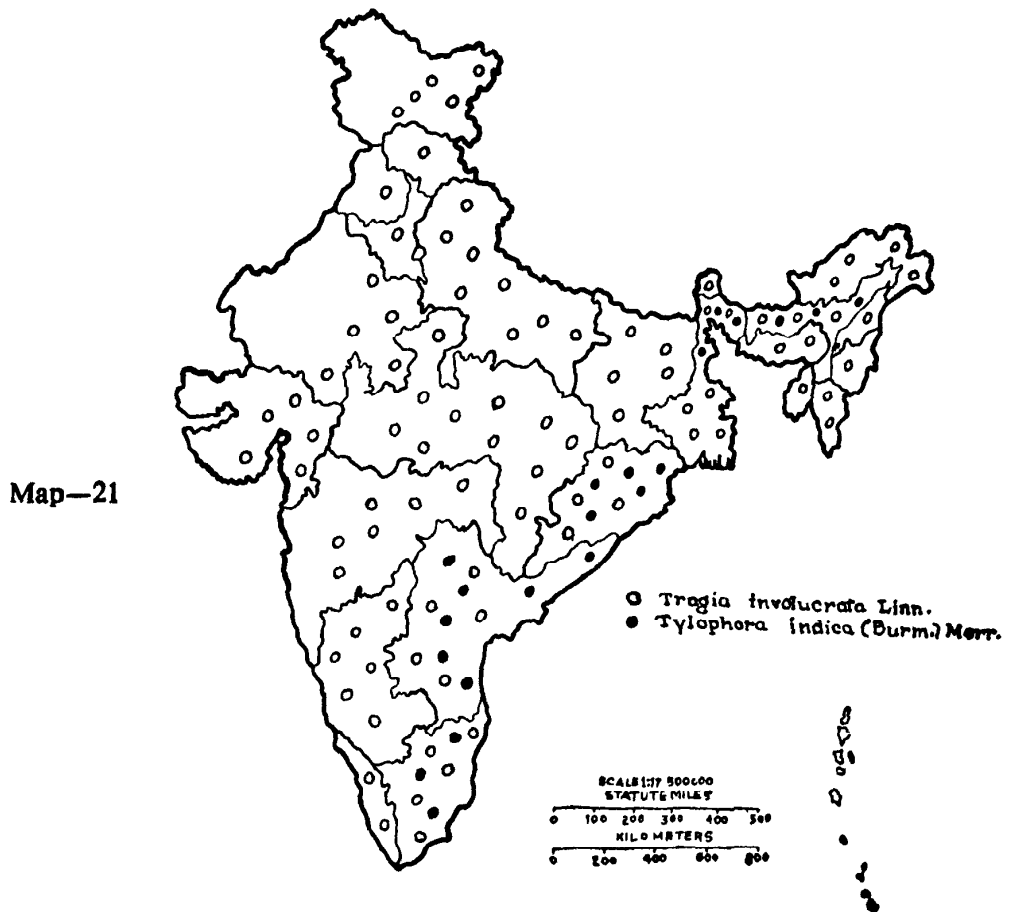
Map—18



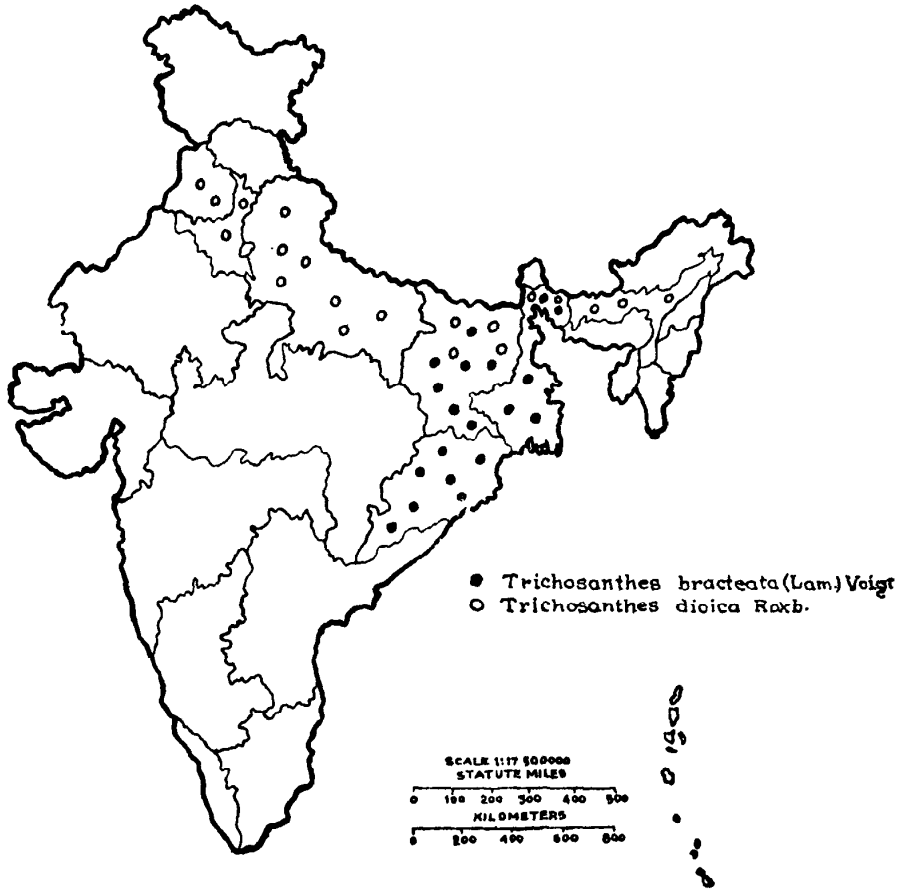
Map—19



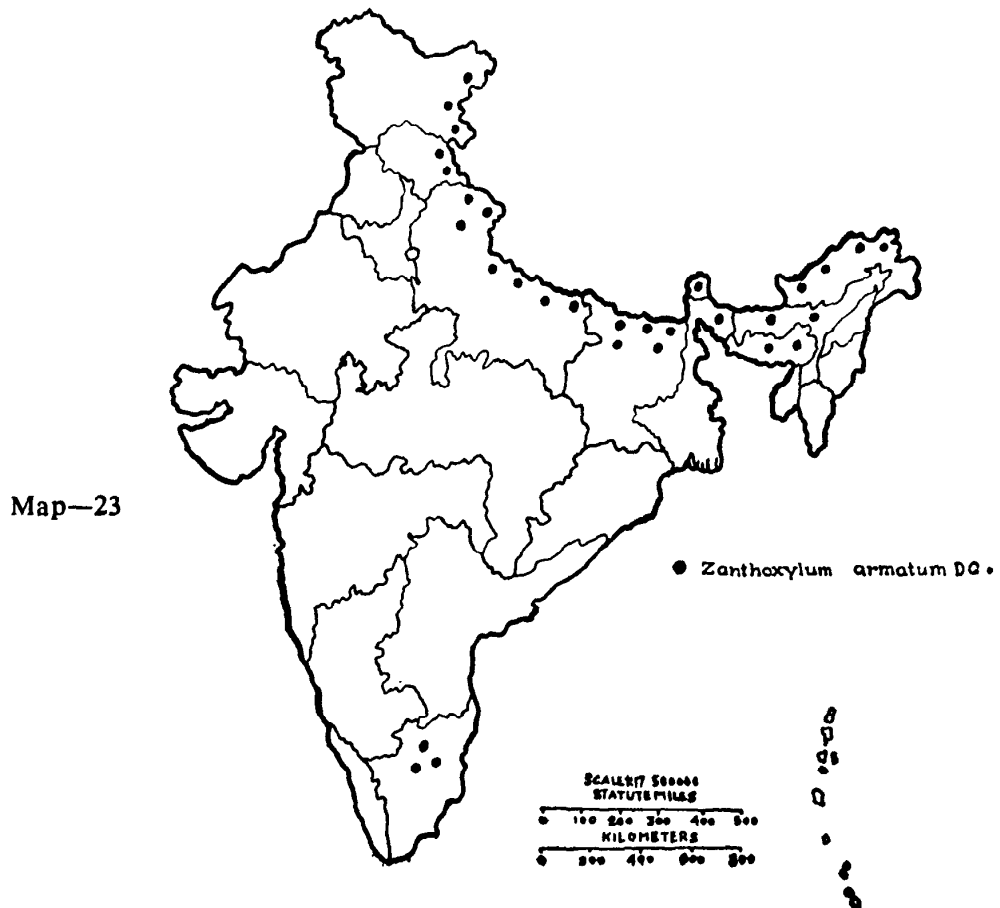
Map—20



Map—21



Map-22



Map-23

INDEX TO SCIENTIFIC NAMES

	<i>Page</i>
<i>Abrus precatorius</i> Linn.	1
<i>Aconitum balfourii</i> Stapf	1
<i>A. chasmanthum</i> Stapf ex Holmes	2
<i>A. deinorrhizum</i> Stapf	3
<i>A. ferox</i> Wall. ex Seringe	5
<i>A. laciniatum</i> (Bruhl) Stapf	5
<i>A. spicatum</i> (Bruhl) Stapf	5
<i>Aleurites moluccana</i> (Linn.) Willd.	6
<i>Allamanda cathartica</i> Linn.	6
<i>Alstonia scholaris</i> (Linn.) R. Br.	7
<i>Amanita muscaria</i> (Linn. ex Fr.) Hook.	8
<i>A. phalloides</i> (Vaill. ex Fr.) Secr.	10
<i>Anacardium occidentale</i> Linn.	10
<i>Antiaris toxicaria</i> (Pers.) Lesch.	10
<i>Argemone mexicana</i> Linn.	12
<i>Arisaema tortuosum</i> (Wall.) Sch.	12
<i>Artemisia nilagirica</i> (Clarke) Pamp.	14
<i>A. vulgaris</i> var. <i>nilagirica</i> Clarke	14
<i>Calotropis gigantea</i> (Linn.) R. Br.	14
<i>Cannabis sativa</i> Linn.	14
<i>Casearia elliptica</i> Willd.	17
<i>Catharanthus pusillus</i> (Murr.) Don	18
<i>C. roseus</i> (Linn.) G. Don	18
<i>Cerbera manghas</i> Linn.	19
<i>Cleistanthus collinus</i> (Roxb.) Benth. & Hook. f.	20
<i>Clematis gouriana</i> Roxb.	20
<i>Cuscuta reflexa</i> Roxb.	20
<i>Datura metel</i> Linn.	23
<i>D. stramonium</i> Linn.	23

	<i>Page</i>
<i>Dioscorea hispida</i> Dennst.	24
<i>D. pentaphylla</i> Linn.	6
<i>Entoloma lividum</i> (Bull.) Quel.	27
<i>Euphorbia antiquorum</i> Linn.	27
<i>E. neriifolia</i> Linn.	30
<i>E. tirucalli</i> Linn.	31
<i>Gloriosa superba</i> Linn.	31
<i>Gnidia glauca</i> (Fresen) Gilg.	33
<i>Gyromitra esculenta</i> (Pers.) Fr.	34
<i>Jatropha curcas</i> Linn.	34
<i>J. gossypifolia</i> Linn.	36
<i>Laportea crenulata</i> Gaudich.	37
<i>Lasiosiphon glaucus</i> Fresen	33
<i>Lathyrus aphaca</i> Linn.	37
<i>Mappia foetida</i> (Wight) Miers	39
<i>Mucuna pruriens</i> (Linn.) DC.	38
<i>Nerium indicum</i> Mill.	39
<i>Nothapodytes foetida</i> (Wight) Sleumer	39
<i>Oxalis corniculata</i> Linn.	23
<i>Papaver somniferum</i> Linn.	41
<i>Parthenium hysterophorus</i> Linn.	42
<i>Pedilanthus tithymaloïdes</i> (Linn.) Poit	42
<i>Plumbago zeylanica</i> Linn.	45
<i>Plumeria auctifolia</i> Poir.	45
<i>P. rubra</i> Linn.	45
<i>Ranunculus sceleratus</i> Linn.	45
<i>Ricinus communis</i> Linn.	48
<i>Russula emetica</i> (Schaff) Fr.	48
<i>Semecarpus anacardium</i> Linn. f.	48
<i>Stuednera colocasioides</i> Hook. f.	50
<i>S. virosa</i> (Kunth) Prain	50

	<i>Page</i>
<i>Strychnos nux-vomica</i> Linn.	51
<i>Thevetia peruviana</i> (Pers.) Schum.	51
<i>Tragia involucrata</i> Linn.	52
<i>Trichosanthes bracteata</i> (Lam.) Voigt	55
<i>T. dioica</i> Roxb.	55
<i>Tylophora asthmatica</i> (Linn. f.) W. & A.	55
<i>T. indica</i> (Burm.) Merr.	55
<i>Vinca pusilla</i> Murr.	18
<i>Zanthoxylum armatum</i> DC.	56

INDEX TO LOCAL NAMES

	<i>Page</i>		<i>Page</i>
Achh kanda	27	Birkitamali	45
Afium	42	Birmanī	45
Agia	42	Bish	5
Airi	42	Bish chatu	8, 10
Ajjanapatte	11	Bish gach	42
Akhoda	6	Bish kachu	51
Akon	14	Boromojhanti	20
Akond	14	Bukla kanta	12
Akroda	6	Bukla kata	12
Akrota	6	Chandu	5
Akuan	14	Chatian	7
Alkusa	39	Chatiani daru	7
Ambar baiḷ	23	Chitaway	45
Anantamul	56	Chitur	45
Antomul	56	Chitwar	45
Aphin	42	Chorla	39
Araba	6	Churchu daru	17
Arabindī daru	35	Chukuru	31
Aragolainchi	45	Cita	45
Arakead	1	Damni	56
Arali	39	Digharandi	48
Araroanr	23	Dhatra	23
Atisingesabish	5	Dhatura	23
Baghrandi	35	Dutura	23
Baire	42	Elete	27
Bajhi	31	Era	48
Bakula janam	12	Erendi	35
Bakuia	12	Eteke	27
Banbal nag	2	Gegla	37
Banwa	1	Gair	57
Baro masiya	18	Ganja	15
Belkangu	20	Garaunda	19
Belkum	20	Garji	19
Bhelwa	48	Garna	19
Bikh	5	Ghanera	39
Bindi	48	Gobari	1
Birchurchu	17	Gobriya	1
Biri	17	Gohai phul	51

	<i>Page</i>		<i>Page</i>
Guiong mot	5	Kulajara	35
Gurj	1	Lal-gab-jara	37
Hasa	24	Lalgolainchi	45
Hasear sanga	27	Lal Bis-chatu	48
Hedare	39	Latadaona	31
Hiju-araung karbis	27	Lonkasij	31
Hindaramba	19	Marang	55
Huring aru	27	Marangkanaili	51
Huring chahkad	12	Milagaipoondu	18
Idiya	20	Miriako	31
Itika	39	Miria-phulo	31
Itulad sanga	27	Mohra	4
Jangli bhang	14	Mohri	2
Jangli motor	37	Moriel	20
Jara bindi	37	Morvel	20
Jhagrahi	31	Moura	4
Kaibu	37	Nach-churuppam	56
Kainch	1	Nachinaar	34
Kala Bischatu	34	Nanoa	34
Kalachedi	19	Nangu	34
Kalgur	39	Nanja murichchaan	56
Kalli	31	Natakrotu	6
Kalobikhmo	5	Natta kkarottu	6
Kamili ba	39	Nettavil	11
Kanai	51	Nilum	14
Kanda	24	Nyine	5
Kapavila	18	Ote rai	10
Karbis	48	Palati	14
Karwat	11	Parashi	20
Kead	1	Parval	55
Kargelo daru	20	Parvar	55
Kheb-bija	14	Patala	55
Kiro	48	Postaka	42
Kodsa	39	Pium	2
Kombuppudalai	55	Rajbaka	39
Kommupotla	55	Ranga bindi	48
Konpal	31	Rangaini	12
Kosokosa	42	Rangedjara	48
Kuchila	51	Ranjai	20
Kulabindi	35	Ramelta	34

	<i>Page</i>		<i>Page</i>
Rami	34	Tezbal	57
Ramita	34	Timal	57
Rewan	37	Timba	57
Rewari	37	Timru	57
Risa jaradaru	48	Tirukalli	31
Sada Bis-chatu	27	Titipati	14
Sengel sing	53	Totka bindi	35
Shodduk mot	5	Tundo poda	57
Siddaru	27, 31	Tuntura ba	23
Sitaparu	45	Vellummattai	23
Sosadaru	48	Wakmi	39
Tambul	57	Xenso erendi	35
Tamot	37	Xenso golainchi	45
Telejadari	20	Xoxro banda	23