RESEARCH ACTIVITIES

Dr. M. U. SHARIEF

SCIENTIST –' E '

A. J. C. BOSE INDIAN BOTANIC GARDEN

HOWRAH – 711 103.

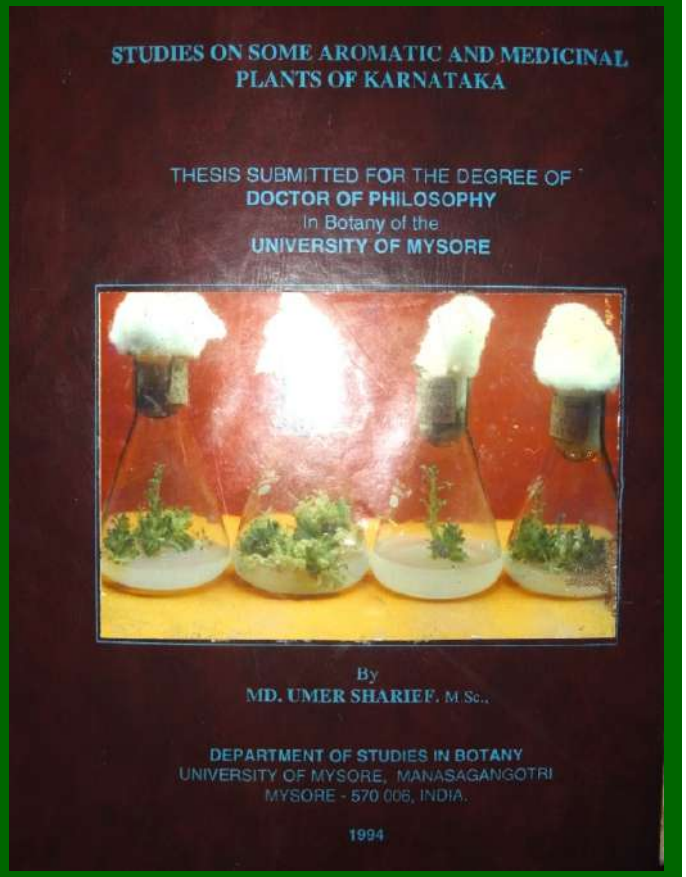
Name : **Dr. M. U. SHARIEF**

Designation : SCIENTIST – 'E '

Department : A. J. C. Bose Indian Botanic Garden,
BSI, Howrah – 711 103.

Research Experience : Worked as Junior Research Fellow (JRF) & Senior Research Fellow (SRF) under the UGC Sanctioned Project **(1988 to 1993).**

P. G. Department of Botany, University of Mysore.



Title of the Ph. D. Thesis:

" STUDIES ON AROMATIC & MEDICINAL PLANTS OF KARNATAKA "

Year of Award: 1994

Central Government Service:

From 1994 to 2001 worked as Senior Field Officer, Rubber Board, Govt. of India, Mangalore.

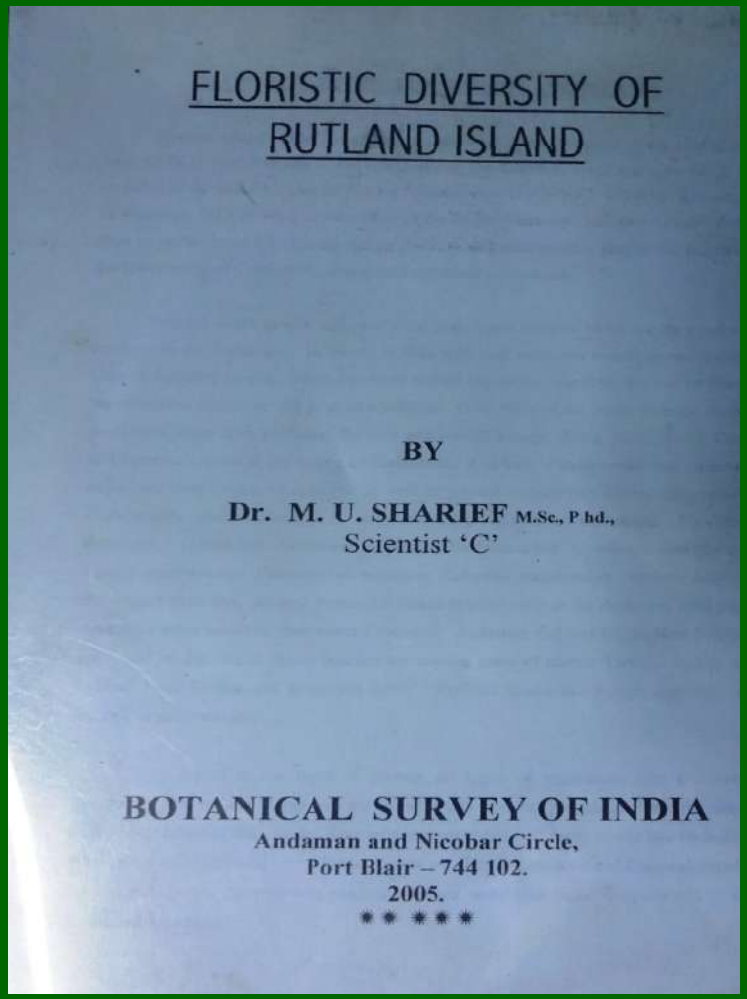
Action Plan Project

Joined BSI on 29th June 2001

A total of 34 plant collection tours has been conducted so far.

I. **Floristic Survey of Rutland Island of Mahatma Gandhi Marine National Park, Wandoor, Andamans (2002- to 2005)**

Individual Project worked. Described nearly 170 plant species with citations and photographs and final report submitted to D/BSI on 08.07. 2005.


FLORISTIC DIVERSITY OF RUTLAND ISLAND

BY

Dr. M. U. SHARIEF M.Sc., P hd.,
Scientist 'C'

BOTANICAL SURVEY OF INDIA
Andaman and Nicobar Circle,
Port Blair – 744 102.
2005.

Action Plan Project (contd…)

II. Floristic works on Angiospermic Families of A & N Islands (2002 – 2005)

Joint project worked along with H.o.O. and other scientists.

Manuscripts of 7 families viz., Amaranthaceae, Acanthaceae, Verbenaceae, Solanaceae, Scrophulariaceae, Asteraceae, and Lamiaceae for Flora of A & N Islands, Vol. II submitted to H.o.O on 13. 07. 2005.

Action Plan Project (contd…)

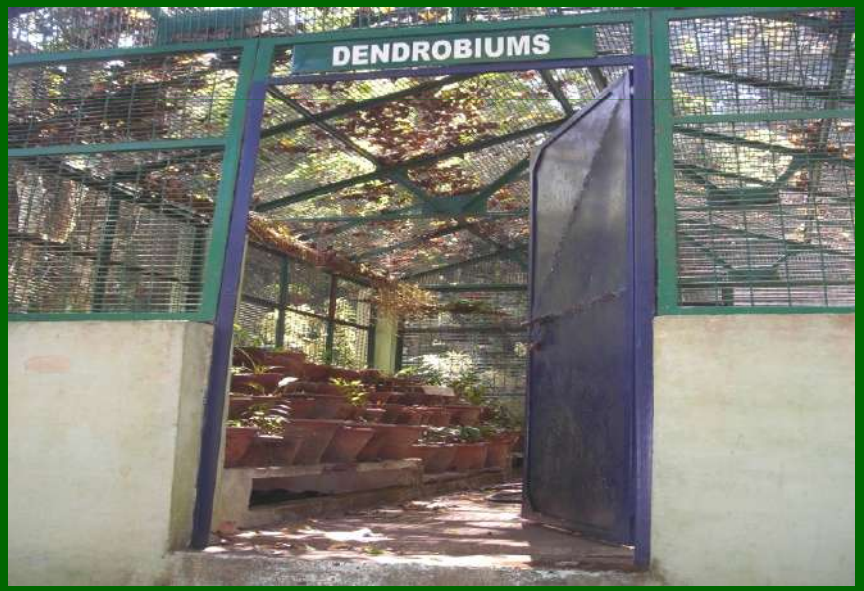
III. Ex – Situ Conservation of Rare & Endemic Orchids and Other RET Plants of the Region and Recording of Phenology of flowering/ fruiting of species in NOEG, Yercaud(2005–2013)

- Collection tours to different parts of Western Ghats - collected, introduced and maintained about 70 species (in multiples) of rare and endemic Orchids in different plots and pots like *Acanthephippium bicolor, Aerides ringens, Anoectochilus elatus, Bulbophyllum aureum, Bulbophyllum fuscopurpureum, Coelogyne nervosa, Coelogyne odoratissima, Habenaria multicaudata, Dendrobium aqueum, D. crepidatum, D. microbulbon, Luisia evanglinae, Porpax reticulata, Taeniophyllum alwisii, Trichoglottis tenera, Vanda thwaitesii and Xenikophyton smeanum.* Phenological data w.r.t. to flowering and fruiting of different plants of NOEG, Yercaud recorded and submitted monthly to Southern Regional Centre, Coimbatore.




MASS CULTIVATION OF ORCHIDS

IN NATIONAL ORCHIDARIUM, YERCAUD.



ENDEMIC ORCHIDS










Action Plan Project (contd…)

Ex – Situ Conservation of Rare & Endemic Orchids and Other RET Plants of the Region and Recording of Phenology of flowering/ fruiting of species in NOEG, Yercaud(2005–2013)

- Collected and introduced about 25 RET plants from western ghats like *Bentinckia condapana, Moringa concanensis, Orthosiphon aristatus, Psilotum nudum, equisetum arvense, Curcuma neilgherensis, Artemisia nilagirica, Magnolia grandiflora, Anisochilus cornosus, Thunbergia mysorensis, Caralluma attenuata, Ceropigia bulbosa, Ceropegia elegans, Hardwickia binata, Mahonia leschenaultii , Gloriosa superba, Rhinacanthus nasutus, Sterilitzia reginae, Ophioglossum reticulatum and Santalum album.*

Action Plan Project

IV. Collection, Introduction and Ex-situ Conservation of Rare and Endemic Orchids of North East India (2014 – 2017)

- **Project** worked along with Dr. B.K. Singh and carried out 4 field tours to different parts of NE India like Tripura, Shillong, Gangtok, Arunachal Pradesh and collected and Documented 60 rare species of orchids. Collected and reported 1 new Species of orchid from Bhusuk forest area of Gangtok. Rare Orchids collected includes : *Aerides odoratum* Reinw. ex Blume, *Agrostophyllum callosum* Rchb. f., *Bulbophyllum careyanum* (Hook.)Spreng, *Chilochista parishii* Seidenf., *Coelogyne cristata* Lindl., *Coelogyne fuscescens* Lindl., *Dendrobium nobile* Lindl., *Dendrobium devonianum* Paxton, *Epigenium amplum* (Lindl.)Summ., *Esmeralda cathcartii* (Lindl.) Rchb.f., *Nervilia macroglossa* (Hook. f.)




Novelties from Sikkim Himalaya

Phytotaxa 273 (1): 072–076
http://www.mapress.com/j/pt/
Copyright © 2016 Magnolia Press

Correspondence

ISSN 1179-3155 (print edition)
PHYTOTAXA
ISSN 1179-3163 (online edition)

http://dx.doi.org/10.11646/phytotaxa.273.1.8

Bulbophyllum paramjitii (Orchidaceae: Epidendroideae: Malaxideae): a new species from Sikkim Himalaya, India

DINESH K. AGRAWALA[1], MOHAMED U. SHARIEF[2] & BASANT K. SINGH[3]
[1]*Botanical Survey of India, Sikkim Himalayan Regional Centre, Gangtok-737103, Sikkim India, E-mail: drdkbsi@gmail.com*
[2]*Botanical Survey of India, A. J. C. Bose Indian Botanic Garden, Howrah-711103, West Bengal, India*
[3]*Botanical Survey of India, A. J. C. Bose Indian Botanic Garden, Howrah-711103, West Bengal, India*

Bulbophyllum Petit-Thouars (1822) is one of the largest orchid genera with about 2200 taxa, widely distributed in the tropics (Vermeulen 2014). The main centres of diversity are Asia-Pacific (1700 species), Madagascar (200 species) and New Guinea (600 species). Based on evidence from morphological and molecular data, Vermeulen (2014) recommended a wider circumscription of *Bulbophyllum*.

During a botanical tour to the Sikkim Himalaya in March 2015, one unusual patch of a small *Bulbophyllum* (in vegetative condition) was observed growing on main tree trunk near Bhusuk in the eastern district of Sikkim. A few specimens were brought into cultivation in the orchid house of Botanical Survey of India, Sikkim Himalayan Regional Centre, Gangtok, where they flowered in August of the same year. A thorough morphological characterization and perusal of literature (Seidenfaden 1979) revealed that this species belongs to *Bulbophyllum* section *Monilibulbus* Smith (1914: 33), which is treated as section *Macrocaulia* (Blume) Averyanov by Vermeulen (2014). Further comparative study with the specimens at leading Indian herbaria (e.g. CAL, BSHC, ASSAM, ARUN, OHT) and perusal of the literature (Hooker 1890, King & Pantling 1898, Seidenfaden 1979, Kataki 1986, Chowdhery 1998, Hynniewta *et al.* 2000, Pearce & Cribb 2002, Lucksom 2007, Chen & Vermeulen 2009) revealed that these specimens belong to a previously undescribed species, similar to *Bulbophyllum subtenellum* Seidenfaden (1979: 46). Therefore, it is described here as a new species.

TAXONOMY

Bulbophyllum paramjitii Agrawala, M.U.Sharief & B.K.Singh, *sp. nov.* (Fig. 1, 2A)

Type:INDIA. Sikkim: East District, near Bhusuk, 1550 m, 27°20'52.49'' N; 088°39'28.36'' E, 26 March 2015, (flowered in cultivation at Gangtok, August 2015), *Sharief & Singh* 37938 (holotype: BSHC!).

Diagnosis: This new species differs from *Bulbophyllum subtenellum* in having well developed leaves present during flowering; a rugose labellum apex, apical margin rolled to form a pouch and disc with three prominent calli, of which the middle one is confined to base and the two laterals extending up to the middle of apical lobe.

Small, caespitose, epiphytic herbs, up to 2 cm tall (including pseudobulbs, leaves and flowering shoots). Rhizome slender, concealed below the closely placed pseudobulbs. Pseudobulbs 3.0–4.0 × 2.5–3.0 mm, oblong-globular, oblique, slightly bilaterally compressed, jointed end to end and forming a mat, smooth when young, wrinkled at maturity, bearing a solitary apical leaf in a lateral position. Leaves 5–10 × 3–4 mm, elliptic-ovate, entire, acute, sessile, slightly oblique at base with somewhat twisted appearance. Flowering shoot (scape) slender, arising from base of mature pseudobulbs, looking like a moss capsule when in bud, elongating with opening of the flower, up to 10 mm long including the solitary flower; peduncle sheathed below with a 2 mm long, membranous, clasping sheath. Floral bract *ca.* 1 mm long, tubular, membranous, clasping the pedicel. Pedicel slender, *ca.* 4.5 mm long including the ovary, abruptly curved below ovary, swollen in the ovary region. Flowers 2.0–2.5 mm in diameter, facing downwards, sepals and petals orange-yellow with dark orange veins, veins slightly raised dorsally; lip uniformly dark orange. Dorsal sepal 2.2 × 1.5 mm, ovate-oblong, entire, obtuse, 3-veined, glabrous. Lateral sepals 2.2 × 1.8 mm, ovate-triangular, slightly oblique at base, entire, sub-acute to obtuse, 3-veined; mentum 2 mm long, broadly conical. Petals 1.8 × 0.9 mm, oblong-elliptic, entire, sub-acute, 1-veined, membranous. Labellum 2 × 2 mm, movably attached to the apex of and hinged on the column-foot through a short, hyaline claw, strongly deflexed from middle, trilobed; side lobes 1 × 1 mm, erect, rounded; midlobe 1.0 × 1.1 mm, cordate when spread, margin rolled back forming a pouch at dorsal side, apex obtuse, upper surface rugose; disc with three short, raised calli, middle one confined to the base, the lateral two positioned at junction of side lobes and midlobe. Column *ca.*1mm long, dark orange, with a long, up curved

 Accepted by Mark Chase: 22 Aug. 2016; published: 5 Sept. 2016

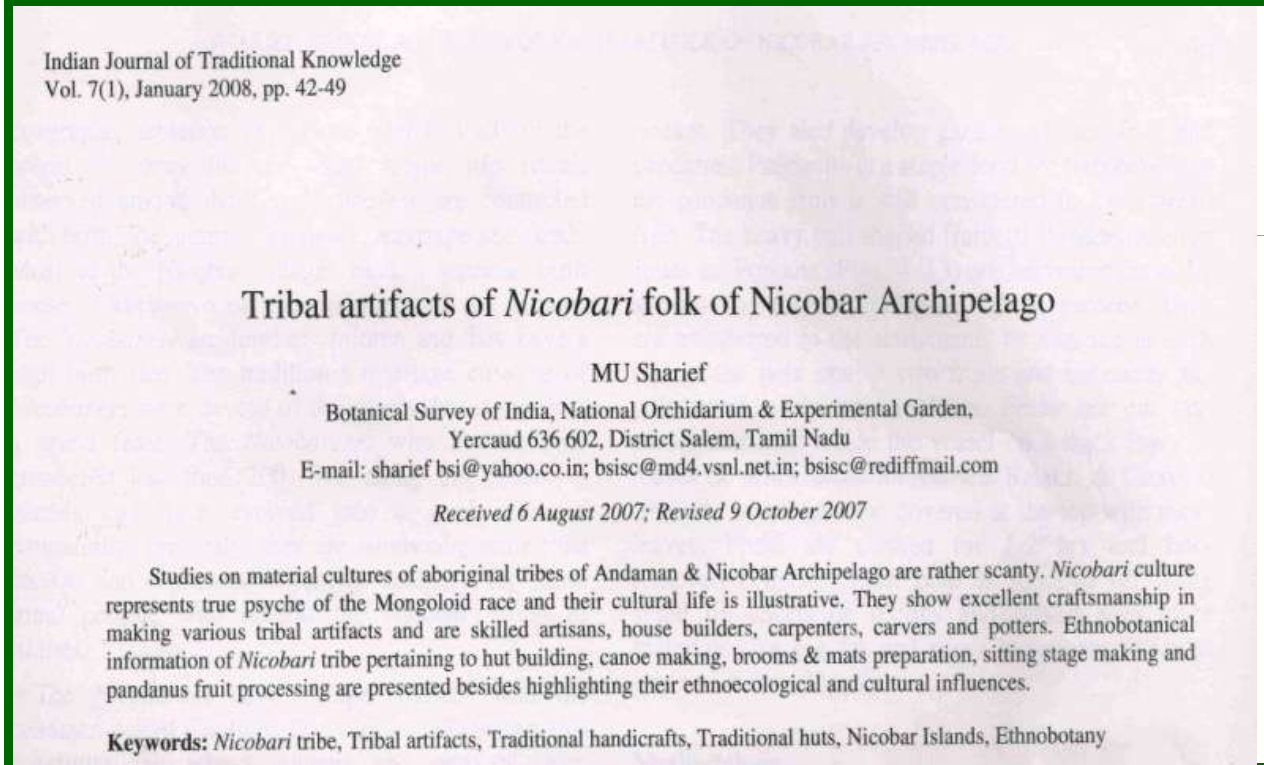
Bulbophyllum paramjitii

Orchids of North-East India (2014 - 2017)

OTHER PROJECTS WORKED

- **Ethnobotanical Studies of Aboriginal Tribes of A & N Islands (2002 – 2005)**

- Individually carried out the work and published 4 research papers of the aboriginal tribes- Onges, Shompens, Nicobaris and others like Karens.



Indian Journal of Traditional Knowledge
Vol. 7(1), January 2008, pp. 42-49

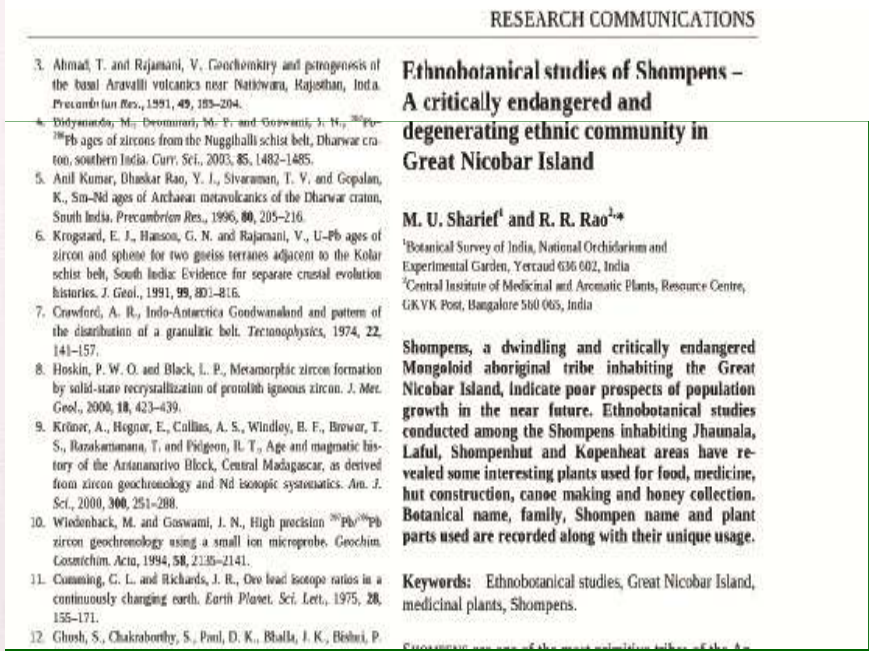
Tribal artifacts of *Nicobari* folk of Nicobar Archipelago

MU Sharief
Botanical Survey of India, National Orchidarium & Experimental Garden,
Yercaud 636 602, District Salem, Tamil Nadu
E-mail: sharief bsi@yahoo.co.in; bsisc@md4.vsnl.net.in; bsisc@rediffmail.com

Received 6 August 2007; Revised 9 October 2007

Studies on material cultures of aboriginal tribes of Andaman & Nicobar Archipelago are rather scanty. *Nicobari* culture represents true psyche of the Mongoloid race and their cultural life is illustrative. They show excellent craftsmanship in making various tribal artifacts and are skilled artisans, house builders, carpenters, carvers and potters. Ethnobotanical information of *Nicobari* tribe pertaining to hut building, canoe making, brooms & mats preparation, sitting stage making and pandanus fruit processing are presented besides highlighting their ethnoecological and cultural influences.

Keywords: *Nicobari* tribe, Tribal artifacts, Traditional handicrafts, Traditional huts, Nicobar Islands, Ethnobotany



3. Ahmad, T. and Rajamani, V. Geochemistry and petrogenesis of the basal Aravalli volcanics near Nathdwara, Rajasthan, India. *Precambrian Res.*, 1991, **49**, 183–204.
4. Didyamoda, M., Deomurari, M. P. and Goswami, J. N., ^{207}Pb–^{206}Pb ages of zircons from the Nuggihalli schist belt, Dharwar craton, southern India. *Curr. Sci.*, 2003, **85**, 1482–1485.
5. Anil Kumar, Bhaskar Rao, Y. J., Sivaraman, T. V. and Gopalan, K., Sm–Nd ages of Archaean metavolcanics of the Dharwar craton, South India. *Precambrian Res.*, 1996, **80**, 205–216.
6. Krogstard, E. J., Hanson, G. N. and Rajamani, V., U–Pb ages of zircon and sphene for two gneiss terranes adjacent to the Kolar schist belt, South India: Evidence for separate crustal evolution histories. *J. Geol.*, 1991, **99**, 801–816.
7. Crawford, A. R., Indo-Antarctica Gondwanaland and pattern of the distribution of a granulitic belt. *Tectonophysics*, 1974, **22**, 141–157.
8. Hoskin, P. W. O. and Black, L. P., Metamorphic zircon formation by solid-state recrystallization of protolith igneous zircon. *J. Met. Geol.*, 2000, **18**, 423–439.
9. Kröner, A., Hegner, E., Collins, A. S., Windley, B. F., Brewer, T. S., Razakamanana, T. and Pidgeon, R. T., Age and magmatic history of the Antananarivo Block, Central Madagascar, as derived from zircon geochronology and Nd isotopic systematics. *Am. J. Sci.*, 2000, **300**, 251–288.
10. Wiedenback, M. and Goswami, J. N., High precision $^{207}Pb/^{206}Pb$ zircon geochronology using a small ion microprobe. *Geochim. Cosmochim. Acta*, 1994, **58**, 2135–2141.
11. Cumming, G. L. and Richards, J. R., Ore lead isotope ratios in a continuously changing earth. *Earth Planet. Sci. Lett.*, 1975, **28**, 155–171.
12. Ghosh, S., Chakraborthy, S., Paul, D. K., Bhalla, J. K., Bishui, P.

Ethnobotanical studies of Shompens – A critically endangered and degenerating ethnic community in Great Nicobar Island

M. U. Sharief[1] and R. R. Rao[2,*]
[1]Botanical Survey of India, National Orchidarium and Experimental Garden, Yercaud 636 602, India
[2]Central Institute of Medicinal and Aromatic Plants, Resource Centre, GKVK Post, Bangalore 560 065, India

Shompens, a dwindling and critically endangered Mongoloid aboriginal tribe inhabiting the Great Nicobar Island, indicate poor prospects of population growth in the near future. Ethnobotanical studies conducted among the Shompens inhabiting Jhaunala, Laful, Shompenhut and Kopenheat areas have revealed some interesting plants used for food, medicine, hut construction, canoe making and honey collection. Botanical name, family, Shompen name and plant parts used are recorded along with their unique usage.

Keywords: Ethnobotanical studies, Great Nicobar Island, medicinal plants, Shompens.

Negritoid Tribes

Great Andamanese

Onges

Sentinelese

Jarawas

Mangoloid Tribe

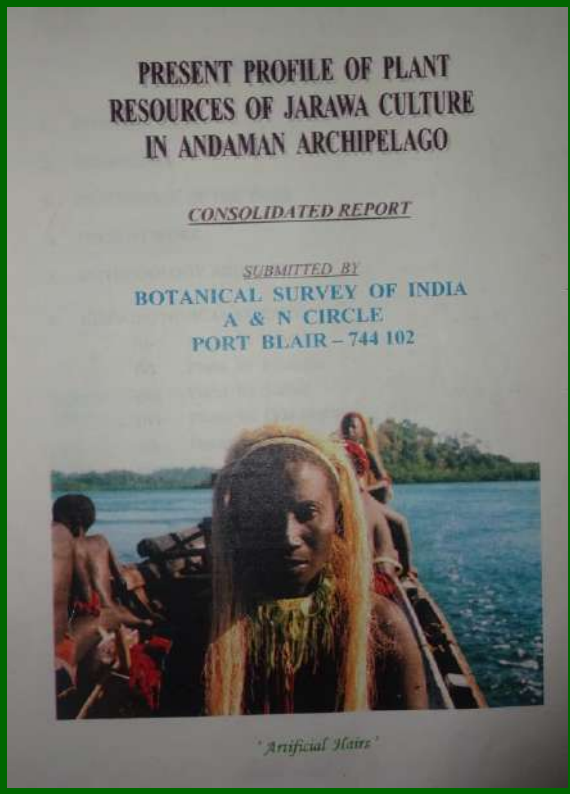
(Shompens)

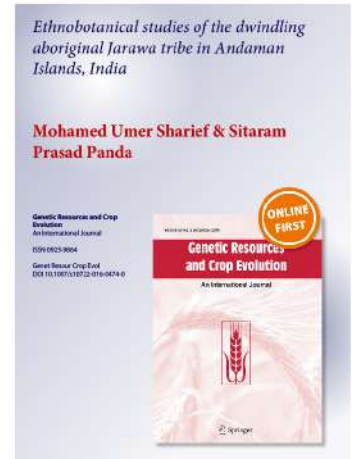
(Nicobarese)

OTHER PROJECTS WORKED

Plant Resource Survey of Jarawa Tribe of Andaman Archipelago (2001 – 2003)

- Co-ordinated and overall supervision of the work and Prepared Ist, IInd , IIIrd and Consolidated reports and submitted to DBSI and Tribal Welfare Director, Port Blair on 31.10.2002. Published 3 research papers in reputed journals.

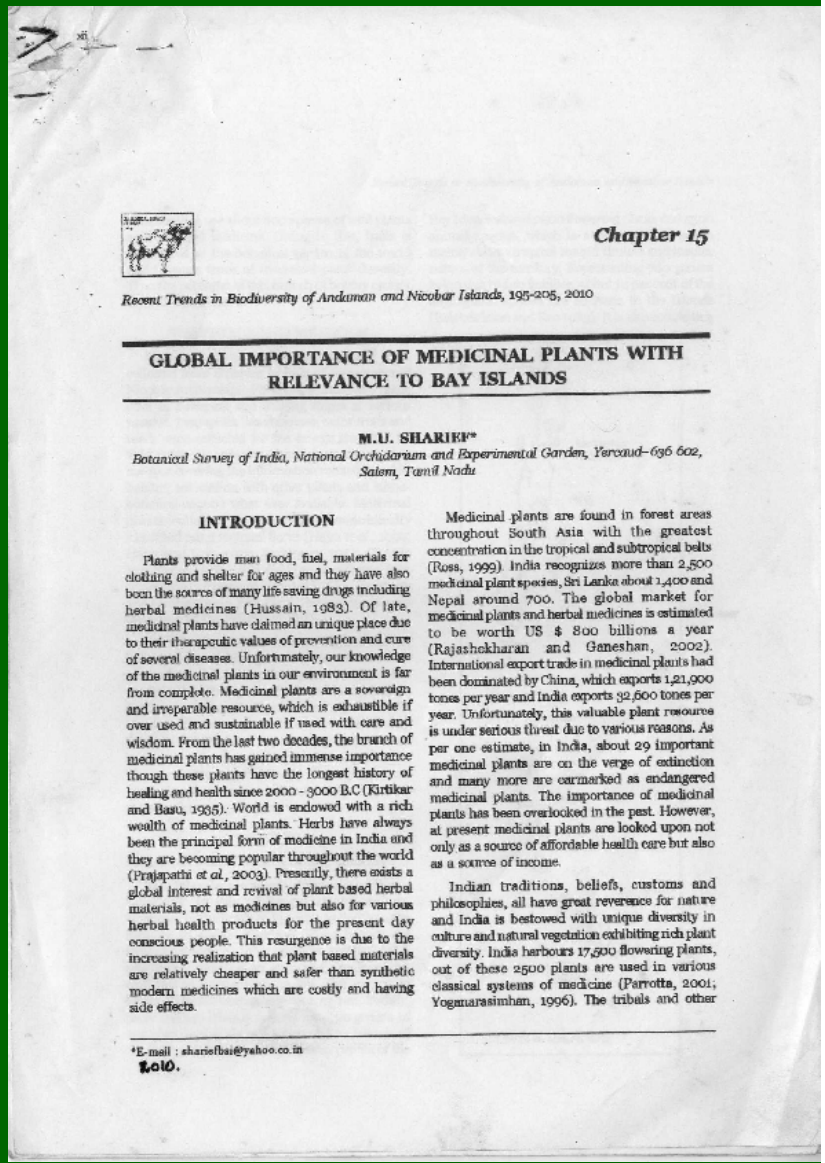




OTHER PROJECTS WORKED

Studies on the Medicinal Plants of A & N Islands (2002 – 2005)

- Project carried out in collaboration with the Medicinal Plant Board, Port Blair and Forest Development Corporation, Port Blair and published a Book Chapter.



Chapter 15

Recent Trends in Biodiversity of Andaman and Nicobar Islands, 195-205, 2010

GLOBAL IMPORTANCE OF MEDICINAL PLANTS WITH RELEVANCE TO BAY ISLANDS

M.U. SHARIEF*

Botanical Survey of India, National Orchidarium and Experimental Garden, Yercaud–636 602, Salem, Tamil Nadu

INTRODUCTION

Plants provide man food, fuel, materials for clothing and shelter for ages and they have also been the source of many life saving drugs including herbal medicines (Hussain, 1983). Of late, medicinal plants have claimed an unique place due to their therapeutic values of prevention and cure of several diseases. Unfortunately, our knowledge of the medicinal plants in our environment is far from complete. Medicinal plants are a sovereign and irreparable resource, which is exhaustible if over used and sustainable if used with care and wisdom. From the last two decades, the branch of medicinal plants has gained immense importance though these plants have the longest history of healing and health since 2000 - 3000 B.C (Kirtikar and Basu, 1935). World is endowed with a rich wealth of medicinal plants. Herbs have always been the principal form of medicine in India and they are becoming popular throughout the world (Prajapathi *et al.*, 2003). Presently, there exists a global interest and revival of plant based herbal materials, not as medicines but also for various herbal health products for the present day conscious people. This resurgence is due to the increasing realization that plant based materials are relatively cheaper and safer than synthetic modern medicines which are costly and having side effects.

Medicinal plants are found in forest areas throughout South Asia with the greatest concentration in the tropical and subtropical belts (Ross, 1999). India recognizes more than 2,500 medicinal plant species, Sri Lanka about 1,400 and Nepal around 700. The global market for medicinal plants and herbal medicines is estimated to be worth US $ 800 billions a year (Rajashekharan and Ganeshan, 2002). International export trade in medicinal plants had been dominated by China, which exports 1,21,900 tones per year and India exports 32,600 tones per year. Unfortunately, this valuable plant resource is under serious threat due to various reasons. As per one estimate, in India, about 29 important medicinal plants are on the verge of extinction and many more are earmarked as endangered medicinal plants. The importance of medicinal plants has been overlooked in the past. However, at present medicinal plants are looked upon not only as a source of affordable health care but also as a source of income.

Indian traditions, beliefs, customs and philosophies, all have great reverence for nature and India is bestowed with unique diversity in culture and natural vegetation exhibiting rich plant diversity. India harbours 17,500 flowering plants, out of these 2500 plants are used in various classical systems of medicine (Parrotta, 2001; Yoganarasimhan, 1996). The tribals and other

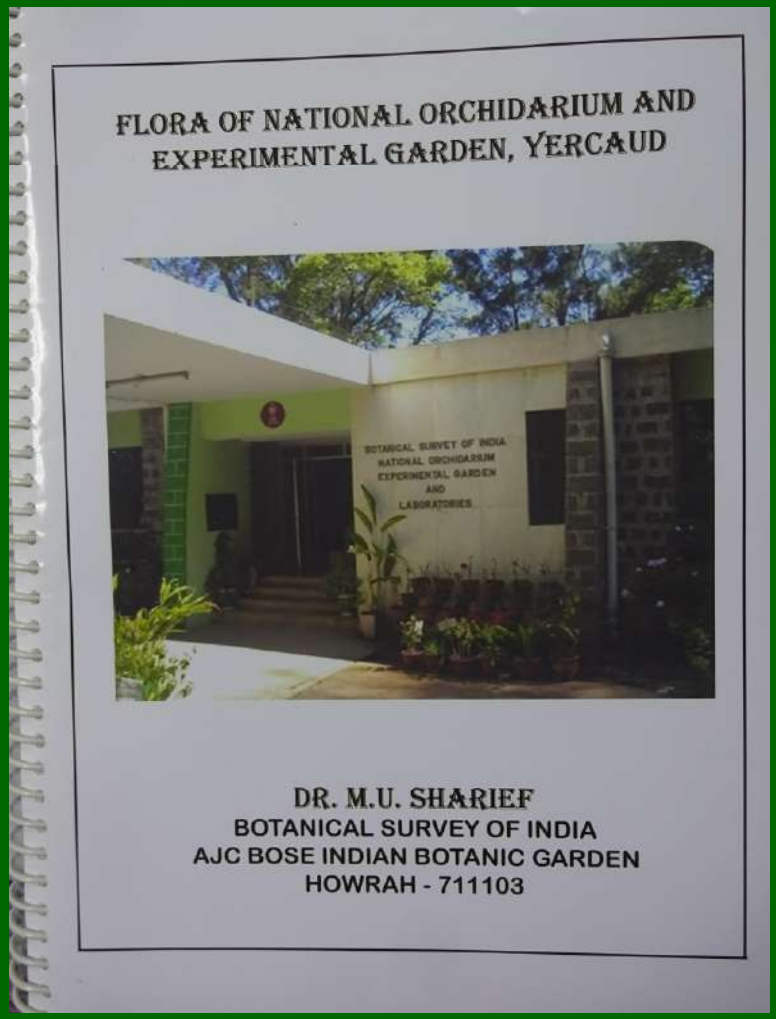
*E-mail : sharieflbsi@yahoo.co.in

2010.

OTHER PROJECTS WORKED

Flora of National Orchidarium and Experimental Garden, Yercaud.

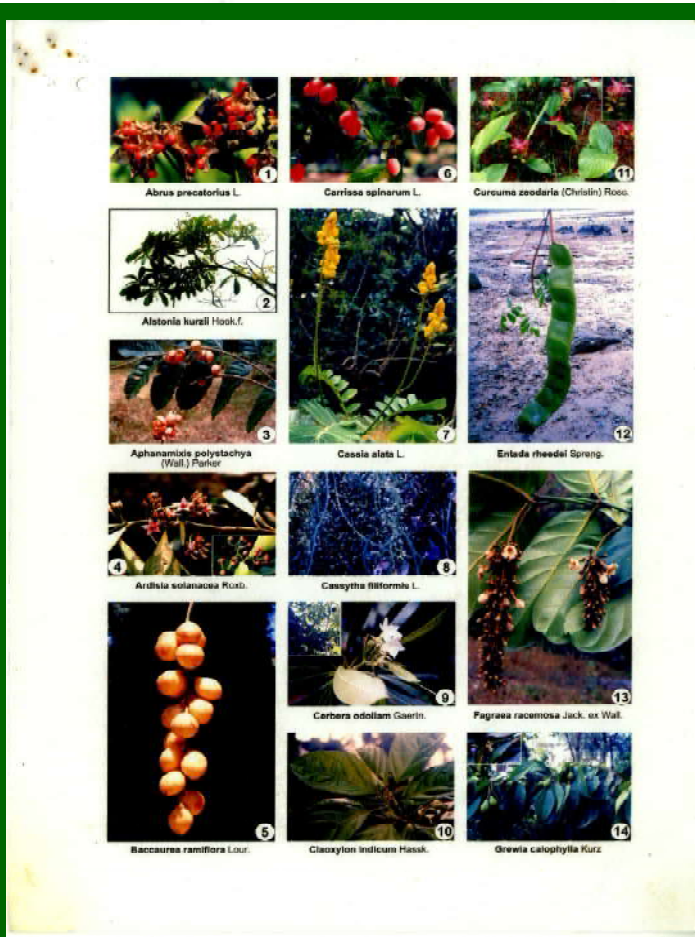
- Description writing and citations of 140 herbs & medicinal plants. 35 tree species and 56 bulbous plants and 50 orchid plants is written. Photographs of 40 garden plants and 100 orchids is also done.



OTHER PROJECTS WORKED

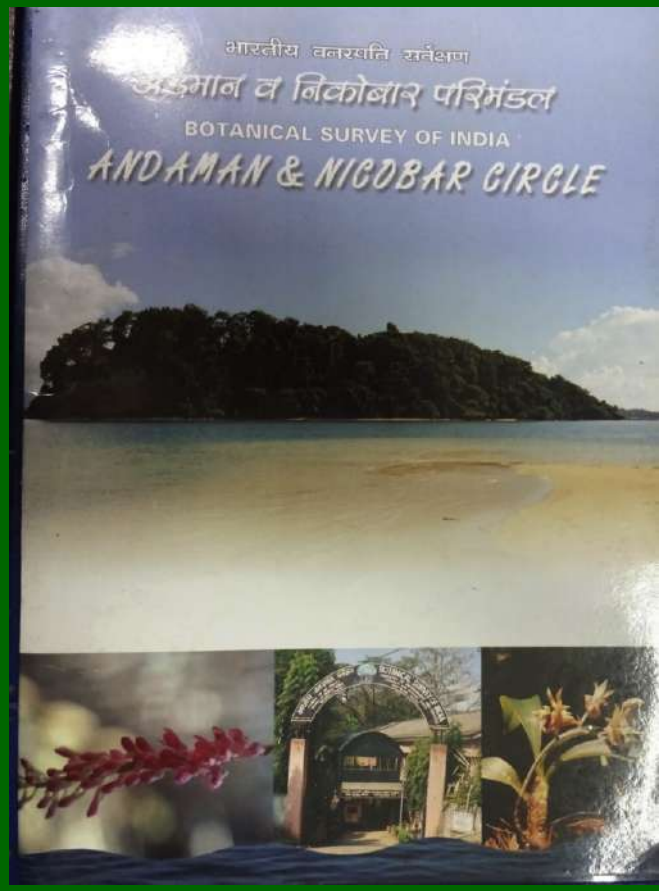
Development and maintenance of Dhanikhari Botanic Garden, Port Blair (2002-2005)

- Acted as Scientist-In-Charge of Dhanikhari Botanic Garden, Port Blair and introduced more than 60 rare and endemic plants of the Islands. Development works like construction of conservatory building and removal and auction of old Barracks in the garden was carried.



ADMINISTRATIVE WORKS

- Acted as H. o. O & D. D. O. of A & N Regional Centre, Port Blair during the year 2002 and 2004.
- Attended Expert Committee Meeting on Jarawas on 4. 4. 2002.
- Attended General Body Meeting and Executive Council Meeting of Aadim Janjati Vikas Samithi at Raj Nivas on 23. 4. 2002 Chaired by Ho'ble Lt.Governor, A& N Islands, Port Blair.
- Revised and prepared the A & N Circle Brochure.
- Attended Review Meeting on II Phase Study of Jarawas in chamber of the Secretary (Tribal Welfare), A & N Administration, Port Blair, on 5. 7. 2002.



ADMINISTRATIVE WORKS

- Acted as Garden –In- Charge, Dhanikhari Botanic Garden and Estate Officer, A&N Circle, from 2002 to 2005.
- Acted as Purchase Committee Chairman, and Estate Officer of A & N Circle from 2002 to 2005.
- Acted as Core Committee Member of A & N Medicinal Plants Board, Port Blair.
- Acted as Scientist –in- Charge of National Orchidarium & Experimental Garden, Yercaud from 2005 to 2013.
- Acted for Referee for Research Papers published in International & National Journals.
- Acted as Examiner for Ph.D., Thesis of 4 Reputed Universities.
- Acted as Curator & Rajbhasa Adhikari of AJCBIBG from 2013- till date and as H.o.O during the absence of regular head.

TRAININGS ATTENDED

1. "Procurement, management and inventory control" at Institute of Govt. Account & Finance at Chennai on 25.04.2011.

2. "Science Administration and Research Management" at Administrative Staff College of India, Hyderabad from 06th to 17th August 2012

3. "Knowledge Management and Knowledge Sharing" at Indian Institute of Public Administration, New Delhi from 29th August to 2nd September 2016.

PUBLICATIONS

A. **Research Papers :**

- **Total No. Publications : ……..…34 Nos.**
- **Research Papers communicated : ……..…..2 Nos.**
- **Individual Publications : …….. 15 Nos.**
- **Publications with 1st Authorship: …….... 21 Nos.**
- **Joint Publications …….25 Nos.**
- **Book Chapters ……..07 Nos.**
- **In Journals ……..27 Nos.**

B. **No. of Books Published :**

Jointly published 1 Book ‘ Vanaspathiyon par Aakrashith Andaman Ke Aadim Janjati Jarawa”- 2007 – BSI, Kolkata.

C. **Popular Articles written : …… 7 Nos.**

FUTURE PLAN OF RESEARCH

- **SURVEY, DOCUMENTATION AND CONSERVATION OF AROMATIC & MEDICINAL PLANTS OF INDIA.**
- **TISSUE CULTURE / *IN – VITRO* CONSERVATION OF RARE, ENDANGERED AND THREATENED PLANTS.**
- **SEED MORPHOMETRIC STUDIES OF INDIAN ORCHIDS.**


Thank You