

Medicinal Trees of Andaman and Nicobar Islands

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Introduction

Andaman and Nicobar Islands lies between 6° 45' to 13° 41' N latitude and 92° 12' to 93° 57' E longitude and constitute one of the hotspots of biodiversity. The vegetation/flora is rich because of the close proximity of this archipelago system in Bay of Bengal with 572 Islands. It is known as islands of the marigold sun. Andaman & Nicobar Islands are lying in north-south direction which comprising Andaman & Nicobar groups. The Andaman group is having an area 6408 km² while Nicobar group is having an area 1841 km² (Length 259 km² & Width 58 km²). These islands are exceptionally interesting to biologists because of their diverse biota and complex bio-geographic features. The combination of complex climatic and physical conditions, extreme topographic relief and broad gradient of biomass provides diverse habitats in which different animals and plants with different evolutionary backgrounds developed consequently making Andaman & Nicobar as conservation priority for plant diversity. Unfortunately, this biodiversity faces massive threats because of the combined effect of habitat destruction or fragmentation and over exploitation of natural resources. Taking in to consideration that human population growth will further increase pressure on this biodiversity in the near future, the present study suggest that conservation priority be given to the endemic plants as well as habitats of primarily evergreen tropical rain forests. The forests and hills of this region is a treasure house of about 120 or more medicinal tree species. According to Lakara *et al* (2012), more than 400 medicinally important species are used in various diseases and ailments by local tribal communities.

Several studies were conducted on flora and vegetational aspects and traditional medicinal uses among the tribes inhabiting in these islands were documented by many workers (Anon. 1985, A. Solkar *et al.* 1992, Bhargava 1981, Chkraborty and Rao 1983, Dagar 1989, Dagar and Dagar 1991 and Seeja *et al.* 2001). In the present communication, 120 medicinal tree species, followed by family in parentheses and vernacular names of each species is provided which are

commonly used by the local people and tribes of these islands (Plate 1-3).

Geological background

Andaman and Nicobar Islands are an elongated north-south oriented in the Bay of Bengal. The northern most islands are at the margin of cape Negrin in Myanmar and southern most islands at the margin of Sumatra in Indonesia. The terrain of most of the islands is hilly with undulating small mountains. The coast line is highly indented and several creeks penetrates in to the islands from inland bays which create many habitats favoured diversification and specification of plants. The wide altitudinal gradients in the region would have provided suitable habitats for many species to survive because of the rugged dissected topography.

Climate

As these islands are situated in the equatorial belt and are exposed to marine impacts having warm and humid tropical climate, with the temperature ranging between 18°C to 35°C. The islands receive heavy rainfall from both south-west and north-east monsoon, the former from May to September later from October to December with the average annual rain fall ranging from 3000 to 3500 mm, cyclonic winds accompanied by thunder and lightning are very frequent here. January to March having fairly dry weather with scanty rainfall. The mean relative humidity is rather high and usually remains between 66% to 85% throughout year. Andaman and Nicobar Islands, a landmass of islands, isles, rocks and reefs, located about 1200 km away from the mainland of India.

This archipelago possesses rich biodiversity under a typical tropical environment. The total land area encompasses 8249 km². The islands are blessed with about 3100 mm rainfall distributed over 8 months starting from May-December owing to the influence of southwest and northeast monsoon. The total forest area of the islands is about 84.3% and in general the islands are lush green due to luxuriant vegetation. The vegetation pattern includes coastal littoral, mangroves,



Forest View of Goal Pahar



Alstonia scholaris



Ambroma augusta



Calophyllum inophyllum



Cocos nucifera



Ficus rumphii

Plate 1



Crateva religiosa



Erythrina variegata



Oroxylum indicum



Pandanus lerum var. andamanensium



Premna corymbosa



Pterospermum acerifolium

Plate 2



Semecarpus anacardium



Terminalia catappa



Wrightia arborea

Plate 2

island deciduous and evergreen forests. There are 2500 angiospermic species of which 223 are endemic. The human population is increasing at an alarming rate and has already crossed islands carrying capacity. The traditional knowledge is fast diminishing owing to recent modernization and overall development of the islands. At this point it was felt essential to survey for collection and collation of folk knowledge in relation to medicinal plants used by the people residing here for generations.

Andaman and Nicobar Islands are also considered to be a hot spot of biodiversity of medicinal plants. The Central Agricultural Research Institute, Botanical Survey of India and Society of Andman & Nicobar Ecology (SANE) have mounted efforts towards compilation, collection and collation of information about medicinal plants available in these islands (Singh and Gajja 1987). Several studies were conducted and medicinal plants of these islands were documented. In the present communication, **120 medicinal tree species**, followed by family in parentheses and vernacular names of each species is provided which are commonly used by the local people and tribes, those found in the mangrove areas, medicinal plants exclusively used by tribals, medicinal plant suited for homestead farming.

Enumeration

1. *Acronychia pedunculata* (L.) Miq. (Rutaceae)
2. *Adenanthera pavonina* L. (Fabaceae).
3. *Aegle marmelos* (L.) Correa (Rutaceae). **Bel**
4. *Aglaia elaeagnoidea* (A. Juss.) Benth. (Meliaceae)
5. *Alchornea javensis* Muell.- Arg. (Euphorbiaceae).
Mitich
6. *A. rugosa* (Lour.) Muell.- Arg. (Euphorbiaceae).
Kaflifato
7. *Alstonia kurzii* Hook. f. (Apocynaceae). **Taungmook**
8. *A. macrophylla* Wall. ex G. Don (Apocynaceae).
Chuharoi
9. *A. scholaris* (L.) R.Br. (Apocynaceae). **Chatian**
10. *Ambroma augusta* L.f. (Sterculiaceae) **Ulat Kambal,**
Devil's Cotton
11. *Annona muricata* L. (Annonaceae). **Kofi**
12. *A. reticulata* L. (Annonaceae). **Olko, Alo, Eang**
13. *Antidesma coriaceum* Tul. (Euphorbiaceae). **Raj,**
Niyat
14. *Aporosa villosa* (Lindl.) Baill. (Euphorbiaceae)
15. *Ardisia oxyphylla* Wall. (Myrsinaceae). **Mikuhon**
16. *Areca triandra* Roxb. (Arecaceae). **Kah-koh**
17. *Artocarpus chaplasha* Roxb. (Moraceae)

18. *A. communis* J.R. Forst. & G. Forst. (Moraceae). **Pompu**
19. *A. heterophyllus* Lamk. (Moraceae). **Tokavoko**
20. *A. lakoocha* Roxb. (Moraceae). **Barhal**
21. *Avicennia officinalis* L. (Avicenniaceae). **White Mangrove**
22. *Baccaurea ramiflora* Lour. (Euphorbiaceae). **Kachchmai**
23. *Bridelia tomentosa* Blume (Euphorbiaceae). **Ka- noh, Ranam**
24. *Bruguiera conjugata* (L.) Merr. (Rhizophoraceae)
25. *Calophyllum inophyllum* L. (Clusiaceae). **Intanng, Inyang**
26. *Camellia sinensis* (L.) O. Ktze. (Theaceae). **Chayepati**
27. *Canarium euphyllum* Kurz (Burseraceae). **Dhup**
28. *Casearia grewiaefolia* Vent. var. *gelonoides* (Blume) Sleumer (Flacourtiaceae). **Kul-tuong, Kill-tuong**
29. *Ceiba pentandra* (L.) Gaertn. (Bombacaceae). **Tusa**
30. *Chisocheton longistipitatus* (F.M. Bolay) L. S. Sm. (Meliaceae). **Kinya**
31. *Claoxylon indicum* (Reinw. ex Blume) Hassk. (Euphorbiaceae). **Hingkuwai, Sing-ke-ra**
32. *Cocos nucifera* L. (Arecaceae). **Taoko, Dob, Naria**
33. *Codiocarpus andamanicus* (Kurz) Howard (Icacinaceae)
34. *Cordia dichotoma* Forst. f. (Boraginaceae). **Large Sebestan**
35. *C. grandis* Roxb. (Boraginaceae). **Minyap, Matka**
36. *C. obliqua* Willd. (Boraginaceae)
37. *Couroupita guianensis* Aubl. (Lecythidaceae). **Nagalingam, Cannonball Tree**
38. *Crateva religiosa* Forst. f. (Capparaceae). **Holapoh**
39. *Croton argyratus* Blume (Euphorbiaceae). **Mintunah**
40. *Cyathea alboetaceae* (Bedd.) Copel. (Cyatheaceae). **Tree Fern**
41. *Cycas rumphii* Miq. (Cycadaceae). **Chatale, Tiwan**
42. *Dillenia indica* L. (Dilleniaceae). **Chalta**
43. *D. pentagyna* Roxb. (Dilleniaceae).
44. *Diospyros undulata* Wall. ex G. Don (Ebenaceae). **Lintoh**
45. *Dipterocarpus indicus* Bedd. (Dipterocarpaceae). **Wood oil tree**
46. *D. pilosus* Roxb. (Dipterocarpaceae)
47. *Dracaena angustifolia* Roxb. (Agavaceae). **Zibak, Tidba**
48. *Elaeocarpus tuberculatus* Roxb. (Elaeocarpaceae). **Minrel**
49. *Erythrina variegata* L. (Fabaceae). **Laro, Dandap**
50. *Euonymus javanicus* Blume (Celastraceae)
51. *Exoecaria agallocha* L. (Euphorbiaceae). **Blinding Tree**
52. *Ficus andamanica* Corner (Moraceae). **Rengo**
53. *F. benghalensis* L. (Moraceae). **Bar**
54. *F. benjamina* L. (Moraceae). **Pakur**
55. *F. hispida* L. (Moraceae). **Katgularia**
56. *F. microcarpa* L. (Moraceae). **Kamrup**
57. *F. racemosa* L. (Moraceae). **Amrakha**
58. *F. religiosa* L. (Moraceae). **Pipal**
59. *F. rumphii* Blume (Moraceae). **Pakar**
60. *F. tinctoria* Forst. f. (Moraceae)
61. *Ganophyllum falcatum* Blume (Sapindaceae)
62. *Garcinia nervosa* Miq. (Clusiaceae). **Kintul**
63. *Garuga pinnata* Roxb. (Burseraceae). **Ghogar**
64. *Glochidion colocarpum* Kurz (Euphorbiaceae). **Hintiv**
65. *Glycosmis mauritiana* Tanaka var. *insularis* Tanaka (Rutaceae). **Kuy-anvo**
66. *Gnetum gnemon* L. (Gnetaceae)
67. *Guettarda speciosa* L. (Rubiaceae). **Tu-ma-halus**
68. *Heritiera littoralis* Dryand ex W. Ait. (Sterculiaceae). **Kamreout, Moro**
69. *Hernandia ovigera* L. (Hernandiaceae). **Minhont**
70. *Hibiscus tiliaceus* L. (Malvaceae). **To-u-ku, Koibo, Bole**
71. *Horsfieldia glabra* (Blume) Warb (Myristicaceae). **Jugane**
72. *Ixora brunnescens* Kurz (Rubiaceae). **Hama-ok**
73. *Knema andamanica* (Warb.) de Wilde (Myristicaceae). **Oro, Aurue**
74. *Lepidopetalum jackianum* (Hiern.) Radlk. (Sapindaceae).
75. *Lepisanthes rubiginosa* (Roxb.) Leench. (Sapindaceae). **Cham-yeh, Chamraw**
76. *Macaranga indica* Wight (Euphorbiaceae). **Kinsul, Kinnil**
77. *M. tanaricus* (L.) Muell.-Arg. (Euphorbiaceae). **Panah, Alle**
78. *Maesa ramentacea* (Roxb.) A. DC. (Myrsinaceae). **Hing-Kwai**
79. *Magnolia andamanica* (King) Raju & Nayar (Magnoliaceae). **Soye**
80. *Mallotus peltatus* (Geisel.) Muell.-Arg. (Euphorbiaceae). **Patage, Kalokvak**
81. *M. philippense* (Lam.) Muell.-Arg. (Euphorbiaceae). **Monkey Face Tree**
82. *Manilkara littoralis* (Kurz) Dub. (Sapotaceae). **Sikata**
83. *Millingtonia hortensis* L. f. (Bignoniaceae). **Ikritie**
84. *Mimusops elengi* L. (Sapotaceae). **Bakul**
85. *Morinda citrifolia* L. (Rubiaceae). **Lurong, Nibase**
86. *Myristica andamanica* Hook. f. (Myristicaceae). **Kinhanmo**

87. *Oroxylum indicum* (L.) Kurz (Bignoniaceae)
88. *Pandanus leram* Jones ex Fontane (Pandanaceae). **Kavera, Keera**
89. *P. odoratissima* L.f. (Pandanaceae). **Oro**
90. *Pangium edule* Reinw. (Flacourtiaceae). **Dello**
91. *Phyllanthus andamanicus* Balakr. & Nair (Euphorbiaceae). **Dadaura**
92. *P. emblica* L. (Euphorbiaceae). **Kupu-utoh**
93. *Pinanga manii* Becc. (Arecaceae)
94. *Planchonella obovata* (R.Br.) Pierre (Sapotaceae)
95. *Podocarpus neriiifolius* D.Don (Podocarpaceae)
96. *P. wallichianus* Presl (Podocarpaceae)
97. *Polyalthia jenkinsii* Hook. f. & Thoms. (Annonaceae). **Khibirtez**
98. *Pongamia pinnata* (L.) Pierre (Fabaceae). **Thinwin, Biochune**
99. *Premna corymbosa* Rottl. & Willd. (Verbenaceae)
100. *P. pyramidata* Wall. ex Schauer. (Verbenaceae). **Tomonja**
101. *Pterospermum acerifolium* Willd. (Sterculiaceae). **Ong**
102. *Pseuduvaria prainii* (King) Merr. (Annonaceae). **Hoomal**
103. *Rinorea macrophylla* (Decne.) O. Ktze. (Violaceae). **Gene, Takhkho**
104. *Ryparosa javanica* (Blume) Kurz (Flacourtiaceae)
105. *Samanea saman* (Jacq.) Merr. (Fabaceae). **Too-na-ka**
106. *Schefflera elliptica* (Blume) Harms. (Araliaceae). **Daandaulase**
107. *Semecarpus kurzii* Engler (Anacardiaceae). **Pep**
108. *Sphyrnthera lutescens* (O. Ktze.) Pax (Euphorbiaceae). **Nyaiyo**
109. *Sterculia rubiginosa* Vent. (Sterculiaceae). **Shawni, Fuk**
110. *Streblus asper* Lour. (Moraceae). **Siora**
111. *Strychnos andamanensis* A.W.Hill (Strychnaceae)
112. *Syzygium samarangense* (Blume) Merr. & Perry (Myrtaceae). **Mi-lul, Kalitngench**
113. *Terminalia bialata* Steud. (Combretaceae)
114. *T. catappa* L. (Combretaceae). **Jangli Badam**
115. *Teijsmanniodendron pteropodium* (Miq.) Bakh. (Verbenaceae)
116. *Thespesia populnea* (L.) Sol. ex Corr. (Malvaceae). **Tebokala**
117. *Thuja plicata* D. Don (Cupressaceae)
118. *Trema tomentosa* (Roxb.) Hara (Ulmaceae). **Teu, Bckri-pathi**
119. *Wrightia arborea* (Denst.) Mabb. (Apocynaceae)
120. *Xylocarpus granatum* Koen. (Meliaceae). **Pussur, Puzzle Fruit**

Discussion

Out of 120 medicinal tree species, the diversity of angiospermic flora represent more as compared to gymnosperms and only one medicinal tree fern. Unfortunately, the biodiversity faces massive threats because of the combined effect of habitat destruction or fragmentation and over exploitation of natural resources. Taking in to consideration that human population growth will further increase pressure on this biodiversity in the near future, the present study suggest that conservation priority be given to the endemic plants as well as habitats of primarily evergreen tropical rain forests of Andaman and Nicobar Islands.

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