

Plants folk medicine of *Negrito* tribes of Bay Islands

M U Sharief

Botanical Survey of India, National Orchidarium & Experimental Garden, Yercaud 636 602, Salem district, Tamil Nadu

Email: sharief bsi@yahoo.co.in; bsisc@md4.vsnl.net.in; bsisc@rediffmail.com

Received 9 November 2005; revised 5 April 2007

The *Negrito* tribes of Andaman Islands nurture rich knowledge about the medicinal plants of their surroundings acquired by trial and error over millennia. The ethnomedicinal plants of Great Andamanese, *Onges* and *Jarawa* tribes are presented. These tribes were found using more than 52 plant species in their ethnomedicinal practices. Plants used to cure fever, headache, stomach disorder, cough and cold, cuts and wounds, bee repellent, joint pains and leech bite are recorded. Botanical names, family, local name, plant parts used and uses are provided for each species. Phytochemical investigations of these medicinal plants are desirable.

Keywords: *Negrito* tribes, *Onges* tribe, *Jarawa* tribe, Bay Islands, Andaman Islands, Ethnomedicine, Medicinal plants

IPC Int. Cl.⁸: A61K36/00, A61P1/00, A61P1/10, A61P1/14, A61P11/00, A61P11/14, A61P15/00, A61P29/00, A61P31/02, A61P39/02

Exploitation of traditional knowledge of medicinal plants is a key issue the world over and it is our prime responsibility to safeguard traditional knowledge for misuse or overuse by the modern societies¹⁻⁴. India possesses two distinct groups of Islands lying either side of the peninsular region. One group consisting of Andaman & Nicobar (A & N) Islands termed as 'Bay Islands' and the other Lakshadweep also termed as 'Arabian Sea Islands'. Lying off the mainland of India, Bay Islands are significant and important from more than one angle and thus present very interesting, fascinating and meaningful study. Their significance cannot be underestimated in the realms of trade and commerce, marine research and engineering, naval development as well as anthropological studies. It is gainful as well as fruitful to have a glance over the cultural traits and social attributes of the people that inhabit these relatively difficult inaccessible and in some sense even remote territories of India⁵. Ethnobotanical studies of Great Andamanese, *Onges* and *Jarawas* have been carried out earlier but detailed information on folklore medicines of these *Negrito* tribes are still lacking⁶⁻⁹. The Bay Islands with a geographical area of 8298 sq km consists of 572 Islands spread in the Bay of Bengal at a distance of 1,200 km from the East coast of mainland India. They lie between 6° and 14°N latitude and 92° and 94°E longitude¹⁰. These Islands are surrounded by the mainland India in the North and West by Myanmar, while in the East lies Thailand and Malaysia. The Andaman group consists of more than 325 Islands (21

of them inhabited), while Nicobar group consists of 28 Islands (13 of them inhabited). The Ten Degree Channel with a width of 155 km separates the two groups of Islands. Two Islands of volcanic origin, the Barren and the Narcondum Islands are found here. Recently, both the volcanic Islands have become active after remaining dormant for several decades¹¹. A & N Islands have a tropical climate, which is warm, moist and equable. Until the end of eighteenth century, the Andaman group of Islands was the exclusive habitat of the hunting-gathering tribals of *Negrito* stock, who are probably the oldest inhabitants of the Islands (Fig. 1). After independence, a large number of people have come to these Islands and by the year 2001, the population of A & N Islands grew to 3.5 lakhs. The tropical hot and humid climate with abundant rains supports very luxuriant and rich vegetation. The most fascinating feature of this hotspot floral bounty is the high degree of endemism and mixed type of taxa associated with last aborigines.

The A & N Islands are the homeland of six aboriginal tribes. Those living in the Andaman Islands are dark in colour, short in stature with peppercorn hairs belonging to *negrito* stock and include the *Great Andamanese*, the *Onges*, the *Jarawas* and the *Sentinelese* (Figs 2-7). The *Nicobarese* and the *Shompens* inhabit the Nicobar group of Islands. It has been recorded that the presence of *negritos* in the Andamans is at least 2,000 yrs old, but their origin cannot be explained with certainty due to the absence

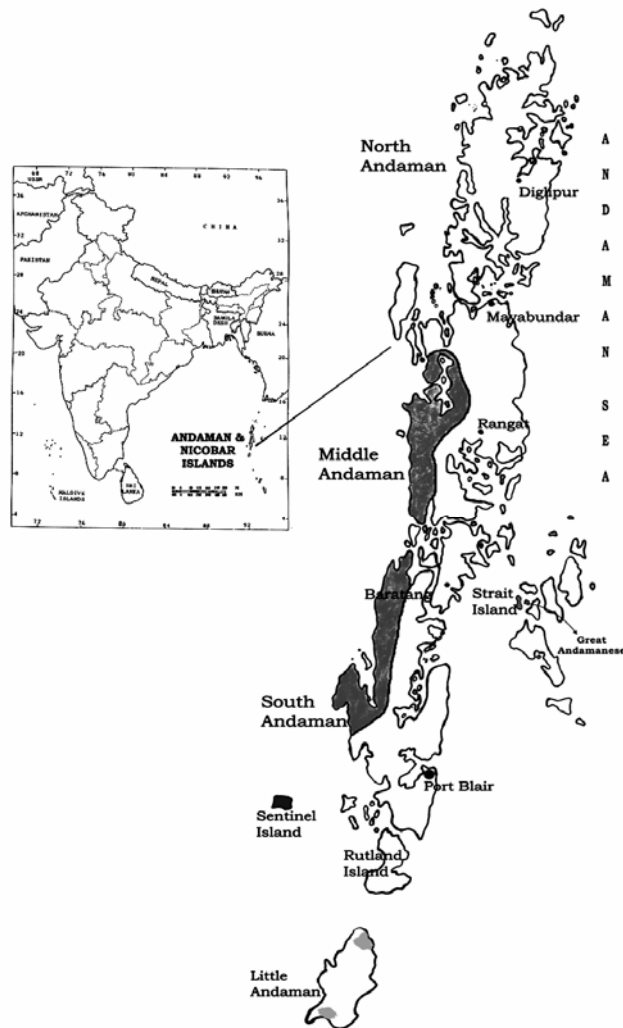


Fig 1 — Location map of the study area

of sufficient archaeological evidences. On the basis of some studies on the kitchen midden in the Andamans it has been concluded that the *negritos* came to the Andamans by sea from Islands along the coast of lower Burma and that *negritos* lived on at least one of these Islands- the Margui^{12,13}. It has been stated that the descendant of the first man who moved out of Africa nearly 70,000 yrs ago took the southern coastal route to India to Southeast Asia and Australia. This startling conclusion is based on a genetic study of the indigenous tribes of the Andamans¹⁴. Once the *Great Andamanese* were supposed to be the biggest tribe inhabiting the major Islands of Andaman group. However, due to various reasons, their population has dwindled tremendously. As per 2001 census, their least number recorded is 25 individuals leading to their quasi-extinction. The *Onge* tribe is also declining for unknown reasons and their present number is 100 individuals rehabilitated at Little

Andaman Island. *Jarawas* are still living in stone-age situation and presently about 250-300 *jarawas* exists occupying the 'Jarawa Reserve' of South and middle Andamans. The *Sentinelese* is perhaps supposed to be the most isolated community found inhabiting the sentinel Island. They are said to be the most ferocious and still remaining hostile thereby putting up a last ditch stand in their Island hideout.

Methodology

Field visits were carried out between December 2001 to September 2002 to different tribal areas of Tirur & RK Nallah of South Andaman, Kadamtala of Middle Andaman for *Jarawa* tribe, Strait Island for Great Andamanese and Dugong Creek of Little Andaman for *Onge* tribe. Observations were made on the spot at the time of application of plants as medicine. Enquiries regarding the plants for their place of occurrence, abundancy, local tribal names and their additional uses were collected. With the help of forest guards acting as interpreters, queries were repeatedly made at different times either from same person or different persons in order to verify the accuracy of the information. Help of interpreters as well as local people were also utilized. The older men of the tribes were contacted as they were noticed to possess indigenous knowledge of the folk medicine developed due to regular uses and long practice. Medicinal plants were collected, identified after proper taxonomic identification and the identified plant specimens were confirmed with the PBL herbaria of BSI, A & N Circle, Port Blair. The specimens were deposited in the PBL, Port Blair¹⁵⁻¹⁷.

Results

The plants used for folk medicine by different *negrito* tribes like the *Great Andamanese*, *Onges* and *Jarawas* of Andaman Islands are categorized and enumerated, with botanical names, local/ tribal names, plant parts used, method of usage and uses. Information is collected about all the *negrito* tribes of the Bay Islands, except the *Sentinelese* tribe, as they are still hostile and contact with them is impossible (Tables 1-3).

Discussion

Protection of TK of the local and indigenous communities seems to be one of the most contentious issue². All the systems of medicine finally ends up with folklore medicine and household remedies. Using TK, the efficiency of screening plant species for medicinal properties has increased drastically. However, the TK of most ethnic groups is eroding for

Table 1 — Medicinal plants used by *Great Andamanese* tribe

Plant name	Family	Parts used	Use
<i>Anodendron manubrium</i> Merr.	Apocynaceae	Leaf	Abortion
<i>Argyrea hookeri</i> Cl.	Convolvulaceae	Leaf	Swelling & hydrocele
<i>Areca catechu</i> L.	Arecaceae	Fruit	Stimulant; stomach disorder
<i>Azadirachta indica</i> A. Juss.	Meliaceae	Leaf, bark	Dressing of cuts & wounds
<i>Citrus medica</i> Linn.	Rutaceae	Fruit	Stomach disorder
<i>Chromolaena odorata</i> L.	Asteraceae	Leaf	Cuts & wounds
<i>Erythrina orientalis</i> (L.) Merr.	Fabaceae	Bark	Fever
<i>Hibiscus tiliaceus</i> L. (Fig. 8)	Malvaceae	Leaf	Stomach disorder
<i>Ocimum sanctum</i> Linn.	Lamiaceae	Leaf	Cold & cough
<i>Phyllanthus amarus</i> Schum. & Thom.	Euphorbiaceae	Leaf	Antidote
<i>Pongamia pinnata</i> (L.) Pierr. Ex. merr.	Fabaceae	Leaf, bark	Fever, back pain, chronic headache
<i>Premna serratifolia</i> L.	Verbenaceae	Leaf	Body pain
<i>Rhizophora apiculata</i> Bl. (Fig. 9)	Rhizophoraceae	Leaf	Antidote
<i>Rinorea macrophylla</i> (Decre) O. Ktze.	Violaceae	Leaf, bark	To promote lactation

Table 2 — Medicinal plants used by *Onge* tribe

Plant Name	Family	Onge name	Parts used	Use
<i>Ardisia solanacea</i> Roxb. (Fig. 10)	Myrsinaceae	<i>Enegane</i>	Leaves	Chest pain
<i>Canarium euphyllum</i> Kurz (Fig. 11)	Burseraceae	<i>Dhup</i>	Resin	To repel insects
<i>Chromolaena odorata</i> L.	Asteraceae	<i>Tukukale</i>	Leaf juice	Cuts & wounds
<i>Desmodium umbellatum</i> (Linn.) DC.	Fabaceae	<i>Damle</i>	Leaves	Fever
<i>Donax canaeformis</i> (G. Forst.) K. Schum. (Fig. 12)	Marantaceae	<i>Kagle, Tambowka</i>	Root, stem, leaf	Abdominal & spinal pain, fever
<i>Dracaena angustifolia</i> Roxb.	Dracaenaceae	<i>Zibak, Tomokoije</i>	Leaf juice applied internally	Stomach pain
<i>Drypetes assamica</i> (Hk.f.) Pax. & Hoffm.	Euphorbiaceae	<i>Torulelu</i>	Leaf juice applied internally/ externally	Chest pain, snakebite
<i>Glycosmis arborea</i> DC.	Rutaceae	<i>Bodbbe</i>	Leaf juice applied	Chronic headache
<i>Horsefieldia glabra</i> (Bl.) Warb. (Fig. 13)	Myristicaceae	<i>Jugane</i>	Fruits	Abdominal pain
<i>Heritiera littoralis</i> Dryand (Fig. 14)	Sterculiaceae	<i>Moro</i>	Leaves	Preparation of <i>Onge</i> tea, stimulant
<i>Hibiscus tiliaceus</i> L. (Fig. 8)	Malvaceae	<i>Koibo</i>	Leaves	Stimulant
<i>Lasianthus andamanicus</i> Hk. f.	Rubiaceae	-	Fruit	Antidote
<i>Mallotus peltatus</i> (Geisel) Muell. (Fig. 15)	Euphorbiaceae	<i>Obottacke, Patage</i>	Green leaves placed or tied on genital parts	Menstrual pain
<i>Mucuna gigantea</i> DC.	Fabaceae	Teetockala	Gently beaten shoots tied around bodyparts	Sprain
<i>Oropehea katschallica</i> Kurz	Annonaceae	<i>Toyoge, Tanjoge, Tonyoge</i>	Paste, juice, Vapours	Bee repellent
<i>Pongamia pinnata</i> (L.) Merr.	Fabaceae	Biochune. <i>Oichukabe</i>	Stem bark paste applied	Chronic headache & backache
<i>Premna serratifolia</i> L.	Verbenaceae	<i>Tamonja</i>	Raw fruit decoction applied on waist & neck	Body pain, cough
<i>Scaevola sericea</i> Vahl. (Fig. 16)	Goodeniaceae	Kwyae	Fruits, Leaves	Rheumatic pain, fever, bodyache
<i>Thespesia populnea</i> (L.) Sol. ex Corr.	Malvaceae	<i>Tebokala</i>	Leaves	Constipation
<i>Wedelia biflora</i> DC. (Fig. 17)	Asteraceae	<i>Tukunkala, Tuvup-pukala</i>	Leaf paste applied	Cuts, headache

Table 3 — Medicinal plants used by *Jarawas* tribe

Plant name	Family	Jarawa name	Parts used	Use
<i>Ageratum conyzoides</i> Linn.	Asteraceae	Aaktel	Tender leaves	Fever, throat pain
<i>Amomum aculeatum</i> Roxb.	Zingiberaceae	<i>Uiyaw</i>	Leaves, Stem	Cough, fever, curing scar
<i>Angiopteris lygodifolia</i> Rosc.	Angiopteridaceae	-	Young leaves	Cough, cold
<i>Areca triandra</i> Roxb. (Fig. 18)	Arecaceae	<i>Thaad</i>	Fruits, Stem	Fruits chewed; stem used to sit during menstruation and also for post parturation.
<i>Canarium commune</i> Linn.	Burseraceae	Pepethale	Heated leaves	Headache
<i>Carica papaya</i> L.	Caricaceae	<i>Thala</i>	Raw fruit	Prophylactic
<i>Caryota mitis</i> Lour.	Arecaceae	<i>Aendao</i>	Young shoots	Vomiting, stomachache
<i>Chromolaena odorata</i> L.	Asteraceae	-	Leaves	Leech bite
<i>Curcuma zedoaria</i> (Christin) Rosc. (Fig. 19)	Zingiberaceae	Oyekuchin	Rhizome, leaves	Cold, cough
<i>Dracaena angustifolia</i> Roxb.	Agavaceae	<i>Tidba</i>	Twigs	To clean genitals during menstruation period.
<i>Knema andamanica</i> (Warb.) de Wilde (Fig. 20)	Myristicaceae	<i>Oro, Aurw</i>	Leaves, bark	Throat pain, cough
<i>Myristica andamanica</i> Hook. f. (Fig. 21)	Myristicaceae	<i>Oro</i>	Leaves & twigs	Sickness, to stop bleeding
<i>Pandanus andamanensis</i> Kurz	Pandanaceae	<i>Thadow, Paliyu</i>	Leaves	Body pain
<i>Piper betle</i> Linn. (Fig. 24)	Piperaceae	<i>Intoto</i>	Stem, leaves	Body pain
<i>Pseuduvaria prainii</i> (King) Merr.	Annonaceae	<i>Hoomal</i>	Leaves	Headache & abdominal pain
<i>Syzygium samarengense</i> (Bl.) Merr. & Perry (Fig. 22)	Myrtaceae	-	Leaves	Fever, headache
<i>Thottea tomentosa</i> (Bl.) Ding Hou. (Fig. 23)	Aristolochiaceae	<i>Udupet</i>	Whole plant	Chest pain, headache, cough, cold
<i>Trichosanthes bracteata</i> (Lamk.) Voigt. (Fig. 25)	Cucurbitaceae	<i>Urubethe</i>	Whole plant	Throat infection

the various reasons. Hence, it is an urgent task to locate and develop a catalogue of the knowledgeable resource persons and herbal medicine practitioners among every ethnic group. Nevertheless, protecting a tribal resource is as good as saving an entire library of information. Apart from this, commercial collection of traditional medicinal plants from tribal areas should be controlled. *Negrito* tribes of Bay Islands hoards a rich TK of medicinal plants among their folk acquired by trial and error over millennia. The studies revealed that among the *negrito* tribes, the maximum number of plant species utilized for medicine is by *Onges* (20) followed by *Jarawas* (18) and *Great Andamanese* (14). Among these tribes, there is no medical practitioner as such. The elderly people suggest the treatment as they have expertised themselves in recognizing and applying different plant products for curing various health disorders. Methods of applications are very simple. In most cases, the tribals chew the particular plant raw, in other cases, plant parts are pounded and applied externally. Sometimes, plants are tied around neck (Fig. 6) and in rare cases plant part decoction is taken. Little attention is given to the quantity of the plant parts used in prescription.

India with its innumerable tribes and ethnic groups offers ample scope for ethnobotanical studies. Intellectual Property Right (IPR) is becoming a very important area of concern and this subject is versatile¹⁸. Bay Islands are gifted with rich biological and cultural diversity¹⁹. These forest reserves evidently contain germplasm of many potentially important plants most of which do not occur elsewhere in our country²⁰. Thus, the medicinal plants used by the *Negrito* tribes deserves special attention and detailed studies. Biological screening and phytochemical investigations of these folk medicinal plants is of utmost importance. Further, the TK about any plant is of little value if it is kept confined to a small local population as the chances of its dying away for ever are very much prominent. Hence, diversification of TK is the need of the hour for sustainable development. The *Negrito* tribes are an integral part of the forest ecosystem and they play a vital role in balancing the ecosystem. But there are positive reasons to believe that the *Negrito* tribes of Bay Islands are declining. They have come down from their glorious past to the unfortunate present. These are to be protected in their natural environment



Fig. 1- Young couple of *Great Andamanese*



Fig. 2- Hostile *Sentinel* at the Sentinel Island coast



Fig. 3- *Onge* women with bull covering their genitals



Fig. 4- *Jarawa* ladies decorated with *Dillenia andamanica* flowers



Fig.5- *Jarawa* lady wearing neck girdle of *Piper* sp



Fig.6- *Jarawa* man dressed in *Pseuduvaria prainii* leaves



Fig.7- *Hibiscus tiliaceus* L.



Fig. 8- *Rhizophora apiculata* Bl.



Fig. 9- *Ardisia solanacea* Roxb. - used by Onges



Fig. 10- *Canarium euphyllum* Kurz



Fig. 11- *Donax canaeformis* (G. Forst.) K. Schum.



Fig. 12- *Horsefieldia glabra* (Bl.) Warb.



Fig. 13- *Heritiera littoralis* Dryand



Fig. 14- *Mallotus peltatus* (Geosel) Muell.



Fig. 15- *Scaevola sericea* Vahl.



Fig. 16- *Wadelia biflora* DC.

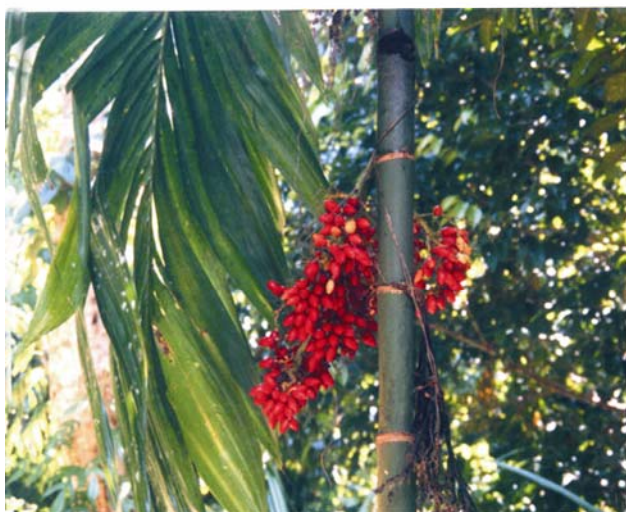


Fig. 17- *Areca triandra* Roxb.



Fig. 18- *Curcuma zeodaria* (Christin) Rosc.



Fig. 19- *Knema andamanica* (Warb.) de Wilde



Fig. 20- *Myristica andamanica* Hook. f.



Fig. 21- *Syzygium samarangense* (Bl.) Merr. & Perry



Fig. 22- *Thottea tomentosa* (Bl.) Ding Hou.



Fig. 23- Jarawa lady collecting *Piper* sp



Fig. 24- *Trichosanthes bracteata* (Lamk.) Voigt

retaining alive their cultural traditions. Otherwise, these people in peril may not survive for too long and with them will go a huge bank of invaluable knowledge.

Acknowledgement

Author is thankful to Dr M Sanjappa, Director, Botanical Survey of India, Kolkata for able guidance and encouragement. Author is grateful to the Deputy Director, BSI, A & N Circle, Port Blair, and Director, Tribal Welfare, A & N Administration, Port Blair for constant support and facilities during the work. Thanks are also due to all *Negrito* tribes of Bay Islands for imparting the indigenous knowledge.

References

- 1 Rao RR, Traditional knowledge and sustainable development: Key Role of Ethnobiologists, *Ethnobotany*, 8 (1996) 14.
- 2 Tripathi SK, Traditional Knowledge: Its significance and implications, *Indian J Traditional Knowledge*, 2 (2) (2003) 99.
- 3 Boom, Giving native people a share of the profits, *Garden*, 14 (1990) 28.
- 4 Balick MJ, Transforming Ethnobotany for the new Millennium, *Ann Missouri Bot Gard*, 83 (1996) 58.
- 5 Chib SS, *Caste, Tribes and Culture of India*, Vol 9, (Ess Ess Publications, New Delhi) 1985.
- 6 Bhargava N, Plants in folk life and folklore in Andaman and Nicobar Islands, In: *Glimpses of Indian Ethnobotany*, by SK Jain, (Oxford & IBH Publishing, New Delhi), 1981, 329.
- 7 Bhargava N, Ethnobotanical studies of the tribals of Andaman & Nicobar Islands, India, I: Onge, *Econ Bot*, 37 (1) (1983) 110.
- 8 Rao PSN, Vinod Maina & Marcel Tigga, The plants of sustenance among the Jarawa aborigines in the Andaman Islands, *J Forestry*, 24 (3) (2001) 395.
- 9 Chakrabarty T & Balakrishnan NP, Ethnobotany of the Andaman and Nicobar Islands, India - A Review, *J Econ Taxon Bot*, 27(4) (2003) 869.
- 10 Srinivasan MS, Geology of Andaman and Nicobar Islands, *J Andaman Sci Assoc*, 2 (1) (1986) 1.
- 11 Anonymous, The Daily Telegrams, (Government Press, A & N Administration, Port Blair), 2005.
- 12 Dutta PC, Pigmy Tools from the Andaman Islands, *Nature*, 197 (4667) 1963, 624.
- 13 Dutta PC, *Great Andamanese: Past & Present*, (Anthropological Survey of India, Kolkata), 1978.
- 14 Iyer Lalita, Secrets of the *Onges*, *The Week*, (Malayala Manorama Press, Kottayam), 5 June 2005, 32.
- 15 Hajra, PK, Rao, PSN & Mudgal, V, *Flora of Andaman Nicobar Islands*, Vol 1, (Botanical Survey of India, P - 8, Brabourne Road, Kolkata), 1999.
- 16 Parkinson, CE, *A Forest Flora of the Andaman Islands*, (Bishen Singh Mahendra Pal Singh, 23 - A, New Connaught Place, Dehra Dun), 1923.
- 17 Gamble, JS & Fischer, CEC, *The Flora of the Presidency of Madras*, Reprinted edition, Vol I - III, (Botanical Survey of India, Calcutta), 1959.
- 18 Jain, SK & Mudgal, V, *A Hand Book of Ethnobotany* (Bishen Singh Mahendra Pal Singh, Dehra Dun), 1999.
- 19 Dagar, JC & Singh, NT, *Plant Resources of the Andaman and Nicobar Islands*, Vol 1 (Bishen Singh Mahendra Pal Singh, 23 - A, New Connaught Place, Dehra Dun), 1999.
- 20 Pankaj Sekhsaria, A Precious heritage, *Frontline*, May 7, 1999,70.