

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

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**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.

SHOMPENS are one of the most primitive tribes of the Andaman & Nicobar (A&N) Islands and constitute one-sixth of its total population<sup>1</sup>. The Shompen tribe is one of the dwindling Mongoloid aborigines and presently it is an ethnic oddity. It is a forest-dwelling tribe inhabiting the Great Nicobar Island (Figure 1) which constitute 'the home of Shompens'. However, the island does not provide much clue about the origin of the Shompens. Probably, they might have migrated several years back from the nearby Malaysian regions and made the Great Nicobar Island their home. However, legends place them at the time of great epic – *the Ramayana* – which states that they were sent by Lord Rama in search of Sita. Having failed in their mission, they decided not to go back, as they dreaded the wrath of Lord Rama.

Shompens are semi-nomadic food-gatherers and hunters with stone-age civilization. They live in small groups in the dense interior forests of the island. Being suspicious and shy, they have rejected all contacts with the outside world; however, they are not hostile. They are well-built and taller than the Nicobarese (Figure 2a). They have slightly dark complexion and their features, especially their noses and jaws are quite prominent. The term Shompen might be the outcome of the British pronunciation of the Nicobari term 'Shamhap' meaning 'one who lives in forests'. The Nicobarese call them 'Shompehan' and 'Champion'. Perhaps Shompens are the last remnants of the Malay race who maintain a separate existence in

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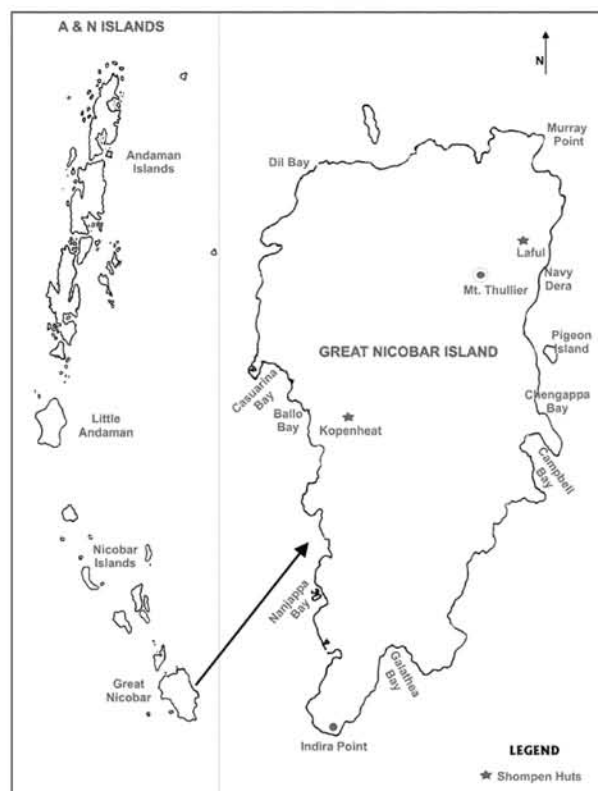
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dense forests and have their primitive culture and own language<sup>2</sup>. Like the Great Andamanese and the Onges of the Andaman Islands, the Shompens are a dying race being ravaged by diseases and a primitive way of life<sup>3,4</sup>. Among their economic activities related to subsistence, the major ones are hunting, fishing, food-gathering and pig-rearing. Hunting and fishing are mostly carried out throughout the year (Figure 2 b). Though the 1981 census enumerated their population to be 214, subsequently their number reduced to 134, as an epidemic break of gastroenteritis eliminated nearly 100 individuals<sup>5</sup>. However, their population according to the 2001 Census has risen to 395.

Till the end of the 19th century, the Nicobar Archipelago remained isolated from all points of view. It was annotated with phrases like 'the paradise of the pirates' or 'the land of naked people'. This island represents one of the greatest emporia of ethnobotanical wealth, where aboriginal native tribes of ancient culture remains in their virginity. Shompens are the original inhabitants of the Great Nicobar Island, which is the southernmost island of the A&N Archipelago (Figure 1), situated between 6°45'–7°15'N lat. and 93°37'–93°56'E long.<sup>6</sup>. The island covers an area of about 1045 sq. km, and is about 55 km long between Murray Point in the north to Indira Point in the south. The island presents a varied natural panorama and

is covered with virgin lush evergreen dense tropical forests extending from the sea coast to the hilltops.

The island occupies a phytogeographical strategic position between the mainland, Myanmar and Thailand on the one hand, and Sumatra and the Malay Peninsula on the other. The island is highly rugged with narrow, flat land along the sea coasts and hill ranges running in north-south direction. The highest peak is Mt Thullier, with an altitude of 670 m asl. Five perennial rivers – Alexandra, Dogmar, Amrit Kaur, Jubilee and Galathea with their tributaries constitute the main drainage system of the island. The soils of the island are loose in texture, poor in drainage and low in moisture-retaining capacity. The climate is that of the humid tropics with temperature ranging from 22°C to 32°C, with mean relative humidity of about 82%. Annual rainfall in the northern part of island is 3800 mm, while in south it is about 3000 mm. April is the hottest month of the year. Rainy season begins in April and continues up to December. January to March have more or less dry weather. The island is subjected to gales and cyclonic winds blowing west to east and east to west,



**Figure 1.** Map of Great Nicobar Island showing two important places of Shompen inhabitation.



**Figure 2.** a, Tribal group at Shompenhut area. b, Shompens with the hunted turtle. c, Fruit of *Pandanus leram* Jones. d, *Macaranga nicobarica* Balakr. & Chakrab. e, *Ardisia solanacea* (Poir.) Roxb. f, *Morinda citrifolia* L. g, *Hornstedtia fenzii* (Kurz) K. Schum. h, *Croton argyratus* Bl.

changing with the monsoon and sudden depression in the sea.

Several anthropological studies on the tribes of A&N Islands have been carried out<sup>7-13</sup>. However, ethnobotanical studies of the Shompens are meagre. Among the earlier workers, Kloss<sup>14</sup>, Chengappa<sup>6</sup> and Sahni<sup>15</sup> have casually mentioned some plants used by the Shompens. Sangal<sup>16</sup> also described some forest foods of the tribals of A&N Islands. Bhargava<sup>17</sup> enumerated some of the plants used in folk life and folklore of the A&N Islands, mentioning the ethnobotanical use of few plants by the Shompens. Balakrishnan *et al.*<sup>18</sup> carried out work on the Shompens and recorded the uses of several previously unreported plants by the Shompens. Later, Chakraborty and Rao<sup>19</sup> presented the ethnobotanical aspects of the Shompens. Chakraborty and Balakrishnan<sup>20</sup> highlighted ethnobotanical aspects of all the aboriginal tribes of the A&N Islands, except the Sentinelese tribe. The present work reports some more plants of sustenance, besides recording their botanical names, families, Shompen names, parts used and their modes of use.

Field visits were conducted to several areas of the Great Nicobar Island like Jhaunala, Laful, Shompenhut and Kopphenheat, all inhabited by the Shompens. The dialect of the Shompens has not been understood so far by outsiders and therefore, direct communication with them was not possible. Some of the settlers and Nicobari forest guards having close contact with the Shompens acted as interpreters and helped in the collection of information on their dietary habits, medicinal practices and knowledge on local plants. For information on medicinal plants, elders of the tribe were contacted, as they possessed more indigenous knowledge about these plants. All plants of ethnobotanical importance were collected, photographed and voucher specimens prepared for the herbarium. Taxonomic identification of the specimens was done referring to the literature<sup>21-23</sup>. The identified plant specimens were then confirmed with the PBL Herbaria of BSI, A&N Circle, Port Blair. The voucher specimens were deposited in the PBL, Port Blair.

The Shompens were the sole occupants of the Great Nicobar Island until the arrival of the settlers. They are entirely dependent on forest resources and sea products for all their needs. In the present work, ethnobotanical aspects pertaining to food, medicine, shelter, hunting and canoe-making are presented. The Shompens were found to depend on rhizomes, bulbs, tubers, roots and fruits of wild plants present in the surrounding forests. Animal-based diet of the Shompens included several kinds of fishes, turtles, lobsters, prawns, mussels, octopus, wild pigs, eggs of megapode birds and wood insects. The men generally go out for fishing, hunting, food-gathering and honey collection. The Shompens like hunting wild pigs in the forest of Great Nicobar Island. They also hunt monkeys, crocodiles, frogs, snakes, birds and lizards. Their fishing and hunting are of the most primitive type. They

use harpoons made of pointed iron rods for fishing and hunting turtles (Figure 2b) and crocodiles. For hunting wild pigs, monitor lizards, snakes and monkeys, they use spears and hatchets. The food collected becomes the property of the whole community and the women usually prepare food for the men. Fruits of *Pandanus lerram* Jones (Figure 2c) form the staple food. The Shompens use several wild plants for treating various physical ailments. Methods of application are simple as in most cases, the Shompens simply chew a particular plant either raw or at times it is pounded and applied externally. Plant decoction is also used. However, no attention is given to the quantity of plant parts used in the prescription. The Shompens build temporary huts propped on stilts 2-6 m above the ground (Figure 3c). Inside the huts, crude mats made from pandanus and cane strips are used and leaves of *Leea grandifolia* Kurz serve as bed sheets, while a piece of bamboo is often used as pillow. The Shompens prepare indigenous dugouts or canoes called 'horis', which are of two types. Small canoes having carrying capacity of two or three persons are used for crossing creeks and rivers. Big canoes having carrying capacity of 2-7 persons are used for transportation and fishing in the sea. These canoes which vary in size from 6 to 10 ft, are generally fixed with an outrigger for balance and moved using paddles. Plant species under ethnobotanical use by the Shompens are enumerated in Table 1.

The Shompens appear to be an intermediate group between the Andamanese (hunters and food-gatherers) and the Nicobarese (gardeners and herders), as they combine their food-gathering and hunting habits with some gardening and herding as well<sup>24</sup>. The Shompens generally live in places close to a drinking water source and where abundant pandanus fruits are available, which form their staple food<sup>25</sup>. The Indian region with its innumerable tribes and ethnic groups offers ample scope for ethnobotanical studies<sup>26</sup>. The A&N Islands are the abode of hunter-gatherer nomadic tribes leading a contented life with limited forest resources. The Nicobarese live closer to the coast and are sea-dependent, while the Shompens are forest-dwellers. Thus their lifestyles blend harmoniously with nature, and they are considered as 'eco-friendly people'. The Shompens like many other tribes suffer from various ailments like malaria, microfilariasis, elephantiasis and other fatal diseases. Strangely no tribal medicines for such diseases exist amongst them. Ironically, these ailments together with lower population of females, low birth rate, high rate of infant mortality and malnutrition have placed the Shompens almost on the verge of extinction.

During the last two decades, the Tribal Welfare Directorate of the A&N Administration and Botanical and Anthropological Surveys of India, Port Blair are involved in studying and documenting the different dwindling socio-cultural, ethnobotanical and historical aspects of the aboriginal tribes of the A&N Islands respectively, apart

# RESEARCH COMMUNICATIONS

**Table 1.** Plants under ethnobotanical use by the Shompens

Plant species	Family	Shompen name	Parts used	Mode of use
<b>Edible plants</b>				
<i>Anacardium occidentale</i> L.	Anacardiaceae	–	Nuts	Kernels eaten raw or roasted
<i>Ardisia solanacea</i> (Poir.) Roxb. (Figure 2 e)	Myrsinaceae	Kanheyo	Fruits, leaves	Raw fruits eaten. Leaves boiled in water and eaten
<i>Blechnum orientale</i> L.	Blechnaceae	–	Tender fronds	Boiled and eaten
<i>Calamus andamanicus</i> Kurz	Arecaceae	Woolaiyo	Stem, fruits	Sap of stem forms drinking water
<i>Calamus pseudo-rivalis</i> Becc.	Arecaceae	Woolaiyo	Fruits	Fruits eaten
<i>Capsicum frutescens</i> L.	Solanaceae	–	Fruits	Fruits used as condiment
<i>Ceratopteris thalictroides</i> (L.) Brongn.	Parkeriaceae	–	Tender fronds	Boiled and eaten
<i>Citrus medica</i> L.	Rutaceae	Aatoi	Fruits	Fruits eaten
<i>Cocos nucifera</i> L.	Arecaceae	Taoko	Fruits	Coconut water is a refreshing drink. Seeds eaten raw. Shells used as mug
<i>Colocasia esculenta</i> (L.) Schott.	Araceae	Kamum	Rhizome	Boiled and eaten
<i>Cycas rumphii</i> Miq.	Cycadaceae	Tivan	Seeds	Boiled and eaten
<i>Dioscorea glabra</i> Roxb.	Dioscoreaceae	Lailong	Tubers	Boiled and eaten
<i>Diospyros cauliflora</i> Bl.	Ebenaceae	–	Fruits	Raw fruits eaten
<i>Flagellaria indica</i> L.	Flagellariaceae	–	Stem, fruits	Boiled and eaten
<i>Ficus hispida</i> L.	Moraceae	Hampam	Fruits	Boiled and eaten
<i>Mangifera camptosperma</i> Pierre.	Anacardiaceae	–	Fruits	Fruits eaten
<i>Morinda citrifolia</i> L. (Figure 2 f)	Rubiaceae	Lurong	Leaves, fruits	Boiled and eaten
<i>Musa sapientum</i> L.	Musaceae	Hipuh	Fruits	Eaten raw or boiled
<i>Nicotiana tabacum</i> L.	Solanaceae	Chukha	Leaves	Dried leaves eaten
<i>Pandanus lerram</i> Jones	Pandanaceae	Mukung	Fruits	Forms staple food, boiled and eaten
<i>Pangium edule</i> Reinw.	Flacourtiaceae	–	Seeds, bark	Roasted seeds eaten. Bark powder used as fish poison
<i>Phoenix paludosa</i> Roxb.	Arecaceae	–	Fruits	Boiled fruits eaten
<i>Pisonia umbellifera</i> (Forst.) Seem	Nyctaginaceae	–	Tender shoots	Boiled and eaten
<i>Piper betle</i> L.	Piperaceae	Takoocho	Leaves	Leaves used as masticatory with arecanut
<i>Rubus moluccanus</i> L.	Rosaceae	Voknuto	Fruits	Fruits eaten
<i>Tacca leontopetaloides</i> (L.) O. Kuntze	Taccaceae	Saunch	Tubers	Tubers boiled and eaten
<i>Terminalia catappa</i> L.	Combretaceae	Tohang	Fruits, Kernels	Fruits and roasted kernels eaten
<i>Thespesia populnea</i> (L.) Correa	Malvaceae	–	Leaves	Leaves boiled and eaten
<b>Medicinal plants</b>				
<i>Actoplanes canniformis</i> (Forst.) K. Schum.	Marantaceae	Amokyoan	Stem, root	Stem and root decoction taken orally in fever
<i>Alstonia kurzii</i> Hook. f.	Apocynaceae	Tachuroi	Stem, leaf root	Stem, root or leaf vapours inhaled in fever
<i>A. macrophylla</i> DC.	Apocynaceae	Tachuroi	Stem, leaf root	Stem, root or leaf vapours inhaled in fever
<i>Ardisia solanaceae</i> (Poir.) Roxb.	Myrsinaceae	Kanheyo	Root	Roots boiled in water and used to wash the uterus after child birth. Root decoction also taken orally to remove blood clot and cure internal haemorrhage
<i>Costus speciosus</i> (Koen.) Sm.	Zingiberaceae	Manola	Rhizome	Crushed rhizomes used in diarrhoea
<i>Croton argyratus</i> Bl. (Figure 2 h)	Euphorbiaceae	Mintunah	Seeds	Seeds used as laxative and in stomach disorder
<i>Dischidia benghalensis</i> Coleb.	Asclepiadaceae	Talima	Twigs	Pounded twigs applied externally to heal fractured bones
<i>Donax cannaeformis</i> (G. Forst.) K. Schum. (Figure 3 b)	Marantaceae	Amok	Stem, root	Stem and root decoction used orally in fever
<i>Glochidion calocarpum</i> Kurz	Euphorbiaceae	Kinson	Seeds, bark	Pounded seeds or bark applied in skin diseases
<i>Hornstedtia fenzlii</i> (Kurz) K. Schum (Figure 2 g)	Zingiberaceae	–	Root, flower	Root and flowers boiled in water and used to wash the uterus after child birth
<i>Leea grandifolia</i> Kurz	Leeaceae	Takteyu	Leaves	Leaves eaten in fever
<i>Macaranga nicobarica</i> Balakr. & Chakrab. (Figure 2 d)	Euphorbiaceae	Panah	Leaves	Leaf decoction used in stomach ailments

(Contd.)

Table 1. (Contd.)

Plant species	Family	Shompen name	Parts used	Mode of use
<i>Mallotus peltatus</i> Muell – Arg.	Euphorbiaceae	Kisoh	Leaves	Leaf decoction used in stomach ailments
<i>Melastoma malabathricum</i> L. (Figure 3 a)	Melastomataceae	Kiyang	Leaves, stem	Leaves and stem paste with lime juice and honey applied on wounds
<i>Myristica peltata</i> Wall. ex Hook. f.	Myristicaceae	Kinhanmo	Seeds, bark	Seeds and bark pounded and applied in skin diseases
<i>Nicotiana tabacum</i> L.	Solanaceae	Chukha	Leaves	Dried leaves pounded with lime juice and honey
<i>Ophiorrhiza nicobarica</i> Balakr.	Rubiaceae	–	Leaves	Fresh leaves paste in water applied on wounds
<i>Semecarpus kurzii</i> Engl.	Anacardiaceae	–	Fruits	Fruits used externally to cure injuries
<b>Hut construction</b>				
<i>Actephila excelsa</i> (Dalzell) Muell-Arg.	Euphorbiaceae	–	Stem	Stems used as posts, beams and wall sticks
<i>Antidesma tetrandrum</i> Bl.	Euphorbiaceae	Niyoto	Stem	-do-
<i>Areca catechu</i> L., <i>A. triandra</i> Roxb. (Figure 3 d)	Arecaceae	Yaang	Stem	Split stem used for floor making. Leaves used for thatching
<i>Casearia grewiaefolia</i> Vent.	Flacourtiaceae	–	Stem	Stem used as posts, beams and wall sticks
<i>Calophyllum inophyllum</i> L.	Clusiaceae	Lamonk	Stem	-do-
<i>Calamus andamanicus</i> Kurz (Figure 3 e)	Arecaceae	Woolaiya	Leaves	Leaves used for thatching
<i>Caryota mitis</i> Lour.	Arecaceae	–	Leaves	-do-
<i>Dinochloa scandens</i> (Bl. ex Nees) O. Kuntze	Poaceae	–	Stem	Split stems used for making floor
<i>Diospyros cauliflora</i> Bl.	Ebenaceae	–	Stem	Stem used for posts, beams and thatching sticks
<i>Drypetes sumatrana</i> (Miq.) Pax & Hoffm.	Euphorbiaceae	–	Stem	-do-
<i>Dysoxylum arborescens</i> (Bl.) Miq.	Meliaceae	–	Stem	-do-
<i>Mallotus resinousus</i> (Blanco) Merr.	Euphorbiaceae	–	Stem	-do-
<i>Radermachera pinnata</i> (Blanco) Seem	Bignoniaceae	–	Stem	-do-
<i>Saurauia bracteosa</i> DC.	Saurauiaceae	–	Stem	-do-
<i>Nypa fruticans</i> Wurm. (Figure 3 f)	Arecaceae	Lanceolae	Stem	-do-
<b>Dugouts or canoes</b>				
<i>Artocarpus gomeziana</i> Wall. ex Trec.	Moraceae	Ekul	Stem	Trunk used for dugouts
<i>Barringtonia asiatica</i> (L.) Kurz (Figure 3 g)	Barringtoniaceae	Aalva	Stem	-do-
<i>Calophyllum inophyllum</i> L. (Figure 3 h)	Clusiaceae	Lamonk	Stem	Trunk used for canoes
<i>C. soulattri</i> Brum. f.	Clusiaceae	–	Stem	-do-
<i>Garcinia nervosa</i> Miq.	Clusiaceae	Kintul	Stem	-do-
<i>Garcinia speciosa</i> Wall.	Clusiaceae	Kintul	Stem	Wood used for paddles
<i>Leea grandifolia</i> Kurz	Leeaceae	Takteyu	Stem	Stem used for making balance for canoes
<i>Pterocymbium tinctorium</i> (Blanco) Merr.	Sterculiaceae	–	Stem	-do-
<i>Sterculia macrophylla</i> Vent.	Sterculiaceae	–	Stem	Trunk used for canoes
<b>Miscellaneous uses</b>				
<i>Aglia argentea</i> Bl.	Meliaceae	Kinya	Bark	Bark used for making cooking vessels
<i>Anthocephalus chinensis</i> (Lamk.) Rich. ex Walp.	Rubiaceae	–	Bark	Bark used for making cooking vessels
<i>Areca catechu</i> L., <i>A. triandra</i> Roxb.	Arecaceae	Yaang	Nuts, spathe	Nuts used as stimulant. Spathe used as vessel
<i>Atalantia spinosa</i> (Willd.) Tanaka	Rutaceae	–	Stem	Branches used for making harpoons
<i>Calophyllum inophyllum</i> L.	Clusiaceae	Lamonk	Bark	Bark used for making cooking vessels
<i>Coix lachryma – jobi</i> L.	Poaceae	Aalay	Grains	Grains used for making necklace
<i>Dinochloa scandens</i> (Bl. ex Nees)	Poaceae	–	Stem	Slender branch pieces used as ear ornaments. Stem pieces used as pillows
<i>Hornstedtia fenzlii</i> (Kurz) K. Schum	Zingiberaceae	–	Stem, leaf, flower	Stem, leaf and flower juice is a powerful honey bee repellent
<i>Macaranga nicobarica</i> Balak. & Chakrab.	Euphorbiaceae	Panah	Leaves	Leaves used as plates or cover
<i>Nypa fruticans</i> Wurm.	Arecaceae	Lanceolae	Dry fruit	Dried fruit with fibre used as brush
<i>Pandanus leram</i> Jones	Pandanaceae	Mukung	Fruit	-do-
<i>Terminalia manii</i> King	Combretaceae	Tohangko	Bark	Bark used for making cooking vessels
<i>Trema tomentosa</i> (Roxb.) Hara.	Ulmaceae	Tev	Bark	-do-



**Figure 3.** a, *Melastoma malabathricum* L. b, *Donax cannaeformis* (G. Forst) K. Schum. c, Rectangular Shompenhut at Jhaunala. d, *Areca triandra* Roxb. e, *Calamus andamanicus* Kurz. f, *Nypa fruticans* Wurmb. g, Fruits of *Barringtonia asiatica* (L.) Kurz. h, *Calophyllum inophyllum* L.

from serious efforts towards protection and rehabilitation of some of these tribes. Despite these concerted efforts, three tribes, viz. the Great Andamanese, the Onges and the Shompens are on the brink of extinction<sup>4,27</sup>.

Immediate steps are to be taken to register and recognize the local knowledge and help in its revitalization. Ethnobotanical studies have revealed that these tribes possess great amount of indigenous knowledge, besides knowledge about natural calamities and climatic changes. Unlike most other tribes, the Shompens do not have tribal medical practitioners, but by and large all the elders have knowledge about medicinal plants. As the tribe itself is degenerating rapidly, urgent efforts are needed not only to catalogue all the information about plants, but steps need to be taken to protect and rehabilitate the Shompen tribe in the islands. The ethnobotanical information gathered in this study may be considered as 'clues' for prioritizing species for further critical scientific evaluation and bioprospection, leading to the development of value-added products for human welfare.

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