HAD MAI NGAM Trail Guide



Surin Islands National Park













FOREWORD By the Andaman Pilot Project

The trail guide booklet on "Beautiful Wood Trail" was first printed in 2005 in Thai language with the support from UNDP and UNESCO. This English version is printed as part of the celebration of 35th anniversary of Chulalongkorn University Social Reseach Institute (CUSRI). We are fortunate to have an introduction to the trail written by MR.VIROJ ROTJANAJINDA the Surin Islands National Park Superintendent who has much experience in working with local communities and other stakeholders in natural resource management. We hope foreign visitors will find more enjoyment from the trail with additional information about Moken ethnobotany. The Moken have been a significant part of the Surin Islands for centuries and we hope they will remain so for a very long time.

INTRODUCTION By Mr.VIROJ ROTJANAJINDA

We would like to invite visitors to the Surin Islands to walk "Beautiful Wood Trail" and to follow interpretive signs. The trail starts from National Park Service Area and ends at Beautiful Wood Beach. Along the 2,000 meters stretch, you will learn about island ecology; see the largest ballnut tree; and walk through beach forest with tropical almond trees and pandanus trees. You may even have a glimpse of macaques and squirrels. After you walk pass fern and rattan groves, then a long white beach and blue sea await in front of you. Beautiful Wood Bay is a very good place for snorkeling, so you may give it a try! You will be able to appreciate both the forest and the coral reefs within 2 hours. We really hope that the experience on the trail will enhance your appreciation and awareness of the island ecology and hope you will become our avid partner in nature conservation. **Quiz 1:** Among the five islands in the Surin Archipelago, which island is the largest?





The Surin Islands should not be visited without walking this trail. As well as beautiful underwater coral reef "forests", the Surin Islands also have lush tropical rain forests with trees stretching 20-30 meters from the forest floor, or equal to a building of five to seven storeys.

The most popular trail is the Had Mai Ngam trail on the North Surin Island. It takes about 2-3 hours for the return trip and is mostly flat. You should wear sturdy shoes.

If you walk quietly, you may spot several creatures including macaques, squirrels, and various bird species. There are over 80 bird species alone found on the Surin Islands so **let's count how many you can see along the trail.**

It is likely that you will walk this trail during the day time, so you will not see any nocturnal creatures like mouse deer. However, if you are lucky, you may see their droppings or tracks on wet ground.



The trail has 14 stations and signs to inform you about the local environment and distinctive features. Please stay on the trail at all times because the forest floor may be home to poisonous creatures. Of course these little ones may not have harmful intentions, but if you walk into their territory, especially when they are relaxing, they have to defend themselves. Please do not drop any litter nor take souvenirs. The Surin Islands usually have over ten thousand tourists per year and if each person picks a leaf, a piece of fruit or a seashell, then there will no longer be this natural spectacle for us all to enjoy. Each plant and animal in the ecosystem makes their own contribution to this fragile environment and what we collect or take away could compromise the sustainability of the whole system.

The end of the trail is Had Mai Ngam or "Beautiful



Wood Beach". It is a stretch of white sand where the Park campground is located. If you are keen on snorkeling, please bring your snorkeling gear as the bay has many coral reefs and underwater wonders waiting for you.

Our very own forefathers walked this forest before you. Do you know who they were?



Who walked this forest

before you do? Hundreds of years before the establishment of the Surin Islands National Park, the Moken traveled these islands and some made the islands their home during their semi-nomadic lives. The Moken depend on marine resources for their livelihood and they are adept at spearing fish and diving for sea produce. The forest is also an important resource because it yields food and raw materials for their houses, boats, tools, and medicine. The Moken select the straight and tall *Ja-ngarn* timber (*Hopea odorata*) for crafting their dug-out boats. They select long and firm pandanus leaves to weave their mats, thatches, baskets and boxes; selecting palm leaves to weave into thin bamboo stakes to make walls and roofs for their huts. The Moken have a great respect for the forest. A ceremony will be held before cutting down a big tree and offerings are presented to the supernatural beings that are the protectors of the forest.



The Moken have their own forest trails to gather wild fruit, vegetables and tubers. They collect wild fruit and leaves for fresh consumption or to be used in cooking such as *Pawan* leaves (*Meliantha suavis*) and *Ka-ning* (*Diospyros sp.*) fruit. Medicinal plants are also gathered from the same forest. *Ba-ai* (*Derris indica*) bark is collected and ground into a paste and mixed with water to rub on and cool feverish infant's heads.

The leaves of another species, *Bubong* (*Scaevola taccada*), are dried, chopped into pieces, pounded with rice and wrapped within cloth to form ball shapes. These can then be warmed on a slow fire and used as a massager to sooth aching parts of the body.

The Moken have a close relationship with the forest and they have a great respect for the forest as it is a life giver.



The starting point of the trail is right by the beach and just a short distance beyond the stairs to Sinsamutra house. When you spot a marked *Cordia subcordata* tree with dark yellow flowers, then you find the trail entrance.

Station 1 Chong Khad Bay

" Chong Khad Bay ", the channel you can see in front

of you separates North and South Surin Islands. In the bay, there are patches of coral, but they were damaged by the 2004 tsunami.

There used to be many beautiful fish, such as Anemone fish, Parrot fish, Lion fish and Butterfly fish.

After the tsunami of



December 26, 2004, the channel became larger and there was a slight change in the sand bar position. When the tide is very low, you can no longer wade to the beach on the opposite side.

The Moken call the beach "buhun" and it used to be their old settlement. Historically the Moken did not settle permanently in one place, they moved to seek shelter from winds and waves during the southwest monsoon season and to flee from epidemics. At present, the Moken live in large Bon Bay, on south Surin Island.



Station 2 Igneous Rock

Granite rock is an Igneous rock that is composed of minerals including Quartz, Feldspar and Mica. Granite forms **from magma which has cooled far under the earth's surface.** Because it hardens deep underground, it cools very slowly. This allows mineral crystals to grow large enough so as to be easily seen by the naked eye. It is estimated that Granite found in the Surin Islands is from the Jurassic period.

Station 3 Lofty Fig Tree

Lofty fig tree (*Ficus altissima*) or "*Grang*" (swagger) in the Thai language is a member of the *Moraceae* family. The large spreading branches of the crown create shade under which shade-loving plants can grow. The roots grow into nearby rocks, creating crevices in them and breaking off fragments. This tree is the starting point of an important food web. Its fruits are eaten by various animals such as lesser mouse deer, bats, worms and insects.

This is a good place to do some sea-watching. How is the sea-water today? Is it clear? You may notice that on a certain day, the sea-water has greenish patches in it. This is caused by plankton blooms or algae blooms, each indicating a relatively large amount of nutrients in the sea-water. The **Moken call this phenomenon** "*teed*" and refrain from fishing and gathering in the area until the sea-water becomes clear once again.



Station 4 Coastline

Most of the coastline of the Andaman Sea has a submerged shoreline, characterized by steep cliffs and rugged shore.

It has been shaped by earth movements and especially erosion **at the earth's surface.** The sea level has risen over 100 meters during the last 10,000 years and mountainous areas which have been eroded and submerged have formed islands.



The island that you see in front is called *Pachumba* or *Mangkorn* (short for *Kung Mangkorn* or lobster as many lobsters are spotted around the **island reef). The Moken call this island** "*Jaloh Bunal*" **meaning** the island where turtles create their nests and lay their eggs. If we sail southward from *Jaloh Bunai Island*, we will see Tachai island. Especially when the water is not very clear, the area around Tachai island is frequented by manta rays. Further south, we will see *Bon island* and *Ba-ngu island*, the latter is a part of Similan Archipelago which is reported to be one of the best dive sites in the world.

Quiz 5—Why do we usually spot manta rays or whale sharks at a time when the water is not crystal clear ?

Station 5 Bearch Gardenia

Beach Gardenia or *Kong Kang Hu Shang* (elephant ear mangrove) is the most common name for this tree. Its scientific name is *Guettarda speciosa* and belongs to the family of *Rubiaceae*. There are several names for this tree. In Krabi Province it is called "*Nacia*", in Surat Thani Province it is called "*Peng Men*" and in Chum Phon, it is called "*Ploh*". Although it can be



easily found on the Surin Islands, it is a rare sight in mainland Thailand as it only survives in the mildly wet conditions of a beach forest. This tree can be identified by its elliptical leaves connected to long leaf stalks and there arrangement in the opposite decussate pattern. Its leaves feel smooth throughout its surface and the flowers are white with a similar fragrant to Gardenia flower.

Station 6 Ballnut or Alexandrian Laurce or Beauty Leaf

The *Krating* tree (*Calophyllum inophillum* L.) is said to be the only tree of its kind in Thailand. One of the *Guttiferae* Family, it can be found along sandy beaches, usually on the edge of the beach forest and the land forest. The leaves are



thick and shiny to withstand salty air and sea spray. The white flowers bloom in a large bunches and have a nice fragrance which emanates from the abundant orange pollen. The fruit is edible although it tastes sour and the seeds have a hard shell which

can float in the water so as to aid dispersion.

The crown of a Ballnut Tree is thick so it provides very good shade and is used as an ornamental plant. In the past, Thai people used Ballnut wood to make railway bolsters because the wood is hard and strong. Today it is difficult to find large Ballnut Trees. You are very lucky to see this one. Additionally, the tree has medicinal qualities with the fragrant flowers used as an ingredient for tonic or refreshing medicine. The Moken also use the leaves to cure pink eye. They prepare the mixture by crushing the leaves in water and then use the water as an eye wash.



Station 7 Beach forest

This forest type originates from plants growing and covering sand dunes or soil along the raised shore. The forest receives moisture from sea spray with the structure of the forest varying according to soil, sand, and rock composition.



In this area, the beach forest consists mostly of **tropical Almond trees or "Deer's Ear"** (*Terminalia catappa*) and Fish Poison trees (*Barringtonia asiatica*). Plants in the lower strata include Beach Morning Glory and Sea Morning Glory (*Ipomoea purpurea*), which have beautiful purple flowers. The Moken use Beach Morning Glory leaves to sooth jelly-fish stings.

Quiz 7 — How do Beach Morning Glory leaves , _relieve the pain from jelly-fish stings?

Station 8 Swamp



This is a natural seasonal swamp or wetland and is occasionally filled with fresh water. Although small in size, the area is an important habitat for several kinds of animals such as small shrimp, butterflies, dragonflies and plants

which grow well in moist areas such as the wild Taro (*Colocasia* esculenta) and the Fish Tail Palm (*Caryota mitis*.). The Moken **call wild Taro shoots** "*Umood Lolob*" **and gather these shoots** to eat fresh with shrimp paste dip or to cook in soup. They prepare them by peeling the green sheaths and taking only the white shoots within. The leaves of fishtail palm may cause itchiness to the skin.



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Station 9 Butress

This tree of *Glyptopetalum* family has a straight smooth trunk with few branches. Their root system is very shallow so to support its weight it grows a buttress that can spread out to a great distance, thus serving like an anchor. The buttress also helps the tree to absorb more nutrients from soil.



Quiz 9 — In the old days, the Moken used the buttress for some specific purpose. Can you guess what?



Station 10 Mangrove forest

The plant community in this forest type contains several species, predominantly evergreen with important plants such

as *Rhizophora*. Mangrove forest originates on eroding coastline along the narrow and flat stretches of land around islands or along shorelines and it is affected by tides.

Plants are specially adapted to this environment with features including thick shiny leaves housing salt glands and a root system which spreads



widely to help support the trunk. Furthermore, long, thin fruits sprout from the branches and are capable of rooting and growing rapidly once they fall to the ground.

This mangrove area provides an excellent habitat for



the breeding and feeding of all kinds of animals. It also acts as a buffer to protect the land from strong winds and rough seas. This mangrove area is quiet and protected. If you look in the water, you may see a small school of round-belly sardines which seek refuge here from

other predatory fish.



Station 11 Rattan

Rattan is a plant in the *Palmae* family. It is a climbing palm and the top part has small thorns on leaf sheaths. Rattan trunks or canes have smooth surfaces and are green when alive yet the cane turns yellowish white when dried. Rattan is different

from other palms because it has a cirrus or flagellum.

Rattan is a tropical plant which grows well under the shade of larger trees. One tree usually consists of 6-7 trunks. The trunk is used for making furniture and the fruit is edible.

Rattan strips are strong and durable and the Moken use long small strips to sew pandanus leaves together as boat sails and boat roofs. In the old



days, the Moken also used rattan strips to tie hut posts and lintels together, similar to the assembly of traditional Thai house parts.

Quiz 11— Where is the English word "rattan" derived from?



Station 12 Banyan Tree

This banyan tree (*Ficus annlata*) provides an excellent food source for many animals such as monkeys, squirrels, and birds. It has a spreading crown with connecting and interlocking branches. It is this crown that provides a habitat and food source for animals and birds.

On the Surin Islands, the banyan tree bears fruit between February and April. If you remain quiet for a while, you will have a chance to see and hear a variety of birds which come to feed on the fruit. The banyan tree benefits from this as birds and other animals help to spread seeds.

About a hundred years ago, loggers visited the Surin Islands for Hopea trees which are used to produce valuable timber. Logging on the Surin Islands was difficult due to complex transportation problems to and from the Islands. In addition, there was a killer disease, "jungle fever", or Malaria. It is fortunate that we still have this kind of forest left for on next generations to enjoy.

Quiz 12 — Old hopea and rubber trees usually have holes in their trunk. How do these holes contribute to the local environment?

Station 13 Fern

The fern you see perched in the tree belongs to the same genus as *Asplenium sp.* This fern is an epiphyte. Many people mistook it for a parasitic plant, but it is not because it does not absorb water and nutrients from the host tree. The roots do not penetrate the host bark, but spread out to form a net. This net catches dry leaves that fall from the tree and keep moisture in. When these leaves decompose, nutrients are then absorbed through fern roots.





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Peat Swamp Palm (Lieuala longecalycata) belongs to

the *Palmae* family which grows in moist areas, in or near wetland. Because it grows in a large cluster, it is home to several kinds of animals, for example, reptiles, fishes and birds which live in the piles of vegetative litter. Thorny leaf stems help protect these animals from predators.

Peat swamp Palm leaves have long and strong stems, the leaves have thick grooves. In southern Thailand, young leaves are used to wrap sticky rice and are made into a snack. The leaves can also be woven into hand-



fans which have become popular home industries in several southern districts. The Moken eat young shoots which are bitter when fresh, but palatable when boiled or grilled.



Are you able to answer the quiz? Yes? You're good! But if not, you could ask around – ask Park staff, tour guides, and the Moken! The knowledge about the marine and forest environment is everywhere around you, and does not only exist in textbooks. The Moken have intimate knowledge about these natural resources, and since they don't have a writing system, the knowledge is passed on by oral traditions. On the Islands, you can learn more about these, in person, from the Moken!



Moken handicrafts-available at the village !

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The Surin Islands are situated in the Andaman Sea, about 60 kilometres from Khuraburi Town in Phang-nga Province.

The forest on the islands is pristine, and the coral reef is considered to be one of the best in the country. The islands are also home to the Moken, an indigenous group who have roamed the Andaman Sea for centuries. The Moken are familiar with the sea, and they are also know-ledgeable about plants in the forest.

On "Had Mai Ngam Trail", you will enjoy the sights, sounds and smells of different plants and animals on the islands, as well as learn about the Mokens indigenous plant knowledge.

