

TO WHAT FATE, THE SURIN ISLANDS ?

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SUMMARY

The Surin Islands off the coast of Ranong are still relatively undisturbed, clean, and very attractive. They have a large number of biological assets which argue strongly for their being saved from almost inevitable future disturbance and degradation.

A prized asset of any environment now is freedom from pollution, development and other human disturbance. Such assets are already rare in Thailand. Offshore islands are an especially limited and fragile type of environment, and few have not been claimed by irreversible development, for better or worse. Among those of moderate size as yet unspoiled are the Surin Islands : Ko Surin Nua and Ko Surin Tai. Located in Ranong Province 53 km offshore, they total about 30 square km in area (as measured from the 1:250,000 scale map Series 1501S, Sheet NC47-10 of the Royal Thai Survey Dept). The islands have been described in some detail by BROCKELMAN (1977) and SMITINAND *et al.* (1977) in this volume, but briefly, they are covered with evergreen rainforest and are fairly steep, reaching 350 m in elevation. A particularly interesting and beautiful aspect is the numerous coves (about 10) into which small brooks bring clear fresh water. Most coves have sandy beaches backed and overhung by a variety of flowering trees and shrubs specially adapted to beach habitats. Noteworthy are the large *Barringtonia asiatica* trees on some beaches whose heavy boughs reach out across the beach and touch the water at the low tide mark. They bear large puffy white flowers which appear to be exquisitely designed, snowy Christmas tree ornaments, strangely out of place on a tropical beach.

The outer portions of the coves are floored by impressive coral reefs which present to the diver an underwater vista of shapes and forms of practically endless variety and interest. The fishes are equally

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variable in colour, form, and habit, some seeking the security of elusive amoeboid schools and others tenaciously hugging their territorial coral heads and crevasses. The water is very clear and unpolluted.

Although unspoiled and in a substantially natural condition, the islands are not totally undisturbed. Approximately 10-20% of the forest is secondary, probably the scarring of monsoon storms, but possibly partly because of some past lumbering. A half dozen or so large sawn logs lie stranded on the beaches, but no stumps or current signs of cutting are in evidence. A small amount of rattan cutting and burning of beach vegetation was noted in one place. Small rustic shelters in some of the coves attest that fishermen are probably occasional temporary residents. There are no permanent human residents. Dr. Doug Burns (personal communication) noted while skin diving that one point on the coral reef showed the impact of a recent underwater explosion, and several hundred dead fish lay about.

The islands owe their unspoiled nature to their distance from the mainland, but they will not remain so for long, as more people are drawn to them, unless they are given some form of protected status and actively protected. Aside from their beauty, there is a variety of biological reasons for preserving these islands in their present state :

- (1) The islands have some unusual and interesting terrestrial fauna. The pied imperial and Nicobar pigeons present are almost confined to islands and hence have limited populations which will become endangered in time. Wreathed hornbills are still common, although the total population size has not been determined. Pig-tailed macaques (*Macaca nemestrina*), flying lemurs (*Cynocephalus variegatus*) and mouse deer (*Tragulus sp.*) are among the mammalian inhabitants, and pythons (*Python reticulatus*) and monitor lizards (*Varanus salvator*) are the largest nonmarine reptiles.
- (2) The coral reefs are packed with biological interest and contain species of coral not found near to the mainland (Dr. Hansa Chansang, personal communication).
- (3) The islands are interesting and important biogeographically. The dynamics of communities on offshore islands have during the

past few years been providing insight and many new ideas concerning the structure and diversity of biological communities in general. Basically, the questions being asked are: What limits the number of species in an ecological community? What determines which species may live together in a given community? How stable is the species composition of any community? The Surin Islands could make important contributions to island biogeographical theory if more work is done on the occurrence, abundance and ecology of different species, in different places on the islands, on other islands of various types nearby, and on the mainland for comparison.

- (4) The islands may be useful some day as a sanctuary for endangered species from the mainland. Before any releases are made, however, careful study should be made of the endangered animal's ecological requirements and possible interactions with organisms naturally occurring on the islands.
- (5) The islands are breeding grounds for one or two species of sea turtle, including the Ridley turtle, which are threatened by overexploitation in most other areas.
- (6) The marine environment could be used as an important pollution-free control in studies of the presence and effects of pollution nearer the mainland. In areas such as Ranong and Phuket, it is no longer possible to know definitely if any given condition is an effect of pollution or a natural phenomenon. The lack of proper control areas and knowledge of the structure and dynamics of natural communities will make evaluation of the adverse effects of technological development on the marine environment or of overharvesting nearly impossible.

Far too often, when immediate profit is sought in developing an undisturbed environment or harvesting an unregulated resource, disaster is the inevitable, is slow, result. The basis of the profit is ultimately destroyed. Hotels, eating places, automobiles and boats, which are seldom regulated, bring visitors to pleasant natural surroundings, which

they then despoil. Too many people dependent of harvesting fish or turtle eggs will overharvest and drive themselves to poverty. Along our southern coastlines, dried corals for sale to tourists are being collected faster than they can regenerate, and are becoming rare in inshore waters.

The economics of this process are understood: the individual exploiter monopolizes the profits resulting from his actions while the "costs" of overutilizing the resource resulting from the same actions are distributed over all others doing the harvesting, over society as a whole, or are deferred to the future. The tragedy is that the process is often slow enough and the costs indirect and complex enough that we do not have much sense of tragedy or of catastrophe. In many cases, neither our system of justice nor our market economy makes those gaining the profits responsible for the damages they cause. It does not even make them feel the slightest bit guilty. But if exploitation is not effectively regulated and limited, it follows its course and becomes self-limiting when the environment becomes exhausted or polluted. Marine resources are especially susceptible to this process, because they are on "public" property for which no one assumes responsibility, and they are difficult to monitor and control. They are also highly sensitive to pollution.

Most islands off Thailand are well developed (Ko Chang, Ko Samui, Phuket, etc.), and although they may retain a certain charm for a while, they will surely become, in time, less and less pleasant and more polluted. Ko Tarutao, now a national park, may be able to withstand a restricted and well regulated tourist influx while still preserving and capitalizing on its relatively unspoiled nature. The participants on the April, 1976 expedition to the Surin Islands felt that the beautiful but relatively small coves and coral reefs on these islands could not bear any significant exploitation or development without having their beauty and biological attributes destroyed rather quickly.

In one of the beautiful coves of Ko Surin Tai, for example, it would require only about two bags of garbage, three litres of petrol, one wood chopper and one well fed mule working for one day and three spoiled, enterprising children to give one of the beaches the total aspect

of Pattaya (to be fair, the prime cherished attractions of Pattaya do not appear to be its inshore beaches, although they may once have been). Such a degradation could happen literally overnight. A small amount of pollution and siltation from clearing of vegetation would in a short time kill off the extremely sensitive corals, as they have been killed on Phuket and other mainland areas of the South.

Furthermore, the biological attributes of the Surin Islands merit consideration for complete preservation; the immediate economic sacrifice would be nil, and the future gains potentially great. Therefore, I hope others will join us in urging protected status for the Surin Islands and surrounding waters.

It should be added that all islands closer to shore, such as Ko Chang, Ko Phayam, Ko Sin Hai and Ko Ra, are being deforested and settled. Will the fragile Surin Islands be next?

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