

ARCHAEOLOGICAL EVIDENCE FOR HUMAN SETTLEMENT IN THE ANDAMAN ISLANDS

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ABSTRACT

The paper presents a summary of results to date of the author's long-term project on the human settlement of the Andaman Islands in the Bay of Bengal. Both cave sites and shell middens have been investigated and evidence indicates that the islands were settled well over 2000 years ago and all the main islands have traces of ancient habitation. Coastal resources were important but more than 75% of food was derived from the land. The proximity to fresh-water springs seems to have been the most important determinant of site location.

ARCHAEOLOGICAL EVIDENCE

This is a broad overview of the archaeological investigations that have been carried out by the author in the Andaman Islands since 1989 (Figure 1). Surveys have brought to light numerous shell middens as well as one cave site, thereby attesting to the existence of human habitation in all the major islands of the group (Cooper 1985, 1990a, b). For the first time in the history of archaeological work in this Archipelago, it has been possible to obtain a series of radiocarbon dates from a variety of sites and on material ranging from charred shell to organic matter from a limestone cave (Cooper 1993).

Each site was studied in relation to its environment, as well as with reference to the factors that were responsible for the disturbance and destruction of archaeological deposits. The oldest archaeological date recovered so far goes back to 2280±90 BP (BS-599) and constitutes the first step in understanding the origins of the Andamanese. Considering that the Hoabinhian in Sumatra and Malaysia perhaps began around 10,000 years ago

(Bellwood 1985: 62), the Andamans seem to have been colonised fairly recently. This, however, does not rule out the possibility that earlier evidence for human habitation may be forthcoming in future.

Waselkov (1987: 95) defined a shell midden as "a cultural deposit of which the principal visible constituent is shell". The archaeological sites in the Andamans are not only rich in faunal remains, but also in pottery and in artifacts of bone, stone and shell. In studying each of these components different avenues of research have been explored. Thus, it has been possible to infer the exploitation of different habitats on the basis of variations in the composition of molluscs at certain sites (Cooper 1990a). For example, in the shell mound at Chauldari in South Andaman, it appears that during the earlier phases of occupation, species belonging to rocky shores and estuaries, such as *Saccostrea cucullata*, *Nerita lineata* and *Thais luteostoma*, were preferred as food items. At a later stage, however, the mud flats in the littoral and sub-littoral zones were increasingly exploited for bivalves such as *Marcia marmorata*, *Anadara granosa*, *Anadara antiquata* and *Scapharca (Cunearca) conorua*.

The preferential selection of molluscs for cutting and scraping purposes has partially explained the dearth of stone tools in Andaman sites (Cooper (1988). The preliminary analysis of use-wear on lithic artifacts suggests that they were often used for the purposes of scarification and shaving (Cooper 1990a). The textural differences in Andaman ceramics, as also the temperatures at which the pottery was fired, have been determined by petrological studies and by X-ray diffraction analysis (Cooper and Raghavan 1989).

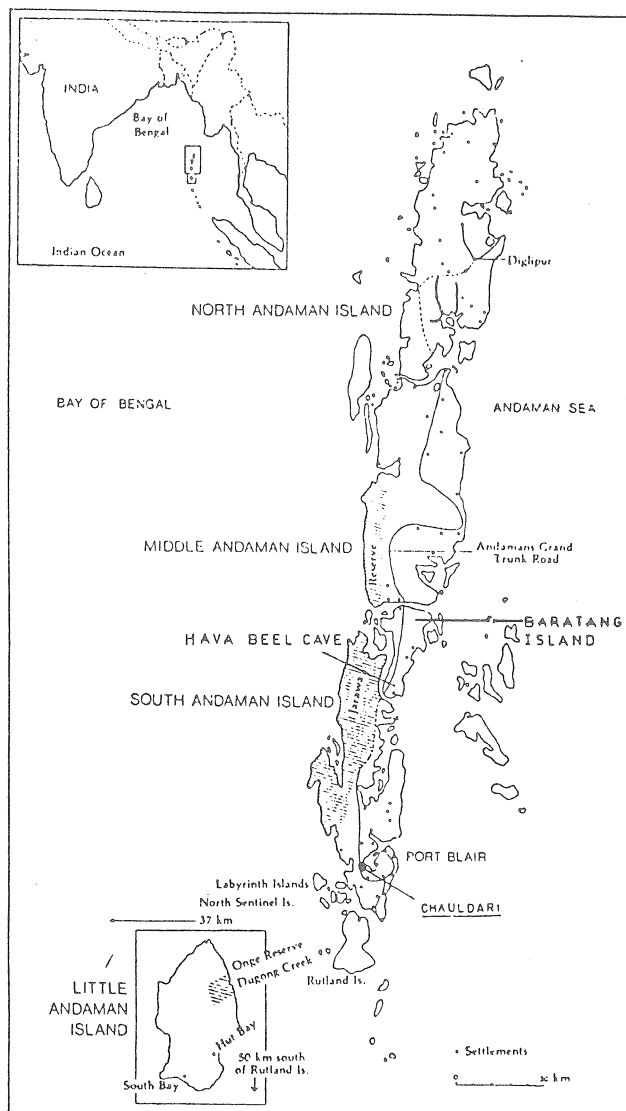


Figure 1: The Andaman Islands, locating the archaeological sites and places named in the text.

ETHNOARCHAEOLOGY

In the course of these investigations numerous questions have been raised regarding the interpretation of the archaeological record in the Andaman Islands. An attempt to answer these queries has been made by observing several abandoned Onge encampments on Little Andaman Island (Cooper 1994). The results of this survey are beyond the scope of this paper, though it may be mentioned

that a variety of sites have been identified and it has been found that the location and internal structure of a camp is determined by group size, intended duration of stay, social organization and economic activities, in addition to certain environmental constraints. Thus, transient camps disappear within a short time and leave no traces of their existence. Such sites would be characterised by a simple lean-to or a platform on which meat is smoked. On the other hand, the locations of semi-permanent encampments, which are occupied during the monsoon and winter, would be determined by the availability of freshwater, adequate shade and by the direction of the prevailing winds. Of course, accessibility to different food resources would also be taken into consideration.

While all perishable material would eventually disappear in exposed sites, some of it may be preserved within the sealed deposits of limestone caves such as Hava Beel Cave on Baratang Island (Cooper 1990b). In addition to charred organic remains, pieces of wood and resin were also recovered. The basal layer here has been dated to 1540±110 BP (ANU-5302). The absence of faunal and artifactual remains was in sharp contrast to the contents of a shell midden located 100 m from the mouth of the cave.

THE QUESTION OF ISOLATION

The absence of data on external factors that have influenced and shaped the social and economic structure of the Andaman Islanders has projected an impression of isolation reinforced by images of stormy seas and savage tribes (Cooper 1989: 133). The work of Terrell (1986) and Kirch (1986) relating to island communities in the Pacific has served to emphasise that isolation need not be a causal factor in the biological, social or economic development of an island society. Moreover, the concept of closed systems associated with island communities is no longer valid.

As I noted a few years ago (Cooper 1989: 145), the Andaman Archipelago did not feature on the map of international trade routes except as a brief reference on navigational charts. However, the islands were probably quite prominent within the local economic network of the southern part of the Bay of Bengal, a network about which only inferential statements can be made at present.

When considering the possibilities of silent trade as a means of exchange in the distant past, and the enigmatic origins of different watercraft characteristic of this area, one is impressed by the readiness with which the Andaman Islanders adopted some ideas and innovations, while others were eschewed or ignored. The utilitarian value of any object would probably have been measured in terms

of the prevalent social, religious and economic concepts of the society (*ibid.* 144).

A situation in which cultural traditions foreign to this area were thrust upon the local people, enforcing drastic social and economic changes, does not seem to have taken place until the establishment of the British penal settlement in the last century. Thus, the freedom of choice to adopt or reject an idea seems to have been greater in the past, and formed a fundamental criterion of the process of adaptation (*ibid.* 145).

DEMOGRAPHY

In another study I have used historical records, early census reports and ethnographic accounts to demonstrate how the social and economic framework of Andamanese society, in conjunction with economic factors, determined group size and spatial relationships. This study has been extended to look at the circumstances which brought about the biological and cultural disintegration of the different Andamanese groups. In this case it is possible that relative geographic isolation may have accelerated the process of segmenting the Andamanese population into groups, with the result that the islanders were too vulnerable, biologically and culturally, to withstand the devastating impact of the penal settlement and the rapid spread of diseases (Cooper 1990c).

SUBSISTENCE EFFICIENCY AND THE FORAGER/COLLECTOR MODEL

This brings us to the question concerning our concepts of adaptation as applied to archaeological cultures, both inland as well as along the coast. Although the overwhelming predominance of shellfish in middens is suggestive of an economy based on coastal resources, Bose's (1964) study of the diet of the Onges on Little Andaman reveals that only 25% of their food is derived from the coast. Furthermore, the Andamans have only a narrow band of littoral resources which, in combination with the frequency of storms and the unsuitability of the traditional outrigger canoe for voyaging in deep waters, greatly diminishes the role of aquatic food in the local diet (Erickson and Beckerman 1975). It is also interesting to note that the availability of coastal resources is not a population determinant in the Andamans. This has been determined by Erickson and Beckerman (*ibid.*), who have calculated the varying ratios of coastline to inland areas in the Archipelago and estimated that each square mile of forest supported slightly over two people, while the coast could support only 0.7 person per linear mile.

The Andaman middens are generally situated within a distance of one km of freshwater sources (Cooper 1985),

which are thus one of the principal determinants of site location, as witnessed by clusters of middens around perennial springs and streams. A recent study (Cooper n.d.) of place-names, however, revealed the preponderance of plants in the descriptive terminology of the Andaman Islanders. This is evident in their knowledge of over 160 species of trees and plants (Man 1882: 281). Thus, the fundamental criterion for the location of encampments, namely, the availability of drinking water, is not reflected in the etymology of place-names, indicating thereby the economic importance of the local flora, and clearly distinguishing between the criteria for the selection of sites and those determining their identification.

Subsistence efficiency in the Andaman Islands is facilitated by a cultural inventory that is more elaborate than that of desert and inland peoples (Oswalt 1986: 192). Despite this apparent cultural complexity, I have questioned the appropriateness of the forager/collector model, as proposed by Binford (1980), wherein the Andaman Islanders are described as collectors. I have argued that the inland population may be identified as collectors, while the more mobile coastal groups would fit the forager model more closely (Cooper 1992: 117). While both these organizational strategies seem to be incorporated in local subsistence patterns, it is also important to note that shell middens, which may be defined as 'coarse-grained' archaeological deposits in keeping with low mobility (Binford 1980: 17), are associated with the mobile coast dwellers as well as with the relatively sedentary inhabitants of the forests, although distances between sites vary (Cooper 1985). Moreover, the practice of storage, which is supposed to be associated with collectors, is minimal among the Andaman Islanders. However, the ritual prohibition of the exploitation of certain tubers, such as *Dioscorea glabra*, seems only a step away from the deliberate or accidental dispersal of seeds of valued fruit trees in the vicinity of camp sites, as practised by the Malaysian negritos (Hutterer 1983: 176).

How then do we define or categorize the food-procurement strategies of the Andaman Islanders? Can we label them as 'affluent foragers'? If so, what are the criteria that we apply? Perhaps these and other questions can only be answered through further debate, especially in terms of our current knowledge of hunting and gathering societies throughout the world.

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