

A Possible Source of Origin of the Easter Island Boat-Shaped House

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AT THE TIME OF European discovery, the more prominent Easter Island dwelling was an elongated pole-and-thatch structure with a lenticular floor plan and a composite ridgepole. The ridgepole ran the length of the house, was highest in the middle, and curved downward at both ends to approximately 0.5m above the ground. The rafters sprang directly from the ground or from a dressed stone footing, and arched up from either side to the curving ridgepole. In larger structures of this type, this latter element was supported by a line of ridgeposts located along the principal axis of the building. Once the rafters had been firmly fastened in place, a series of horizontal purlins was lashed to them. These purlins served to strengthen the frame and hold the thatching in place. Routledge (1920:215) described the thatching as consisting of a three-layer assemblage of plant material, the inner layer being of reeds, the middle of grass, and the outer covering of sugarcane leaves. Métraux's informant confirmed the use of a three-layer construction but claimed the middle layer was sugarcane leaves and the outer one grass. The three layers, however, were not always used, any one of the three types of material being occasionally employed alone (Métraux 1940:197-198).

A doorway, sometimes modified into a short tunnel, was only large enough to crawl through and was located in the center of one side. The few larger houses of the *hare nui*, or community, house type occasionally had an additional door on the opposite side (Milet-Mureau 1798:256). A specialized modification occurring in connection with a number of houses consisted of a lenticular-shaped footing of dressed and fitted stones. Pecked into the smoothed upper surface of these was a series of various-sized holes that served to hold

the bases of the arched rafters which, where footings were not used, were normally stuck directly into the ground (Forster 1777:vol.1, 569-570).

The resulting house type (Fig. 1), according to the early explorers who described them, gave the appearance of an overturned boat, or canoe, with keel uppermost (Beaglehole 1961:352). Largely for this reason, it has been referred to as the boat-shaped house type of Easter Island (Ferdon 1961:333), though more recently it has been designated the elliptical thatched hut (McCoy 1976:40). Where dressed curbstone footings were employed, the islanders referred to the house as a *hare paenga*. The addition of such a footing appears to have represented an important element to the boat-shaped dwelling, with possible significance in terms of the owner's rank. At least Routledge obtained the information that during the reign of the last *ariki*, Ngaara, such a house was privileged by having the *ariki* attend the house inauguration and be the first to eat inside the dwelling (Routledge 1920:243). Boat-shaped houses, with or without stone footings, ranged from 10 to as much as 40 m in length, from 1.5 to 4 m at their widest central axis, and were from approximately 1.5 to 3 m at their central high point (Métraux 1940:200).

While Métraux made favorable comparisons of some of the building elements of these houses with those of other dwellings in Polynesia, he was unable to find anything approaching the lenticular floor plan and curved ridgepole of this style of Easter Island house. He finally concluded that these unique features stemmed from an environmental lack of suitable building material and, rather unsatisfactorily, explained the curving ridgepole as the result of an inability to obtain natural rafter material of sufficient length to maintain this member in a straight and horizontal position (Métraux 1940:201-202). Believing with Métraux that this boat-shaped house configuration was a unique and local development on the island, I once suggested its possible derivation from the lenticular floor plan of a few of the cantilever-roofed stone houses at the ceremonial center of Orongo (Ferdon 1961:333). However, since these stone structures have floor plans ranging from rectangular to oval and lenticular, the comparison was weak and, I now believe, not truly adequate. What is more to the point is that, after numerous surveys and excava-

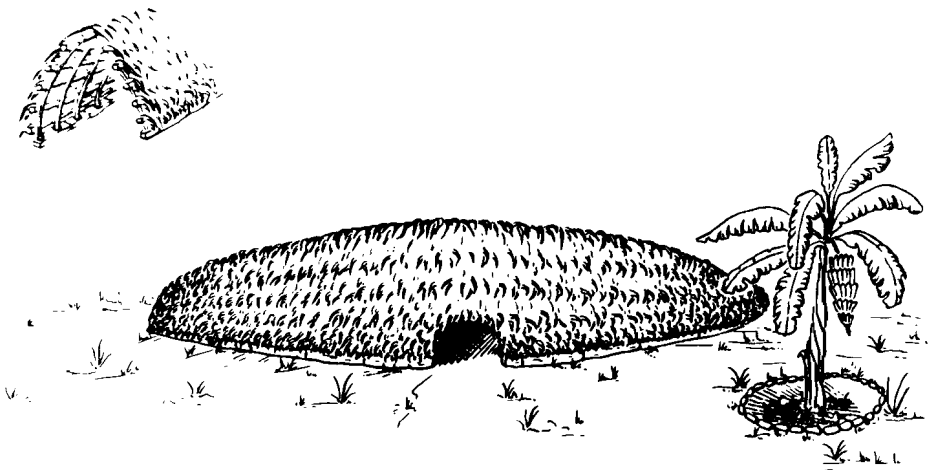


Fig. 1 Reconstruction of an Easter Island boat-shaped house, based upon early descriptions and surveyed floor plans of *hare paenga*. (Illustration courtesy Mrs. Nancy Sciscenti)

tions on the island since 1955, no evidence has yet been reported for a developmental, or evolutionary, sequence in house floor plans from which the boat-shaped dwelling configuration might have derived.

With such negative results over a lengthy period of active archaeological investigations, it now seems reasonable again to look elsewhere for the origin of this specialized house type. With this in mind, I would like to suggest that the original source, or model, for this house type may have derived not from a land-based dwelling style on some other island, or islands, but rather from one of the cabin designs used on Tuamotu double canoes. While no double canoe was ever seen at Easter Island by European voyagers, it should be recalled that two legendary accounts of the landing of Hotu Matua, titular first immigrant to the island, have him arrive in a double canoe (Thomson 1889:526; Routledge 1920:278). Since double canoes were the customary voyaging vessels of the Polynesians, this type of craft may well have brought at least one group of Polynesians to this island. Whether they were the first to inhabit the island, or represented a later arrival, is not important to this paper.

The particular Tuamotu cabin design under consideration is found on a model double canoe in the John Young Collection of the Bernice P. Bishop Museum (specimen 3474). It was claimed by Young to have been made in about 1874 at Fagatau (Fangatau or Angatau), and is said to have been patterned after a then-existing voyaging canoe having a length of approximately 18 m and capable of carrying 60 passengers. Emory (1975:176), however, has made a good case for its having been made much later, although he considers that the thatched cabin, sails, and rigging represent ancient Tuamotuan design.

Since the model has been amply described by Hornell (Haddon and Hornell 1936:vol. 1, 90-91), one need only mention that it is of the *pahi* equal-ended type which permitted the craft to be sailed in either direction. This allowed the cabin, which is built over one of the canoe hulls, to be always on the windward side of the vessel. Of importance to this article, however, is the overall shape of the cabin. As may be noted (Plate I), its floor plan conforms to the lenticular outline of the underlying canoe hull. The ridgepole is arched over the length of the hull, and the roof extends from the curving ridgepole directly to the gunwales, there being no vertical walls. The single doorway is centrally located and opens onto a decking. Thus, the similarity of shape and design of the Easter Island boat-shaped house (Fig. 1) to this Tuamotu *pahi* cabin is so apparent that a possible relationship is difficult to deny. To add further to the similarity, the base of each of the rafters in the canoe model is fitted into a hole drilled in the gunwale (William K. Kikuchi, personal communication, 1964). This feature at least suggests the possibility that the specialized pitted and dressed stone footings of the Easter Island *hare paenga* may have been designed to recall the gunwale of the original canoe hull from which the house may have been modeled.

The Fagatau model is not the only example of the existence of double canoe hull cabins in the Tuamotus. Another variety had the windward rafters arched and the lee ones vertical, forming a wall with two doors on the lee, or deck, side (Duperry 1827:atlas Pl. 47). Although the vertical wall of the lee side of the cabin was straight and followed the fore-and-aft midline of the canoe, the baseline of the arched windward side followed the contour of the gunwale nearly to the ends of the canoe, where it was then rounded inboard to meet the two ends of the lee side vertical wall. Furthermore, the ridgepole, as with the Fagatau model, curved downward at the two ends of the canoe. That this basic design could not have come from elsewhere in Polynesia appears probable, since built-up canoe hull cabins on double canoes seem to be limited to the Tuamotus. Although cabins were

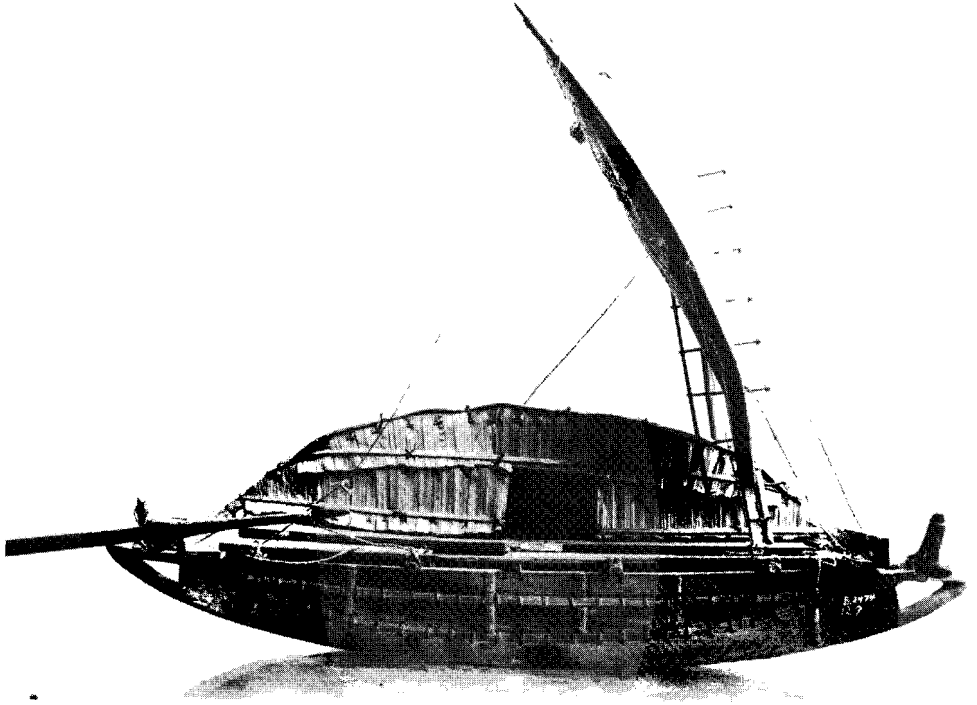


Plate I Fagatau double canoe model with canoe hull cabin in the John Young Collection of the Bernice P. Bishop Museum. (Photograph courtesy Bernice P. Bishop Museum, Anthropology Department, Honolulu)

present on a variety of double canoes in other parts of Polynesia (Haddon and Hornell 1936), they were generally rectangular in floor plan, had straight, horizontal ridgepoles, and occasionally included vertical side walls. So far as can be determined, such cabins were customarily located on the decking built over the beams which held the two hulls of the double canoe at a fixed distance from each other.

The apparent independent development of the Tuamotu canoe hull cabin represents a fine achievement in the clearly adaptive characteristics of the structure. Its configuration successfully solved the problem of placing it over a canoe hull, with the depth of the canoe giving its occupants a degree of head room and protection while minimizing wind drag on the craft when under sail. In the Fagatau model, even the fore-and-aft arched ridgepole which, with the sloping rafters, forms an inverted canoe prow at each end of the cabin, must have been designed not only to lessen wind resistance at the critical extreme ends of the canoe, but its "whaleback" design must also have served to shed bow waves that might break over what appear to have functioned as plank "manger boards" that cross both bows at right angles to the length of the hull.

In comparison to this hull cabin, the special configuration of the Easter Island boat-shaped house cannot, with any degree of real justification, be held to be the result of forced adaptation based upon environmentally controlled factors, as suggested by Métraux. After all, as late as 1774, G. Forster (1777:vol. 1, 578-579, 592) reported the

existence of open, low-tree stands ranging up to 3 m in height. Furthermore, the boat-shaped house was not the only pole-and-thatch dwelling that appears to have existed on the island. Tepano, one of Métraux's informants, claimed that there were simple shelters consisting of nothing more than thatch-covered rafters extending diagonally upward from the ground to a horizontal ridgepole which rested on posts (Métraux 1940:201). While Métraux described these under the heading "kitchen shelters," his report of Tepano's statement clearly indicates that his informant viewed them as something quite different. That Tepano's statement regarding these small huts as living quarters is probably correct is also supported by Hervé, who was on the island in 1770. Having previously described the larger boat-shaped houses, Hervé later adds, "They have several very low and small huts, and some like the one first mentioned" (Corney 1908:126), thus indicating the presence of a different type of dwelling. In fact, Tepano's description fits rather well an illustration of a similar type of hut in Thomson's 1889 publication on Easter Island (Thomson 1889:454, Fig. 1). This latter, we might add, compares well with Reao shelters illustrated by Emory (1975:52, Figs. 25, 26, 38). Finally, attention should be called to the evidence recently presented by McCoy of the former existence of circular huts on Easter Island that appear to have been of pole-and-thatch construction (McCoy 1976:53). Such circular structures also existed in the Tuamotus (Kotzebue 1821:vol. 3, 223; Emory 1975:59, 61).

The above would appear to indicate that the boat-shaped house, rather than being the only style of pole-and-thatch dwelling on the island, was instead a specialized form with possible symbolic implications. This is brought out rather clearly by Aguera, who accompanied Gonzales on his 1770 voyage to Easter Island. In referring to these boat-shaped houses, he says: "The more polished or powerful persons, whether in virtue of their age or authority, are held in esteem. These inhabit small huts covered with reeds, and constructed in the form of a large tunnel whose bilge or bellying portion is the entrance . . . so narrow that only one man can pass in or out at a time, and that with effort" (Corney 1908:102). If this, in fact, was the case, it opens up the possibility that such a dwelling may have represented a specialized symbol of rank for its occupant. Considering the similarity of the Fagatau model's cabin and the Easter Island boat-shaped house, it is possible that this symbol marked the owner as being related, in a ranking capacity, to one or another of the original immigrants who arrived on the island in a double canoe of Tuamotu origin and similar, at least in cabin design, to that of the Fagatau model. Just as the inhabitants of Raraka in the Tuamotus used their canoe cabins as land-based houses (Emory 1975:58), so the immigrants of this presumed double canoe could have employed their canoe hull cabin as their first shelter upon landing on the island. From that time onward, such a structure may have become a symbol of relationship to certain ranking members of this particular immigrant group.

If the boat-shaped house were the only apparent expression of symbolism concerned with past voyaging experiences to be found in Easter Island culture, this suggestion might be difficult to support, especially when one considers the few flimsy canoes that existed on the island when first seen by Europeans. There are others, however. Examples of these are the ceremonial use of beaked dance paddles (Métraux 1940:267-268) which, according to Thomson (1889:537-538), were patterned after those used in the ancient canoes; the custom of occasionally laying out gifts in a marriage gift exchange ceremony in the shape of a boat (Ferdon 1957:229); and the former annual occurrence of the feast of the boat near Vaihu on a mound called *moro oone*, the 'earth ship' (Métraux 1940:351). Thus the acceptance of a cabin-shaped house type for people of rank may well have been simply

another manifestation of this concern for navicular symbolism harking back to the memory of at least one former immigrant group.

Based upon the results of excavations in the Marquesas Islands, Sinoto (1968:117, Fig. 3) has concluded that this island group was a likely dispersal point for East Polynesian culture and, in a diagrammatic illustration, indicates that these islands were a source of Easter Island culture. This is also the conclusion reached by Métraux (1940:417-418). Such a result of careful comparative studies should negate the previous suggestion that the boat-shaped house derived from a Tuamotuan canoe cabin if, as Emory (1972:57) believes, Easter Island's remote situation made it unlikely that more than one Polynesian group ever reached the island. Such a view, however, represents purely personal speculation and seems not to have taken into account that not only are the eastern Tuamotus closer to Easter Island than the Marquesas but, certainly in early historic times, the Tuamotuan were building and sailing probably the best voyaging canoes in eastern Polynesia.

Although archaeological data for comparative purposes are sadly deficient in the Tuamotus, several valid historic traits in this archipelago compare favorably with ones to be found on Easter Island. Thus, Churchill (1912:166-167) found a remarkably close linguistic affiliation between the Tuamotus and Easter Island. Also, as already noted, both areas shared the low, unwallled dwelling that was nothing more than a roof placed on the ground, as well as the small, circular hut. To this might be added the feather headdress noted by Métraux (1940:417), and face and body painting observed on Easter Island (Dalrymple 1967:94; Corney 1908:98; Beaglehole 1961:351) and noted by Behrens in the Tuamotus when, in 1722, he found that the natives of Takapoto had their "body painted of all colors" (Dalrymple 1967:99). It thus seems fully within the range of possibility that at least two Polynesian contacts were made with Easter Island, with the Marquesas contact accounting for, among other things, many of the Easter Island crops that were seldom, or never, grown on the Tuamotu atolls. Which of these migrants arrived first would be pure conjecture at this point. That some Tuamotu people reached the island in the prehistoric past, however, seems probable and thus may well have accounted for the origin of the Easter Island boat-shaped house, as well as the other two simpler types of pole-and-thatch dwellings. Perhaps it is not without some significance that in the Routledge-recorded legend of Hotu Matua, titular first migrant to Easter Island, he is said to have described the land from which he came in terms that reflected an atoll situation, that is, "when the sea is low we die few, when the sea is high we die many" (Routledge 1920:278).

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