The Canoes of Geelvink Bay, Dutch New Guinea

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This account of certain New Guinea native canoes and their construction is compiled from field notes made from mid January to early March, 1956, during the "Gloria-Maris" expedition to Geelvink Bay, Dutch New Guinea.

The primary purpose of this expedition, which was sponsored by Mr. A. J. Ostheimer of Philadelphia, for the Academy of Natural Sciences of Philadelphia, was to make a survey of the molluscan fauna of the area, and although this objective proved to be almost a full time occupation, opportunity was afforded from time to time, to observe and make notes in other fields of enquiry.

I am most grateful to Mr. Ostheimer, not only for the invitation to join this expedition, but also for his interest in an ethnographical diversion, which I introduced and which he greatly assisted, by personally organizing trading transactions with the natives, thereby acquiring a representative series of canoe prows, accessory ornaments, sternposts and paddles, which he generously donated to the Auckland Museum.

The expedition worked entirely within Geelvink Bay, which forms the "back of the neck" of the "New Guinea bird." Geelvink Bay is about 200 miles across its greatest width and runs in for approximately 170 miles. Across the entrance lie the Schouten Islands comprising the practically joined high islands of Biak and Soepiori with a combined length of 75 miles. Further in and to the east lies the even larger high island of Japen, with a length of about 115 miles.

The observations made cover these three large islands, the Padeaido group of atolls and small islands at the north east entrance to the Bay and the Mios Aoeri group in the south west area of the Bay.

Geelvink Bay lies from 1° to 3° south of the equator; it is relatively land locked and is not influenced by any major currents. For the most part sea conditions are calm except for sudden storms of short duration and brief unsettled periods associated with seasonal changes. These relatively easy conditions have influenced the development of canoes of light construction with a primitive sail plan suited only for light steady winds. However, provision for more rigorous conditions likely to be encountered on long journeys far from land is made by a simple process of building up the height of the gunwale with multiple wash strakes of sago-palm mid-ribs.

The canoes of the area mostly fall into one or another of the following three categories.

A. Simple dugout of 9 to 10 feet in length with a single outrigger and minus attached bow-cover, prow or stern piece.

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B. Larger canoes up to 15 feet in length with an attached carved bow-cover of two sides connected transversely. Single or double outriggers. Detachable tripod mast and square palm-leaf sail usually carried.

C. Still larger canoes up to 25 feet in length with, in addition to the double sided attached bow-cover, an elaborate forwardly raked prow carrying accessory detachable fret-work ornaments. Two detachable tripod masts carrying square palm-leaf sails and between the masts a low canopy, with thatched roof erected on low uprights, the whole freely detachable to serve as a temporary shelter ashore when required.

A. THE SIMPLE DUGOUT.

This canoe is 9 or 10 feet in length, hollowed out of a single log, and lacks ornamental prow, bow-cover or stern attachments. It is fitted with a single outrigger and carries one or two persons.

In the hollowing out of the hull an evenly spaced series of horizontal projecting lugs is left about four to six inches down from the gunwale. Each of these lugs is drilled to hold a spike of wood which impales a prepared midrib of a sago-palm leaf to give height and smoothness to the gunwale and act as a wash strake. The spikes protrude through this wash strake so that other similar wash strakes may be added when more freeboard is required. The convex outer and concave inner surfaces of these palm midribs makes them admirably suited for the purpose. The outrigger beams check against pairs of the gunwale spikes and are held firmly by rattan lashings connecting the beams with pairs of transverse pieces of wood down in the hull. These transverse pieces grip both the top and bottom faces of the lugs in the hull in vice-like fashion.

The single, soft-wood outrigger is spiked to the beam by a small branch with a naturally attached twig. The branch goes through a hole in the outrigger beam and the twig is lashed to the top of the beam to prevent rise and fall of the branch in the hole.

This very simple yet quite effective construction is shown in detail in Text Figure 1 a-d.

B. THE SMALL SAILING CANOE.

This canoe has the same basic construction as the small dugout, but runs to about fifteen feet in length. It differs from the small canoe in having an attached double bow cover, and usually carries a detachable tripod mast and rectangular sail of sewn palm leaves. It may have a single outrigger, but is usually fitted with double outriggers when mast and sail are added. The bow-cover is double with a transverse connecting member, all carved from a single piece of wood and lashed to the hull. Sometimes a low covering piece, shaped as a seat for the steersman, is lashed to the stern, but more often the hull terminates in a bluntly projecting tang drilled to take a trailing length of rattan which serves for mooring and anchoring.

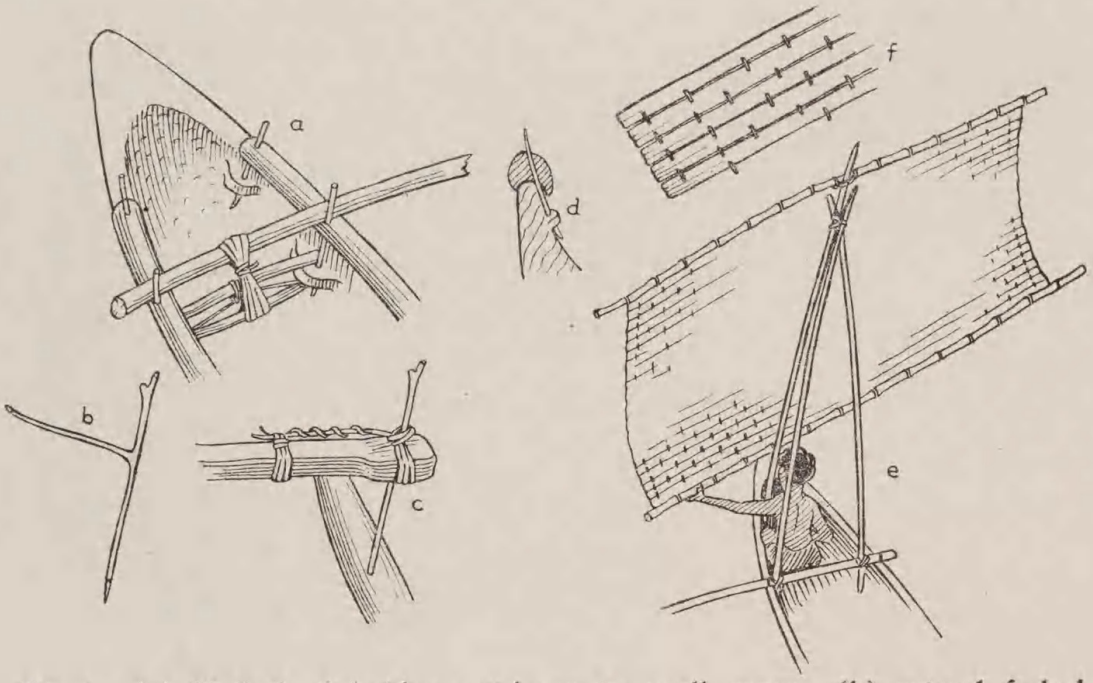


Fig. 1. (a) Method of lashing outrigger to small canoe; (b) natural forked twig for fastening outrigger float to beam; (c) method of lashing same; (d) cross section showing spiking on of wash-strake; (e) tripod mast and sail of sewn strips of sago-palm leaves; (f) detail of sail.

The tripod mast when not in use is carried on one outrigger and the furled sail on the other. The mast has one member a foot or more longer than the other two and it is upon this longer member that the sail is hung or pivoted. Two of the feet of the tripod are lashed to the forward outrigger beam, splayed, one on each side of the hull and the third foot is wedged or lashed in the bow.

The rectangular sail is made of two-inch strips of sago-palm leaves sewn together, the whole lashed to top and bottom bamboo poles. At the middle of the upper bamboo pole there is a loop of rattan for hooking the sail in place on the projecting member of the mast.

The sail has no other lashings and is simply held in operation by hand. Erecting the mast and setting the sail is done awkwardly by a man standing in the canoe. It is doubtful if the sail is used in this sized canoe in anything but light steady winds.

Frequently in lieu of a sail for running before the wind a single green coconut palm leaf is erected vertically and lashed below to the forward outrigger beam. It is almost as effective as the properly fashioned sail.

It is a common practice for natives to cook their fish at sea. The fire is made upon a sheet of flat iron, usually the top of a forty-gallon drum and placed across two of the outrigger beams.

C. THE LARGER SEA-GOING CANOE.

This canoe has the same basic construction as the other two but has more beam and attains 25 feet or more in length. It always has two outriggers and usually two masts with a thatched deck house in between.

The most interesting feature of this canoe is the rakish highly ornate fretwork prow with accessory ornaments for ceremonial occasions. This follows the gunwale sheer and emerges from between the front projections of the double bow-cover (Text Figure 2).

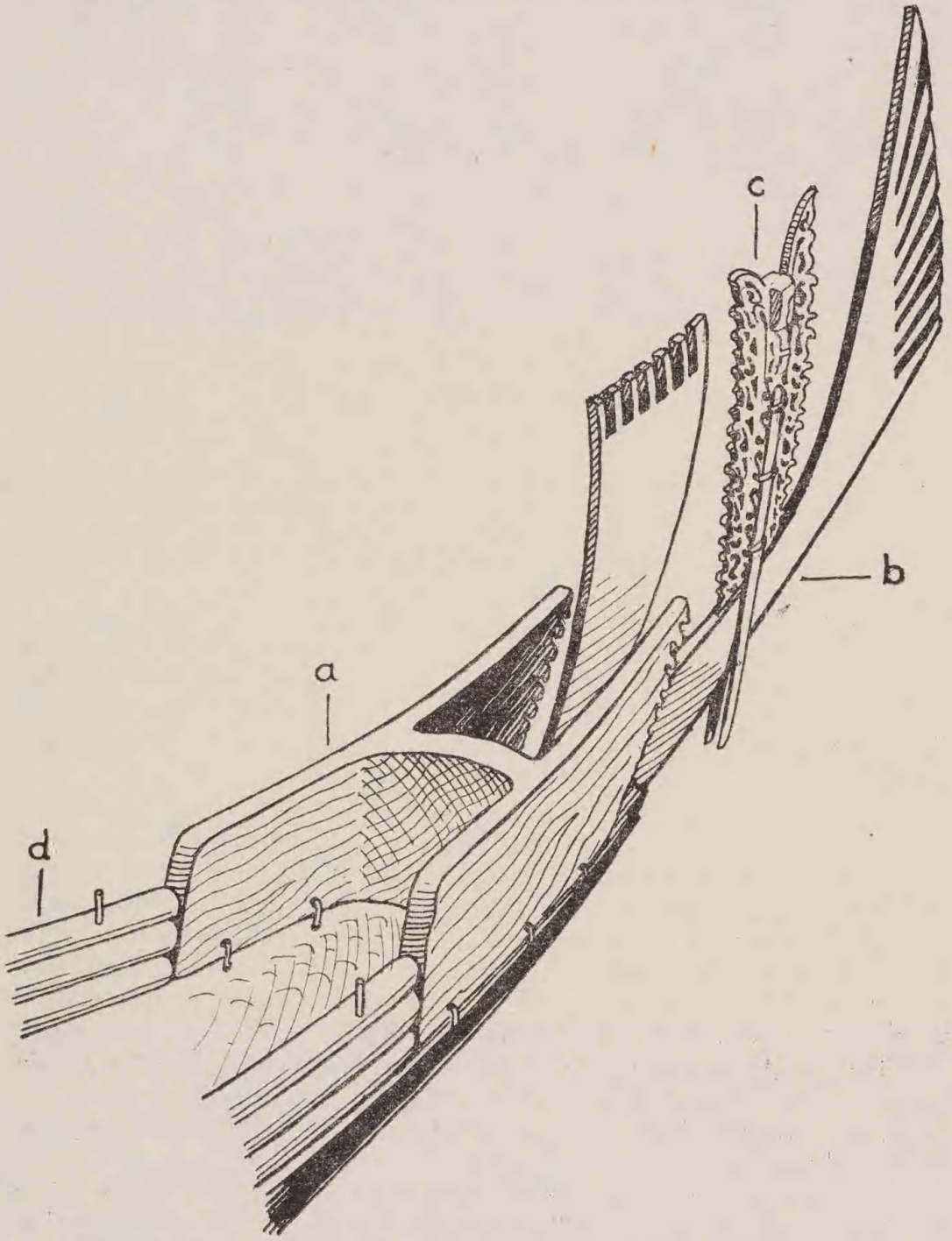


Fig. 2. Bow assembly of Type C Canoe, showing (a) double bow-cover carved from a single piece; (b) raked double prow; (c) accessory pegged fretted ornament; (d) multiple wash strakes.

The fixed part of the prow is formed into two forward raked carved members, one behind the other but with a free space between them. Into this space, upon special occasions, one or two accessory ornamental pieces are often placed. These frail, elaborately fretwork

carved accessory pieces have a strip of bamboo lashed upon each side, which provides a clothes-peg-like mode of attachment to the prow proper. When not in use these accessory pieces are carefully stored in their houses.

Often the fretwork carving is differentially marked out in colours, usually Indian red, blue and white. Tufts of black cassowary feathers add to the effect.

The shelter or deck house is long and narrow with a thatched gabled roof supported by a number of three-feet high posts. The structure is designed so that it can be taken ashore in its entirety and used as a bivouac.

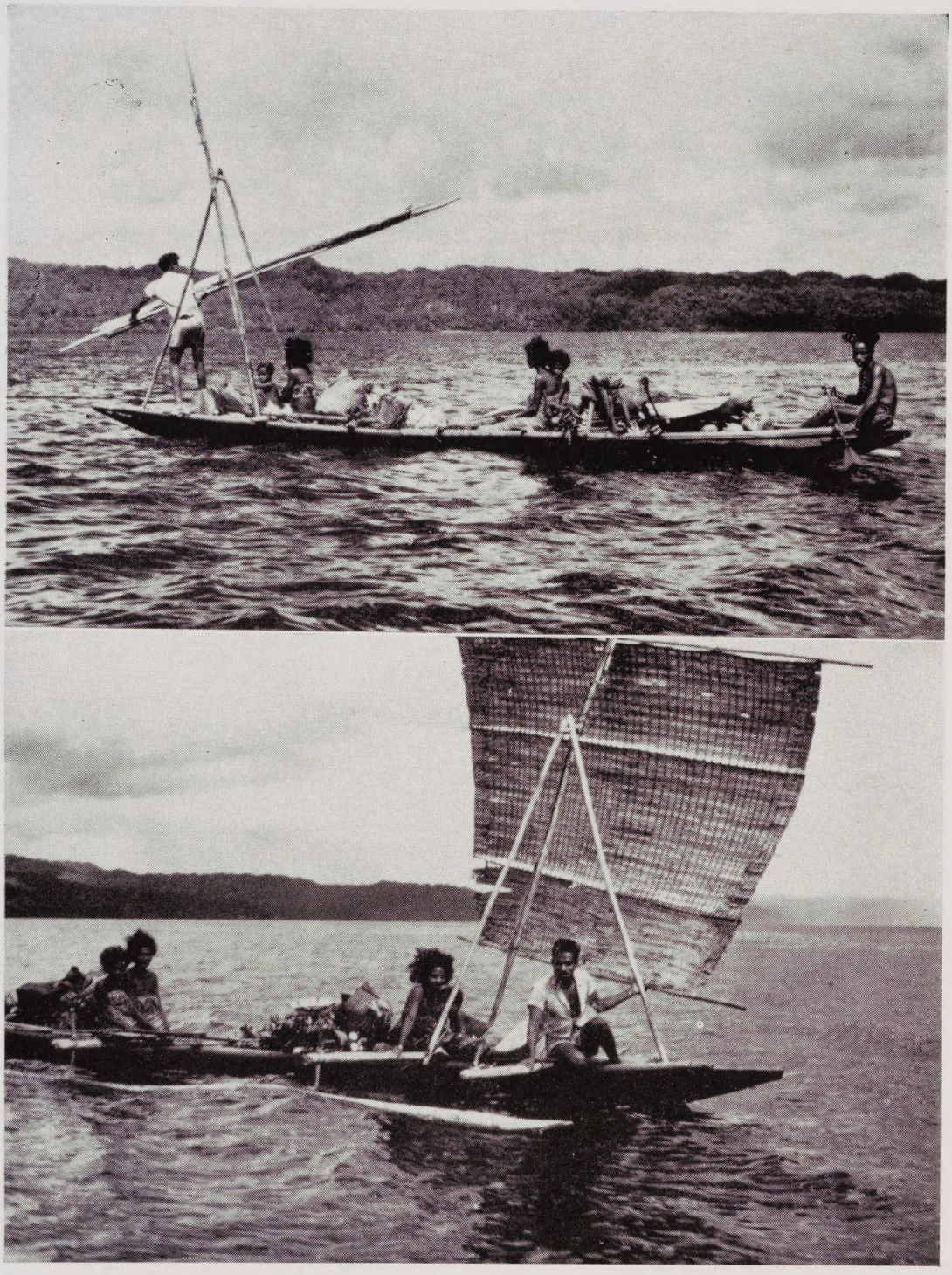
Other large canoes had more elaborate permanent shelters and it was evident that whole families lived on them for considerable periods. Pigs, fowls, dogs, parrots, opossums and even a Victoria Crowned Pigeon were observed aboard this type of craft. The pigs and the pigeon were housed in pyramid shaped crates made of thick bamboo crossed at the corners.

Most of the houses in the area are strongly constructed of stout hewn timber with thatched roofs, and they are built on piles over water in estuaries or shallow bays. Many of the houses had a "lean-to" annex at floor level where finishing work on even larger canoes was in progress. The rough hewing and hollowing out of the hull was done ashore and all the tools used were of home manufacture.

These people are quite expert metal workers and many of the homes possessed a forge of simple yet effective design. It consisted of a pair of hollow wooden cylinders of about four inches in diameter and about 30 inches in height, connected below by a "T"-shaped metal tube which delivered a continuous blast to the furnace. The circular pistons were of wood edged with feathers to give an air seal and the plungers were operated alternately by hand.

It was interesting to note that the blades of the adzes used in hollowing out the canoes were of hand wrought steel, yet they were still reminiscent of the old stone adze in shape and thickness. Even the manner of hafting was in some instances similar to that used for the original stone tool.

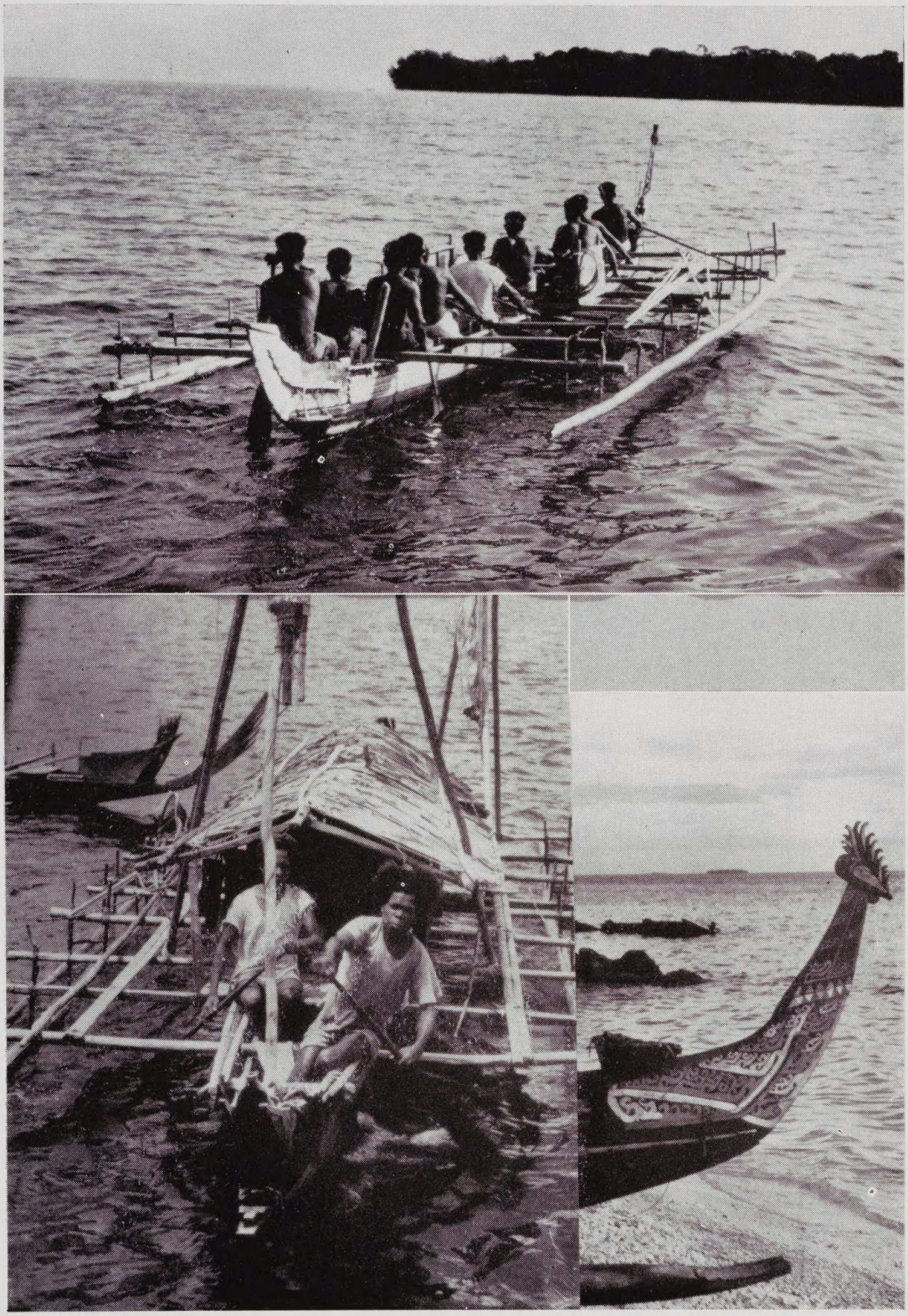
Plate 31 shows a characteristic fretwork style prow with pegged accessory ornaments, and Plate 32 the carved blade and handle of an ironwood ceremonial steer oar from the Ambai Group, Island of Japen. This was obtained from a headman on his inflexible terms of twenty shirts.



Miss Virginia Orr, Photos.

TYPE B CANOE.

Showing (above) tripod mast and awkward method of hoisting the sail; (below) showing the same canoe under sail. The sail carries no ropes and is merely held by hand. Wooi Bay, Japen Island.



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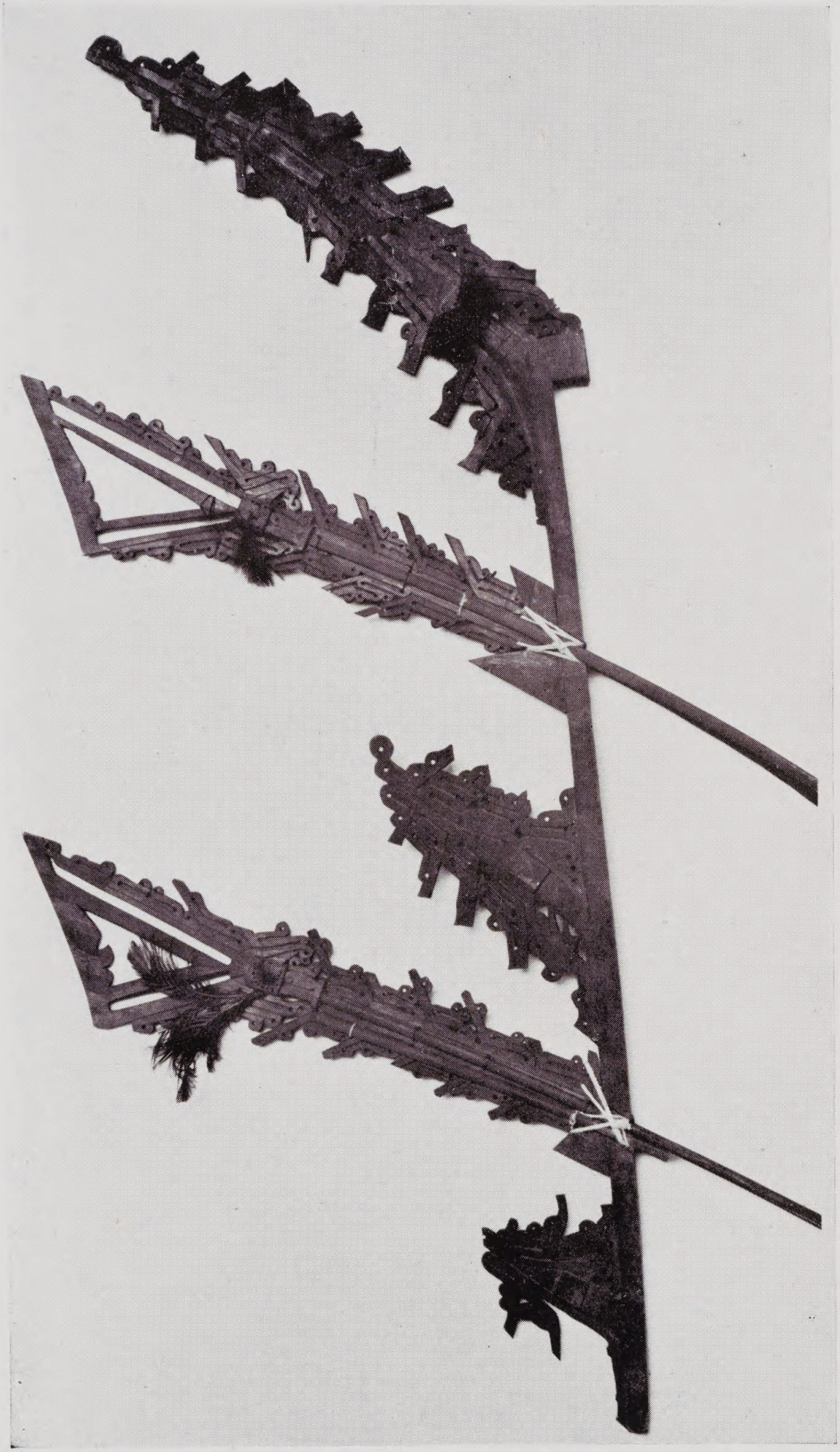
TYPE C CANOES.

1. Crocodile hunters at Roemwaken Island, Mios Aoeri Group, South West, Geelvink Bay. Note the four tiers of sago palm mid-rib wash-strakes. The thatched deck house had been already detached and erected ashore.
2. Showing (foreground) double outriggers, two tripod masts with furled sails and double bow-cover minus prow; (background) second canoe with double bow-cover and double prow, but minus pegged accessory ornaments. Ambai Group, Japen Island.
3. Canoe prow of unusual design with deeply incised but not fretted carving, picked out in colours. Biak Island.



Canoe prow with accessory pegged fretted ornaments. The dark tufts are cassowary feathers. Ambai Group, South Coast, Japen.

Ceremonial steer-oar of iron-wood. Blade (19 inches) and carved handle end, human figure motif (36 inches). The whole oar is 10 ft. 9½ inches in length and the carving on the handle is set at right angles to the blade. Ambai Group, South Coast, Japen.