

Prehistoric Polynesian Puzzle

The 'founding culture' of modern Polynesian societies was surprisingly complex 3,600 years ago. But where did it originate?

By BRUCE BOWER

In 1985, a team of archaeologists traveled to a small South Pacific island in search of the homeland of the prehistoric Lapita people, whose descendants first settled Hawaii and the rest of the Polynesian islands. Amid the muck and wet sand that now straddles a former shoreline of one of the Mussau Islands, the Lapita threw them for a loop.

What the investigators found was an extensively preserved record of the earliest known Lapita settlement, dating to about 1600 B.C. To their surprise, the remains were not those of a primitive "homeland" group, but of people whose culture was comparable to that of their counterparts more than a millennium later.

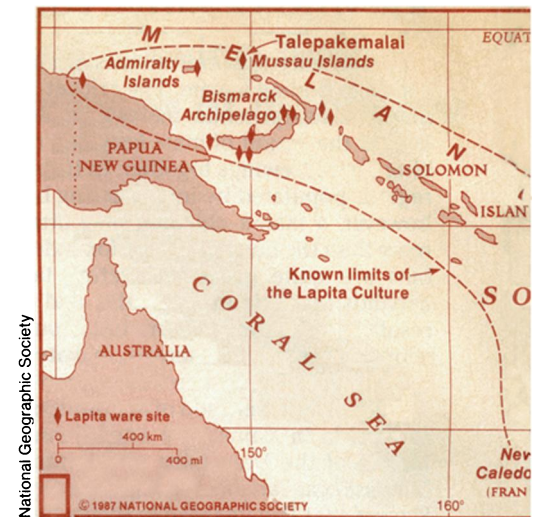
"It's an amazing site," says archaeologist and project director Patrick V. Kirch of the University of Washington in Seattle. "The pottery is the best and most sophisticated that we've yet obtained from any excavation of Lapita sites. The range of shell and bone tools and ornaments is well beyond anything we've found in 30 years of Lapita excavations."

As well as uncovering a cornucopia of

Lapita artifacts, the investigators came upon the remnants of a stilt house that once stood in the shallow water of a lagoon, reports Kirch in the summer *JOURNAL OF FIELD ARCHAEOLOGY*. More than 30 wooden posts jut out of the waterlogged sand and coral rubble, with larger posts in several clusters that appear to have supported a dwelling of some kind. Numerous household items have been recovered around the posts, including vegetable peelers and scrapers, obsidian tools and ceramic pottery sherds.

The site also yielded a 6-inch-high figurine, its stylized human features carved into what is probably a porpoise bone. "Nothing like this has been found before at a Lapita site," says Kirch. "There's no way to say what it meant or how it was used, but it's reminiscent of later bone sculpture in Polynesian cultures that often symbolized high-status figures such as chiefs."

For now, the impassive face of the bone figure symbolizes the continuing mystery surrounding the



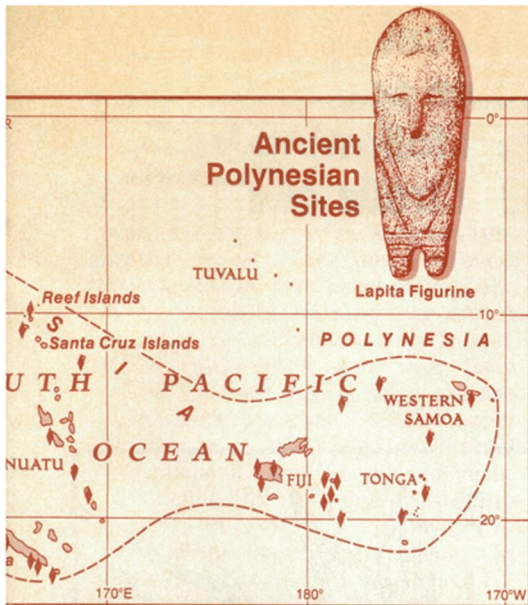
origins of the Lapita. In the first few decades of this century, there were suggestions that they migrated from India, the Americas and even from a sunken continent in the mid-Pacific. Thor Heyerdahl took his 1947 voyage on the balsa raft *Kon-Tiki* to show that South American Indians could have founded the Polynesian cultures.

Many archaeologists now hold that the Polynesians originated in the west toward Southeast Asia. This theory assumes that they sailed across expanses of uncharted ocean with no known navigation instruments against prevailing winds and currents. Nevertheless, it appears that the Lapita island-hopped throughout the South Pacific with surprising speed. Lapita sites range from the Bismarck Archipelago — which includes the Mussau Islands — and Papua New Guinea in the west to Fiji, Tonga and Samoa in the east, a distance of about 3,000 miles. Radiocarbon dates bracket the time span for their settlement of the scattered islands from about 1600 B.C. to 1200 B.C.

Pottery sherds uncovered at the Mussau Island excavations contain intricate dentate-stamped designs that characterize the Lapita culture.



Patrick V. Kirch



Map shows the eastward spread of the Lapita people, beginning in the area of New Guinea and the Bismark Archipelago. Bone figurine (inset) was found at the Talepakemalai site.

In the last several years, a number of investigators have argued that the most promising place to look for origins of the Lapita culture is the Bismark Archipelago. An international scientific investigation was launched in 1985 called the Lapita Homeland Project, in which 11 field teams, including Kirch's group, explored sites in the Bismark Archipelago that appeared promising.

Kirch and his co-workers excavated three sites on two of the Mussau Islands. The most important site, where the stilt house remains and figurine turned up, is called Talepakemalai ("under the malai tree"). Radiocarbon dates indicate that it was occupied from 1600 B.C. to 500 B.C.

The "cultural signature" that identifies Lapita settlements is a distinctive brand of decorated pottery. Ceramic cooking pots, bowls and dishes are laced with intricate horizontal bands and geometric designs. Decorations were applied either by direct incisions or with "dentate-stamps." A number of needle-like teeth apparently used in the stamps have been found, but an intact stamp has yet to be recovered.

The Mussau excavations have yielded more than 15,000 Lapita ceramic sherds so far. The artistic motifs on the pottery are much the same as Polynesian tattoo styles that occurred centuries later, says Kirch. Several ceramic fragments, he adds, contain dentate-stamped human faces.

More unexpected, however, was the wide range of nonceramic artifacts uncovered at the sites. Some of the material, such as obsidian

and chert flakes and stone that was shaped into cutting tools, is available only on other islands in the Bismark Archipelago and, according to Kirch, confirms previous evidence for long-distance trading by the Lapita. An abundant array of shell rings, beads and other ornaments at the Mussau sites may have been manufactured there for use as barter in the trading system. Shell "money" was a common form of exchange among many later Polynesian groups, says Kirch.

The Mussau Lapita, like their comrades who settled further west, ardently fished the surrounding reefs and lagoons. Thousands of fish bones and an assortment of sophisticated shell fishhooks were found at Talepakemalai and the two smaller sites.

Some researchers have proposed that the Lapita moved from island to island in search of new marine resources to exploit, scarcely bothering themselves with the land-based pursuit of agriculture. But the latest work at Talepakemalai has shot that theory out of the water, says Kirch. Last summer the field team dug near the remains of the stilt house and found seed cases of 24 species of domestic tropical tree crops, encompassing a variety of nuts and fruits. "This is the best evidence I know of for Lapita agriculture," notes Kirch.

Animal bones at the site also provide evidence that domestic animals such as pigs and chickens were present in small quantities.

The spectrum of Lapita cultural items at the Mussau sites, along with previously excavated deposits, is clearly linked to later South Pacific cultures and strengthens the Lapita's position as the founding culture of the entire region, says Kirch. Yet their origins remain elusive. "Lapita culture is full-blown at Talepakemalai," he explains. "This suggests that there was a sudden intrusion into the area."

Whether their arrival was rushed or relaxed, the Lapita were not the first people in that neck of the South Pacific. Another field team participating in the Lapita Homeland Project has excavated simple flaked and chopped tools on New Ireland, about 200 miles south of the Mussau Islands, that date to approximately 30,000 years ago. The tools bear no resemblance to Lapita artifacts.

The Mussau Island excavations, however, suggest to Kirch that the early rumblings of Lapita culture reverberate farther west. "I'd like to look on the north coast of New Guinea and even the southern Philippine Islands for earlier Lapita sites," he says. "This huge area is an archaeological unknown." □

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