Graves of the Pacific’s First Seafarers Revealed

Little is known about the Lapita peoples, the first settlers of the Western Pacific, other than their ubiquitous calling card: red pottery fragments with intricate designs. But in what’s being hailed as one of the most dramatic finds in years, researchers at the meeting offered a glimpse of the first-known early Lapita cemetery. “This is the closest we’re going to get to the first Polynesians,” says archaeologist Matthew Spriggs of Australia National University (ANU) in Canberra, a member of the excavation team.

The graves on Efate, in the Vanuatu Islands, are estimated to be 3000 years old. That’s around the time that the Lapita peoples began hopscotching across the Pacific from New Guinea’s Bismarck Archipelago, fanning out as far as Samoa and Tonga. The site reveals unknown facets of their burial customs, and DNA from the bones may offer clues to their origins. “The find has opened a new window on the Lapita people as a biological population as well as an archaeological culture,” says Lapita expert Patrick Kirch of the University of California, Berkeley.

Since the first Lapita shards came to light a half-century ago, more than 200 sites have been found, but skeletal remains are very rare. But the biggest surprise came when the team, led by Bedford, Spriggs, and Ralph Regenvanu of the Vanuatu National Museum, began excavating bones. Because so few Lapita burials had been found, the researchers assumed these were recent graves until paleoanatomy expert Hallie Buckley of the University of Otago in New Zealand confirmed the remains were Lapita. Every-where they dug, it seemed, was a skeleton. “It blew us away,” says Bedford.

In two seasons, they excavated 25 graves containing three dozen individuals.

All skeletons were headless, a feature of other Pacific cultures. In some graves, cone shell rings were placed in lieu of the skulls, indicating that the graves were reopened after burial and the heads ceremonially removed, Bedford says. (The rings are 3000 years old, according to radiocarbon dating.) The heads were reburied. In one grave, three skulls (see photo, above) were lined up on the chest of a male skeleton, whose grave the bulldozers missed by centimeters. His bones bear scars of advanced arthritis. “He must have been in a lot of pain and was clearly looked after,” says Spriggs.

The pots too are revelatory. Some are burial jars, by far the oldest in the region. The inner rim of one features four clay birds peering into the vessel. The vessels are similar in form to early “red-slip” pottery found in Taiwan and islands of Southeast Asia, bolstering the argument that Lapita peoples at least tarried in this region on their eastward migration. An article on Teouma is in press in Antiquity.

After excavations this summer, the team hopes to extract DNA from bones to compare with modern populations. In the meantime, Teouma has become the pride of Vanuatu, which has featured its Lapita heritage in a set of postage stamps.

When in Vietnam, Build Boats as the Romans Do

In December 2004, researchers drained a canal in northern Vietnam in search of ancient textiles from graves. They found that and a whole lot more. Protruding from the canal bank at Dong Xa was a 2000-year-old log boat that had been used as a coffin. After a closer look at the woodwork, archaeologists Peter Bellwood and Judith Cameron of Australia National University in Canberra and their colleagues were astounded to find that the method for fitting planks to hull matched that used by the Roman Emperor Caligula and his contemporaries in the 1st century C.E. That shipwright technique was believed to be unique to the Mediterranean, several thousand kilometers to the west.

“It’s very convincing,” says Lucy Blue, a maritime archaeologist at the University of Southampton, U.K. “They are absolutely correct in their links with comparable material in the Greco-Roman world.” It’s impossible to say, however, whether the boatmaking method is a case of technology transfer across vast distances or whether it arose independently in East Asia.

The Dong Xa boat yielded a trove of artifacts: a ramie burial shroud, a cord-marked pot next to the head of the corpse with a red lacquered cup inside, and a couple of Han Dynasty washu coins, minted from 118 B.C.E. to 220 C.E. But the big discovery was courtesy of a remarkably well-preserved hull. Along the gunwale of the 2-meter section are empty mortise and locking peg holes for attaching planks with rectangular fastenings called tenons. In this technique, planks are fitted together before a frame is added.
Java Man’s First Tools

About 1.7 million years ago, a leggy human ancestor, *Homo erectus*, began prowling the steamy swamps and uplands of Java. That much is known from the bones of more than 100 individuals dug up on the Indonesian island since 1891. But the culture of early “Java Man” has been a mystery: No artifacts older than 1 million years had been found—until now.

At the meeting, archaeologist Harry Widianto of the National Research Centre of Archaeology in Yogyakarta, Indonesia, wowed colleagues with slides showing stone tools found in sediments that he says were laid down 1.2 million years ago and could be as old as 1.6 million years. The find, at a famous hominid site called Sangiran in the Solo Basin of Central Java, “opens up a whole new window into the lifeways of Java Man,” says paleoanthropologist Russell L. Ciochon of the University of Iowa in Iowa City.

Although hominids apparently evolved in Africa, Indonesia is a Garden of Eden in its own right, with a wealth of *H. erectus* fossils. The startling discovery 2 years ago of “hobbits”—the diminutive *H. floresiensis* of Flores—added a controversial new hominid to the Indonesian menagerie.

In 1998, Widianto found stone flakes in the 800,000-year-old Grenzbank layer at Sangiran, whose well-plumbed sediments reach back 2 million years. Then in September 2004, his team struck gold in a layer dated by extrapolation from the rocks around it to 1.2 million years ago. Over 2 months, they unearthed 220 flakes—several centimeters long, primarily made of chalcedony, and ranging in color from beige to blood red—in a 3-by-3-meter section of sand deposited by an ancient river.

The find, not yet published, could be even more spectacular than Widianto realizes, says Ciochon. His team, which also works at Sangiran, has used ultraprecise argon-argon radiometric methods to date the volcanic strata overlying the levels excavated by Widianto to 1.58 million to 1.51 million years ago—making the flakes at least 1.6 million years old. If the flakes were undisturbed, Ciochon says, they would represent “some of the earliest evidence of the human manufacture of stone artifacts outside of Africa.” Their antiquity would match that of the oldest flakes found in China, at Majuangou, dated to 1.66 million years ago and also made of chert.

But not everyone is convinced. Although the chert flakes are abraded, possibly by water, a few limestone flakes are remarkably sharp. “The difference in preservation condition could indicate that we are dealing with secondary deposition,” or flakes of different ages mixed together, cautions archaeologist Susan Keates of Oxford University in the U.K., who was at the talk. Others disagree. “I feel their excavation is reliable, because the deposits are thick and undisturbed,” says Hisao Baba, curator of anthropology at Japan’s National Science Museum and the University of Tokyo, whose team has also uncovered *H. erectus* fossils and flakes on Java.

The Sangiran flakes “are fundamentally different”—smaller—than the stone choppers made by *H. erectus* in Africa, says Ciochon. The evidence, he argues, suggests that Java Man had to range far for small deposits of good flint or chert and so created small, finely worked tools in contrast to the larger tools found in Africa. Considering the scarcity of raw materials on Java, Ciochon says, it’s “a remarkably fine technology.”

Widianto will resume excavations in June. “I will be going deeper and deeper, older and older,” he promises.

—R.S.
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