The Forgotten People of Amazonia

In 1542, when the Spanish conquistador Francisco de Orellana and his crew of 60 became the first Europeans to travel the 6000-km length of the Amazon River, they reported that the lower third of the river was full of "very large settlements," with each village no more than "a crossbow shot" from the next. All along the way, according to the chronicle of the expedition, the riverbanks "bristled" with armed warriors. Few believed Orellana at the time, and indeed, later explorers saw no sign of large indigenous cities. But this absence, researchers have observed, was itself a puzzle. With its plethora of fruit and fish, the Amazon is an enormously rich environment. Why wouldn't the people who created complex societies in the arid heights of Peru have filled it up?

An answer was provided in the 1950s by Smithsonian researcher Betty Meggers and her husband, the late Clifford Evans. Basing their conclusions on their archaeological studies at Marajó, a huge island at the mouth of the Amazon, Meggers and Evans concluded that Amazonia is a "counterfeit paradise"—a region with such intractably poor soils that it cannot long provide the agricultural base they argued was necessary to support materially advanced cultures.

Ancient abundance. Archaeologist Eduardo Góes Neves examines abundant ceramic fragments near Iranduba, Brazil.

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The arguments by Meggers and Evans cast such a large shadow that for decades after their publication few archaeologists explored the main Amazon. "Why would you look when you know ahead of time that you're going to find nothing?" asks Eduardo Góes Neves, an archaeologist at the University of São Paulo. "So for almost an entire generation almost nobody in archaeology came to even the most obvious places in the basin." To Neves and a few other young archaeologists, the "obvious places" are deposits of *terra preta*: the Amazonian "black earth" that soil scientists believe was created by precontact indigenous settlements (see main text).

Intrigued by accounts of terra preta, Michael Heckenberger, now at the University of Florida, Gainesville, and James B. Petersen, now at the University of Vermont, Burlington, decided in 1994 to explore the central Amazon for possible archaeological investigation. The first terra preta deposit that they investigated, on a high riverbank near the hamlet of Açutuba, was thick with artifacts. There were so many broken pieces of ceramic in the 3-km-long site, Petersen said, "that it was a nuisance for farming."

Excavating at Açutuba in 1995, 1997, and 1999, Heckenberger and Petersen were joined by Neves and many of his students from São Paulo. Robert N. Bartone, an archaeologist at the University of Maine, Farmington, later joined the team, which calls itself the Central Amazon Project. Ultimately they excavated four sites intensively and explored another 30, all near the junction of the Amazon and the Rio Negro. On the evidence of carbon-dated ceramics, they argue that Açutuba was inhabited in two waves, from about 360 B.C., when terra preta formation began, to as late as A.D. 1440. "We haven't finished working, but there seems to be a central plaza and some defensive ditches there," Petersen says. The plaza was at least 450 m long; the ditch, more than 100 m long and up to 6 m wide and 2 m deep. His conclusion: "Açutuba was a big, permanent settlement."

The scale of Amazonian settlement, the team members believe, is demonstrated by their dig at Hatahara, a farm near the riverside village of Iranduba, about 40 km southeast of Açutuba. There they partially excavated the largest of 10 low, humanmade mounds dating from about A.D. 900. They found a burial urn and its occupant in the center of the mound and eight more bodies 10 meters away, all nine apparently interred at the same time. Believing it unlikely that the group's first small dig hit the only concentration of human remains, Neves argues that the entire mound is likely to be full of burials—hundreds of them. "That suggests thousands of people lived here," he says.

Another indication of the site's population, Neves notes, is the huge number of ceramic fragments in the mound, many of which seem to have been deliberately smashed to build up its surface. According to a "rough, back of the envelope-type" calculation by Petersen, who specializes in ceramics, this single mound might contain more than 40 million potsherds. "Think of the industry required to produce that much pottery," Neves says. "Then they just smash it. Look at the way they piled up this good soil—it's all wasteful behavior. I don't think scarcity was a problem here."

After the Central Amazon Project published its initial findings, Meggers sharply attacked them last fall in the journal *Latin American Antiquity*. Charging that the team members had ignored data from long-term, Smithsonian-backed surveys, she argued that they had confused multiple small reoccupations of the same site with continuous large occupation. The Central Amazon Project replied that the surveys, many of which remain unpublished, mainly involved "brief episodes of fieldwork at small samples … along vast stretches of major rivers," not the detailed work they had performed.

Even larger than the terra preta site at Açutuba is a deposit on a long bluff overlooking the mouth of the Tapajós, a lower Amazon tributary near the present-day town of Santarém. First mapped in the 1960s by Wim Sombroek, former director of the International Soil Reference and Information Center in Wageningen, the Netherlands, the zone of terra preta is more than 7 km long and 1 km wide, suggesting widespread human habitation. Indeed, when Orellana passed by the Tapajós, he reported that so many people poured down from the bluffs to meet him that the expedition turned tail and fled.

The plateau has never been carefully excavated, but observations by geographers William I. Woods of Southern Illinois University, Edwardsville, and Joseph McCann of the New School University in New York City indicate that most of the Tapajós site is filled with ceramics—much like Açutuba, but even larger. If the agriculture practiced there was roughly as intensive as in the most complex cultures in precontact North America, Woods estimates, "you'd be talking about 200,000 to 400,000 people a few centuries before the Spanish came"—a city about the same size as Tenochtitlán, the Aztec capital, which then was probably the biggest city in the world. "Think of it," says Woods, "a population on the same order as Tenochtitlán, at about the same time, here at the mouth of a river nobody has even heard of."

–C.C.M.