Indians dance in a village in the Xingu National Park

ANTHROPOLOGY

Amazonia
lost and found

Scientists discover that the first inhabitants established civilizations that were organized and cwomplex

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Perhaps this is a perfect example of a cruel irony: the criminal and reckless deforestation of the Amazon Forest has made possible one of the most important archeological discoveries ever in Brazil. Based on satellite images and field research studies, Brazilian and Finnish scientists have discovered and mapped out geoglyphs, up to 350 meter-wide gigantic geometric designs made by the first organized group of human beings that inhabited the region approximately 13 thousand years ago. "Perhaps we'd still be unaware of their existence, if deforestation hadn't taken place", acknowledges professor Denise Pahl Schaan, vice-coordinator of the Graduate Program in Social Sciences, coordinator of the Specialization Course in Archeology at the Federal University of Acre (Ufac) and president of the Brazilian Archeology Society. Moreover, Denise is head of the Amazonia Geoglyphs research group, financed by CNPq, the National Council for Scientific and Technological Development, together with Miriam Bueno, Ufac geographer.

The investigation will probably significantly change what had already been studied about the occupation of the Amazon region. To begin with, it puts an end to the understanding that the western portion of this region is a vast area free from complex human culture, as previously believed. The enigmatic drawings on the ground left behind by organized societies show that they lived and harvested in the area. These signs may lead to important discoveries at the beginning of the twenty first century, when no one believed the news on this matter. "The presence of geoglyphs in Acre puts an end to the paradigm that complex societies in Amazonia were only developed along the flooded forests of the main rivers", observes Alceu Ranzi, of (History and Geography Institute of Acre and a member of the team headed by Ondemar Dias, of the Federal University of Rio de Janeiro (UFRJ), who, in 1977, discovered the first traces of these signs.

Ranzi explains that the geoglyphs are essentially found in areas between the rivers – the highlands that divide the rivers Acre, Iquiri and Abunã. In other words, they are located on terra firma. Dias's team discovery was only officially communicated to the scientific community in 1988, without any repercussion, in an article published by anthropologist Eliana de Carvalho. In the past nine years, however, work carried out in the region has obtained international results. Currently, the team of anthropologists lead by Denise

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Revealing excavations: researchers find new evidence

is regionally surveying the geoglyphs. "When one considers the abundance of geometric shapes, circles, octagons and perfect angles, one notices the complexity behind the design of these gigantic geoglyphs", adds professor Ranzi.

Project Amazonia Geoglyphs was established in 2007. In 2006, a project to study five geoglyphs deemed of great importance was created, together with Finish researchers. According to Denise Pahl Schaan, information provided by travelers of the past centuries mentioned great societies living along the Amazon river and its most important tributaries. Likewise, the first archeological researches emphasized flooded forest areas. The remaining native Indian populations from the colonial era migrated to the areas between rivers, and thus were found there by the ethnographers, who described their lifestyle.

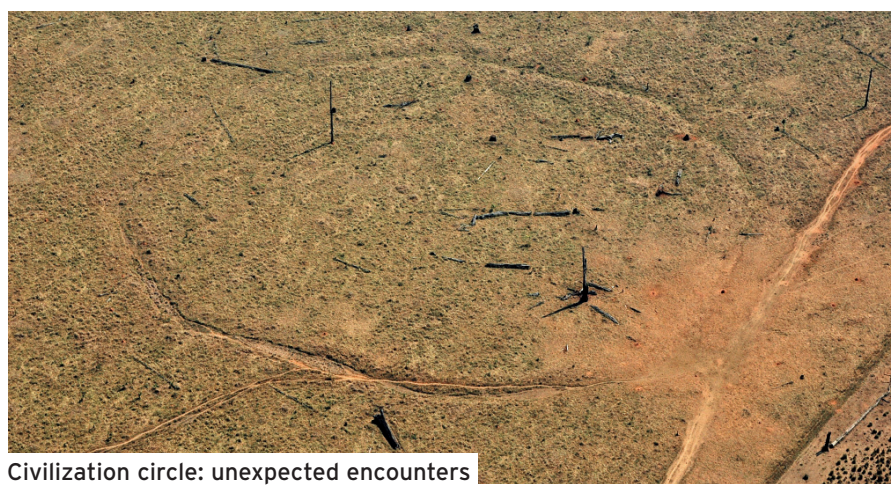
In the 1950s, some researchers suggested that the native Indian lifestyle (small villages, migration from villages every five years, on average) known by the ethnographers reflected the typical model of life on terra firma, at all times. "The geoglyphs show that this concept is incorrect. The gigantic designs indicate that there was organization of the workforce and planning, a social hierarchy and possibly armed conflicts, since the excavated trenches may have been built for defense purposes." The researcher highlights that its geometry is perfect and further mentions their symbolic concern. "The cultural development stage of these peoples would be of the so-called cacicados, i.e., regional societies with social stratification."

However, there is no information on when and why these peoples disappeared. "We are currently surveying the sites in the entire State of Acre and adjacent areas, carrying out excavations in some and collecting soil samples and vegetation material in others for dating purposes, so that we can discover the vegetation cover at the time of the design. Thus it will be possible to learn whether the forest was cut down to enable the design of the geoglyphs or whether it was an open area, a savannah."

When compared to the native Indian populations living in the Amazon region today, these ancient peoples were far greater in number with a more complex social organization. According to Denise, the geoglyphs mean there was a considerable population living on terra firma. The structures made of earth indicate workforce mobilization and planning, which only exist in complex societies. "The considerable extension of the distribution of geoglyphs in an area of over 250 km indicates a standardization of monumental cultural practices across vast regions, which only takes place in complex societies", she adds. "It is important to recall that the landscape transformations made with the geoglyphs only exist in complex societies."

Among the researchers that were part of Ondemar Dias's team was Franklin Levy, who has since completed his PhD in anthropology. By e-mail, the Finnish researcher recalls that after the discovery of the first land structure in Acre, in 1977, during the next few years he took over the research in the eastern front, from the City of Cruzeiro do Sul to the frontier with Peru. "Land structures have not been located there". During this time, says Levy, there was no knowledge about the western portion of the Amazon region. "Sparse data and fortuitous findings did not constitute organized archeological knowledge. Thus, this gap could be filled by people's imagination and, occasionally, as an extension of modern ethnologic knowledge."

According to the anthropologist, the preconceived observation of modern cultures based on the idea of linear evolution, and on the belief that each people reach easily observable evolutionary standards – in other words, material progress – resulted both in distortions in the assessment and interpretation by other thinkers and theorists. "However, this confusion is gradually being clarified, providing ground for a



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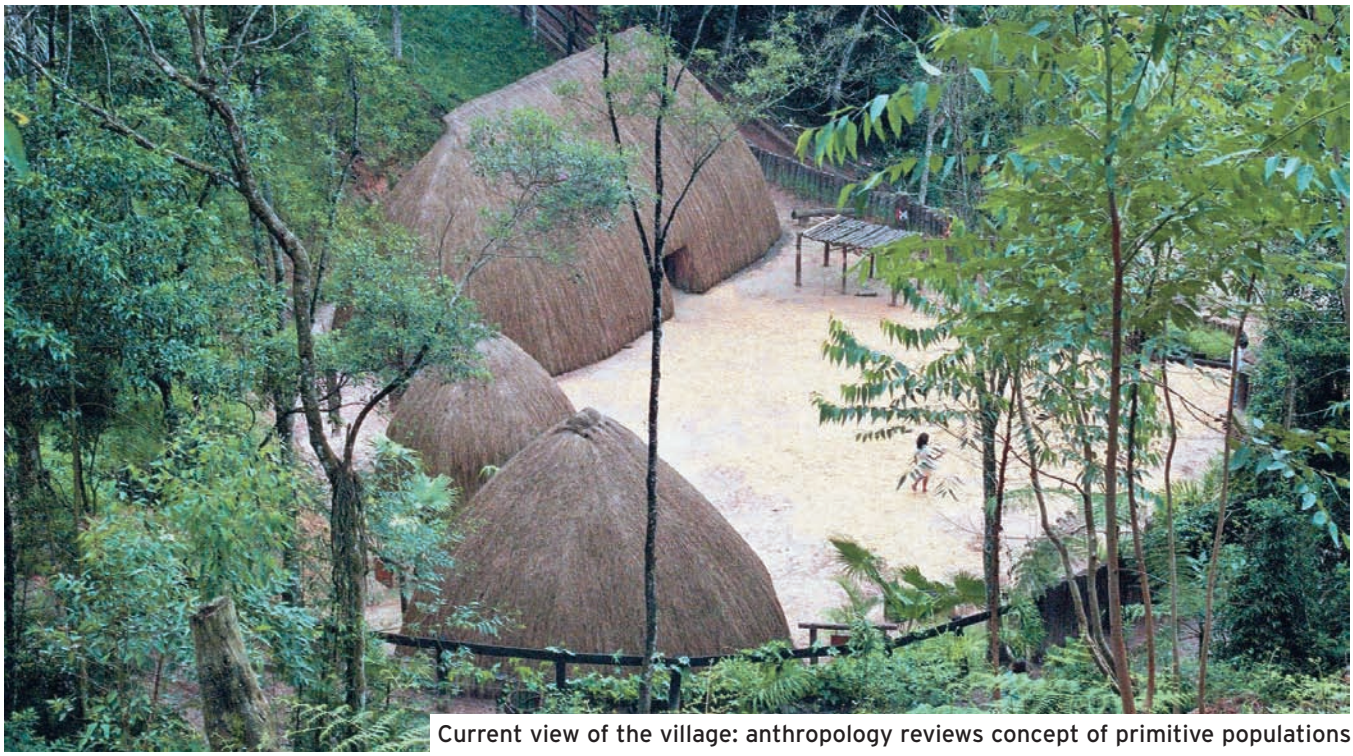
Civilization circle: unexpected encounters



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Current view of the village: anthropology reviews concept of primitive populations

new viewpoint, which speaks of complex cultures with organization, leadership and regional societies with social stratification. The archeologist's role is to understand how these phenomena were understood internally, without trying to explain them based on the size of their undertakings."

Levy firmly states that based on archeological evidence, a society remained within its geoglyphs, though with certain migration periods, for over 2,500 years. The society thus had time to develop such a complex culture that it will be impossible to discover all of its particular features. "These people dominated the environment with their several technical resources and overcame climatic vicissitudes, maintaining production throughout all seasons of the year." They also inhabited the savannas in the higher lands between the rivers. Because the waters kept them from inhabiting and harvesting, they excavated large ditches around the area that was to be improved, lowering the insurgent water table and thus releasing the roots from the water. Thus, they managed to keep the floor of their houses drier during the rainy season.

Still according to Levy, when the rains ceased and it was necessary to burn the stubble, the ditches became safe areas and preserved the domestic environment. They also used fire to contain forest advancement. "They diversified the economy with resources from the flooded lands which, once uncovered, at the end of the rainy season, supplied everything that the highlands lacked." As proven by the archeological remains, they would remain there for short periods of time. "The perfect awareness of the climate and environmental conditions, and their ability to explore productively even the forms of interaction between the many peoples that composed this culture, show a baffling level of evolution to the modern eye", evaluates Levy. "We attribute intent and inventiveness to these survival technologies, eliminating casualty in the process and in the intentions."

Finnish researcher Martti Pärssinen, scientific director of the project Man and Nature in Western Amazonian History, financed by the University of Helsinki, mentions that Alceu Ranzi is the 'soul' of the geoglyphs research for he was responsible for mobilizing all the researchers to establish a research group. He lists the main objectives of the project he coordinates, in terms of importance: (1) to rebuild the history, culture, economy, ethnicity and demographic distribution of the peoples that inhabited the region located on the border between Brazil and Bolivia before and after the arrival of the Europeans; (2) to provide the authorities of both countries with information that can help them protect the archeological sites, in addition to a strict and sustainable control of tourism in the area.

In 2002, Pärssinen was invited by Ranzi to see the geoglyphs in Acre, when he was studying an Inca fortification near the City of Riberalta, Bolivia, 200km away from the City of Rio Branco, Acre. "Until the mid-twentieth century, the pre-European Amazonian peoples were in general interpreted by a contemporary ethnographic perspective. The Amazonian societies were essentially seen as primitive groups living in small hostile groups and without a complex social organization." He cites the writings of Julian H. Steward, in 1948: "The tropical forest culture was adapted in an extremely hot, humid and densely covered area. Hunting, fishing and deforestation resulted in a low population density and small communities". Evidence nowadays indicates otherwise. ■