

Abstract #: 3493

DARK EARTHS PLANT MANAGEMENT AND THE REGIONAL DEVELOPMENT OF TAPAJÓ CULTURE IN THE LOWER AMAZON

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The highly fertile Amazonian Dark Earths (ADE) results from landscape transformations found in association with archaeological sites throughout Amazonia. In the Santarem region (Lower Amazon), ADEs are mainly found in ancient Tapajó settlements (AD 1000-1600), though observed in some older occupations. Our paper brings together results from different lines of evidence (phytoliths, geochemistry, micro-charcoal, and archaeology) to address landscape and social changings following the regional organization of the Tapajó culture. The data stems from three ADE sites sampled on terrestrial cores, excavation profiles, and cultural features such as house floors, fire pits, hearths, caches and refuse pits. Phytolith revealed an overall increase in plant foods, consisting of food crops and edible native species concomitant to a shaded vegetation cover. Additionally, inter-site comparison indicated a gradient of vegetation change correlated to the formation of ADEs, varying according to site size (population) and length of occupation. Microcharcoal (<125µm) showed a sharp increase throughout the ADEs layers on the studied sites indicating intense charcoal input resulting in soil amelioration confirmed by the geochemical data. Altogether, these data suggest a long-term polyculture agroforestry practice, including crop cultivation, management of edible native species, and soil enrichment beginning before the Tapajó advent and intensified by them. Therefore, regional socio-cultural and landscape transformations during the Late Holocene connect to traditional ecological knowledge and ancient subsistence practices, which applied controlled fire as a tool for shaping their surrounding environment.

Keywords

Archaeobotany, Amazonian Dark Earths, Phytoliths, Plant management, Tapajó culture, Lower Amazon

Note/comment