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Ancient Maya Environmental Adaptations and Impacts: The Paleocology of Laguna Tamarindito, Petén, Guatemala

Research Year: 1995

Culture: Maya

Chronology: Late Pre-Classic to Late Classic

Location: Petén, Guatemala

Site: Laguna Tamarindito

This project addressed issues of past human-environment interactions through a research agenda which recovered complimentary archaeological and paleoenvironmental data. **Laguna Tamarindito** is a small lake located in the southwestern portion of the **Petén** rainforest of Guatemala. In 1991, a sediment core was taken from the lake as part of a larger program of research examining the history of human-environment interactions in the Petexbatún region.

In 1995, **FAMSI** funds were used to recover and analyze two additional cores from the lake. We have employed a conjunctive analytic approach in interpreting the cores, including archaeological survey of the lake's watershed, physical and chemical analysis of sediments, palynology, and molluscan ecology.

Our analysis reveals substantial paleoecological information about the past 10,000 years in this region. Study of the lake sediments, pollen, and gastropod populations indicates variation in regional climate, including two periods of significant drying.

Changes in the rate of sedimentation in the lake can be related to the occupation of the region by Maya peoples beginning sometime between 2,000 and 1,000 years B.C. Sedimentation during the Late Classic (A.D. 600-800) was slowed by a system of soil erosion controls. Palynological analysis indicate that Holocene period changes in the region's vegetation were roughly similar to the paleoecological record from other parts of the Petén, but with some significant differences.

A pattern of human disturbance that differs somewhat from other parts of the Petén is also indicated by the pollen record. Significantly, many major high forest species show reduction during both the Late Preclassic and Late Classic periods, but are present in greater numbers during the intervening Early Classic corresponding to an apparent concentration or reduction in human population. A

great diversity of economic tree species are indicated for the time of Maya occupation.

Palynological analyses were done by David Rue, Alfred Traverse, and John Jones.

Gastropods were examined by Alan Covich.

Sediments were analyzed by Timothy Beach and Nicholas Dunning.

Submitted 01/01/1996 by:
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