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THE ARCHAEOLOGICAL COMPLEX OF THE RIO DO PEIXE VALLEY: FROM THE FLOW OF LITHIC DISPERSION TO THE IDENTIFICATION OF NEOLITHIC ENGINEERING (1975-1981)

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Abstract: This article presents the results of ethno-archaeological investigations conducted by SIFETE between 1975 and 1981 in eastern São Paulo. The research was based on an ascending prospecting methodology, tracking the dispersion of lithic artifacts from river deposition zones in Itapira, São Paulo, to the production center at the headwaters of the Rio do Peixe in Socorro, São Paulo. Twenty-eight pieces were cataloged, evidencing a technological duality between flint knapping (workshop industry) and the polishing of intrusive rocks. The identification of Neolithic engineering structures—including a circular stone furnace and retaining walls—associated with the vast waste from cutting in Socorro confirms the existence of a structured and permanent settlement. The study also distinguishes the terrestrial hunting corridors of Aguaí-SP from the river dynamics, consolidating a model of systemic territorial occupation for the Gê linguistic groups in the region.

Keywords: Archaeology of Eastern São Paulo; Rio do Peixe; Lithic Industry; Neolithic Engineering; SIFETE.

Introduction

The archaeology of eastern São Paulo, specifically in the region between the Mantiqueira Mountains and the peripheral depression, presents a complex pre-colonial occupation scenario that has yet to be explored in long-term studies. This article presents the results of investigations conducted by SIFETE (Society for the Investigation of Terrestrial and Extraterrestrial Phenomena), under **MEC Official Letter No. 003235/75**, between 1975 and 1981. The main objective is to demonstrate the existence of an integrated territorial occu-

pation system, where the course of the Rio do Peixe acted as an axis of technical dispersion from an industrial production center in Socorro, São Paulo.

Research Methodology: Fluvial-Spatial Deduction

Unlike random prospecting, this research used a **spatial archaeology** model. The team identified lithic artifacts in secondary deposition contexts (ebb tides) in Itapira, São Paulo. Macroscopic analysis of these pieces revealed a degree of marginal rounding compatible with prolonged water transport.

Based on this evidence, a search vector was established upstream. The methodology consisted of traversing the banks and terraces of the Rio do Peixe, identifying the density of remains for each kilometer advanced. The success of this strategy was confirmed when, upon reaching the headwaters in Socorro, the nature of the findings shifted from finished objects to a scenario of **primary production**, characterized by extraction centers and flaking byproducts.

Analysis of Findings and Material Culture

The collection of 28 recovered pieces comprises a technological inventory that allows us to infer the daily activities and diet of the group studied.

The Socorro Lithic Workshop (Flintknapping Industry)

The main evidence of the industrial character of Socorro was the discovery of workshop sites. Arrowheads made of flint

and hyaline quartz were recovered, showing bifacial retouching and marginal pressure.



Figure 1: Flint industry: arrowheads produced in Socorro, São Paulo.

(Source: SIFETE, 1978).

- **Technical Waste:** The presence of thousands of micro-flakes and percussion bulbs in situ proves that manufacturing took place on site. Neolithic craftsmen selected flint cores for their purity and predictable fracture to create high-precision hunting instruments.

Abrasion and Polishing Tools

The polished pieces found in the dispersion area (Itapira) consist of double-edged axes and hand percussion tools. The use of intrusive rocks (granite and diabase) indicates knowledge of mineral hardness. The technical drawings and photos (Figures 2 to 9) show that polishing was not only functional but also sought ergonomic balance.

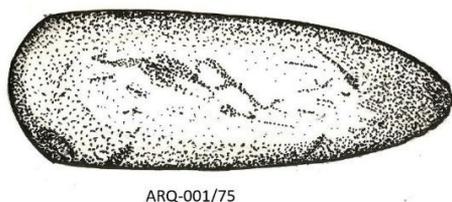


Figure 2: Technical drawing of polished axe ARQ-001/75.

(Source: SIFETE Collection, 1975).



Figure 3: Photo of polished axe ARQ-001/75

(Source: SIFETE Collection, 1975).

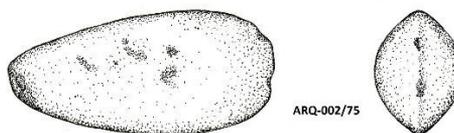


Figure 4: Technical drawing of polished axe ARQ-002/75

(Source: SIFETE Collection, 1975)

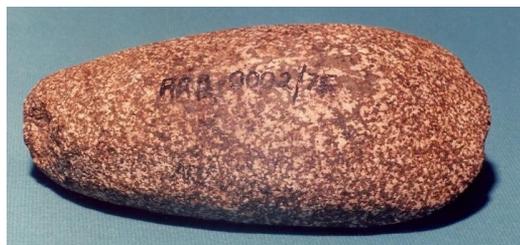


Figure 5: ARQ-002/75 polished axe

(Source: SIFETE Collection, 1975)

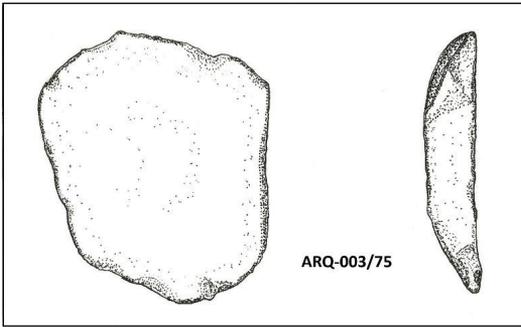


Figure 6: Technical drawing of polishing stone ARQ-003/75

(Source: SIFETE Collection, 1975)



Figure 7: Photo of polishing stone ARQ-003/75

(Source: SIFETE Collection, 1975)

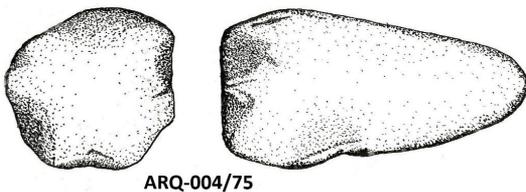


Figure 8: Technical drawing of seed grinder ARQ-004/75

(Source: SIFETE Collection, 1975)

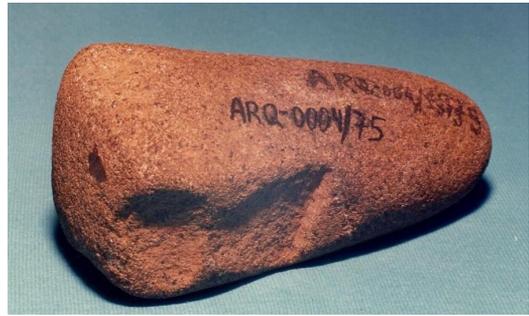


Figure 9: ARQ-004/75 seed grinder

(Source: SIFETE Collection, 1975)

Neolithic Engineering and Human Settlement

The XV Expedition (1981) represented a milestone by locating permanent engineering structures in Socorro-SP.

The Circular Stone Furnace

Located in a protected area of dense forest, the 1.25 m diameter structure was built with medium-sized stones, selected for their resistance to thermal shock. The arrangement of the stones suggests a heat retention system for processing organic matter, producing ceramics, or hardening wooden tips with heat. The soot found encrusted on the base stones indicates that the fire was kept under control for prolonged periods, something characteristic of sedentary settlements.



Figure 10: Primitive furnace structure in Socorro/SP.

(Source: SIFETE collection, 1981).



Figure 11: Part of a polished stone axe ARQ-006/77

(Source: SIFETE Collection, 1977)

Retaining Walls and Land Management

Stone alignments were identified that formed small walls up to 1.50 m high. This engineering indicates a concern with rainwater drainage and the protection of residential areas against erosion of the mountain slopes, evidencing a constructive intelligence focused on the site's sustainability.

Discussion: The Unity of the Territory and the Aguaí Corridor

The research showed that the occupation of Aguaí-SP was **logistical and not residential**. While Socorro was the production center (factory) and Itapira the place of use/deposition, Aguaí functioned as a passageway for hunting.

- **Water Independence:** The remains of Aguaí are not related to the ebb tide of the Rio do Peixe, which proves that the groups traveled by seasonal land routes to access different fauna niches.

- **Systematization:** This proves that the group had a mental map of the territory, using the river for transportation and land routes for strategic subsistence.

Conclusion

The research cycle (1975-1981) reported here confirms that the Rio do Peixe Valley was the scene of sophisticated cultural development. The integration between the flint industry in Socorro, the technical dispersion to Itapira, and the hunting routes in Aguaí defines a model of systemic territorial occupation. The uniqueness of the engineering structures (ovens and walls) and the vast disposal industry found at the headwaters elevate the status of this site to one of the most important records of the Gê trunk in the interior of São Paulo.

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