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## AMAZON ARCHEOLOGY — A CENTENNIAL APPRAISAL

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Eighteen years ago Dr. Meggers and I introduced modern scientific archeological techniques to Amazon archeology by working in the Territory of Amapá, and on the Islands of Marajó, Mexiana, and Caviana. We were advanced graduate students from Columbia University, New York working on research problems for our Doctor of Philosophy dissertations. The research was conducted under the auspices of the Museu Nacional, Rio de Janeiro and in collaboration with the Museu Paraense "Emílio Goeldi" in Belem, with the financial support of the Wenner-Gren Foundation for Anthropological Research (then known as the Viking Fund, Inc.) of New York and a William Bayard Cutting Fellowship of Columbia University. Up until 1948, the archeology of the mouth of the Amazon was known from descriptions by explorers, travelers, journalists, ethnologists or scientists from other fields. By applying what at that time were

relatively new methods — quantitative ceramic analysis, seriation, settlement pattern and the concept of environmental limitation — we were able to verify some of the interpretations of our predecessors and to disprove others. We were also able to propose a reconstruction of the prehistory of the area from the first arrival of pottery making groups to European times.

It is sad to report that in 1966 the Amazon basin is almost as devoid of scientific archeology as it was 18 years ago and I am at a loss to explain why this vast, interesting region has frightened off or failed to attract either Brazilian or foreign scientists for basic archeological research. Perhaps no other area as large, stretching almost the full width of a continent, has been so badly neglected by archeologists as the Amazon Basin. It is my sincere hope that when the 200 hundredth anniversary of the founding of the Museu Paraense "Emilio Goeldi", is celebrated in

2066 AD, the archeological picture will be totally different from what it is today. However, I am proud to report that during these first 100 years, the Museu Paraense "Emilio Goeldi" has been a leader in sponsoring and directing archeological research in the Amazon, sharing the honors at times with another Brazilian organization, the Museu Nacional.

In order to give the proper perspective to the centennial appraisal of Amazon Archeology, this paper will be divided into two sections: The Past and Present, and The Future. The first section will outline briefly the earliest and most significant work, not making any attempt to be all inclusive or to mention everyone who dug, collected or wrote a few words about the archeology of the Amazon, and then close with the last two decades of work up to the present day. The last section will suggest problems to be solved by future archeological field work in the Amazon drainage on the basis of what little is known of the area, the ecological considerations, the possible affiliations with cultures in adjoining areas, and probable migration routes.

#### *The Past and Present*

The first serious attempt to pull together with descriptions the archeological artifacts that had been

collected from various sites along the Amazon and its tributaries and that had found their way into various museum collections in Brazil was JOÃO BARBOSA RODRIGUES' *Antiguidades do Amazonas*, with Volume I published in 1879 and Volume II in 1892. The same author published various books on the ethnology and exploration of the Amazon and its tributaries between 1872 — 1899 in which he mentioned archeological sites. He also gave good descriptions of geography, environment, the village sites of the Indians, the navigation conditions of the rivers, as well as other ethnographic information. Some of this information is very useful and BARBOSA RODRIGUES might be called the forerunner of integrated anthropological-ecological interpretations of the Amazon drainage even though he was not aware of the approach. No other general summaries were written until in 1930 two publications appeared in French. ERLAND NORDENSKIÖLD summarized the archeology of the Amazon Basin as a whole, while ALFRED METRAUX made a short contribution on the Upper Amazon. No other publication embraced Amazon archeology as a whole until BETTY J. MEGGERS published in 1948 for the *Handbook of South American Indians — Volume 3: The Tropical Forest Indians* a short summary article.

Another early figure of importance, who was one of the men most responsible for founding a society of intellectuals in Belem and assembling collections from the Amazon under the name of Museu Paraense in 1867, was also prominent in writing on Amazon archeology. He is the naturalist, DOMINGO SOARES FERREIRA PENNA, who in the service of the Museu Nacional of Rio de Janeiro conducted scientific collecting trips in the Amazon. He was the first to examine scientifically the mounds of Marajó when he visited Camutins in 1870. He also called to the attention of the geologist C. F. HARTT the fact that Indian artifacts came from the mounds of Marajó and specifically mentioned to him the importance of Pacoval Mound on Lago Arari. In 1871, FERREIRA PENNA visited and excavated in Pacoval confirming the stratigraphy that had been observed earlier the same year by the naturalist J. B. STEERE of the University of Michigan, Ann Arbor during his excavations. FERREIRA PENNA wrote specifically on the archeology of Marajó Island in 1875 and 1885. He made important contributions to the archeology of the Amazon when he visited and excavated sites on the Rio Maracá in Brazilian Guyana in 1872 in order to collect anthropomorphic and zoomorphic burial urns for the Museu Nacional. Later he

published illustrations and detailed descriptions of them in 1879. Other publications of his are interesting and useful accounts of the general history of European contact in the Amazon, the history of the formation of the Museu and of early visitors and contributors to museum collections.

1870 is an important date in the history of Marajó archeology. Ever since that date Marajó has been the classic place for both scientific and unscientific archeology in Brazil because of the prominent artificial earth mounds that contain beautifully painted anthropomorphic burial urns. The first excavations on Marajó began with FERREIRA PENNA and STEERE, in 1871, mentioned in the previous paragraph, but also in the same year the area began to receive attention from geologists working in the region. CHARLES F. HARTT, Professor of Geology of Cornell University, Ithaca, New York and leader of the Morgan Geological Expedition of 1870 — 1871 was working on the geology of the Lower Tapajós and the Lower Amazon when he also became interested in archeology through information received from FERREIRA PENNA. Being unable to visit Pacoval himself, HARTT sent his assistant, W. S. BARNARD in 1870 to examine the site and to make collections. In November 1871 HARTT again

was unable to go to Marajó himself so he sent his geological assistant, ORVILLE A. DERBY, accompanied by an artist E. R. BERKELEY. From these excavations DERBY brought back specimens that today are in the collections of the Peabody Museum, Harvard University, Cambridge, Massachusetts. Later in 1876, DERBY, then an assistant in the Geological Commission of Brazil, excavated mounds on Lago Arari and on the Rio Camutins on Marajó and these collections are in the Museu Nacional in Rio. Both DERBY and HARTT wrote on the archeology of the Lower Amazon in various articles from 1871 to 1889 in which the geology of the area is also discussed. DERBY also wrote a general interpretative article in 1882, "Os Povos Antigos do Amazonas", in which he discussed the Pre-European cultures of Marajó, Santarem area, and the Maracá region of Brazilian Guayana with some interesting interpretations of the origins of Marajó culture.

In addition to this early work by geologists from the United States, some early significant work was also done by the Brazilian LADISLAU NETTO, Director of the Museu Nacional in Rio de Janeiro, who in 1882 organized an archeological expedition to Marajó. NETTO verified the observations of FERREIRA PENNA and STEERE that at Pacoval the better pottery was in the bot-

tom of the mound and the poorer quality was at the top. The large collection brought back to the Museu Nacional was published in 1885 in a long and well-illustrated report.

The first specific reference to the archeology of the Lower Amazon and Brazilian Guayana mainland under the official sponsorship of the Museu Paranaense "Emilio Goeldi" is the field excavations conducted by AURELIANO LIMA GUEDES from July to September, 1896 under the direction of Emilio Goeldi, the Director of the Museum. Although only brief preliminary reports and maps were published by LIMA GUEDES in 1897 and no other field notes have ever been located in the archives of the Museu Paranaense "Emilio Goeldi", the collection remains one of the best documented and most important in the archeological collections of the Museu Paraense "Emilio Goeldi".

Except for occasional notes by writers and travelers, the Amazon was ignored archeologically after this early flurry of interest from the 1870's to the late 1890's until the American anthropologist, WILLIAM C. FARABEE of the University Museum of Philadelphia, Pennsylvania conducted field work on Marajó and in the same region of LIMA GUEDES' work in Brazilian Guyana from 1914 — 1916. Although FARABEE published only a

brief account of the archeological field research in 1921 in the University Museum Journal, his letters and field notebooks are on file at the University Museum along with the extensive collections of pottery, complete vessels from Marajó.

Following his field work there was no significant archeological work in the Amazon until 1923 — 1928, when CURT NIMUENDAJÚ collected sherds, conducted excavations, and made superb maps with detailed field notes for the Etnografiska Museet in Göteborg, Sweden. The advanced degree of thinking of the director of the Göteborg Museum to support NIMUENDAJÚ's archeological research of village sites and to add to the collections hundreds of well-documented sherd collections from sites that to this day have not been further studied is commendable anytime and especially so for the 1920's because other museums of the world were concentrating on complete objects of artistic value and financing basic archeological research producing only sherds was almost unheard of. NIMUENDAJÚ materials are from Caviana, Mexiana, Marajó, Brazilian Guyana, the Tapajós, the Tocantins, and various tributaries of the Lower and Middle Amazon. Although his collections in Göteborg were studied by the late STIG RYDÉN and a

manuscript prepared, as well as classified, analyzed and photographed by MEGGERS and EVANS, to this date, unfortunately, only brief references have been published.

The next phase of Amazon archeology is not one of field work but rather the study of archeological collections in various museums of the world especially those from the Tapajós — Santarem region. HELEN C. PALMATARY published one extensively illustrated monograph in 1939 and another in 1960. Also, the Brazilian, FREDERICO BARATA, who had an extremely important private collection of Santarem pieces published several articles on Santarem culture. A study of Marajó pottery made by PALMATARY based on specimens in various museum collections came out in 1950 abundantly illustrated.

Although occasional travelers and journalists, such as ALGOT LANGE and DESMOND HOLDRIDGE, continued to excavate unscientifically and to write about Amazon archeology, excavations by qualified persons were rare. In 1930, HELOISA ALBERTO TORRES of the Museu Nacional worked on Marajó and Mexiana; ANTONIO MORDINI excavated at various places on Marajó in 1926 and 1928, but it was not until 1948 that the next phase of Amazon archeology was begun by CLIFFORD EVANS and BETTY J. MEGGERS of Columbia University, New

York and under the direct sponsorship in Brazil of the Museu Nacional of Rio de Janeiro and the Museu Paraense "Emilio Goeldi" of Belem. MEGGERS and EVANS chose the area at the mouth of the Amazon for an intensive 1 year archeological project because of MEGGERS' earlier efforts to study selected collections of Marajó pottery made in 1871 by J. B. STEERE and deposited in the University Museums of the University of Michigan, Ann Arbor, Michigan, and the Marajó collection in the American Museum of Natural History in New York made by ALGOT LANGE from Pacoval in 1914. MEGGERS' studies revealed the meagerness and indefiniteness of the information available on Marajó sites and their contents and demonstrated that no reliable conclusions could ever be drawn until stratigraphic excavations had been made. This phase of Amazon archeology saw the introduction of extensive archeological survey techniques, the excavation of stratigraphic cuts keeping all materials for analysis, the classification of all pottery whether decorated or plain into the type concept, the development of sequences through time and space and the definition of distinct phases (cultures), the use of seriation technique for expanding the sequences derived from individual stratigraphic excavations, and the attempt to use

ecological explanations for a better understandings of the development or decline of certain cultures in the region. From this work in the Territory of Amapá, and on the Islands of Marajó, Caviana and Mexiana both EVANS and MEGGERS produced theses for Columbia University in partial fulfillment of their requirements for the degree of Doctor of Philosophy. EVANS presented "The Archeology of the Territory of Amapá (Brazilian Guiana)" in March, 1950 and BETTY J. MEGGERS presented "The Archeological Sequence on Marajó Island, Brazil" in February, 1952. Later these two theses were totally reorganized, partially rewritten and incorporated with the rest of the fieldwork, as well as with extensive information on comparative collections and ethnohistorical data, into a large monograph published in 1957 under the title, *Archeological Investigations at the Mouth of the Amazon* as the first publication the Smithsonian Institution had ever undertaken on Brazilian archeology. The volume changed considerably the point of view about tropical forest culture and demonstrated that the various cultures in the sequence at the mouth of the Amazon had come into the area from somewhere in the Amazon drainage or perhaps as far as the Andean area and were not the result of long local deve-

lopment as had been previously proposed. In the case of the Marajoara Culture, with its mound complex and elaborate painted pottery burial urns, an origin on the eastern side of Ecuador or southern Columbia was postulated.

It is appropriate to mention that in 1948-1949 through the magnificent cooperation of Director Machado Coelho, we lived in a house on the Museu Goeldi grounds. It is our understanding that this house had been the original home of Emilio Goeldi when he was Director. Today after some modernization, it has become the home once again of the Director of the Museu Paraense "Emilio Goeldi", Dr. DALCY ALBUQUERQUE. The significance of this dwelling in the history of Amazon Archeology is great since during the rainy season of 1948 — 1949 we not only lived there but also classified and analyzed our tons of excavated sherd materials. The bulk of the type sherd collections and most of the complete specimens were deposited in the Museum at the completion of study. Among them was a complete, well-painted, large-size, anthropomorphic burial urn for Marajó, which to this day occupies a prominent position in the exhibition halls of the Museum.

During the last phase of the work on Marajó from May through June, 1949 ethnologist PETER PAUL

HILBERT from the Museu Paraense "Emilio Goeldi" accompanied us at our request and received some preliminary training in archeological methodology. From 1951 until his return to Germany in the latter part of 1961, HILBERT conducted extensive and intensive archeological field work under the auspices of the Museu Paraense "Emilio Goeldi" on Marajó, the Solimões, and at various sites on the Middle and Lower Amazon and its tributaries. Without adequate funds, but taking advantage of every opportunity to travel, HILBERT is to be commended as the only person to contribute substantially to our knowledge of Middle and Upper Amazon archeology. Without his information and published articles, appearing from 1952 to 1962, some of which were published by the Museu Paraense "Emilio Goeldi", we would have no specific knowledge of these archeological phases and sequences.

While HILBERT was concentrating on the Middle to Lower Amazon, ETTA BECKER-DONNER of the Museum für Völkerkunde of Vienna, Austria conducted some interesting archeological excavations in the middle regions of the Guaporé River and published them in 1956. In 1959 WANDA HANKE published brief notes on pottery from the Solimões and the Japura, obtained from field work conducted



under the auspices of the Institut für Völkerkunde of Cologne and Munich, Germany. When Hilbert returned to Germany for advanced study in 1961 unfortunately practically all the archeology of the Amazon came to a standstill. More recently, the Museu Paraense "Emilio Goeldi" has resumed its role in forwarding research in the Amazon area. Initially in collaboration with NAPOLEÃO FIGUEIREDO of the Universidade do Pará, and subsequently alone or with his own assistants, MARIO SIMÕES of the Museu Paraense "Emilio Goeldi" has conducted excavations on the southeast part of Marajó in an attempt to broaden out the geographic distribution of the various phases defined earlier by MEGGERS and EVANS. PROTASIO FRIKEL has reported briefly on archeological remains from the Tumuc-Humac range along the Brazilian and French Guiana and Surinam borders.

#### *The Future*

The second century of archeological research in the Amazon drainage will begin following the closing session of this symposium when MARIO SIMÕES will undertake the first systematic archeological research in the headwaters of the Xingu. This fieldwork is one project of a nation-wide program of Brazilian archeology co-sponsored

by the Conselho Nacional de Pesquisas and the Smithsonian Institution, with the approval of the Patrimônio Histórico e Artístico Nacional. During future years it is to be hoped that Simões will be able to fill in other spots on the map in the Amazon basin.

The interpretation of the culture history of man in South America cannot leave out the vast network of rivers in the Amazon Basin that served as routes of movements. With homogeneity of environment, basically the same climate, the same topography, similar limitations of slash and burn agriculture in tropical forest, the same and natural resources of plant and animal species, ecological interpretation of culture sequences and routes of migration should be easier than in other parts of South America where the diversity of microenvironments complicates the picture. But until basic archeological research gives us some information on certain areas that today have had either no archeological work of any kind, or collecting by non specialists, little but conjecture is possible. To be specific, then here are some of the major problems.

Except for the work of DONALD LATHRAP in eastern Peru and MEGGERS and EVANS on the Rio Napo of eastern Ecuador, the western margin of the Amazon basin is archeo-

logically unknown. From Colombia to Bolivia, small and large rivers offer potential routes of migration and diffusion from the centers of higher civilization in the Andean area toward the lowlands, but we have no knowledge of which ones were used and what traits were introduced. Entire rivers are blanks in the archeological record, including the Juruá, the Purus, the Madeira, the Japurá and the Negro, and the proper investigation of any one of these could occupy the lifetime of several archeologists. Between Manaus and Marajó, many sites are known but few have been stratigraphically investigated. So few carbon-14 dates are available that it is impossible to place known sequences with confidence in a scale of absolute chronology.

The investigation of Amazon archeology has recently grown more urgent for two reasons. First, hypotheses are being proposed that derive elements of early agriculture and pottery making on the eastern slopes of the Andes from the Amazon basin. As long as Amazonian archeology remains little known, such hypotheses cannot be substantiated or disproved. Second, the population explosion is causing urban development and agricultural expansion in the Amazon basin as in other parts of the world, threatening the destruction

of important archeological sites. If these data are lost, we may never be able to answer conclusively some of the basic questions about South American cultural development and dissemination. During the second century of history of the Museu Paraense "Emilio Goeldi", we cannot afford the leisurely pace at which archeological work has progressed in the Amazon Basin during the first hundred years.

#### SUMMARY

Most of the collections and data about archeological sites along the Amazon River and its major tributaries were obtained in the late 1890's and early 1900's explorers, travelers and ethnologists rather than by trained archeologists. Only a few will be mentioned. JOÃO BARBOSA RODRIGUES' publications of 1876 — 1878 and 1892 described collections from the Amazon as a whole. DOMINGOS SOARES FERREIRA PENNA in 1879 and 1885 and EMILIO GOELDI in 1900 published accounts of materials excavated by them from Brazilian Guiana (now Territory of Amapá). CHARLES F. HARTT from 1871 — 1898 wrote on excavations on Marajó and the lower Amazon, while WILLIAM C. FARABEE left extensive field notes on excavations made in Marajó from 1914 — 1916 but published only brief accounts of the material in

1921. CURT NIMUENDAJÚ made extensive survey collections along various parts of the Middle Amazon from 1923 — 1926 but his specimens and data have never been published and no one has followed up with modern excavation in the numerous sites that he reported. Extensive collections from the Tapajós — Santarém area have been published by HELEN C. PALMATARY in 1939 and by FREDERICO BARATA in 1951 but it was not until PETER PAUL HILBERT of the Museu Goeldi worked in the Lower and Middle Amazon between 1949 — 1962 that scientific archeological excavations were made in sites along the main stream. Tributaries such as the Guaporé received some attention from the excavations of ETTA BECKER-DONNER in her publication of 1956 and von WANDA HANKE of work on the Japurá published in 1959. Although PALMATARY in 1950 published a monograph on the pottery of Marajó from a study of museum collections around the world, it was not until the fieldwork of 1948 — 1949 of BETTY J. MEGGERS and CLIFFORD EVANS and publication in 1957 that detailed sequences and descriptions of the culture complexes were developed for the Islands of Mexiana, Caviana and Marajó and the Territory of Amapá by basing the study entirely upon a framework of scientifically excavated materials. Additional

work under the auspices of the Museu Goeldi in Marajó by HILBERT in the late 1950's and by MARIO SIMÕES in the 1960's and by NAPOLEÃO FIGUEIREDO of the University of Pará in the 1960's has continued to fill-out the sequences. Except for a research program of the Museu Goeldi in the Tumuc-Humac range, no other active archeological field work is underway in the Amazon drainage.

On the basis of what little is known of the area, ecological considerations, possible affiliations with cultures in adjoining areas, and migration routes recommendations for future archeological field work in the Amazon drainage can be proposed around the solution of specific problems that will be more scientifically fruitful than the haphazard digging of miscellaneous sites.

#### SELECTED BIBLIOGRAPHY

- BARATA, F., 1950, A arte oleira dos Tapajós I. Considerações sobre a cerâmica e dois tipos de vasos característicos. *Instituto de Antropologia e Etnologia do Pará*, Publ. N.º 2, Belém.
- BARBOSA RODRIGUES, J., 1879, *Antiguidades do Amazonas: Ensaio de sciencia por diversos amadores*. Vol. I, Rio de Janeiro.
- BARBOSA RODRIGUES, J., 1892, *Antiguidades do Amazonas. Vellozia*, Rio de Janeiro, 2: 1-40, 1885-1888.

- BECKER-DONNER, E., 1956, Archäologische Funde am mittleren Guaporé (Brasilien). *Arch. Völkerk.*, Vienna, 11: 202-249.
- DERBY, O. A., 1879, The artificial mounds of the Island of Marajó. *Amer. Natur.*, 13: 224-229.
- DERBY, O. A., 1882, Os povos antigos do Amazonas, *Rev. Exposição Antropol. Brazil.*, Rio de Janeiro, pp. 129-131.
- DERBY, O. A., 1898, A ilha de Marajó, *Bol. Mus. Paraense*, 2: 163-173.
- FARABEE, W. C., 1921, Explorations at the mouth of the Amazon. *Mus. J.*, Philadelphia, 12: 142-161.
- FERREIRA PENNA, D. S., 1879 a, Apontamentos sobre os cerâmios do Pará. *Arch. Mus. Nac.*, Rio de Janeiro, 2: 47-67.
- FERREIRA PENNA, D. S., 1879 b, Urnas do Maracá. *Arch. Mus. Nac.*, 2: 69-71.
- GOELDI, E. A., 1900, Excavações archeológicas em 1895. 1.<sup>a</sup> parte, As cavernas funerarias artificiaes dos Indios hoje extinctos no Rio Cunany (Goanany) e sua ceramica. *Mem. Mus. Goeldi*, Belém.
- GUEDES, A. P. L., 1897, Relatorio sobre uma missão ethnographica e archeologica aos Rios Maracá e Anauerá-pucu. *Bol. Mus. Paraense*, 2: 42-64.
- HANKE, W., 1959, Archäologische Funde im oberen Amazonagebiet. *Arch. Völkerk.* Vienna, 14: 31-66.
- HARTT, C. F., 1871, The ancient Indian pottery of Marajó, Brazil. *Amer. Natur.*, 5: 259-271.
- HARTT, C. F., 1885, Contribuições para a ethnologia do valle do Amazonas. *Arch. Mus. Nac.*, Rio de Janeiro, 6: 1-174.
- HARTT, C. F., 1898, A região de Breves. *Bol. Mus. Paraense*, 2: 173-181.
- HILBERT, P. P., 1952, Contribuição á arqueologia da Ilha de Marajó. *Instituto de Etnologia do Pará*, Publ. N.º 5, Belém.
- HILBERT, P. P., 1955, A cerâmica arqueológica da região de Oriximiná. *Instituto de Antropologia e Etnologia do Pará*, Publ. N.º 9, Belém.
- HILBERT, P. P., 1957, Contribuição a arqueologia do Amapá. *Bol. Mus. Paraense Emilio Goeldi*, n.s. Antropologia 1: 1-37.
- HILBERT, P. P., 1959, Preliminary results of archeological investigations in the vicinity of the mouth of the Rio Negro, Amazonas. *Proc. 33rd Intern. Cong. Americanists*, San José, Costa Rica, pp. 370-377.
- HOLDRIDGE, D., 1939, *Feudal Island*. New York.
- LANGE, A., 1914, *The lower Amazon*. New York.
- MEGGERS, B. J., 1948, The archeology of the Amazon Basin. In *Handbook of South American Indians, Volume 3 — The Tropical Forest Indians*, Bureau of American Ethnology Bulletin 143, Vol. 3: 149-166.
- MEGGERS, B. J. & EVANS, C., 1957, Archeological investigations at the mouth of the Amazon. Bulletin 167 Bureau of American Ethnology, Smithsonian Institution, Washington, D. C.
- MÉTRAUX, A., 1930, Contribution à l'étude de l'archéologie du Cours supérieur et moyen de l'Amazone. *Rev. Mus. La Plata*, 32: 145-185.
- MORDINI, A., 1934, Les cultures précolombiennes du bas Amazone et leur développement artistique. *International Congress of Americanists*, Session 24, Hamburg, pp. 61-65.

- MORDINI, A., 1947, L'île de Marajó (bas Amazon): un problème archéologique á résoudre. *International Congress of Americanistes*, Session 28, Paris, pp. 637-642.
- NETTO, LADISLAU, 1885, Investigações sobre a archeologia brasileira. *Arch. Mus. Nac.*, Rio de Janeiro, 6: 257-554.
- NIMUENDAJÚ, C., 1927, Streifzug vom Rio Jary zum Maracá. *Petermanns Mitt.*, 73: 356-358.
- NORDENSKIÖLD, E., 1930, *L'Archéologie du Bassin de l'Amazone*. *Ars Americana* N.º 1, Paris.
- PALMATARY, H. C., 1939, Tapajó pottery. *Ethnol. Stud*, Göteborg, N.º 8.
- PALMATARY, H. C., 1950, The pottery of Marajó Island, Brazil. *Trans. Amer. Philos. Soc.*, Philadelphia, n.s., 39 (2).
- PALMATARY, H. C., 1960, The Archaeology of the Lower Tapajós Valley, Brazil. *Trans. Amer. Philos. Soc.*, n.s., 50 (3).
- STEERE, J. B., 1927, The archeology of the Amazon. *Univ. Michigan Official Publ.*, 29 (9), pt. 2: 20-26.