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Initial Encounters: Arawak Responses to European Contact at the En Bas Saline Site, Haiti

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ABSTRACT

The En Bas Saline site in Haiti is believed to have been the village of Guacanacaric, the Arawak cassique who assisted Columbus and his men after the wreck of the Santa Maria on December 24, 1492. Columbus subsequently established the tiny colony of La Navidad in Guacanacaric's town, where 39 Spanish men lived in daily contact with the Arawak Indians for nearly nine months. Three years of archaeological research carried out at the site by the University of Florida have verified the very early contact period date of the site, have provided information about Arawak society on the eve of the contact, and have yielded preliminary data on the changes that occurred in the Indian community between 1492 and ca 1515 (when the town was no longer occupied). This paper will summarize these results, and offer suggestions about the nature of changes that occurred in Arawak society as a result of the very earliest European-American interactions in the New World.

INTRODUCTION

The Arawak Indians of the greater Antilles were the first native Americans to experience sustained interaction with European settlers in the New World. They were also the first Amerindian group to disappear as a result of this interaction. Today they are extinct; the victims of disease, enslavement, warfare and severe social and economic disruption. Although many other Amerindian groups were subjected to these pressures as a result of European contact, none succumbed as quickly as, or to the extent of the Arawak, who were not only the first to encounter Europeans, but who were also among the few groups adapted to and restricted to island systems. The Arawak of Hispaniola sustained a population density that was possibly greater than any other pre-state, sedentary society in North America or the

Caribbean.[1] In their island environments they had no hinterland population reserves or areas for retreat, and Spanish policy for dealing with the Indians was initially uncontrolled and based almost exclusively in labor and natural resources exploitation. Under these circumstances, Arawak extinction was effectively ensured by the population declines that had occurred as early as 1520.[2]

Because of this astonishingly rapid post-contact cultural demise and the concomitantly very short period of historical documentation, it falls to the field of archeology to provide detailed documentation of these people and their culture. Of special interest to anthropologists in this undertaking is the opportunity to observe — at least indirectly — the specific mechanisms by which cultures change in response to population decline and disruption.

The search for Columbus has provided us with an unsurpassed opportunity to study these Arawak peoples of Hispaniola in considerable detail, and to trace the changes that occurred in at least one society as a result of contact with Europeans. I refer to the archeological research being conducted at the site of En Bas Saline, Haiti, which is believed to have been the Arawak town of the cassique, Guacanacaric, and in which Christopher Columbus established the small fortified settlement of La Navidad in 1492. It was here that the first sustained interaction between Europeans and Native Americans took place. In the process of searching for La Navidad, a great deal of information about the Arawaks before and after contact is being recovered and applied to questions about Arawak life and culture at the time of contact, and about some of the changes that occurred after contact.

The site of En Bas Saline was discovered in 1976 by Dr. William Hodges, a medical missionary in Haiti who has had a lifelong interest in the history and archeology of the region. The site has been the focus of archeological survey and testing by the University of Florida since 1983, and we have conclusively documented the presence of both prehistoric and very early post-contact period Arawak components.[3]

The En Bas Saline site is located 1 kilometer inland from the north coast of Haiti at Limonade Bord de Mer (Figure 1), about 10 kilometers east of present day Cap Haitian. It is situated in an area of low, alluvial marine soils in a humid subtropical forest life zone, adjacent to an area of dry subtropical forest. The vegetation of the area has been greatly modified since the 15th century, due to deforestation and overcropping, and almost no forest or other original plant communities are extant in the area. The site itself is under cultivation (manioc, corn, bananas, beans, potatoes) and is at the edge of a saline basin (once a river channel connecting the site to the shore) with adjacent stands of mangrove and bayahonda.

Using Columbus' log, coastal conditions and currents, shoreline information and a knowledge of sailing, Samuel Eliot Morison and others determined that the *Santa Maria* went down off the coast of Haiti at the town of Limondade Borde de Mer.[4] By Columbus' accounts, the town of

Guacanacaric was 1.5 leagues (4.3 miles).[5] The site located by Hodges is about 1 kilometer from the shore and 4 miles from the reef, (Figure 2). Aerial photographs reveal that the site was connected at one time with the shore by multiple, now non-navigable river channels. The major of these were tributaries of the Grande Riviere du Norde, which was diverted in the 18th century by French planters for irrigation purposes, resulting in the oxbow lake and present littoral pattern at the site.

With the assistance of Guacanacaric, the *Santa Maria* was offloaded and her goods stored, and the timbers were salvaged to build a small fortified area named La Navidad. We believe from Columbus' own accounts[6] that one or two large houses belonging to the cassique Guacanacaric were fortified with a palisade and possibly a moat. Columbus left 39 men there with instructions to trade with the Indians for gold until he returned. He did, in fact, return some 9 months later, to find all of his men dead and the fortress and surrounding Indian town burned, ostensibly as a result of conflict with Indians from the interior.[7] Columbus abandoned the area and moved westward along the coast to establish the town of La Isabela.

After the demise of La Navidad, the Indians of En Bas Saline were left in relative isolation from Europeans until 1503, when the Spanish town of Puerto Real was established at about 2 kilometers from the Indian settlement. Puerto Real was a ranching community occupied by a Spanish and Indian population that fluctuated between 100 and 15 families.[8]

The Indians of En Bas Saline were undoubtedly and immediately impacted by the settlement of Puerto Real. The Spanish *repartimiento* records of 1514 (developed to allocate the available Indians and Indian labor to the Spanish settlers) is revealing. 942 Indians, including men, women, children and "old people", under 14 cassiques (including three women cassiques) were distributed to the settlers.[9] The Indians were drawn from at least as far away as the Ft. Liberte region (30 km. from Puerto Real), however by this time all of the cassiques had Spanish names and thus are difficult to locate or identify.

What few Indians were left at En Bas Saline were probably further decimated in the smallpox epidemic of 1518-1519.[10] There is some suggestion that the population was already very low by 1508, when the Spaniards began to raid the Lucayan (Bahamas) Islands for Indian slaves to replace the decimated Arawak of Hispaniola.[11] It is unlikely that traditional Arawak culture survived past 1520, when even the Lucayans were decimated and it became necessary to import large numbers of African slaves as a labor source.[12]

The site remained isolated from the early 16th century until the 19th century, when it was partially occupied by the tiny Haitian village of En Bas Saline. No passable road existed until the archeological work began, and the only known cultural activity at the site has been intermittent hoe cultivation of manioc, beans, bananas and potatoes. Today the site is divided into 21 small gardens surrounded by cactus fences and filled with garden crops.

Reconnaissance work began at En Bas Saline in 1983 as part of a long-term archeological study of initial contact and colonization in the region. We had been working at the nearby site of Puerto Real since 1979 in order to investigate Spanish responses and adaptations to the circumstances of Caribbean colonization, and the processes by which a crystallized Hispanic-American cultural tradition emerged.[13]

Thirty-four weeks of fieldwork at En Bas Saline have been conducted over the past three years, much of it devoted to survey and mapping activities. We have completed a 10 cm. interval topographic map of the site; and an electromagnetic survey using an EM31 terrain conductivity meter on a two-meter grid, done to search for anomalies related to a moat or a storage cellar. A complete surface collection was done to take advantage of the clearing required for the survey and the abundant, low-cost labor available in Haiti.

In addition to the survey and surface collection, two series of 25 cm square test pits were excavated at 10-meter intervals across the north-south and east-west extents of the site. These have provided a guide to the general nature of depositional depth and composition, and site structure. We have also excavated areas totalling approximately 93 square meters, selected through topographic, surface and electromagnetic data as potential sites of the fortified structures of La Navidad.[14]

More than seven tons of archeological materials have been recovered from the site, and are analyzed and curated at the Florida State Museum at the University of Florida, eventually to be returned to the Government of Haiti. More than 40,000 artifacts, nine kilos of faunal remains, and 300 kilos of shell have been catalogued.

The only direct evidence for the fort of La Navidad itself will be architectural features from a fortified — and possibly Indian — structure, possibly with a well, moat, palisade and/or cellar. Such features should be burned, and associated with European seeds, fauna and other small items. European artifacts are not necessarily the primary evidence category in the identification of La Navidad, since it is almost certain that any transportable European items — which would have been extremely exotic to the Indian villagers —would have been removed from the immediate area of La Navidad to other loci of use. We expect that only those European items not considered exotic, or too small to be noticed, would enter the archeological record of La Navidad.

Although we have not encountered anything we are willing to unequivocally identify as La Navidad, we have amassed a large body of circumstantial evidence pointing to the identification of the site as Guacanacaric's town. This evidence is based on the interfaces between archeological remains, documentary sources, and chemical-physical analyses of materials.

The size and configuration of the site conforms to the expectation of a substantial chiefly town with a large central plaza, as indicated by documentary accounts. The site is described by a C-shaped, raised earthwork

open to the south, and measuring 350 meters north to south and 300 meters east to west. The earthwork itself averages about 20 meters in width, and is about 80 cm high. The test pits across the site suggest that the earthwork is composed largely of midden debris rather than soil elevated to provide montones for farming, although the contour map indicates that borrow pits may be present adjacent to the highest parts of the mound. The southern, open portion of the "C", although not elevated, does have a significant quantity of surface debris in a distribution corresponding to the shape of the raised area. The interior of the site (inside the earthwork) is flat and relatively free of cultural remains except for a mounded area near the center. This is currently hypothesized to represent a plaza and chiefly residence complex, and our excavations to date have concentrated on this area.

Few Arawak towns in the region have been studied to determine the extent and nature of intrasite settlement patterning, and no systematic regional surveys have been done in northern Haiti. Little is specifically known, therefore, about spatial organization on a regional or community level. Ethnohistoric accounts and archeological mapping activities have indicated that some sites were quite large, and were inhabited by as many as 3,000 people.[15] Others were reported to have contained only a few families,[16] possibly in a pattern similar to that described for the southeastern United States Mississippian chiefdoms.[17] These towns were typically organized in a rectangular or oval fashion around a central plaza or ballcourt, on which the cassique's house stood.[18] The sites at Ft. Liberte,[19] Bois Neuf,[20] Yuma,[21] and En Bas Saline, conform to this pattern.

Two major stratigraphic components have been identified at En Bas Saline through the test excavations. These include an upper zone of 10 to 12 cm in depth (A horizon) that has been disturbed by modern hoe cultivation, but that nevertheless contains large quantities of aboriginal material and almost no post-contact material. The densest occupation at the site is represented by the "B" horizon, which ranges from 25 cm in depth in the site center to more than 50 cm on the earthwork. It has been excavated in increments of 10 cm, and these, on the basis of stratigraphy and content analysis can be assigned to three subhorizons (Bl, B2, B3). Two charcoal samples from the lowest stratigraphic components at the site have provided radiocarbon dates of AD 1270±80 and AD 1350±70. This is consistent with Rouse's proposed date of ca A.D. 1200 for the appearance of Carrier ceramics and their associated cultural phenomena.[22]

The material from the excavations indicates that the site contains almost exclusively Carrier artifacts,[23] with no evidence of earlier occupation. Analyses of the sub-horizons and their associated features indicates that the A and Bl deposits are of the historic period. Five bones from European fauna (*Rattus rattus* and *Sus scrofa*) and 17 European artifacts (*melado*, Columbia Plain majolica, Olive jar or unglazed coarse earthenware, a nail and latticino glass — all dating typologically to the late 15th century) have been

recovered from excavated contexts. One of these contexts was a very large and very unusual feature initiating in the BI horizon. This feature appears to have no precedent in Hispaniola Indian sites, and has been suggested as a candidate for the well of La Navidad. Radiocarbon dates were calculated on charcoal from the feature's fill, and TL dates on ceramics in association with the charcoal, resulting in a weighted average date of 1450±80 (A.D. 1370-1530). The presence of a rat and a pig bone, however, provide a TPQ of 1492 for the filling in of the feature. The contents are otherwise exclusively aboriginal, including a large number of decorative ceramics. They indicate that a material assemblage consistent with descriptions of late prehistoric Arawak sites was still present at En Bas Saline during the post-contact period, suggesting a very early historic period component.

Stable isotope analyses have been conducted on the pig and rat teeth by Jonathon Ericson of the University of California, Irvine. Ericson's preliminary work indicates very strongly that the pig tooth came from an animal that lived in the vicinity of southwestern Spain during that part of its life when its bones were forming. This will be very significant if evidence that live pigs were a common feature on 15th century ships can be encountered. The fact that the En Bas Saline pig had its origin in Europe is a potentially strong argument for its association with La Navidad.

The well-like feature, the European fauna and evidence for a burned structure are concentrated in one area of the site, the mounded portion of the central plaza believed to have been associated with the Cassique's residence. Analysis of a cinder-like substance found in quantity in that area has been carried out under the direction of Dr. Dow Whitney of the University of Florida Materials Sciences Department. Whitney indicates that the substance is burned clay daub that was subjected to such an intense heat that it formed Cristobalite, a phase of quartz formation that occurs at about 1400° C. This conforms to documentary accounts of the burning of La Navidad.

Other structural evidence includes postmolds in the central raised area and a few small circular hearths or fired pits although no complete structure has yet been delineated. Two unusual and adjacent features dating to the pre-contact period have been located at the site. These enormous, straight-sided hearth-like features are filled with food debris, ash and griddle fragments, and occur in the flat central part of the site unassociated with structural evidence. These may represent communal or long-term cooking activities.

Sixty-two percent of the excavated artifacts are from post-contact deposits, and 38% from pre-contact contexts. Certain differences are evident in the pre-and post-contact assemblages, although these should be considered with caution as preliminary samples. The majority of remains from both periods come from a few very large and densely filled features and possibly do not form a representative sample of the range of past activities at the site. We have been unable, for example, to recover a systematic spatial sample,

owing to the requirements of the search for La Navidad. We are therefore unable to address questions of settlement and spatial organization. We do, however, believe that the available data provide a general description of changes that occurred from pre- to post-contact times in the material life of the Indians at En Bas Saline.

The most substantial category of evidence is, not unexpectedly, ceramic materials. These ceramic items conform overwhelmingly to the Carrier wares first described by Irving Rouse. Very small amounts of Meillacoid ceramics also occur at the site, comprising 9.3% of the assemblage ceramics in the lowest stratigraphic horizon at the site. This decreases steadily through time to 0.1% in the post-contact horizons. It suggests that the site was initially occupied by Chicoid tradition people who had somewhat stronger involvement in Meillac material culture than did later occupants of the site.

A general trend from pre- to post-contact times is an overall decrease in the proportion of decorated ceramics from 19% to 14% of the assemblage. Certain design motifs also decrease in frequency from early to later times at the site, including rows of double punctation and concentric circles. Only one element, broad-line incising, increases in frequency with time.

The general decrease in decorated wares during post-contact times is accompanied by a significant increase in the proportion of unidentified aboriginal wares (that is, not conforming to any previously recognized or defined types). These wares increase from 4% of the assemblage in pre-contact times to 9% of the assemblage in post-contact times. Varieties include both grit and sand tempered plain wares, and a very thick, coarse low-fired pottery known at Puerto Real as "Colono ware".[24] Such wares are known from other early contact sites occupied by both Indians and Spaniards in the early 16th century Caribbean colonies, including Nueva Cadiz, Venezuela; Puerto Real and Yayal, Cuba. This, along with the appearance of plain, grit-tempered wares, is suspected to have been a material response to the changes brought about by colonization, depopulation and social disintegration. Such a response suggests a general simplification in craft tradition resulting from contact-induced change.

Vessel forms also decrease in number through time (only 6 of the 8 vessel forms noted in the assemblage are found in postcontact contexts). Bottles, jars and ceramic griddles decrease in proportion through time, while platters and shallow bowls increase in frequency. Round and boat-shaped bowls were not represented in post-contact contexts, and carinated bowls are the only form that occurs in roughly the same proportions through the temporal divisions at the site. It is noteworthy that although the artifact assemblages of the pre- and post-contact periods are roughly equivalent in number, the proportion of recognizable vessel forms varies greatly. Eighty-one percent of the sherds exhibiting vessel form occurred in pre-contact proveniences. Although this is certainly in part a function of depth of deposit, we believe that it also reflects a general simplification of form and a reduction in the number of different forms in the post-contact period.

Other, more subtle changes are detectable in the non-ceramic assemblage at the site, most apparently in the lithic category. All of the chipped chert debitage occurs in post-contact proveniences. Stone griddles appear only in post-contact contexts, however stone beads are much more frequent in pre-contact contexts. Nearly all carved bone or shell ornaments (with the exception of a cojoba tube made from a turkey leg bone) occurs only in pre-contact contexts. Very few such items have been recovered to date, however, and their presence primarily in the distinctive features discussed earlier makes it difficult to determine their significance until a larger sample is available.

Preliminary analyses of fauna from the site, done at the Florida State Museum under the direction of Dr. Elizabeth Wing, indicate that an extraordinarily diverse range of animals was exploited at the site during both the pre-contact and the historic period. More than 60 vertebrate species from 47 families, and 57 invertebrate species from 31 families are represented in the faunal assemblage. These reflect a very broad exploitation base centering around estuarine and marine resources, with little emphasis on terrestrial fauna. Habitats include a variety of estuarine shallow coastal waters, freshwater lakes and rivers, coral reefs, mangrove estuaries, and less commonly, deep sea waters.

Diversity and equitability indices were calculated on the pre- and post-contact faunal assemblages to measure the range of diversity in animals used, and the degree to which certain animals were preferred and emphasized at the expense of others in the diet. The overall diversity index for vertebrates in pre-contact times was 4.611, which is very high (4.99 is the maximum value possible). They were also used very evenly, with no single animals heavily selected. This is reflected in the equitability value of 1.027. Both diversity and equitability were reduced somewhat in the historic period, which had a diversity index of 3.822, and an equitability index of 0.839. In both periods, bony fishes were the major food source (78% pre-contact, 82% post-contact), followed by small mammals (8% pre-contact, 6% post-contact), and lizards (5% pre-contact, 4% post-contact).

Patterns of vertebrate fauna exploitation did not change dramatically in the post-contact period, other than the slight increase in diversity. Invertebrate fauna, however, show a marked increase in diversity during the post-contact period, with 90 species used as compared to 83 species in pre-contact times. Shellfish collection requires fewer specialized skills than fishing for vertebrates, particulary open water species. The reduction in diversity of fishes, and the increase in diversity of invertebrates may reflect a more generalized pattern of resources exploitation resulting from a population decrease and concomitant reduction of the labor force performing specialized subsistence tasks. This may also have extended to farming activities, although there is little direct evidence in the archeological record for plant use. Ceramic griddle fragments decline in frequency from 2.8% of the assemblage in pre-contact times to 1.4% of the post-contact assemblage, which may reflect a decreased emphasis on manioc in the diet.

The archeological assemblage from pre-contact to post-contact times at En Bas Saline reflects less change than had been anticipated at the beginning of the project. A general trend toward simplification can be detected, manifested in reductions in both the proportions of decorated ceramics and the number of motifs used; in a reduction in the number of vessel forms used; the appearance of plain grit-tempered wares in the postcontact period; in the reduction of bone, shell and stone ornaments in the post-contact period; and possibly in subsistence activities as discussed above. None of these changes is dramatic, however, and we are left with the possibility that our post-contact sample was extremely early in the historic period, probably representing a very short time period after contact. Certainly no direct evidence of European influence in the native material assemblage can be detected. It is possible that the post-contact deposits at En Bas Saline represent a historic period occupation by Indians who had not yet suffered severe demographic and social disruption, which would be consistent with the hypothesis that it was associated with La Navidad.

We expect to continue our excavations in the summer of 1987, both to continue the search for La Navidad, and to obtain a more representative sample of pre- and post-contact Arawak occupation at the site. We believe that archeological work of this kind is a particularly critical element in the quincentennary effort, not only because of its intellectual content related to Columbus, but also in a more urgent sense as more and more archeological sites are impacted by development activities. The documentation of American Indian culture at the time of contact, and the tracing of the changes these cultures underwent after contact are surely among the most important tasks facing archeologist in the Americas for the remainder of this century.

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23. Rouse, 1941, op. cit.

24. Smith, op. cit.

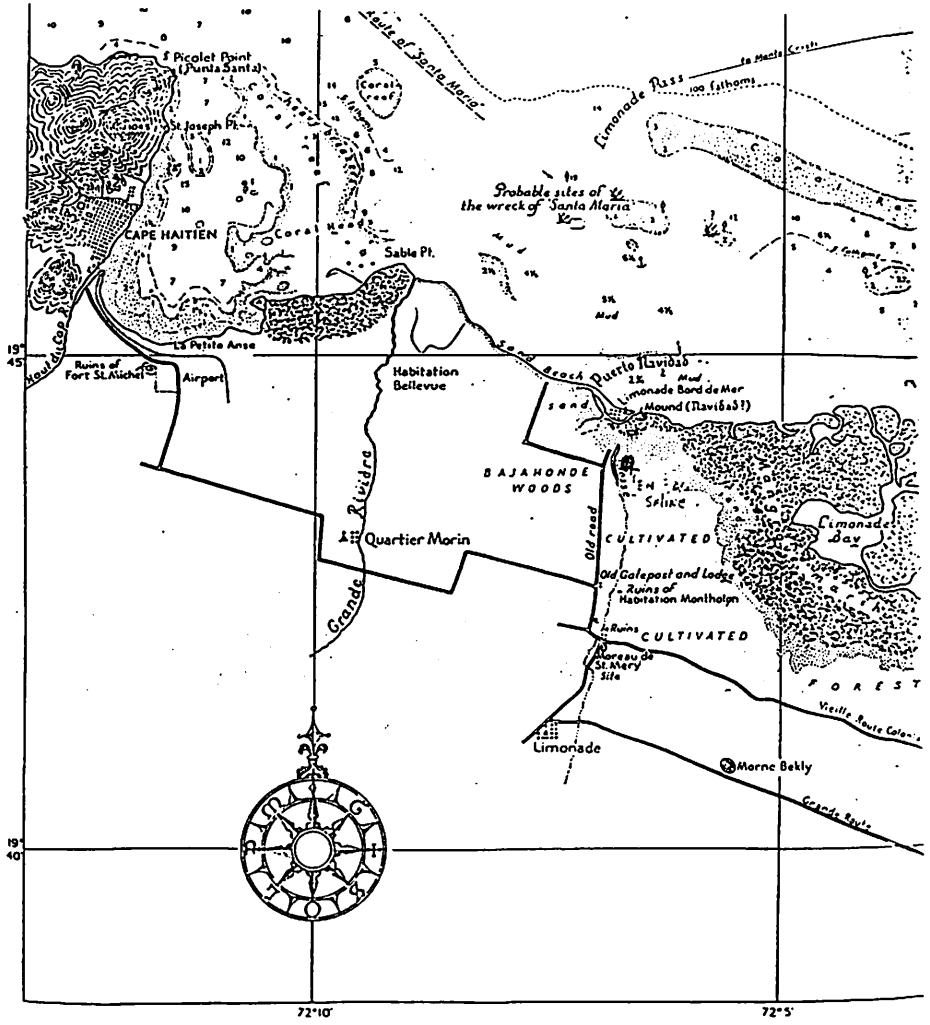
Pt Picolet Point (Punta Santa)
Coral reef
Route of Santa Maria
Limonade Pass
to Monte Cristi
100 fathoms
St Joseph Pt.
Probable sites of the wreck of Santa Maria
CAPE HAITIEN
Coral
Sable Pt.
Mud
Sand
Rock
Pte Picolet
Mud
Limonade Bord de Mer
Mound (Taviéas?)
La Petite Anse
Ruins of Fort St. Michel
Airport
Habitation Bellevue
Sand
BAJAHONDE WOODS
Salines
Limonade Bay
Rivière
Quartier Morin
Old road
CULTIVATED
Old Gatepost and Lodge
Ruins of Habitation Montholon
Ruins
CULTIVATED
Sucrerie de St. Méry Site
FOREST
Vieille Route Coloniale
Limonade
Morne Bekly
Grande Route
Grande
19° 45'
19° 40'
72°10'
72°5'

Fig. 1.

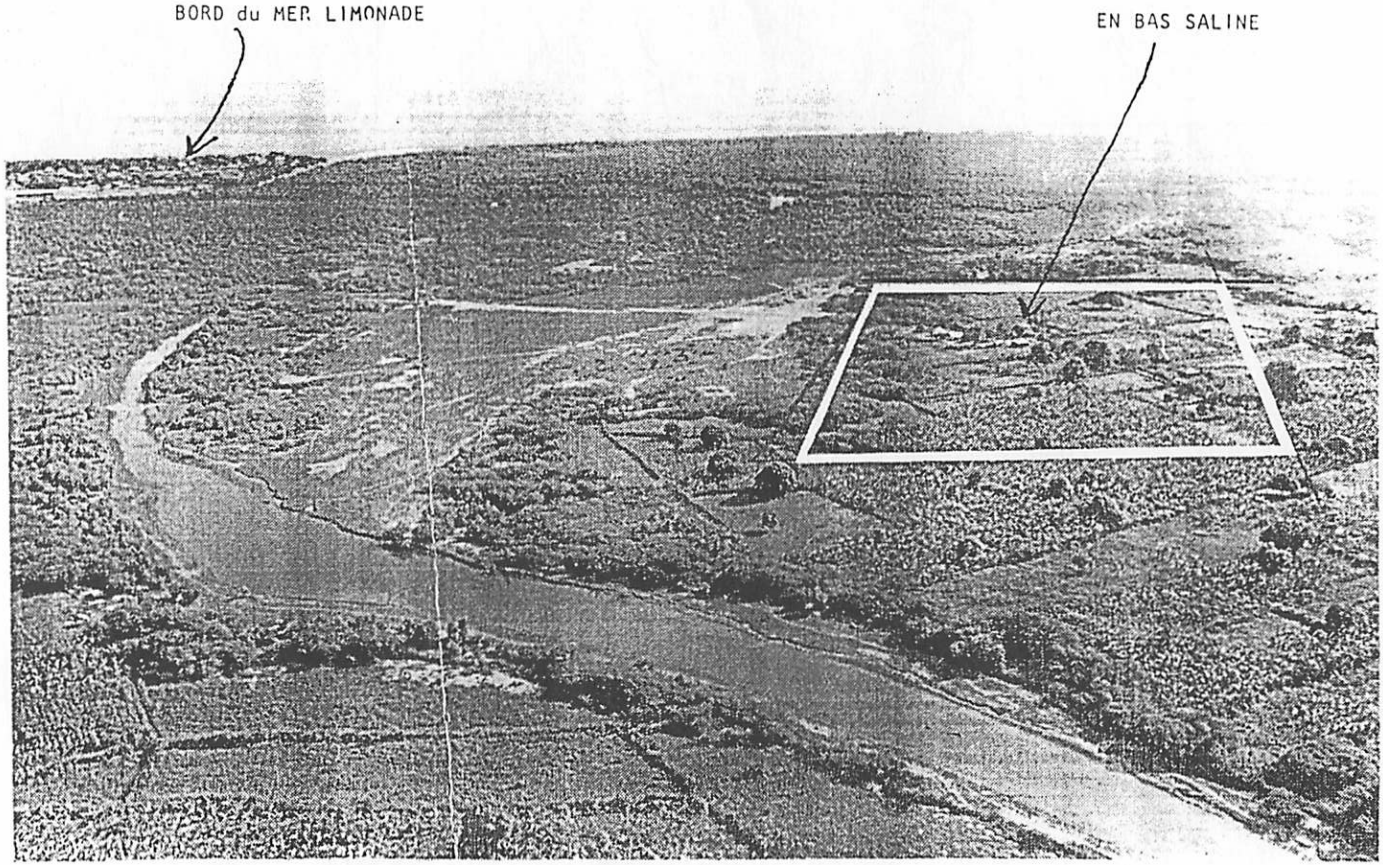

Fig. 2.

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