

## THE LESSER ANTILLEAN ARCHAIC: NEW DATA FROM ST. KITTS

By R. Christopher Goodwin

Two Archaic middens were accidentally encountered in July, 1976, during the second consecutive field season at the Sugar Factory Pier site (Sk-SFPI) 1.6 kilometers east of Basseterre, St. Kitts (Fig. 4). Because very few well-documented Archaic sites are known for the Lesser Antilles, the St. Kitts find is noteworthy. This Archaic site has added value because the Archaic refuse was located stratigraphically below both a Saladoid occupation floor and a dense stratum of volcanic ash and tuff, or tephra. Since analyses of the data have not been completed, this constitutes a preliminary report; it will be primarily descriptive. In order to place the St. Kitts discovery in perspective, major definitions of the Archaic in the Caribbean Area (after Rouse and Allaire *in press*) will be reviewed. Some ramifications of the find that may be helpful to other practitioners in the Area will be suggested.

Prior to the 1975 field season, the SK-SFPI site had not been extensively sampled, although Charles A. Hoffman (1973) conducted brief salvage excavations. The current research program, which is sponsored by the Behavioral Sciences Foundation and by the Government of St. Kitts, Nevis, and Anguilla, has as its objective the elucidation of the Saladoid occupation sequence, with special emphasis on patterns of change in subsistence. To date, twenty-four two-meter pits and eighteen additional archeological features have been excavated.

During the 1976 field season a series of test units was established in a grid network near the shoreline at the western perimeter of the site. This was done because previous tests indicated that the initial Saladoid Period was well-represented in this area, and the 1975 samples were biased in favor of late Saladoid refuse. Too, it was necessary to correlate the stratigraphy of this area with that of the more intensively studied eastern portion of the grid. Excavations well below the last level containing ceramic refuse were part of the effort to correlate stratigraphy in the site, and they led to the discovery of the Archaic middens.

The Saladoid materials were located within a stratum comprised primarily of the protosols that are characteristic of the Basseterre Valley in general (Christmas 1971). This soil base decomposes gradually and is extremely fertile. At around sixty centimeters below surface, these soils begin to grade into an increasingly dense stratum of tephra, deposited by the island's youngest and largest volcano, Mount Misery, during its last major eruptive

episode, the Mansion Series (Baker 1969). The beginning of the Mansion Series of eruptions has never been adequately dated. However, Baker (1969:220) obtained carbonized wood samples from contexts indicating the end of the eruptive sequence, and the resultant radiocarbon date places that geologic event at 3658 B.P. Below this volcanic stratum is a silty loam, indicating the fringes of a shallow lagoon environment, which averages about forty-five centimeters in depth. In four adjacent test units an Archaic midden was found at the interface of these last two strata. In three other units a second, distinct Archaic midden was located about fifteen centimeters into the silty loam matrix (about 1.35 meters below surface).

A *tentative* temporal placement for the upper Archaic midden can be extrapolated from the stratigraphic evidence and from the single extant radiocarbon date for the Mansion Series of eruptions. It should be noted that radiocarbon dates express a statistical tendency, and a single date should always be suspect. Nevertheless, it seems likely that the upper Archaic midden will date from before 2000 B.C. The earlier midden within the silty loam stratum is more difficult to date because of the lack of a geologic referent. Radiocarbon dates now in process from the SK-SFPI site should clarify both the temporal placement of the Archaic middens and the beginning of the Mansion Series of eruptions.

The two Archaic deposits at the SK-SFPI site appear similar in that both were almost entirely marine shells. In both cases the vast majority of refuse was composed of only two species of clam, *Anadara notabilis* (Röding) and *Arca zebra* (Swainson). Large soil samples were subjected to salt water flotation in an attempt to recover additional faunal remains; results were entirely negative. It may prove to be significant that not a single fish bone was recovered from either assemblage. One major difference between the two deposits is that in the deeper assemblage the shells were apparently opened by smashing a small hole in the shell near the hinge to extract the animal; this damage is absent in shells from the midden located at the interface of the strata.

Although tools were rare in both assemblages, there are a number of differences that should be noted. First, in the deeper midden one large chert flake was found, while no chert was recovered from the shallower Archaic refuse. It is possible that this represents an accidental inclusion due to crab activity, although there was no visible sign of intrusion. However, there is no natural chert outcrop on St. Kitts. If this flake was, in fact, part of the Archaic tool kit, it would have been brought from another island. Second, a fragment of a ground stone cylindrical mano was found in the stratigraphically later midden. If grinding is viewed as a procedure of manufacture, then no other ground stone was found. However, one edge-ground stone (through use as opposed to manufacture) was also recovered from the later deposit. A few small, battered cobbles were excavated from

each of the middens. Two large celts, made from the outer lip of *Strombus gigas* conch shells were recovered from the shallower deposit; in addition, one shell celt from the deeper deposit (Figs. 2 & 3) has an interesting fishtail form at the poll that distinguishes it from the petaloid *S. gigas* celts that are found in later, Ceramic period sites. A small shell tool was also found in the deeper refuse (Fig. 1).

So little is known about the way of life of Archaic peoples in the Lesser Antilles that it is difficult, on the basis of the scanty technological data from the SK-SFPI site, to determine if the two deposits constitute habitation refuse or single activity loci. Before this issue can be adequately resolved, cultural complexes will have to be established, and for this additional data will be needed. The Lesser Antillean Archaic is poorly understood not only as a function of the small number of known sites, but because of the nature of the remains themselves. Just as at the SK-SFPI site, the Archaic sites that Davis (*in press*) has studied on Antigua are poor in terms of artifact yield, especially insofar as 'diagnostic' artifacts are concerned.

These shortcomings in the data, coupled with a variety of theoretical orientations, have led to a number of different definitions of the Archaic in the Caribbean Area. Actually, the Archaic middens at the SK-SFPI site fulfill all of the stated criteria. This is especially the case because of the clarity of the stratigraphic situation. It might be valuable to review what is meant by Archaic in the Caribbean Area, and to determine how these con-

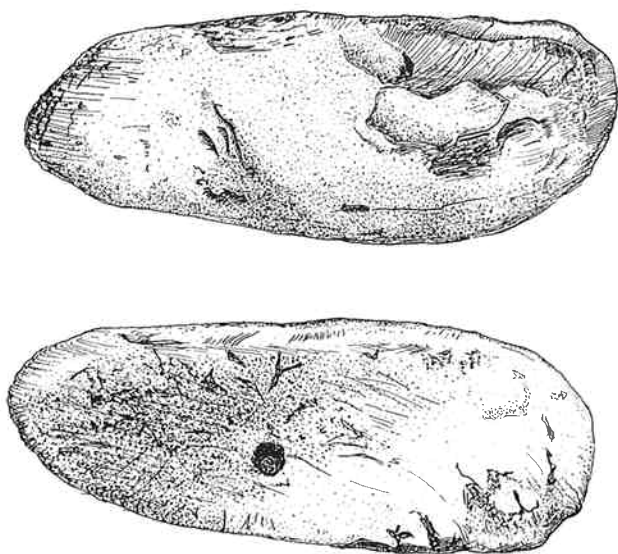


FIGURE 1

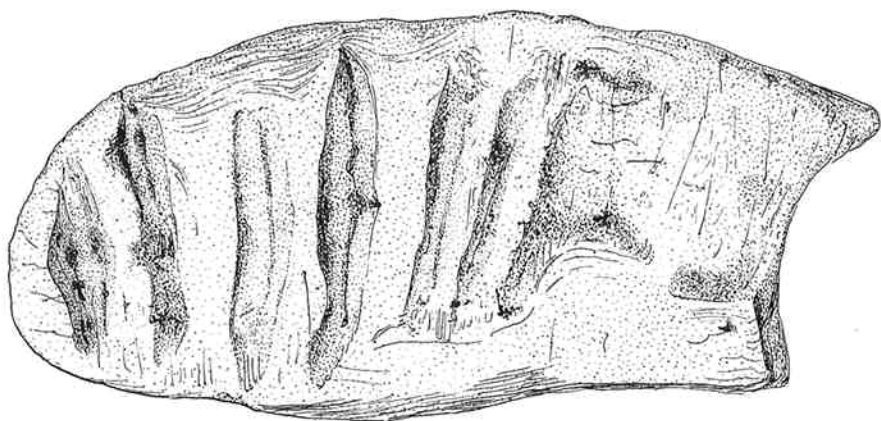


FIGURE 2

cepts relate to the Sugar Factory Pier site data. Briefly, the Archaic has been defined alternatively as a stage, an age, and as a subsistence or economic pattern.

Emphasizing the evolution and change of traditions, rather than chronology (*cf.* Rouse 1972:212-216), Willey (1976) has defined the Archaic as the *stage* of cultural development characterized by a marine-oriented subsistence that followed the terrestrial, hunting-based economy of the earlier Paleo-Indian stage and preceded the agriculture of the Neo-Indian stage. The Archaic can be recognized in the archeological record by virtue of certain 'diagnostic' traits, both positive and negative. Of course, the preeminent negative traits are the absence of pottery and of evidence for horticulture. For positive diagnostics, Willey (1976:3) lists 'stone grinding tools,' of which the pebble-edge grinder is cited as the most common example, shell and bone tools, and some polished stone objects. The pebble-edge grinder was the principal tool recovered from Loíza, Puerto Rico (Alegría, Nicholson, and Willey 1955). However, this class of artifact is ground through use, rather than as a product of manufacture. This complicates the picture for two reasons. First, the classification of artifactual materials in order to establish complexes, or to determine the nature of the culture responsible for those artifacts, and the analysis of behaviors of that people or culture are logically distinct procedures (*cf.* Rouse *in press*). The first requires classification primarily on the basis of form, *e.g.*, stylistics, while



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FIGURE 3

the second presupposes the antecedent existence of that classification as a framework for determination of function or behavioral context. Second, there is a likelihood that unmodified stones might be used for grinding in different places and times by different peoples for different purposes. This is precisely the kind of simple tool usage that should be expected to have occurred over and over throughout prehistory, independent of origins or traditions. For these reasons, then, it is doubtful that the edge-grinder *per se* is a good diagnostic of the Archaic in the Caribbean Area.

Rouse and Allaire (*in press*) view the Archaic in the Caribbean Area as an *age*, or as an essentially arbitrary division in the areal chronology. An age is defined on the basis of technology alone; it records the occurrences of certain key innovations, artifacts or traits, irrespective of context. For Rouse and Allaire, the Archaic division in the chronology of the area begins with the appearance of either ground stone or ground shell, specifically excluding those implements ground only through use, and persists until the appearance of pottery.

A third point of view has recently been articulated by Davis (*in press*). Because of difficulty in operationalizing either age or stage definitions of the Archaic on Antigua due to the extreme scarcity of diagnostic artifacts, especially in surface collections from aceramic sites, he has argued for the Archaic to be defined as a subsistence or economic pattern (*cf.* Sears 1948). According to Davis, shellfish remains in aceramic context would be a necessary criterion for an Archaic site. The problem of a confounding, earlier Paleo-Indian occupation is obviated by the near total absence of an exploitable prehistoric land mammal population (Davis *in press*). Veloz (1976) reached a similar conclusion based on his researches in the Dominican Republic, and has suggested that the terminology be changed from Paleo-Indian to Paleo-archaic, to denote the lack of early hunting peoples in the Antilles. Of course, the problem of distinguishing an aceramic, Archaic midden from an aceramic, single activity locus of a subsequent ceramic period has yet to be solved. This presupposes more knowledge of Saladoid subsistence patterns than is presently available, as well. Hopefully the research program on St. Kitts will prove to be illuminating in this regard.

Interestingly, Veloz (1976), following Meggers (1972: 18-41), uses Archaic and Transitional interchangeably, in order to emphasize the formation processes (*e.g.* hybridization of Archaic cultures responding to local problems of subsistence (*cf.* Caldwell 1962, for a similar emphasis on Archaic adaptation).

Returning to the data from St. Kitts, if the Lesser Antillean Archaic is viewed as an *age*, defined by the absence of pottery and by the presence of ground stone and/or shell, then clearly the SK-SFPI finds belong somewhere within that chronological division. If the Archaic is viewed as a

developmental *stage*, then, too, the SK-SFPI deposits belong in this category, albeit the absence of fish bones suggests that a littoral, rather than marine, orientation describes the situation more precisely (*cf.* Willey 1976:4). Finally, the SK-SFPI data strongly suggest that shellfish exploitation was in fact the bulwark of the Lesser Antillean Archaic subsistence pattern. If the deposits prove to represent habitation sites, as opposed to single activity loci, then the hybridization that Veloz (1976) has postulated would have already occurred: in that case the subsistence pattern could be characterized as highly specialized. More work will be needed before this proposition can be substantiated, however.

The St. Kitts discovery raises a number of other issues that warrant attention. First, as Desmond Nicholson pointed out in this *Journal* (1976), there is every reason to suspect that changes in sea level may have been a significant factor in the settling of the Antilles and was responsible, in part, for the dearth of data on Archaic cultures, because a number of those sites may now be underwater. To this I should like to add that, in a sense, volcanic activity on some of the Lesser Antilles may have played a parallel role. The data from St. Kitts show that vulcanism also 'submerged' sites; it did so while changing the island's surface dramatically. At SK-SFPI, for example, the Mansion Series of eruptions apparently filled part of what was previously a shallow lagoon, perhaps constraining to some degree the habitat of some economically important shellfish species. It may also have been the case that volcanic activity played a significant role in the movement of peoples. The stratigraphic situation at SK-SFPI suggests the probability that Archaic people were on St. Kitts when Mount Misery began a major eruptive episode. If it is reasoned that this caused a secondary migration to a neighboring island, *i.e.*, Nevis, then a number of avenues for further research are opened. Questions of differential adaptation (*e.g.*, how did local environmental conditions and concomitant problems of subsistence modify Archaic culture(s) in the Lesser Antilles) might profitably be pursued on other islands in the Archipelago where volcanic activity and human occupation may be found to have overlapped.

Finally, Allaire (1974: 158) had previously suggested that there were no Archaic sites on St. Kitts, because of the absence of a natural chert outcrop and due to the 'apparent scarcity of shellfish resources.' We now know that a readily available supply of chert or flint was not prerequisite to an Archaic occupation; it is also clear that an assumption of ecological stasis on a volcanic island is not a tenable position. Perhaps cognizance of the geologic history of other islands in the Lesser Antilles, coupled with an appropriate sampling strategy that is not based solely on the surface characteristics of sites, will lead to the discovery of other sealed Archaic contexts where previously none were known.

## Postscript

It has been almost one year since the preliminary report of the Kittitian Archaic was written. Additional data, including radiocarbon dates, have been assembled in the interim. Therefore, a brief addendum to this report is needed. First, single radiocarbon dates for each of the two Archaic middens were obtained, helping to clarify their temporal placement. The deeper midden from a silty loam matrix was dated, using a sample of *Anadara notabilis* (Röding 1798) shell, to  $4100 \pm 60$  radiocarbon years (UCLA 2111A), or, at 2123 B.C. (Z-60). The shallower midden from the interface of the silty loam with a stratum of tephra was dated, using a sample of *Arca zebra* (Swainson 1833) shell, to  $2175 \pm 60$  radiocarbon years (UCLA 2111B), or, at 198 B.C. (Z-60). This new evidence suggests that the initial chronological estimate for the middens needs revision. First, the date for the older midden seems to fit fairly well with Baker's (1969) date for the terminus of the Mansion Series. But, the date for the shallower midden, which was expected to correlate even more closely with the Mansion Series, is almost 1500 years more recent than the only radiocarbon date for that event.

Three explanations for this discrepancy may be suggested. First, it is possible that there is something wrong with the  $^{14}\text{C}$  date for the later Archaic midden. In order to test this possibility additional assays are being conducted. However, there was no stratigraphic evidence of contamination. Of course, it is also possible that Baker's (1969) determination for the age of the Mansion Series was somehow in error. Finally, it is possible that all three radiocarbon dates are essentially sound, and that they reflect the temporal placement of the archeological and geological events with which they are associated. In this case, contrary to what was previously thought (*viz.* Christmas 1971), it is not the Mansion Series that is represented at SK-SFPI, but some other more recent geologic event. *e.g.*, the Steel Dust Series. Baker's date for the Mansion Series was taken from contexts over ten kilometers from SK-SFPI. All of this points to a need for further documenting both the archeological and geological sequences, a process that is presently under way. Because of the problem in correlating the archeological and geological data bases, then, it is probably most efficacious to divorce the two and tentatively accept the  $^{14}\text{C}$  dates for both of the Archaic middens.

In this regard the almost two thousand year span between the two Archaic middens is noteworthy, especially in light of a quantitative comparison, conducted by Douglas Armstrong, of the shellfish remains from the middens. It may be recalled that after a preliminary inductive examination of the data it was concluded that both middens were similar insofar as both were comprised almost entirely of marine shells. While this was the

case, it is now known that 87.1 per cent of shellfish individuals ( $n = 31$ ) from the earlier midden were from species that inhabit a sandy bottom habitat, whereas only 8.2 per cent ( $n = 680$ ) of the shellfish from the later midden can be attributed to this habitat type (Douglas V. Armstrong, personal communication). While this may reflect some sort of regional environmental alteration, such as sea level fluctuations (Fairbridge 1976), as an alternative the long span of time indicated between the two middens makes it possible that two distinct Archaic traditions are represented at SK-SFPI. At any rate two specialized subsistence patterns seem to be represented. There appears to be a degree of diversity in the Lesser Antillean Archaic, as seen on St. Kitts. Determination of the significance of these differences is a matter for further research.

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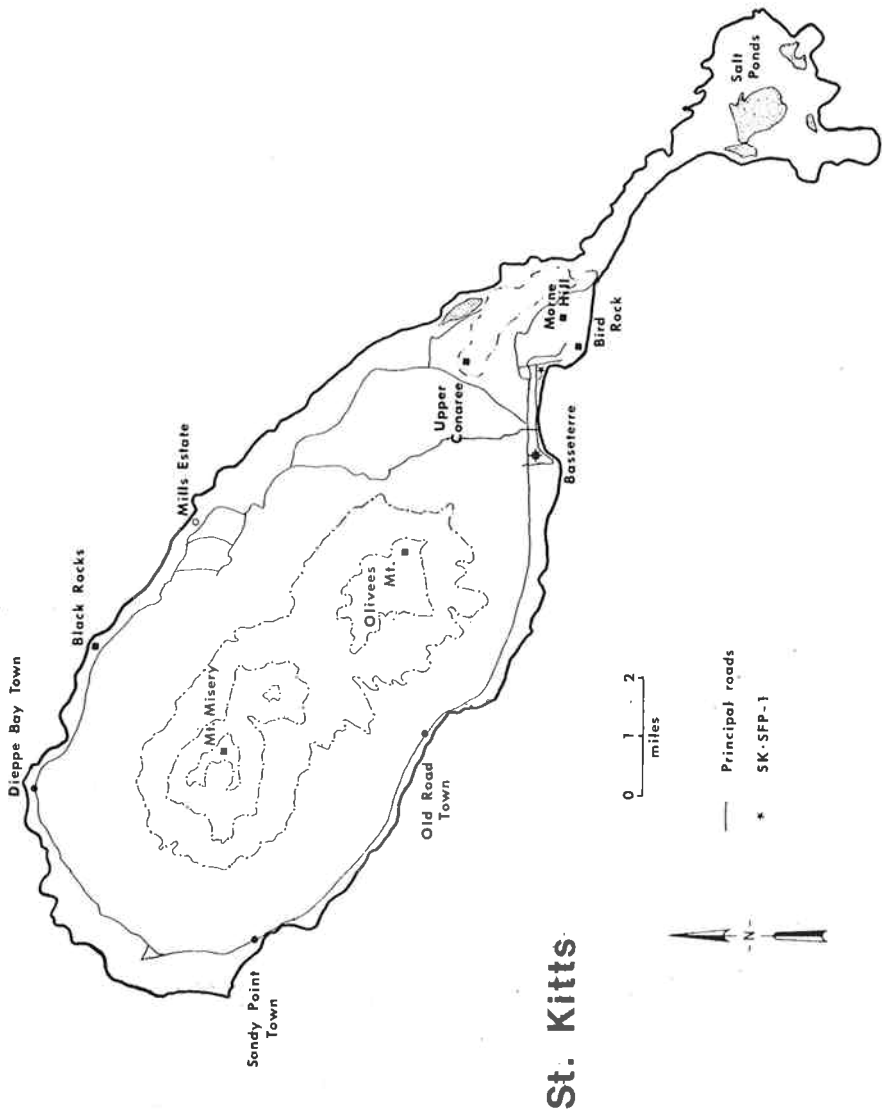
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FIGURE 4

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