Archaeological investigations were carried out at five sites disturbed by construction projects:

1) The Shell Oil Depot, on the north end of the Spring Garden Highway, at Freshwater Bay;
2) Brandons, on the south end of the Spring Garden Highway;
3) Greenland Site, St. Andrew, near the tile and brick factory, below Farley Hill;
4) Goddard's, within the Fontabelle business area; and
5) Divi St. James, south of Holetown at Sunset Crest.

These rescue efforts were undertaken by the author (then serving as a curator with the Barbados Museum and Historical Society) with the assistance of volunteers from the Museum's recently formed Archaeological Society of Barbados. The nature and extent of prehistoric cultural deposits at the Greenland and Brandons sites were previously unknown. The Shell Oil Depot, Goddard and Divi St. James sites are new prehistoric site discoveries. Major portions of all five sites are believed to remain intact, and warrant protection and future excavation. Artifacts recovered from the sites are currently curated at the Barbados Museum. A manuscript report describing the methods and results of the Museum's 1986 archaeological investigations is in preparation.

The present abstract is intended to serve as an interim report. Following brief descriptions of the investigations at the sites, a sequence of summaries is presented regarding: ceramics, stone technology, subsistence, human burials, house patterns, changes in sea level, and interpretations of several select artifacts that may represent important examples of "cultural traits." Regrettably, due to consideration of space, several key maps and figures have been excluded. Also due to the constraint of space, the acknowledgements owed to a long list of individuals connected with the Barbados Museum, as well as site proprietors and construction managers, must be postponed to the completion of a final manuscript report.

INVESTIGATIONS

Shell Oil Depot

In April, 1986 inspection of construction trenches and an excavated foundation area (40 x 40 m) at the Shell Oil Depot, Freshwater Bay, revealed pottery sherds and conch shell buried to a depth of one meter. Volunteers collected all observable artifacts from the spoil spread by bulldozers from the foundation area and trenches. Three 1 x 1 m test pits were excavated by 10 cm levels in an undisturbed area of the site. One pit contained a human burial.
Brandons

In August, sherds and human remains were reported from a Plantations Ltd. construction site at Brandons. Previous survey of areas bulldozed to approximately one meter in depth located only a few scattered sherds and conch shell. However, deeper trenches excavated for a retaining wall (two meters in depth) were responsible for exposing more substantial archaeological remains. Two features (50 x 50 x 50 cm), composed of layered pottery sherds were removed from the wall of an unfilled trench. Human remains found within the sherd features include a shovel shaped incisor, a metatarsal, and a fragment of cranium.

Greenland

In November, sherds and shell tool finds were reported from an area adjacent to the Greenland tile and brick factory (Building Supplies Ltd.) where highway construction was underway. Volunteers made collections of artifacts from one area now occupied by a new leg of highway as well as from the north face of a cut-bank left at the road edge. After the initial road cutting, and prior to the final mechanical sloping of the bank by the construction crews, a living surface or house floor was identified and one burial feature was excavated. The latter contained the remains of two Amerindian individuals. Previously, in March of 1986 at the invitation of the factory managers, test excavations were completed at the factory entrance adjacent to the factory office building. Approximately one meter of sediment was removed from the area during construction work in the 1960s, and the remaining deposit was highly compacted by vehicle traffic. However, within the top two 10 cm levels of a 2 x 5 m excavation area a dense midden was apparent and a burial feature was discovered.

Goddard’s

In December, construction began at Kensington (Goddard’s Supermarket) on the proposed site of a new discount store. Engineering test pits unearthed sherds, bone, shell, and 18th century artifacts. With the proprietor’s assistance, a Bobcat was used to excavate a trench (5 x 1.5 m) to a depth of 80 cm. A deposit of sandy fill and historic building materials was found, below which occurred clayey sand with prehistoric artifacts to a depth of 1 to 1.2 m. Below 1.2 m beach rock was found. Within the Bobcat trench, five units (each 1 x 1.5 m) were excavated in 10 cm levels, followed by two additional units (1 x 1 m) on the north side of the trench (Fig. 1). In the trench, at a depth of 90 to 120 cm, an undisturbed extended Amerindian burial was discovered (Fig. 2).

To recover the maximum amount of archaeological data pertaining to residence patterns at the site, arrangements were made for bulldozers to remove the top sediment layers prior to the planned date for the full foundation excavations. As machines removed the top 60 to 80 cm of sediment, volunteers collected exposed historic and prehistoric artifacts in four areas (each 10 x 10 m). One concentration of human bone (Amerindian) and associated dog remains were uncovered by the bulldozers. These remains were rapidly excavated by hand before the bulldozers continued their work.
A grid system with 35 units (5 x 5 m) was established over the exposed deposits (35 m north-south by 25 m east-west). The surface of each unit was collected. After three test pits (1 x 1 m) indicated that the southern portion of the grid area was disturbed by historic occupation, excavations were focused on the northern two-thirds of the grid system. Sixteen test units (1 x 1 m) were excavated at the northwest corner of select 5 x 5 m grid units. Six additional units were excavated at points within the 5 x 5 m units. Two, three, and more rarely four 10 cm levels were excavated from each of the 1 x 1 m test units. The sample of 22 units permitted the delineation of site depth and artifact densities, and the collection of representative artifact types.

One test unit included a pit feature containing three large inverted pots (each about 55 cm in dia; see feature description below). After the test excavations were completed, bulldozers returned to complete the foundation excavations. During this final stage of earth removal, further artifact collections were made, and cranial fragments were found in a depression in the beach rock underlying the cultural deposits. Also at this time a pattern of post-holes was identified that represents the outline of a circular to oval house about 14 m in diameter (Figs. 1 and 3). As described below, this house included the burial discovered in the Bobcat trench and is located adjacent to the pit with the three inverted pots (a probable water-hole).

Divi St. James

The Divi St. James Site is known only from a surface collection of Troumassoid and/or Suazoid pottery fragments from sediment removed for the construction of a tennis court (50 x 50 m) at the Divi St. James Hotel in December of 1986. The deposits bearing cultural materials consist of beach derived sediments located approximately 200 m inland from the current shore. The area surrounding the tennis courts needs test excavation.

CERAMICS

At each site most of the prehistoric ceramics consist of thick-walled (>1 cm), undecorated ware characteristic of the utilitarian pottery of the Troumassoid (A.D. 650-1100) and Suazoid (A.D. 1100-1450) ceramic series (Boomert 1987; Drewett and Harris 1988). All sites also contain examples of decorated pottery and pottery shapes that are attributed to the Troumassoid and Suazoid series, including: legged griddles and shallow vessels, closed bowls, horned-lugs, strap-loop handles, pedestals, spouts, finger-indented rims, black/brown painted linear designs, and plain red slips or paint (Boomert 1987). A thermoluminescence date of A.D. 846-1214 for a sherd with a Troumassoid-type, outwardly thickened rim gives an estimate for the earliest substantial occupation of the Shell Oil Depot Site.

Examples of thin interior incised, exterior incised, and white on red painted pottery, thought to characterize the Palo Secan Saladoid series (A.D. 350-650) (Boomert 1987), are found at Brandons, the Shell Oil Depot, and the Goddard sites; however, these are relatively rarer in number. Rims of flat circular plates or griddles (Palo Secan and Troumassoid) are found
at the Oil Depot, Brandons, and Goddard's. Rims from the necks of possible jars are present at the Goddard Site.

STONE

Fine screened sediment samples from Greenland and the Shell Oil Depot have revealed small stone flakes, and similar finds are expected for Goddard's once sediment samples have been screened. These small sharp flakes of stone may have been used in grater-boards used to shred cassava. Large flaked stone fragments are found at the Goddard Site, and this stone appears similar to samples from sources in St. Lucia and Martinique. These objects are either portions of cutting and scraping tools, or are cores from which flakes were removed to use as tools.

SUBSISTENCE

Conch shell is densely scattered at the Shell Oil Depot and in the upper levels of the Goddard Site. The relative sparsity of conch shell in the lowest levels of the Goddard Site may reflect the clearing of food refuse from the living area, or less use of conch in the diets of earlier people. At least one area of the Greenland Site contains concentrations of fragmented conch, other marine shellfish, and land snail shell. This area also appears to contain greater densities of fish, chiton, and sea urchin remains than have been found at the other sites. The species of fish, bird and possible reptile and mammal remains are to be identified for each site.

HUMAN REMAINS

Remains of Amerindian people were discovered at four of the five sites (the exception being the Divi St. James Site). A burial at the Shell Oil Depot contains a crouched (semi-flexed) man, some 145 cm (4 ft. 9 in.) in height who died perhaps between the ages of 25 and 30. As few as eight teeth or teeth sockets were present (P. Drewett, pers. comm.). Other burials are reported to have been destroyed during the construction of the depot office.

An extended burial inside a house feature (see below) at the Goddard Site included a young woman (aged 15 to 20) without obvious dental pathologies. The incomplete remains of a male (aged 30 to 40) buried in a semi-flexed position south of the house at the Goddard Site are accompanied by the partial remains (forebody) of an immature Amerindian dog. This practice is known from early (Salado) burials in the Caribbean, particularly in Puerto Rico. The man suffered from moderate tooth loss, wear and decay.

Two individuals recovered at the Greenland Site, from a common grave, are late middle-aged (aged 50 to 60). One man appears to have been buried in a tightly flexed position, and the other's remains appear to have been disarticulated before being placed over the flexed body of the first. Both individuals exhibit tooth loss and advanced tooth wear and decay. This burial feature may reflect a type of burial sacrifice described in ethno-historic accounts, or a secondary burial of one person upon the later death of another. Another burial discovered at the Greenland Site was located at
the edge of the tile and brick factory driveway, where human remains were crushed in clay sediments of a midden compacted by vehicles and heavy machinery. Fragments of cranium, rib, long bone and one incisor were recovered in association with several shell adzes and a large (50-70 cm dia) thick-walled pot decorated with a human head adorno (4 x 5 cm) and several shell adzes. Several burials are reported to have been disturbed, but left in place, on the west end of the factory premises in 1960.

Additional partial and isolated human remains are present at Brandons and Goddard's. These remains are probably the result of secondary burial practices. This is particularly the case for the finds of a metatarsal, incisor and cranium fragment buried within two features (each about 50 x 50 x 50 cm), constructed from layers of broken sherds of many different vessels, at the Brandons Site. At Goddard's an isolated portion (left half) of a human cranium was found.

The above described burial discoveries indicate a number of different practices in the disposal and use of the dead. Future studies examining larger burial samples will undoubtedly identify the fashion in which individuals of different social rank were buried, and the ways in which burial practices changed during successive prehistoric periods. Cause of death and the presence or absence of butcher marks on human bone may also be determined.

The current sample of human remains, including four burials recovered by Dr. Peter Drewett at Chancery Lane, is being examined by Dr. Egon Reuer of the Anthropological Institute, Braunschweig University, Austria. The results of that study will shed further light on the physical condition of the Amerindian peoples of Barbados and their relationship to peoples of neighboring islands such as St. Lucia (Reuer, in Friesinger 1986).

HOUSE PATTERNS

The outline and floor of a roughly circular house (14 m dia.) was discovered within the lowest level of the Goddard Site (Figs. 1 and 3). Charcoal from a post-hole feature located within the house is dated to between B.C. 150 and A.D. 150 (Beta-20723), and gives the earliest such date known for Barbados. It is comparable in age to the earliest ceramic deposits in the Windward Islands. The house was found beneath a midden (densely spread conch shell and pottery sherds) deposited during later site occupations (A.D. 400-1450).

Though there have been recent discoveries of post-hole features in St. Lucia (Pointe de Caille) (Friesinger 1986) and Barbados (Chancery Lane) (Drewett and Harris 1988), the Goddard Site gives the most complete evidence of early house construction known in the Windward Islands. The house remains exhibit similarities in house design, albeit on a smaller scale, to those reported from the Golden Rock Site in St. Eustatius (A.D. 600) (Versteeg 1988). These prehistoric houses are very similar to houses, constructed up to the present day, in the Tropical Forest region of northern South America (Versteeg 1988; Hugh-Jones 1986). Comparisons between archaeological house discoveries and ethnographic accounts of house building will permit inferences regarding the social organization and
symbolic systems of the prehistoric Caribbean peoples originating from South America.

Each post in the house "wall" was placed about three large paces (3 m) apart by the house inhabitants. Each of these posts probably measured between 15 and 20 cm in diameter. At least four larger posts (perhaps 30 cm dia) were used to support the section of the roof covering the half of the house that was archaeologically excavated (presumably 8 posts supported the full roof). A large central roof post was probably used in the house construction, but the hole for this post was obliterated by earth-moving machinery prior to the discovery of the house outline. Due to the consolidated nature of post-hole fill below 40 cm beneath the surface of the beach rock, and time constraints imposed by the construction schedule, the full depth of post-hole features could not be adequately determined. However, the impression, based on the relatively small diameter of the excavated holes, is that the original post-holes were probably not much deeper than 50 cm.

A series of slender posts (10-15 cm) was used to construct at least one partition within the house. An oval pit about 1 m long and three smaller pits probably served as hearths. The extended remains of the teenage woman were found in the southeast section of the house (Figs. 1 and 3), and a large deep pit of disturbed sediment in the house center may have also served as a grave area, from which remains were exhumed for ritual use or secondary burial by the house inhabitants (Fig. 1).

A pit containing the nearly complete remains of three stacked pots (each about 55 cm dia) was discovered at the west entrance to the house near the largest hearth (Fig. 1). Due to the construction design, and the existence of fresh spring water at the bottom of this feature, it is inferred that the pit and retaining wall of stacked pots served as a water-hole, or well. Two pots (top and bottom) were intact with the exception of removed bases. The third pot (middle) was apparently placed in the pit in sections interleaved with the sherds of two other pots. The latter sherds were placed so as to create a shelf that extended underneath a rectangular section of beach rock (50 x 70 cm). This shelf would have functioned to collect water from a sand aquifer capped by the beach rock. Fragments of large grinding stones (approximately 20 x 30 x 10 cm, perhaps from a source of stone in St. Lucia) surrounded the upper level of the pit and three stacked pots. Grinding stones for shaping shell, bone and wood implements would be associated with a water source, due to the use of water in grinding an object to shape.

The location and orientation of the house features, including the western position of a fresh water source (the probable well), are consistent with South American house patterns and related concepts of the house as a cosmological symbol in Tropical Forest Cultures (Hugh-Jones 1986). Mapping of artifact and refuse locations outside the house feature is revealing patterns in which the larger site area was used for different activities.
SEA LEVEL

Preserved fragments of wood found in ancient beach deposits below the water table (below the beach rock and cultural deposits) at the Goddard Site are radiocarbon dated to B.C. 230-340 (Beta 19969). These deposits of beach sand are about 150 m from the historic extent of the seashore and occur at 0.5 to 0.7 m above current mean sea level. It is tentatively concluded that sea level was relatively higher at about 2200 years ago. Further dating of the Shell Oil Depot Site beach deposits (A.D. 846-1214) will probably indicate a second period of high sea level at about 1000 years ago. Absolute dating for archaeological sites found on the coast will help reconstruct a record of prehistoric sea level and shoreline changes for Barbados that can be compared to sea level change throughout the Caribbean.

ARTIFACT INTERPRETATION

A clay phallus and a clay "body stamp" with possible dual male/female sexual representations (Shell Oil Depot Site) attest to the use of sexual symbolism among an agricultural island people for whom concepts of plant and human fertility were undoubtedly important. A thumb sized vessel with a beaker like rim (Depot Site) may represent another variant of the snuff bowl used for inhaling drugs. Bone tubes (2) and a large shell with a cut and polished tubular end (Goddard Site) probably served similar purposes. Small cup sized vessels, some with spouts and some with pedestals (all sites), probably functioned in the consumption of hallucinogenic infusions.

A carved shell pendant in the form of a male figure (6.5 cm in length), from the Shell Oil Depot, exhibits ear spools, a circular abdomen, hands on hips, and "club feet" (Fig. 3). One eye socket of the figure still contains the inlaid disk of mother-of-pearl that has been perforated to represent the iris and pupil of the eye. These stylistic features are very similar to conventions of design used in both the Lesser and Greater Antilles.

Three artifacts found in association with the extended burial of the teenage woman within the Goddard Site house are: a clay figurine head in the form of a dog or bird-like head (3 x 4 cm), a red slipped clay disk (4 cm dia). and a small ground coral stone artifact in the shape of a triangle (3 x 3 x 3 cm). The first two of these objects were found to the left of the woman's head, while the third was found at her right forearm.

It may be conjectured that the clay head, which exhibits an inlaid eye of burned shell, represents a plumed serpent, a mythological creature which is widely documented in Central and South America--particularly in connection with creation stories. Alternatively, the figurine may portray a dog deity associated with the control of afterlife, and may be related to the burial of dogs with humans. Clay disks have previously been inferred to represent models of cassava cakes used for burial with the dead; however, this conclusion has not been adequately demonstrated through burial excavations. Disk shaped artifacts are also ethnohistorically noted to have represented the moon. The triangular ground coral stone object probably represents a variation of the three-pointed stones identified.
Conclusions

The findings described in this abstract add significantly to data on Amerindian settlement of Barbados (A.D. 0-1450). Data obtained from the five investigated sites provide important information related to ceramic typology and chronology, stone technology, subsistence, human burials, household and village structure, and changes in sea level. Several artifacts represent important examples of "cultural traits" with wide Caribbean distributions, and some objects are unique items of Amerindian "artistry." Continuing archaeological investigations on Barbados will yield very interesting discoveries that will help reconstruct the lifeways of the island's first inhabitants, as well as increase our knowledge of the nature and extent of prehistoric Caribbean cultures.

References Cited

Boomert, Arie

Drewett, Peter L. and Mary Hill Harris

Friesinger, Herwig

Hugh-Jones, Stephen

Versteeg, Aad H.
Figure 1. Plan map of the northern portion of site grid system at the Goddard Site, showing the Bobcat trench, excavated test units, the identified house outline and related features (ca 2000 B.P.).
Figure 2. Extended burial of a young Amerindian woman discovered in the Bobcat trench excavated at the Goddard Site. The burial was located within a depression in the beach rock and was later determined to occur beneath the living floor in the southeast section of a circular to oval house (ca 2000 B.P.). Note position of hands over pelvis or hip area (adjacent to trowel).

Figure 3. House area exposed after final removal of sediment from beach rock by bulldozers at the Goddard Site. Stakes flagged with dark plastic bags mark post-holes on the southern perimeter of the house. Light plastic bags mark three possible hearths within the house. The disturbed mounds of sediment remaining within the house
Figure 4. Carved shell pendant depicting a male figure (6.5 cm in length) discovered at the Shell Oil Depot Site. Note: inlaid disk of mother-of-pearl remaining in the right eye; ear spools; circular abdomen; and hands-on-hips. Shortened legs and perpendicular feet may represent an attempt to depict a crouched (semi-flexed) burial position.