AN ARCHEOLOGICAL SURVEY OF THE MANU'A ISLANDS, AMERICAN SAMOA

T. L. Hobbs and F. V. Kroe

As a legacy of colonial history, the Samoan archipelago is politically divided into the independent state of Western Samoa (Gismoi I Smith), comprising the large islands of Utupua and Savai'i, along with Apolima and Manu'a, and American Samoa, comprising Tutuila, Aunu'u, the Aoatua Group, and the diminutive outliers of Rose and Pearl Islands. Extensive archaeological work in Western Samoa, beginning during the co-ordinated, multi-institutional Polynesian Culture History Programmes of the 1960s, preceded the discovery of a three millennia-long prehistory beginning with Early Eastern Lapita pottery and continuing through to the development of western Samoan cultural sites (Onsor and Davidman 1969, 1974; Jenkins et al. 1976; Jenkins and Hopson 1980; Davidman 1979). In striking contrast, the prehistory of American Samoa is poorly known, and it has remained impossible to develop a local cultural sequence, yes there is reason to expect that the archaeological resources of American Samoa are only just beginning to be identified; the eastern islands have been occupied for a shorter period. The problem is simply that of a scarcity of archaeological evidence and study.

The first modern archaeological survey in American Samoa was carried out by Klokhoi (1956, 1960) on Tutuila and Aunu'u in 1961-2. Klokhoi provided an overview of the main types of surface sites, but was unable to investigate the dynamic in his coverage. In 1962, Klokhoi and Tiko extended the survey to Tutuila and conducted minor test excavations on Ta'ala and Tutuila (Espey and Simon 1965). Until recently, no other major field project in American Samoa was that of Froitzheim (1979), who conducted minor excavations at seven sites on Tutuila. Although limited cultural resource surveys were carried out under contract to the National Park Service and the U.S. Army Corps of Engineers (Bale 1970; Klokhoi, 1971; and Palma 1975; Silva and Palma 1978; McCoy et al. 1979). In 1980, Clark compiled a summary of all recorded archaeological sites for the American Samoa Historic Sites Program.
tsipship between subsurface archaeological resources and local geomorphological features and processes. At work elsewhere in the western Pacific has demonstrated (Green and Davies 1972; Kirch and Yen 1982; Kirch 1983; Spriggs 1986), active geomorphic processes of various kinds can substantially affect the archaeological record, and, indeed, in some of these processes themselves result from human actions (e.g., active erosion and coastal deposition), they may provide important evidence for former human-lan relationships. (4) To generate a predictive model of the number and extent of undiscovered subsurface deposits, on the basis of results from objectives 2 and 3. (5) To enhance the local appreciation of archaeology and historic preservation through the training of local personnel and through a range of public activities.

The Environmental Setting

The Manu'a Islands of Olu, Olosega, and Ta'ū form a separate cluster at the eastern end of the Samoan archipelago. Mutually indistinguishable, they are separated from Tutuila to the west by 100 km of often turbulent ocean which reduces the frequency of voyaging contacts with the larger islands. Perhaps because of this isolation, the occupants of Manu'a were regarded at being different from other Samoans. In her monograph on Manu'a's social organization, Mead (1930:9) commented on these distinctions, such as the lack of emphasis on "war, its paraphernalia, its ritual, and its gods," in contrast with the situation in Western Samoa. Mead believed (p.9) that "the chief historical value of Manua lies in its custom and isolated position, offering a valuable check upon cultural traits which are intrusive in western Samoa," a point that may have special relevance to prehistory and archaeology. The current position of Manua's may also prove to be significant in the broader picture of Polynesian settlement, for these islands lie along a probable path for voyages of colonisation bound for Eastern Polynesia (Finney 1985; Kirch 1984).

Olu, Olosega, and Ta'ū are remarkable in their dramatic topography: steep-sided, majestic volcanic cones thrust out of the turbulent waters, with summits often shrouded in clouds (Table 1). The smallest of the principal Samoan islands, their steep topography offers little area suitable for settlements and gardens (Coulalias 1941). Coastlines are rocky, with narrow fringing reefs only in places, restricting the possibilities for marine subsistence. None the less, the resources of land and sea are sufficient to support a modern population of 1,900 persons.
The Master's islands consist of small volcnic domes of Ploceens and Pleinsteens age which rise sharply along a linear fracture zone in the Pacific plate (Hale and McCoy 1969). On these islands the range of rocks which could have been exploited for artificats is limited by dense forest, mangroves, or mist and hence has been even higher isometric stone in the Master's group.

Because of their youthful geologic structure, the Master's islands are characterized above all by their steep topography. Consequently, slopes are generally unstable when cleared of vegetation, and eroded rock and sand are concentrated in the lower coastal plains near the steep volcanic rocks. The coastal plains — the main locus of human settlement and thus an important environmental for archaeological study — are constructed either of volcanic sediments (clay and larger angular clasts) or from the higher slopes, is of calcareous sediments (sand and larger coral cobbles and red cobbles deposited by high energy storms) of coastal origin. Stream-cut trenches through coastal terrains frequently reveal sedimentary sequences reflecting both regional and local environmental changes in alternating series of depositional events. A critical aspect of this coastal geomorphology is its instability, with coastal fans subject to burial from mass wasting of the steep slopes immediately inland, or to removal and redeposition of sediments by high-energy surf during cyclonic storms. All of these processes have been reflected in the archaeological record of human utilization.

The soils of Master's are generally undeveloped, shallow, and rocky (ID). The Agricultural Department of Geography, 1984. On and Ota, most of the terrain, including this area, is subsistence gardening, commonly of deep, well-drained "Ohu" silty-clay". On Ta'o, most of the interior consists of the Oota family of soils developed on volcanic ash under forest cover, or of a rock outcrop-hydroxide joint association. In the vicinity of Ta'o, and Palaunoa villages, however, a complex of silty clays and clayey clays which are highly productive for shifting cultivation and agriculture. Similarly, on the plateau island of Ta'alaua is an extensive area of Palaunoa silty clay loam which also supports subsistence gardening.

The vegetation of Master's is divided into a dominantly coniferous pattern reflecting areas of intensive subsistence production and forest exploitation surrounding primary settlements. The pattern is especially marked on Ma'o Island where "managed forest" and "disturbed forest" form two extensive zones extending inland from the principal settlements at Ta'o-Palaunoa and at Palaunoa, inland of the disturbed forest lie zones of montane forest and cloud forest, subsequently dominated by human for pig and bird hunting, or gathering of wild plant resources. The zones of managed vegetation consist of a complex mosaic of shifting cultivation, secondary growth, and stands of economic trees, especially breadfruit, coconut, and other fruit trees. These zones reflect centuries of continuous land management and, not surprisingly, contain most of the archaeological sites outside the immediate village areas.

Contemporary settlement patterns in Master's are in many respects a summary of the prehistoric patterns. In part, this land we see vegetation reflects the substantial constraints imposed and axes slopes are common.

Modern sediments, and most archaeological indications of former occupation, are concentrated on the relatively narrow strips of flat coastal land (Coulter 1964). On Ta'o island, one main area of settlement is at the north-west corner of the island, with Lamu and Sulujea villages occupying a broad caldera called Ridge. The main villages are hydrophilic torno around island, and Palaunoa Village located on the coast extending along the lower shore of a alluvial-velvet core. The second major concentration of settlement is at Fafina on the northern tip of the island, where a broad, flat bench of lava provides suitable terrain for habitation.

On Ota Island settlement is centered on the central area, where a lake and a dune ridge is bordered island by a large earth providing an extensive productive zone for we this is relatively effective in this month steep cliffs of exposed basalt bedrock. A second, minor settlement of dispersed households is located along the northern shore of Ota Island where the remnants of Posomais and Fata'a collectively comes under the name of Bili.

Ota Island has one major settlement on its west-central shore, Ona
Major Site Classes:

Archaeological sites in Mau'a can be assigned to broad classes that include domestic- or settlement-related complexes, "specialized" sites (e.g., mounds, monumental constructions), wells, constructed walkways, rockshelters, earth/stone-lined pits, petroglyphs, buried cultural deposits (midden with or without ceramics), and sites of human-related geographic significance. These are among the site classes that have also been recognized and described in detail from work in Western Samoa (e.g., Davidson 1974; Jennings et al. 1976, 1982; Jennings and Holmer 1980). The distribution of major site classes in the Mau'a Group is shown in Figures 1 and 2, and is summarized in Table 2.

Domestic Site Complexes. Domestic or settlement site complexes constitute the largest continuous and most complex distribution of archaeological surface features recorded in Mau'a. These complexes are the remains of dispersed "villages" or numerous adjoining residential compounds (Wards and Household Units, "IHU", as Jennings et al. 1983 term them) distributed within a geographically delimited space. Alignments of oval plan composed of basalt and/or coral slabs, together with waterworn pebble paving stones (IHU), are among the most com-
An Archaeological Survey of the Maua’s Island

FIGURE 2. Map of Oli and Olae Island, showing major site locations and some of the major structures. Contour interval 100 feet. See Table 1 for key to symbols.

Table 2: Archaeological sites and features within the complex

<table>
<thead>
<tr>
<th>Site Feature Class</th>
<th>NA</th>
<th>OLOSIOA</th>
<th>OFU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal wall</td>
<td>6</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Aircraft</td>
<td>7</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Specialized Site</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Documented pathway/road</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Agricultural/water control</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Legendary only</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well</td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Spring/Tank</td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Parapet</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>9</td>
<td>11</td>
</tr>
</tbody>
</table>

Upon features recorded for domestic site complexes. Some of these features also have a stone-lined hearth situated at one end of the interior area. These oval alignments are undoubtedly foundations resulting from pole-and-chunk dwelling houses. This house form is known throughout the ethnographic period in Samoa, and persists today with the use of modern materials (Neto 1985). All complete oval alignments were measured, and total interior area calculated. Although the Maua’s sample is small (N = 19), the size distribution (Fig. 3) closely resembles that recorded archaeologically (Davidson 1974:234) as well as ethnographically at Fumala Village in Western Samoa (Jennings et al. 1982:79). A mode between 30-50m² for the Maua’s archaeological foundations fits well within the average house range for Fumala, with two other Maua’s structures of larger size comparable to the ethno- 

FIGURE 3. Frequency distribution of interior area (square meters) for mound-end archaeological site complexes.
alignments of boulders that appear to have served as territorial markers and boundaries. This regular patterned arrangement of surface features occurs in a repetitive pattern that crosses entire coastal flats as well as broad mountain slopes. The redundant pattern of these residential complexes suggests that settlement was organized on the basis of common descent groups occupying individual, yet adjoining, domestic compounds.

Extensive domestic site complexes have been recorded on each of the three islands of Manu'a (Figs. 1, 2). On Ta'u Island, major complexes are situated along coastal lands at Faga (AS-11-1), Suka (AS-11-2) and Amuli (AS-11-4). Examples of two site complexes within the extensive Faga settlement on Ta'u are illustrated on Figures 4 and 5. Other primary sites for prehistoric and historic settlement on Ta'u undoubtedly include the present-day locations of Ta'U, Faleatao and Pi'itula Villages.

On Ofu Island, evidence of two dispersed settlement zones (Sili'uta and Tanatau complexes, Sites AS-12-1 and -2) are situated on the broad slopes of the island's eastern side (see Fig. 2). The present-day settlements of Ofu are no doubt also located for subsistence settlement in the historic and prehistoric past. On Ofu Island, Site AS-13-1 stretching along the coastal lands of the south coast (Ta'aga, Mul'uhu, Fa'ala'aga) represents the vestige of a dense, continuous, and large settlement zone (see Fig. 2). The archaeological remains of the Ofu south coast are comparable in their scale and complexity to those of Faga on Ta'u Island.

Associated with these areas of settlement are features that do not fit within the redundant pattern of domestic complexes identified. Such features are less common and include wells, constructed walkways, and specialised sites. Specialised Sites. Stone and earth mounds, platforms, and monuments that vary greatly in form, size and degree of invested construction labour have been described under this broad designation (e.g., Davidson 1974). With the field evidence recorded so far, specialised sites in Manu'a include stacked and canted stone mound constructions and
stone-filled platforms. These forms are associated, both ethnoarchaeologically and archeologically, with sites such as burial and pigpen-cum-swearing activities (e.g., Buck 1952; 521). Other specialized sites of varying forms are treated in an earlier section as having legendary origins, but many sites remain unaccounted for in local Samoan ethnohistory or folklore. For archeology, this broad class of sites represents a period of Samoan prehistory during which ritual activity was invested in monumental constructions. The effort expended in constructing must have been re-shaped in terms of the symbolic significance these forms held to prehistoric Samoans.

On Ta'ui Island, specialized sites include the Wall of Vaovavau (AS-11-65), Ta Seu Lape Te'au (east Pagan Mound (AS-11-58), and Palapula Mound (AS-11-58). The location of these sites is shown in Figure 1. The Wall of Vaovavau consists of a retaining wall of stacked angular stone boulders that reaches nearly 4 m in height and is over 300 in length. The wall's significant is legendary. Ta Seu Lape Te'au, located on the opposite side of Apou'a Village, is known traditionally as a pigpen-cum-swearing site (as the same complex). Its form simply consists of two adjacent mounds of stacked angular stone boulders and compares well to some of the simple constructed forms known in Western Samoa (Davidson 1974). This is the only pigpen-cum-swearing mound recorded thus far in Manua's Palapula Mound, located on Tupou Ridge well above Ta'ui Village. It is massive (17.5 by 13.5 m in plan, 5 m in height) and shaped arrangement of rough stone boulders. This monumental site is not accounted for in local history or folklore.

One specialized site, the Tu'Ololi L'oa (trunk), has been recorded on Ofo Island. This site, included in the Ofo South Coast Complex (AS-13-3), consists of a crudely terraced mound of basalt boulders (by 9m, 3.5m high). Local tradition associates this site as the repository of high-ranking chiefs of the Tu'ololi tribe. No specialized sites have yet been recorded for Oloaga Island.

Wells: Several wells, made by excavation into the Oloaga-Herbert aquifer on low coastal lands, have been recorded in Manua. Some of these wells are elaborately constructed of stone boulders that form raised rings with adjoining paved court areas. Four wells along the coastal lands of Sisua on the east coast of Ta'ui are constructed with coral sand boulders in varying designs (Fig. 6). Other wells constructed of simple coral rock are those of Oloaga (three wells) and Sisua Village (one well). The Tu'Ololi L'oa in Ofo's south coast is of elaborate construction and remains in good condition. Nearly all of the wells have associated legendary accounts concerning origin, meaning, or importance.

An Archaeological Survey of the Manua Islands 109

FIGURE 5. Plan of Tupou Night, Ta'ui Island.

Wells vary in size and design, constructed in the form of retaining or free-standing walls with rubble or cobble fill. Some common features throughout much of Samoa (e.g., Davidson 1974; Jennings et al. 1976; 1979; Jennings and Holman 1981). In the Manua group, well-preserved examples remain along the west coast of Ta'ui's (a trail linking Ta'ui and Aloua), a raised pathway running the length of passeway's (Pasea) Village, and in sections along the east coast of Ta'ui's (Satau). Simple terraces (earthen paths and some stone alignments) are found on all three islands and are well in use, linking villages with villages and hunting zones. On all three islands modern roads appear to have replaced much of the original trails that once enriched each island.

Other Structural Site Classes. Some significant the classes that have been well documented in Western Samoa appear to be absent from the archaeologica record in the Manua Islands. The striking differences include: (1) the absence of the elaborately constructed and somewhat
enigmatic star-mounds known from the islands of Western Samoa (Davidson 1974) and from Tutuila (Kibuchi, MS n.d.; J. Clark, personal communication 1986) and (2) the total absence of any form of aqu-
treated fortifications such as the ubiquitous inlaid examples from Western Samoa (Davidson 1974). These site classes appear to be truly absent from Manu'a based on three observations: (1) local informants who know their island's terrain intimately were not aware of any site that fit the descriptions of star mounds or constructed fortifications; (2) archaeological survey over substantial areas did not reveal such sites which, if present, should be relatively visible; and (3) the rich local tradi-
tions make no reference to elaborate mounds, while mention of warfare and refuge refers to caves and dispersal of people into underground (karaea) areas. The absence of star mounds and fortifications, so prevalent in the archaeological landscapes of Western Samoa and Tutuila, sets Manu'a apart.

Legendary Sites. Local Samoan folklore is replete with mythical and supernatural accounts for the origins or history of various places. The primary focus of Kibuchi's survey (MS 1963) was recording sites that hold traditional significance, often in legendary terms alone. Most of these sites designate natural features of the landscape, as confirmed by field checks. While a record of such folklore is culturally valuable, these sites do not have archaeological significance per se.

MANU'A'S TERTIARY OCCUPATIONS

Since no sites containing Polynesian Plainware ceramics had previously been reported from American Samoa, we were especially con-
cerned with the problem of ascertaining whether the early, ceramic phase of Samoan prehistory (ca. 1000 B.C. to A.D. 300) was represented in the Manu’a Group. Three localities were chosen on the basis of geomorphic considerations for test excavations, one on each island.

Ta'u Village Excavations

Ta’u Village is situated along a narrow coastal plain predominantly composed of calcium sediment, which separates a low-lying Holocene beach and extensive nearshore deposits. The geomor-
phic structure of this plain includes sand ridges typical of a prograding sequence (Reineck and Singh 1980), with the potential of incorporating stratified deposits likely to include evidence of early coastal occupations. Test excavations were placed along a transect designed to cross-cut stratigraphic variation and thus the depositional history of the sandy

subsurface deposits of present-day Ta’u Village. The location, in the

Beimala sector of Ta’u, was chosen for three reasons: (1) this part of the coastal shelf is relatively narrow and we expected evidence of the deposi-
tional sequence to be contained within a mangrove area. (2) A surface

fluct in a single, thick-course Polynesian Plain Ware rim sherd made this area promaling in terms of producing a long cultural sequence that would aid in developing a model of sedimentological history for the broader area. (3) Excavations were likely to yield evidence of the time of geomorphic transformation of the intensively cultivated taro ground from a former shallow marine embayment.

Three 1-cu. meter test units were excavated along a seaward-inland transect. Unit 2, positioned at the base of the island cliffs, yielded only a high-

energy deposit of boaters indicative of storm or cyclone activity. Unit 1, on the inland slope of the calcareous dune ridge, revealed a pottery-

bearing occupational deposit dated by C14 to 2,330 ± 250 BP (shell, cor-

rected). Unit 3, located on the highest point of the beach ridge, revealed a deeply stratified sequence (to 2.5m) in-laying ceramics.

While further excavations will be necessary to work out the detailed depositional sequence in the Ta’u coastal plain, these preliminary tests are sufficient to indicate: (1) that coastal deposits dating to greater than 2,000 years are present on the inner slope of the beach ridge; and (2) that more recent deposits are present in the seaward portions of the ridge. Significantly, the Ta’u tests indicate that further excavations in this area have the potential to reveal a lengthy and detailed stratigraphic sequence spanning at least two millennia of Manu’aa prehistory.

Ta’u Marae Coring.

As research elsewhere in Oceania has demonstrated, dramatic land-
scape change is a frequent indirect result of prehistoric human activities (e.g., Kirch and Yen 1982; Kirch 1983; Spriggs 1986). Three samples, one on each island in Manu’a, were used to reflect the in-filling of former embayments during the course of human occupation. A 0.5 km transect extending from the interior edge of the Ta’u Marsh to the present shoreline was cored at systematic intervals (50m) in order to reconstruct the geomorphic history of this intensively cultivated landform. The cores revealed a think (1.5-4 m) deposit of smooth sandy loams and muddy clay layers covering coastal calcareous sands. Our preliminary in-

terpretation is a sequence that began with the in-filling of a shallow em-

bayment primarily as a consequence of vegetative community growth and encroachment.

Following in-filling with terrestrial sediments, the coastal dun
These results indicate that by the start of the first millennium A.D. both Ta’u and Ofu Islands were already occupied by makers of Polynesian Plain Ware. The C-14 ages from the Island’s excavations correspond closely with radionuclide ages assigned for similar assemblages in Western Samoa (Green and Daviddson 1974; Jennings and Hodge 1988; Hutt and Kirch 1987).

**ARTIFACTS AND OTHER CULTURAL MATERIALS**

Artifacts were collected from the surface of many sites, or were brought to us from private collections, or were excavated from one of four test areas.

**Prehistoric Ceramics**

Pottery was recovered through excavation at two localities: the terraces through Ta’u Village (AS-12-1) and from the Ofu Dump test pit at 15.250 = 0.0 BP for the ceramic-bearing sandy mud.

**Radiocarbon Dating**

As noted above, samples of human-modified marine shell (midden remains) in direct association with Polynesian Plainwares were obtained from excavations in Ta’u and Ofu Islands and at the Ofu Dump site. These samples were submitted to Beta Analyses for C-14 dates, which indicated precontact use of the shell with dilute acid to remove the outer shell layer, and measurement of the C-14/C-12 ratio, as well as C-14 activity. The C-14 adjusted age (conventional radiocarbon age) after Stuiver and Polach (1977) for these samples are: (1) Ta’u site, Beta-17941, 2,300 ± 50; (2) Ofu site, Beta-17942, 2,300 ± 50. Applying the correction factor for both ocean reservoir effect and for secular C-14 variation, following the methods of Stuiver, Pearson, and Reimer (1980), yields calibrated age ranges at one standard deviation as follows:

- **Ta’u site, A.D. 0-1200**

- **Ofu site, 28 B.C. - A.D. 400**
standard deviation of 1.86 mm. The distribution of mean sherd thickness is shown in Figure 7a. Variance in thickness measurements was also recorded (mean variance = 0.316 mm, s.d. = 0.129 mm), as shown in Figure 7, b. These Mau’s sherd thickness data are comparable with “thick ware” ceramics described by Green (1969:12, 1970) from several sites in Western Samoa, especially the Valefale mounds. Paste hardness, recorded on a Mohs hardness scale, ranges from 2 to 4. Temper grains are consistently harder.

The rims and vessel parts present indicate a simple assemblage of large open bowls (Fig. 8). There are no necks or complex rim forms or carinations indicative of other vessel forms.

FIGURE 7. Frequency distribution of ceramic sherd mean thickness (mm) and variance. See text for discussion.

FIGURE 8. Artefacts from Mau’s site: a, shell salad; b, c, d, Turbo shell fishhooks; e, bone beads; f, g, h, pottery rim sections.
Stone Adzes

A total of 24 classifiable adzes was obtained during the survey from surface contexts (Fig. 10). Following the Green and Davidson (1969) classification of Samoan adzes, the types and their frequencies in the Manu'a collection are: Type I, 1; Type II, 13; Type V, 2; Type VI, 2; Type VIII, 1; Type IX, 6; Type X, 1. Green (1974) has analyzed both surface collections and excavated assemblages of stone adzes from Uolea and Savai'i, and his data provide some interesting contrasts with the Manu'a's sample. Most striking is the low frequency of Type I adzes, thus far, of Type II in the Manu'a's collection. The Western Samoa and Manu'a's types I and 11 are dominant in general surface and museum collections. Whether this difference simply reflects the small size of our Manu'a's sample or a culturally significant difference in the prehistoric adze kits of Western Samoans and Manu'a, can be determined only through enlargement of the Manu'a's sample with further field work.

Type III is also common in Western Samoan collections, and thus its high frequency in Manu'a is not wholly unexpected. The representation in Manu'a of Types VI, VIII, IX, and X—all of these forms developed in the later phases of Samoan prehistory—is also expected based on the larger Western collections. Of particular note is the presence of two examples of Type V, adzes with distinctive plano-convex cross-sections (Figs. 9, b). Type V is known to be associated with Lappioli ceramic assemblages not only in Samoa, but elsewhere in Western Polynesia (Kirch 1981), although it may have persisted in Samoa as late as A.D. 1100-1200 (Green 1974:261). In our view, however, the presence of Type V adzes in Manu'a is a further indication of the presence of ceramic period occupations in these islands.

A single, small adze of fine-grained basalt was also recovered from the ceramic-bearing deposit at the Olo Dump site (Fig. 9, a). The adze has a triangular cross-section, and would thus be classified as Type VI in the Green and Davidson (1969) system. However, it has been well ground on the front, removing the original flaked ridge, and thus in some respects resembles a plano-convex sectioned Type V form.

Shell Adzes

Also found in association with Polynesian Pith SB ware at the Olo Dump site was a small piece of heavy shell, possibly Conus sp. (Fig. 8, a). Shell adzes are rare in Samoan archaeological assemblages, and may be restricted to the earlier ceramic periods (cf. Jennings and Hollister 1985).
Basalt Scraper

The Ta'0 excavations yielded a scraper made by unifacially retouching a large basalt flake (Fig. 11, a). The thick portion of the flake was "bucked" forming a convenient hand grip.

Fishing Gear

Three one-piece fishhooks (two fragments, one incomplete but whole) made of shell were recovered (Fig. 8). Two fragmentary pieces (head and points) came from the ceramic-bearing midden layer at the Ofa Dump, and date to about 2,000 years BP based on their stratigraphic association with pottery. The third, nearly complete hook was recovered from excavation of Unit 3 on the crest of the Ta'0 and date ridge. This specimen (from 1.85 m below surface) is of some antiquity, but presumably predates pottery. These finds are significant given the paucity of fishing gear recovered from archaeological contexts in Samoa, particularly associated with the earliest periods of prehistory.

Two waterworn tubular-shaped pebbles (one of basalt and one of coral) with perforations ground through the centre probably represent net weights (Fig. 11). These were collected by Chief Tupaia on his coastal property at Siva (AS-11-2). Their age and precise archaeological context remain unknown.

Two waterworn tubular-shaped coral pebbles with roughly parallel grooves cut into the surface were recovered (Fig. 11, b). One was found within the ceramic-bearing section of the Ta'0 I test pit. A nearly identical form was collected from the stream bed erosional materials at Aneofu (AS-11-52). This may well be an early form of net weight, providing evidence for netting as a component of early Samoan marine exploitation. A second form of possible net weight is represented by a tubular, coral pebble with roughly parallel grooves worked into its surface. This artefact was recovered from the Ta'0 excavations.

Bead

A polished, drilled bone bead of distinctive "barrel" shape was discovered in the erosional deposits of the Aneofu (AS-11-52) stream bed (Fig. 8, d). The bead was associated with a Type V plano-convex adze, suggestive of a possible early first millennium A.D. age. The bead is similar to what are often called "red" ornaments from early eastern Polynesian contexts (Leach et al. 1979). This ornament form is also known from the Polynesian Outliers of Tikopia (Kirch and Yen 1982, fig. 100, f, g) and Tumuaika (Leach et al. 1979). This is the first archaeological documentation of bone "rotsi" from Samoa.
**Fossil Materials**

Bones and shell midden was recovered from all test excavations. The predominant shell constituents include *Turbinidae* (especially *Turbo compressa*), *Cypridae*, *Trichiidae*, and *Tridacna sp.* These taxa inhabit the intertidal reef platform and reef edge and were readily available in marine environments adjacent to the site. Vertebrate faunal remains were recovered at both ceramic-bearing sites, and were dominated by fish bones. Fossil remains that can be securely associated with Polynesian Pitkäreiee ceramics included sea turtle, pig, medium nautiloids (dogfish), a hagfish fish and other unidentified fish. Bones from postceramic stratigraphic contexts includes abundant pig, rat (probably *Rattus exulans*), medium bird (possibly Gallus gallus), medium macaque (dogfish), and a single *Huanu o* nodar. Fish remains from postceramic context includes large nautiloids (cf. *Turbo sp.*), hagfishes, *Piasisechinus sp.*, *Diodon hystrix*, scards (cf. *Centrostephanus sp.*), *Monotaxis granulosus*, holocentrids, hagfishes, and diatomophytes (definitely shark and possibly also rays). This range of fish taxa suggests exploitation of both intertidal and benthic marine environments.

Although the faunal assemblages are small, none the less are significant in several respects. First, pig is securely associated with ceramic occupations that presently mark the earliest known settlement of Manu'a. Second, the dominance of pig bones in postceramic deposits suggests a temporal trend towards development of terrestrial resources, a pattern which should be tested with further excavations. Third, the fish bones display a more diverse taxonomic suite than from other Samoa sites previously excavated, and thus indicate the potential for expanded excavations at these sites to yield important data on Samoan marine exploitation.

**CONCLUSIONS**

Although extremely limited in scope, the 1986 test excavations on Ta'u and Utu Islands succeeded in extending the prehistory of the Manu'a Islands back to the first millennium A.D., with a cultural assemblage characterized by Polynesian Pitkäreiee ceramics. The question remains, however, whether this horizon marks the initial Polynesian settlement of the group, or whether the Manu'a sequence will ultimately be extended back to the second millennium. Given the close proximity of Manu'a to the larger Samoan Islands (*Tutuila* and Manu'a are intervisible under optimum conditions), it is reasonable to expect that early Lapita colonists reached Manu'a. However, the archaeologist
The classes of prehistoric settlement pattern components identified in Manu'a are generally typical of those known from other Samoan islands. In particular, those include oval or round-ended house founda-
tions, house terraces, low walls, stone pavements, stone-constructed
walkways, and simple stacked-stone mounds, including those identified
ethnographically as pigeon-mating mounds. Manu'a may be unique,
however, in the presence of elaborate stone-lined wells. On the other
hand, two otherwise important Samoan site types are evident almost
in the Manu'a Group: star mounds and cisterns or storerooms. The
absence of these settlement pattern components was both unexpected
and significant, particularly in the implications for the late prehistoric
Manu'a sociopolitical system. Although their exact function remains
unknown, star mounds are monumental and specialized constructions
assumed to be associated with powerful political groups or leaders able
to mobilize the labor required for their construction. Fortifications are
regarded as archaeological manifestations of intergroup conflict,
especially between competing chieftains. The Tui Tau's paramountcy
was reportedly recognized as a very high ranking title throughout Samo,
and beyond to Tonga (Mead 1930:131). Certainly, then a high-ranking
title appears to have been maintained without monumental symbols such
as site mounds, and in a settlement system that apparently did not in-
clude fortifications such as those common in Western Samoa (Davidson
1974). Accounts from the 19th century suggest that warfare was a fre-
cquent and significant factor in Manu'a society and politics (Freeman
1983:139-60, 165-70; cf. Mead 1930:166). The absence of fortifications
might be explained as a problem of archaeological sampling, especially
given the likelihood of forts having been positioned in locations with dif-
ficult access. A second possibility is that warfare emerged as a common occurrence only in the 19th century and was not frequent or protracted
enough to make fortifications as important alternative.

The ethnographic record contains other references to distinctive
features setting Manu'a apart from the more waterily variant of Samoan
culture. These include divergence in kinship usage, religion, and dialect
difference recognized by native speakers (Mead 1930:144 passim). The
archaeological record now adds to this list of minor differences. Distinc-
tive stone-lined wells have already been noted. If it does not prove to be
an artifact of small sample size, the unusually high frequency of Type
13 adzes in the Manu'a surface collection may also signal local differenti-
ation. This is perhaps a thin straw on which to construct this argument
for Manu'a cultural distinctiveness, but it is at least suggestive that the
presence of minor traits distinguishing Manu'an populations from those
of the more westerly Sanoom Islands may have a long antiquity.

The 1966 Manua Project has provided a foundation on which more intensive investigations of local prehistory may build. Some problems requiring immediate attention include: (1) the extension of surface artifact testing of the coastal lowlands for evidence of early settlement, including the possibility of Lapita activity; (2) the location and testing of stratified deposits representing the postceramic phases of Manua's prehistory; (3) detailed mapping of the habitation pattern of household units exist in late postceramic settlement complexes such as at Fagag and Iaoa on Ta'o Island, for comparison with patterns already documented for Western Samoa; and (4) further geomorphic study of localized landforms, such as the hydromorphic taro marae, to determine the role of human land use in landscape transformation. It is our aim to address these and other problems as the Manua Project continues in 1987 and beyond.

ACKNOWLEDGMENTS

The 1966 Manua Project was funded by the Department of Parks and Recreation, American Samoa Government. We are especially indebted to David Culver of Manua's High Chief, Avisgalei Suai, Senator Tutuila, High Chief Tatea, and High Chief Chato, Nuu, Panama, and Ta'oe for their permission to work in Manua as well as for their generous assistance. Island Preservation Officer Sua Suamoe was instrumental in getting our group into Manua. Island Preservation Officer Sua Suamoe was instrumental in getting our group into Manua. We also thank the following individuals for their various contributions to the project; Chief Charlie, Chief Tutuila, Chief Avisgalei, Chief Samo, Chief Avisgalei, Chief Tutuila, Chief Avisgalei, Chief Tutuila, Chief Samo, and Chief Tutuila, Chief Avisgalei, Chief Tutuila, Chief Samo, and Chief Tutuila, Chief Avisgalei, Chief Tutuila, Chief Samo, and Chief Tutuila.

MARTIN J. HUNT

REFERENCES


Survey, Proposed Ta'U Harbor at Fua and Taulele'i Quarry Site Between Ta'U and Fa'ahelo, Manu'a Group, American Samoa. Bernard P. Bishop Museum Library.


