



NEW ZEALAND
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NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER



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ARCHAEOLOGY IN SAMOA - 1965 to 1967

R.C. Green

Part I - General

As a part of a broadscale investigation into Polynesian prehistory by archaeologists and linguists, sponsored by the Bernice P. Bishop Museum and supported by funds from the National Science Foundation of the United States, various co-operating institutions have undertaken archaeological research projects in Fiji, Tonga, and Western Samoa. In this two year project, the investigation of Samoan prehistory was designed to cover a period of 21 months. As continuous as possible a programme of field research was kept in operation in order to derive the maximum use from on hand equipment, established contacts, trained local labour, etc. which accrue to any reasonably sustained enterprise in the islands. The field research period has now ended and the results of this and previous work (Green 1964a, Davidson 1965) in Western Samoa are now being processed for publication. In this series of brief reports, we are thus outlining something of what has been done in the last 21 months and not attempting to present final results.

One objective was to complete the reconnaissance survey of the entire Samoan group, so as to possess some knowledge of the variety of field evidence to be anticipated, to seek for potential sites and localities for detailed investigation, and to assemble data on surface monuments on a sufficiently broad base that one could assess the range and variation among them when making comparative studies. The surface surveys of American Samoa by Kikuchi (1963) and Kikuchi and Sinoto (Emory and Sinoto 1965:40-49), previous work on Upolu and small adjacent islands of Western Samoa (Golson 1957, Green 1964 b) plus the specific projects on Upolu in the present programme, ensured a reasonably adequate coverage of all islands in this respect, except for Savaii, the largest island in the group. Obviously the task could not be avoided, and for this reason two periods each of field reconnaissance, site recording, and mapping on Savaii were undertaken by S.D. Scott (1965, 1966) and A.G. Buist (1966, 1967, and this issue). These amount to nearly six months of field survey under conditions of transport, climate, and difficult terrain that were far from ideal. However, the general record we now possess for field monuments and subsurface sites throughout the Samoan group is as extensive as that for other better known island groups in tropical Polynesia, though, of course, it is a very long way from complete and contains obvious gaps. But some attention at least has been paid to assessing and recording the archaeological potential of the entire group, even if the main investigations have centered almost wholly on the island of Upolu.

Intensive survey, detailed mapping, and excavation have characterized the part of the research based on Upolu. In general individual projects have been undertaken in areas previously investigated, either to answer specific questions as at Vailele where John Terrell (1966) conducted further excavations at mound Va-4, or to expand significantly the knowledge of structural features and time depth in a locality as at Luatuanu'u described in a report below by K.M. Peters. In the same vein M.P. Hougaard (Nicholls) did an additional survey and excavation

in one mound broached by a plantation road in the Upper Vailele area, while S.D. Scott did additional testing on the fortifications at Luatuanu'u, and several of us combined to complete certain additional work at Va-4 recommended by Terrell. A mound at Moamoa, behind Apia, reported to contain pottery was also tested by both Scott and Hougaard.

The principal new project, however, was a more highly structured attack on the pattern of settlement inland in Samoa, a project that was carried out along similar lines to those found successful in a previous study in the 'Opunohu Valley of Mo'orea in French Polynesia (Green et. al 1967). Nearly eight months of intensive site surveying, involving clearing and detailed mapping of settlements in several areas of Upolu, was carried out by J.M. Davidson and is described more fully below. The work she did in one valley, the Falefa, from Falevao village inland, laid the basis for her selection of a series of sites for excavation during the final three months of the field research.

The concluding phase of the research was largely devoted to excavation. It began with work on three house structures in the locally known settlement of Saisoa'a. This settlement was believed on traditional evidence to date to the period of early European contact. Our object was to confirm this archaeologically. In this we were successful and obtained evidence on house structures and graves, recovering a wide range of early European trade items for the period after 1830 A.D. These excavations furnished the necessary baseline for determining whether other sites were of this period or later, or whether they belonged to a period prior to effective contact and trade with the Europeans. The materials recovered are now being processed by J.R. McKinlay, who did much of the initial work at the Sai-3 site at Saisoa'a.

At Sai-3 earlier occupation layers were also encountered which are prior to effective European contact. In fact the lowest two occupations in this site contained abundant pottery and yielded a large collection of stone material including adzes, and structural information. This is now being processed and at present I am only willing to say that the pottery and adzes from the more recent layer may be compared to those from layer V at Va-1, Vailele, and that the more abundant pottery from the earlier occupation may be easily distinguished from the later material.

At another settlement, Folasaa-a-lalo, an extensive excavation was carried out in a large earthen terrace with two clearly defined house structures and a variety of other features on its surface. Both house outlines presented evidence of multiple rebuilding and up to eight successive rebuildings were demonstrated by a Japanese archaeologist, Kisao Ishizuki, from Doshisha University in Kyoto.

Excavations in two house structures at the settlement of Leuluasi, some distance inland from Falevao, were conducted by J.L. Fagan and K. DeNave. In one site several successive occupations were demonstrated, while at both evidence of rebuilding on one horizon was obtained. At another settlement, Puna, a series of medium sized earthen mounds, similar to those excavated at Vailele, stretched in a line across the valley. A cluster of three near Lalomauga was cleared, the surfaces and interconnecting pathways cleaned up and the whole mapped. An

excavation was then conducted in one quadrant of the best preserved example by T. Hansen. Finally small excavations in two sites in one of the farthest inland settlements of the valley, Te Auailoti, were carried out by K. DeNave and myself. To these may be added small excavations by J.M. Davidson, principally for datable charcoal from ovens and firepits at the settlement of Vaimaga and Folasa-a-lalo and in an earthen ring on the alluvial flats at Leuluasi.

On the basis of the data gathered by Davidson, and that obtained from these excavations, it would appear that we are now in possession of some of the information necessary to answer questions such as, how long and how permanently have the Samoans lived inland as well as on the coast. We also have, of course, information on how recently some of the settlements were abandoned, with the people shifting to the coast, or coalescing into new and/or larger villages.

Part II - Intensive Surveys on Upolu Island.

by J.M. Davidson

During 1964, major site surveys were carried out at Vaialele, and Luatuanu'u (Green 1964b). At the same time, less extensive reconnaissances were made in several other areas, including areas inland of Lotofaga and Lepa (Davidson 1964) and Mulifanua and Solaua - Sauniatu (Green 1964b), and further areas in the vicinity of Luatuanu'u and Solosolo. These surveys provided a considerable amount of information on types and distribution of field monuments, and raised a number of problems for further investigation. The data were, however, inadequate for any major conclusions to be drawn concerning settlement patterns.

Three major project areas were selected for intensive investigation during an eight month period between October 1965 and May 1966. These were chosen with a view to exploring the nature of settlement in widely differing environments, and it was hoped that these three new areas, together with those already investigated would cover most of the major types of environments in which settlement had taken place on Upolu.

The first area surveyed was the inland part of the extensive valley lying between Falefa village and the Mafa pass. This large valley, with its fertile soils and abundant water supply, appeared to offer optimum conditions for inland settlement. The full extent of the valley proved too great to be covered in the time available, so that work was concentrated on the larger eastern arm, while the western arm, including the old settlement of Pago, visited by Green in 1964, was not further investigated.

All settlements which could be identified were recorded and explored, but the extent of inland settlement was found to be so great, that it was impossible to map all, or even most of the structures in the project area. As a result it was necessary to resort to sampling, in which only certain areas were cleared so they could be mapped in detail. Traditional information relating to the settlements was also recorded wherever possible.

The second project area selected was a portion of the Mulifanua group of plantations of the Western Samoa Trust Estates Corporation. In much of the Western portions of Upolu, the land is formed by the more recent Mulifanua volcanics, which provide very different conditions from those offered by the older land forms of the eastern portion of the island. The Mulifanua

plantations were selected as a project area representative of this environment for two reasons. The plantations were among the first outlined by the firm of DH & PG and their European history is well documented, providing a terminus ante quem for much of the structural remains. Secondly the plantations provided open-grazing conditions, in which archaeological remains could be relatively easily discovered. It was felt that the accessibility of the sites in comparison with those in village lands, offset any damage done by cattle. A strip extending from the coast some two miles inland was explored and found to be covered by a continuous series of archaeological sites. The land is conveniently divided up into blocks by plantation roads, and the number and nature of sites in each block was recorded.

The third project area was selected on historical as well as geographical grounds. In 1787 La Perouse sailed past Opolu, and remarked on the vast settlement, extending far inland, which he observed in what is generally accepted as the Aleipata district. The third project area, then, involved the plateau extending from Lalomanu village inland as far as Mount Olomauga. This appeared most likely to be the area described by La Perouse, and at the same time involved yet another environment, less fertile than Falevao, less rugged than Mulifanua, offering reasonable conditions for settlement except for a rather serious lack of water. Here, quantities of house sites were recorded, a larger number of "star mounds" was located than in any other area, and traditional information was obtained suggesting that in fact many of the inland sites had been occupied in La Perouse's time.

In addition to these major surveys, minor reconnaissances were carried out in secondary areas, as a spot check on the findings in the project areas. The area extending from Western Apia inland to Moamoa, provided a rough check on the findings from Falevao. A strip extending from Fasito'outa inland almost to Tanumalala, and portions of the Alexisa district provided checks on the Mulifanua findings. Though data from these secondary surveys are insufficient for settlement pattern analysis, they demonstrate that the type of settlement encountered in the major project areas is not in any way unique.

Given the data obtained in 1964, and the considerably greater amount obtained by the more recent survey, together with the results of excavations in a number of sites in the Falevao project area, it will now be possible to draw a number of conclusions about the nature of settlement in Samoa, from early European times well back into the pre-European period.

Part III - Preliminary Report on Investigations at Lu-53.

by K.M. Peters

With repeated discoveries of various "star-mounds" on Upolu and Savaii, it was felt that an excavation of one of them should be carried out in the final three months of the programme. Of various such structures this site was selected because it was in a project area where it could compare with previous investigations by Davidson and Scott, it was partially in earth and amenable to excavation, it was within reach of Apia on the way to Falevao, and it was relatively accessible, if one can call a daily hike of 1½ miles up a 900 ft. ridge easy.

The site, Lu-53, is situated on a ridge running approximately North-South between a hill top fortified site, Lu 44, and the well known inland fort, Lu-41 (Green 1964b; Scott 1965). Besides the nearby fort to the north, many terraces with evidence of pavements, house outlines, etc. a well, and a few mounds are found on this part of the ridge. In fact the "star-mound", itself, has been built on an old terrace along the eastern side of the ridge and is adjacent to a track from the present Luatuanu'u village to the fort, Lu-41. In contrast to many of the similarly shaped mounds found by Davidson, Scott and Buist, this "star-mound" is far more irregular in shape, though clearly belonging to the same structural class (Fig.1). It has eight arms and is surrounded by seven deep pits of varying shapes and sizes. The biggest measured 11 by 5 metres and the smallest 4.5 by 2.5 metres.

Excavation:

A grid and 'squares' for excavation were set out from a point approximately in the middle of the mound, so that one quadrant of the site was covered and the main lines of 'squares' at right angles to each other ran through two of the arms and into the pits opposite. These 'squares' were 4 to 4.5 metres long by 1.5 metres wide with 1 metre baulks between (Fig.1). The baulk between square A2 and B1 was subsequently removed. In total an area of 90 square metres was excavated by a crew of five workmen under the direction of one student from Auckland University, Miss J.L. Fagan, and myself.

One object of the excavation was to find out about the construction of a "star-mound" and any features associated with it which might be clues to its function. Another was to place the "star-mound" form within a stratigraphic sequence. Excavations revealed a stratigraphic sequence which may be divided into six major units:

Layer I - consisted of a dark brown loose granular clay with humus at the surface. A pit dug into this in the centre of the "star-mound" was probably used as a fireplace.

Layer II - was a mixture of brown soil, yellow clay and stones which formed the build up of the mound itself. The spoil for this probably came from the pits surrounding the mound.

Layer III - a river gravel pebble spread ('ili'ili) which underlay the whole mound and rested on the surface of the terrace.

Layer IIIa - a dark brown loose and well structured granular clay layer which was formed when the site was abandoned for a period of time.

Layer IV - a volcanic rock layer which had the appearance of a pavement on the terrace wherever encountered in excavation. Associated with this layer were three lenses, a,b, and c, located in the south-east corner of Square A2 and A which are clearly living floors.

V - a unit composed of 4 layers, the top one of which, V, was a very hard yellow clay, this was definitely a living floor as it is associated with fire-pits, postholes, a pebble spread, a drainage system, and a double alignment of

big stones from a possible house structure. Under this were three less extensive layers: Layer Va was a yellow-brown mixture of loose soil, clay, and some pebbles; Vb was a yellow-brown soil matrix in which occurred scattered lumps of charcoal, and Vc was a loosely compacted grey soil with an abundant and widely distributed fine charcoal.

VI - a unit of two layers which consisted of a loose grey soil with fine and well distributed charcoal, and a yellow soil of volcanic origin from the underlying volcanic rock in which occurred pockets of charcoal.

Drain:

The drainage system of layer V deserves further description. It ran along parallel to the low ridge on the west side of the terrace in a North-South direction. When traced for about 50 meters to the north it terminated at the foot of a large surface rock, while to the south it extended about 15 metres where it was blocked by subsurface volcanic rock, a part of the underlying natural into which the drain was cut in this area. While signs of an attempt to hack away the rock, in order to continue the drain were evident, they had not broken through, though the drain resumed and continued on for approximately another 3.5 meters where rock similar to the first again blocked it. Again an attempt had been made to hack this away. At this point excavation ceased. Levels show that the fall in the drain is 35 cm toward the center in Square B1 from either end. Three additional drains were encountered in Square B1, one over 1.4 metres deep separated from the next by a low ridge 50 cm wide and 30 cm high, a second 1.25 metres wide and 50 cm deep, and a third rather shallow one. In square C1 a further definite drain and a possible one running parallel to the main one were encountered. In Square B2, the two main drains converged, giving the impression of some sort of irrigation, an idea which was abandoned as excavation progressed and either end of the system was found.

Portable Artifacts:

A large number of stone flakes was recovered but the rest of the assemblage was small. It included 10 partial or entire adzes, two large grinding stones, and one Kava stone amongst the rocks in the wall of the "star-mound".

Summary:

One objective, information on the construction of the star mound was achieved. It is clear that the mound was built of material dug from the seven pits surrounding it, with the arms partly formed by rock and then filled with earth. Rock facing was also used on all sides. A second objective, the position in the stratigraphic sequence, showed clearly that the "star-mound" represents the most recent event in a long history of use. However, the third objective, the function of the star mound, was not further clarified.

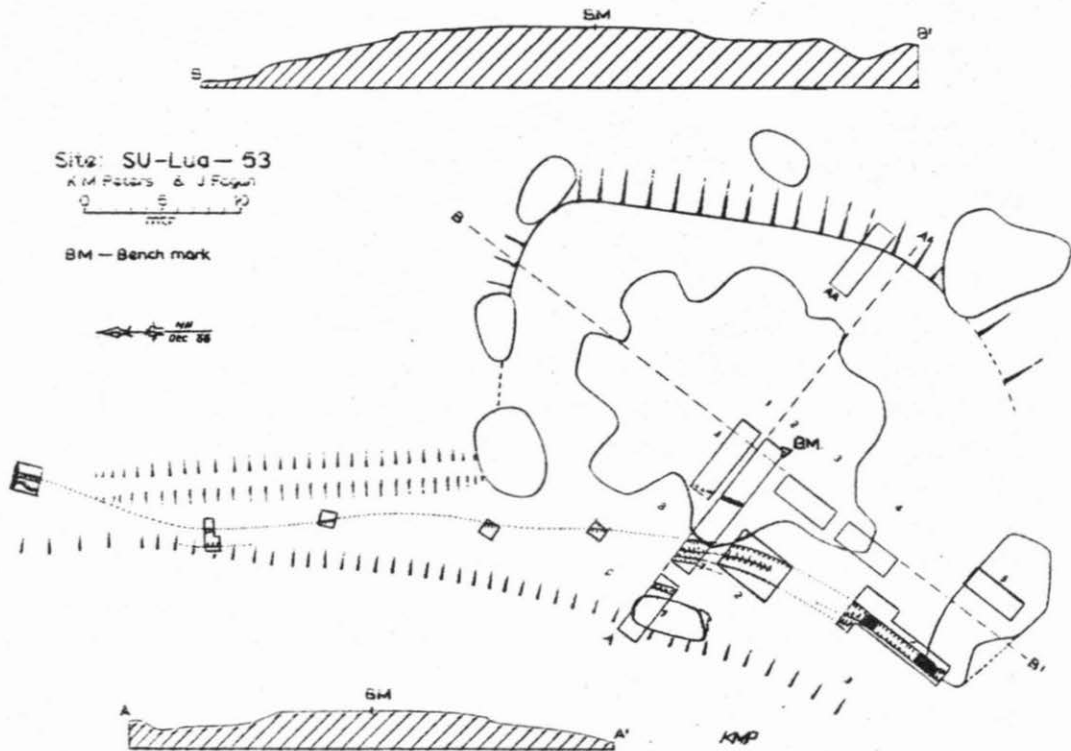
The excavation of the earthen terrace underlying the "star-mound" allowed definition of a long history of occupation with at least one major break (Layer IIIa). Occupation after this break was associated with a pebble spread and in Square A1 a rock pavement. Fire pits at this level were all on the east side, in much the same position as firepits of earlier occupations before the break. One earlier occupation on the terrace with its drain, stone alignment, postholes, pebble spreads and firepits indicates a period of extensive use.

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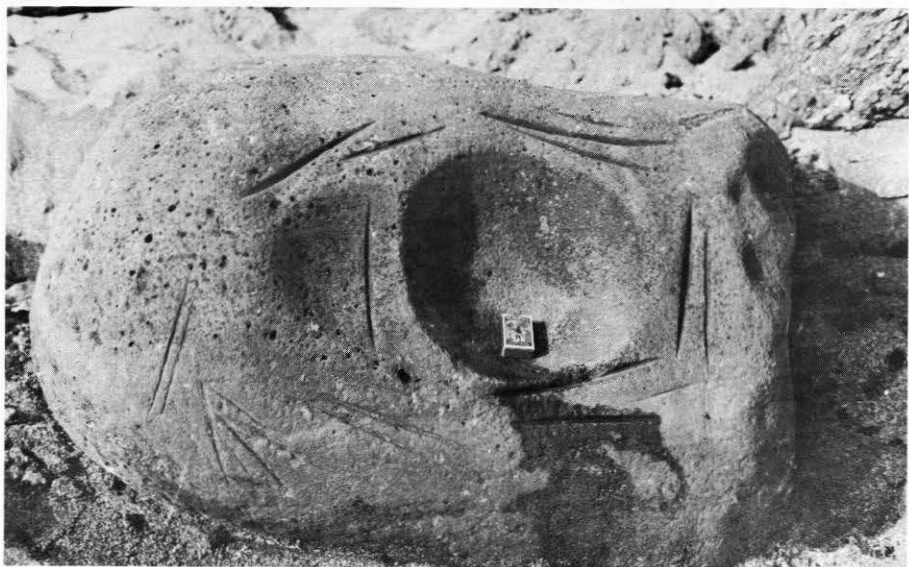


PLATE 7. Savai'i: boulder at Faletagaloa.



PLATE 8.
Upolu: excavation star
mound showing rock
build up, with fire-
places, stake and post
holes, layer IVa.

K.M. Peters