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A BRIEF REPORT ON EXCAVATIONS AT SIGATOKA, FIJI.

Lawrence and Helen Birks

The three sites investigated by the writers of this report are all on the south coast of the main Fijian island of Viti Levu, in the vicinity of the Sigatoka River mouth. Excavation was carried on for three and a half months at the latter end of 1965 and again from June to December 1966.

Work was financed by a grant from the National Science Foundation of the United States, sponsored by the Bernice P. Bishop Museum of Honolulu, and was part of an intensive research programme, involving the Sigatoka Valley area, instituted by the Fiji Museum under the direction of Mr. Bruce Palmer. Under the Museum's site-recording scheme, the designation VL16/1 has been given to part of the southern slope of an extensive sand dune area stretching some three miles west from the river mouth and rising to a height of 175 feet.

Site VL 16/1

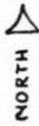
This was perhaps the most significant of the sites excavated, and will be dealt with first. It had been visited previously by several investigators, including Gifford (1951:251-252) who, however, did not undertake any excavation.

Potsherds and fragments of what appears to be introduced stone are to be found at a number of places on the dune surface, notably on the lower portion of the southern or seaward slope. Much of this material seems to have been re-deposited as a result of wind erosion, but a location was found where some remained in place in the semi-consolidated sand. The prevailing wind is the south-east trade, which strikes this unsheltered stretch of coast with considerable force, and drives sand from the beach over a surface completely unprotected by vegetation. The placing of marker pegs showed that denudation of the dune surface was taking place in some areas at least, at the rate of 7 inches in 6 months. It was therefore fortunate that recovery of available material was not longer delayed, as the quantities available proved to be definitely limited. As might be expected, the almost constant movement of drift sand and its very capricious deposition and removal added considerably to the difficulties of establishing the overall stratigraphic pattern. Much additional excavation work and general inconvenience was also due to this factor.

The westerly extremity of the promising area having been established, a grid was set out on a baseline running due east and west about 40 feet above high water level. The extent of the site may be gauged from the fact that the baseline, originally 1040 feet long, was increased to 1600 feet in the course of the second season's work, and that the most northerly square dug was 150 feet up the dune slope.

SITE VL16/1

WEST FACE OF NORTH-SOUTH TRENCH



LEVEL THREE
AS SHOWN
AS 60 FT. WEST
OF ACTUAL
POSITION

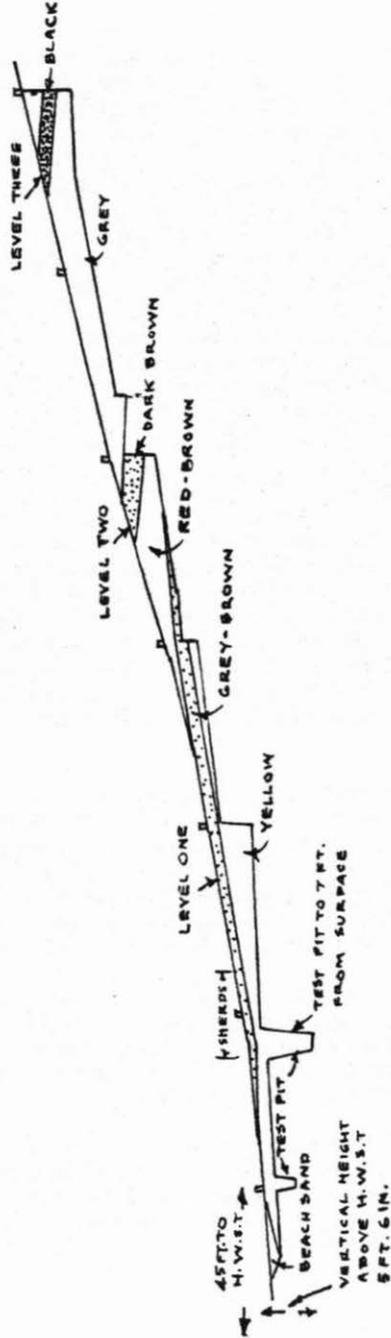


FIG. 1

SIGATOKA - FIJI

As an initial examination suggested the presence of early soil horizons, a position was selected for digging a trench in a north-south direction, in the hope of revealing the entire stratigraphic sequence. The trench excavation disclosed two old soil horizons, the lowest pale grey-brown in colour, running northward into the dune in a fairly horizontal plane at a height of about 6 feet above high water. The second was, measured vertically, 13 feet above the first, and darker in colour. Continuation of the trench failed to intersect a third soil horizon, but investigation to the east of the trench line showed an even darker layer, beginning above the other two and extending eastwards. All three followed the general trend of the dune system in taking a rising course from east to west. The dark layers averaged about 15 inches in depth, and all contained potsherds, distributed unevenly along the line of the old horizons as they showed on the sloping surface of the dune. The soil horizons, in order from lowest to highest, were designated Levels 1, 2 and 3. (See Fig.1).

Site VL 16/1 - Level 1

Attention was given first to Level 1 as being the earliest and therefore likely to be archaeologically the most important. Also, since surface material from Level 2 appeared similar to some obtained by Gifford, it seemed possible that Level 1 might supply material in support or refutation of the hypothesis advanced by Green. This suggests that the Sigatoka area may provide evidence for an earlier occupational phase than any postulated by Gifford (Gifford and Shutler 1956:89-90) and provisionally identifies a Sigatoka Phase with proto-Polynesian culture (Green 1963: 250-251).

In the two seasons' work, 107 squares, each of 100 square feet, were excavated on the line of Level 1, covering all areas in which there seemed any prospect of obtaining culture material. This material was principally pottery, of which some thousands of sherds were recovered. The disposition of many of these suggested a relatively minor degree of disturbance, and the hope that at least partial assembly might in some cases be possible, has been borne out by subsequent experience.

Artifacts other than pottery were comparatively few, and comprised completed or roughed-out adzes; grinders or polishers; sharp-edged flakes possibly used as knives or scrapers; and a few doubtful specimens. Unworked stone, with the appearance of having been used in cooking fires, was scattered through the layer.

Level 1 produced no wood in any form except charcoal, entirely comprised of small and scattered fragments or flecks, with no substantial concentrations. Bone and shell, either in its original or a worked condition, was present only in negligible quantities, this lack almost certainly due to the acid condition of the sand.

The concentrations of potsherds were not accompanied by a corresponding body of structural evidence. The five shallow holes found would have been adequate to take only stakes or small posts. Two of these holes were associated with one of three firepits, dug into either the occupation layer or the underlying sand.

Site VL 16/1 - Level 2

Sherds from Level 2, eroded out and lying on the surface, were very much more plentiful than was the case with Level 1. The first Level 2 squares excavated, towards the eastern end of the visible horizon, were extremely productive, but this plenitude was not maintained further west, where the culture level was more exposed to the wind.

Level 2 followed the pattern of Level 1 in a general lack of culture material apart from pottery. Adzes, for instance, were even scarcer, being limited to a single surface find. No postholes or fireplaces were located.

Site VL 16/1 - Level 3

The exposed portion of this level appeared near the eastern extremity of the two lower horizons, thence taking an easterly course. The organic material composing it was almost black.

Of the three culture horizons, Level 3 contained the least artifactual material, almost exclusively potsherds. Excavation did not disclose any postholes or other evidence of structural features.

Site VL 16/1 - Conclusions

Investigation of the site, begun during the first season, was completed in the second, and involved testing, and excavation where warranted, of the entire visible portion of all three culture horizons.

Processing of recovered material will necessarily be slow and painstaking, especially the sorting and assembling of sherds to form what it is hoped will prove a series of vessels or recognisable size, shape and decorative pattern. However, some general conclusions may be stated:

1. Pottery from all three levels exhibits a number of points of difference, such as to make them readily distinguishable, and implying three separate pottery traditions.

2. There seems to be a difference in pottery technique between pots from Level 1 and those from the other two levels, so that while the latter are obviously made by paddle and anvil, this is uncertain as regards Level 1 pots, where the surfaces are scraped and smoothed.

Some features so far noted of pottery from the three levels may be summarised as follows:

Level 1

- a. Most pots well made and carefully finished.
- b. Much variation in shape and size.
- c. Red slip or stain applied in some cases to part or whole of surface.
- d. Presence of pottery objects other than vessels, some of which seem unlikely to be pot-rests.
- e. What appear to be pot lids or covers.
- f. Outward thickening below lip in the case of many rims, with notched decoration.
- g. A characteristic dentate stamped decoration on a small proportion of vessels (described variously by other writers as pointille or roulette).

Level 2

- a. Apparently smaller variety in shape and size than in the case of pots from Level 1.
- b. Large proportion of vessels decorated on body by use of carved paddle, leaving impressed patterns on the surface.
- c. Most rims wide and flaring.
- d. Many sherds from large and heavy, roughly-made flat-bottomed dishes with leaf or matting impressions on undersides.

Level 3

- a. All pots completely undecorated.
- b. Vessels seemingly fairly consistently large in size.

Site VL 16/1 - Age of the site

Sufficient charcoal to provide a sample for radiocarbon analysis was obtained from both Level 1 and Level 2. Testing by Gakushuin Laboratories, Japan, gave a date for the Level 1 material of 2460 years before present ± 90 . This therefore confirms the accuracy of the forecast by Green (1963:250-251) of an early Fijian cultural phase dated to 500 B.C.

A consideration of the proportion of paddle-impressed sherds from Level 2 suggests, on the basis of Gifford's dating of his Navatu site (Gifford and Shutler 1956:89-90), that Level 2 material will be shown by radiocarbon analysis to date to a period between 100 B.C. and A.D.400.

Level 3 should perhaps be placed somewhere in Green's Vunda Phase, characterised by a high percentage of undecorated pottery and dated about A.D. 1100-1800.

Site VL 16/22

The site is on the reef-enclosed coast about 3 miles west of Sigatoka.

Potsherds had been noted eroding out of a steep bank behind the beach, but the possibility that this pottery horizon might extend inland was largely disproved by excavation of test squares. However, investigation of the culture layer on the beach front, limited by the nature of the site to an area 15 feet by 3 feet, revealed a stratigraphic sequence of four layers containing cultural material, mainly potsherds of small size. Dug into the underlying hard yellow sand were seven postholes and a fire-pit with four hollows, possibly for pot-rests of stone or pottery.

Very little processing of material from Site VL16/22 has yet been done, but a rough classification of sherds showed that it produced the following types, the sequence reading from lowest to highest:

- { a. Dentate stamped (in relatively small numbers).
- { b. Coloured by red slip or stain.
- { c. Paddle-impressed.
- { d. Leaf-impressed.
- e. Plain.
- f. Cross-hatched incised (small proportion).

The correspondence of sherd types indicates a relationship between the cultural sequences of Sites VL16/22 and VL16/1.

Site VL 16/81

This is a rock-shelter on Yanuca Island, which is just over 100 acres in area and lies about 200 yards off-shore approximately 7 miles west of Sigatoka.

An overhanging sea-eroded cliff of coral limestone, 20 feet high, forms the ancient northern shoreline of the island, and has been used as a shelter, possibly by parties visiting the area to gather shellfish. The length of the rock face is 470 feet, but available time limited the excavation to 49 feet at the western end of the site. The extent of the accessible area to the north, that is, away from the rock face, was determined by a road cutting that roughly paralleled the cliff and reduced the width of the site to an average of 12 feet. The area under the overhang, comprising the southerly 6 feet or so of the site, was generally level, thence falling away in an increasing slope towards the beach, now partially covered by the road construction.

SITE VL16/81

SECTION THROUGH TRENCHES 3 & 3A

0 1 2 3 4 5 FEET



-  CORAL LIMESTONE
-  HUMUS
-  LIMESTONE FRAGMENTS
-  LONG LIGHT GREY ASH
-  RED-BROWN SOIL
-  FIREPLACE
-  DARK GREY SOIL & ASH
-  CORAL FRAGMENTS,
SAND, SHELL

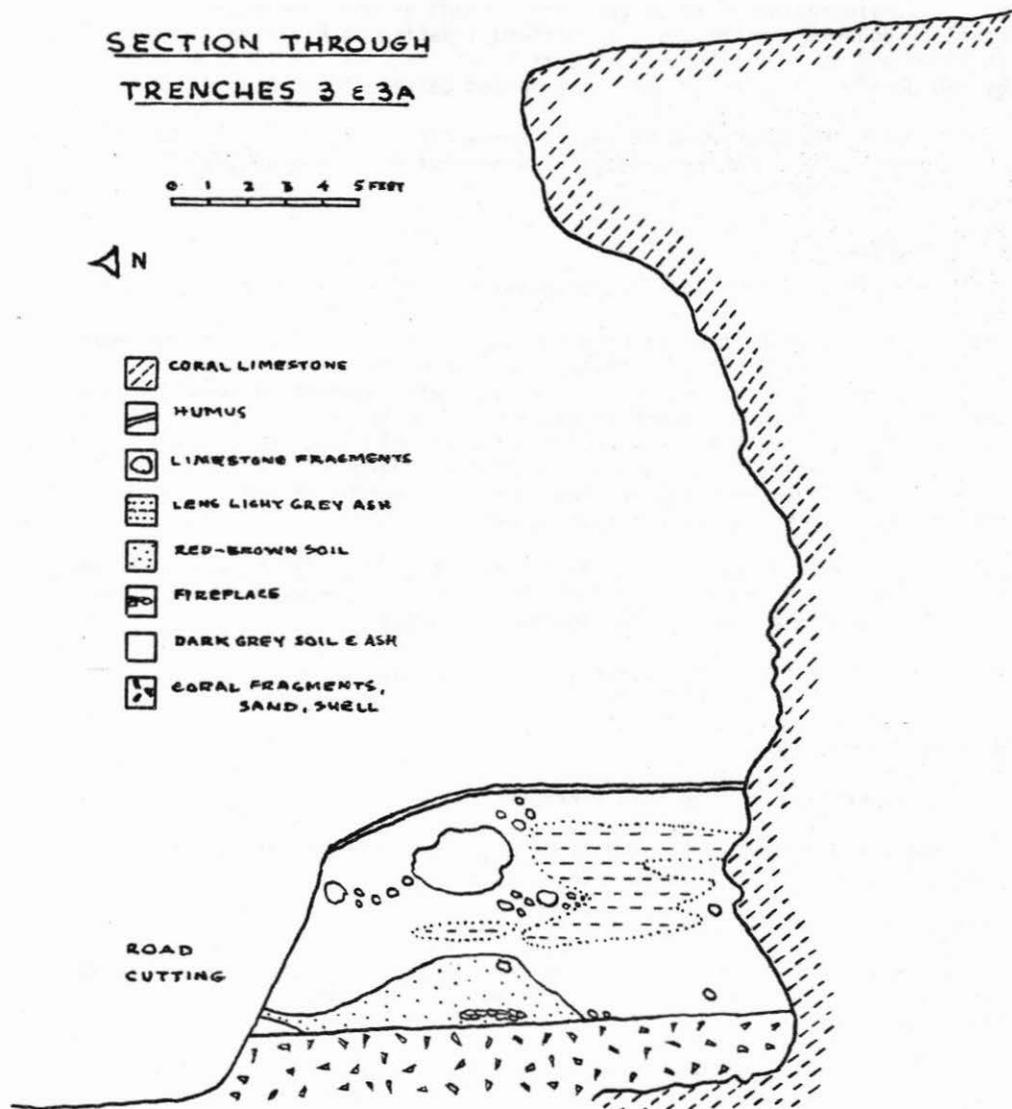


FIG. 2

Clearing of the undergrowth was followed by excavation of four trenches, each 10 feet by 5 feet, in line close to the cliff face. Excavated material consisted of soil, ash, limestone fragments, including large boulders fallen from the cliff face, and large quantities of introduced material. The last comprised potsherds in considerable numbers; shells, most of which were intact; and several adzes and other artifacts of stone or shell. A further line of trenches took the excavation to the northern perimeter of the site, and work was completed by removal of the Baulks.

The picture that emerged as a result of this activity showed a sea-deposited bed of coral fragments, sand and shells 2 feet deep, its surface shelving slightly towards the channel, and laid on the solid limestone mass of which the cliff behind formed a part. This ancient beach extended to the base of the cliff, its surface being 5 feet 3 inches above present high tide level. Subsequent to the use of the spot by the first campers, an incursion by the sea had redeposited the bedded material. Later, human activity on the site, with ash deposits consequent on the building of fires, accumulation of sherds from pottery vessels broken during use, and a natural build-up of stone with a proportion of organic material washed or blown on to the area, had combined to cause an accretion of material that ultimately reached a height of 8 feet above the base of solid rock. (See Fig. 2).

It is noteworthy that every inch of depth, from the ground surface to the top of the beach deposit 6 feet below, contained potsherds. Thus there were no layers of sterile material to separate the cultural phases, as had been the case at Site VL 16/1. Use of Site VL 16/81 had clearly been, if not continuous, at least extremely regular.

Pending any final assessments after the processing of finds, a preliminary examination in the field points to almost exact confirmation, in type and chronological sequence, of pottery from the rock-shelter to that from Sites VL 16/1 and VL 16/22. Thus practically all sherds of a type corresponding to those from Level 1 at Site VL 16/1 were located at Site VL 16/81 in the lowest 18 inches of deposit. Similarly, Level 2 type sherds were generally within the middle areas, and undecorated sherds at a higher level. Within a foot or so of the surface, were some with cross-hatched decoration and others belonging to a heavy-rimmed pot considered to be a late type.

In defining the chronological relationships of cultural material, no help was available from the stratigraphic evidence, which followed no detectable pattern. For instance, part of the ancient beach was covered by a compacted layer of reddish-brown soil typically produced by the weathering of limestone rock. Most, but not all, of this contained early culture material, but the same material was found also in a build-up of ash with a proportion of greyish soil. In sum, the appearance of any particular pottery type seemed to be dictated by distance from ground surface rather than by presence of a defined stratigraphic zone.

One of the most interesting aspects of the sherd material from the rock-shelter site was the presence in the earliest horizon of pottery with much more profuse and elaborate decoration than any from the corresponding level of the other two sites investigated. In this, the Site VL16/81 sherds had more in common with those recovered in New Caledonia by Gifford and Shutler (1956:93-94, Pls.22 and 23) at Lapita, and by Golson (1961:169-170) at St. Maurice, Ile des Pins, suggesting the possibility of a date for VL 16/81 earlier than the 2460 B.P. date established for VL 16/1. Such an assumption depends on the earliest median date of 846 B.C. obtained by Gifford and Shutler (1956: 88) for their Site 13 at Lapita.

Found on the early level at Site VL 16/81, but not so far noted on the other sites, were sherds from several well-made and elaborately decorated flat-bottomed dishes. Rather high and flaring sides rose from a flat, apparently slab-formed base approximately 7 inches in diameter.

Adzes

Adzes in association with potsherds were found on the two main sites dealt with here (none on Site VL 16/22). Without a thorough and systematic examination, a few general observations may be offered:

- a. In all, 15 adzes were recovered, of which 2 only were undamaged, and some were represented by no more than a portion.
- b. There is no sharp distinction in shape between adzes from the earliest horizon, that is, associated with dentate-stamped, Lapita type pottery, and those recovered at a higher level.
- c. Of the 9 early horizon specimens, one is elliptical in section, 3 are quadrangular or nearly so, and 5 have plane back and convex face.
- d. Each of the plano-convex examples differs from the others in degree of convexity of the face, but all show a convex outline from butt to blade as well as from side to side.
- e. Associated with paddle-impressed sherds were 6 adzes, of which 2 are elliptical in section with slight flattening of back and face, one is plano-convex, and 3 are exceptionally wide across the blade.
- f. The three wide-bladed examples are rather roughly finished by flaking and grinding, are a flat ellipse in section, and have a blade more than twice as wide as the butt.

General Conclusions

Taken as a whole, the succession of pottery types revealed as a result of excavation of the three sites discussed here would seem to provide ample confirmation of Green's proposed Revision of the Fijian Sequence referred to earlier. Thus, sherds from the primary levels included those with pointille or dentate stamped decoration typical of the Sigatoka Phase; later deposits contained paddle-impressed sherds with a proportion of "wavy line" types characteristic of the Navatu

Phase; the following Vunda Phase was indicated by an increasing proportion of plain ware; and the Ra Phase by incised specimens. The type of pot with heavy rim has yet to be placed accurately in sequence, but may belong either to the Ra assemblage or to a later phase.

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