

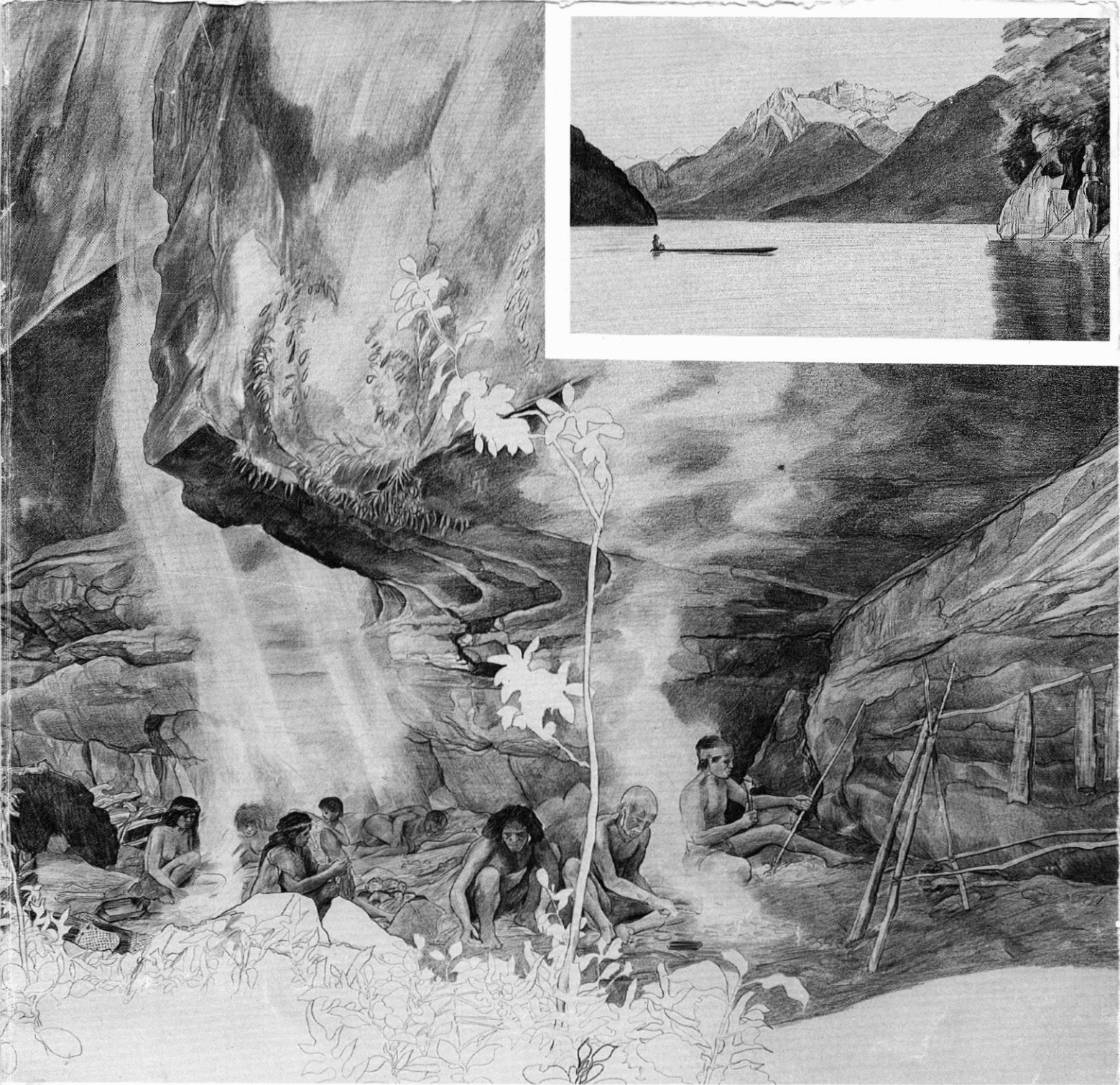


**NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION MONOGRAPH 18:
Atholl Anderson and Richard McGovern-Wilson (eds), *Beech Forest
Hunters***



This document is made available by The New Zealand
Archaeological Association under the Creative Commons Attribution-
NonCommercial-ShareAlike 4.0 International License.

To view a copy of this license, visit
<http://creativecommons.org/licenses/by-nc-sa/4.0/>



Beech Forest Hunters

Edited by
Atholl Anderson and Richard McGovern-Wilson

New Zealand Archaeological Association Monograph 18

ROCKSHELTER EXCAVATIONS AND RADIOCARBON CHRONOLOGY

Atholl Anderson

Once salvage archaeology had been agreed as the most suitable course of action, it followed that the intention should be to excavate each site as fully as was practicable. In the event, the small openings to S131/5, essentially a cave, were simply walled-up with stones to protect the very small deposit of cultural soil which existed there. Virtually all of the cultural deposit was excavated in the remaining sites. Of S131/6 about 3% remains unexcavated, so far as it is possible to tell by test-pitting the shelter floor and nearby area outside the excavation. According to the same method, about 5% of cultural soil, containing essentially only charcoal (but left as a record of the stratigraphy and matrix), remains in sites S131/3 and S131/4.

Excavation was by observed stratigraphy and on a metric grid. Substantial whole samples (one plastic bag containing about 2 litres of deposit from each square and layer) were retained for laboratory analysis. All other material was passed through sieves of 4 mm mesh-size where no bone or other small cultural remains were evident, and 2 mm mesh-size in areas where such material occurred. In the summary of each site which follows, the description of S131/6 was produced partly from

notes and plans taken by Williams, who directed that particular excavation. The location of Lee Island, and the approximate location of the sites as seen from the lake to the west, are shown in Figures 1.1 and 2.1. There is no large-scale map available and it is difficult to locate the sites precisely on an aerial photograph because of overhanging forest, but their locations could not be mistaken in the field.

SITE S131/3

This shelter (Fig. 2.2), the northernmost of the series, and designated Lee Island 1 in Cave (1979), was most notable for remains of a large drying rack, some pieces of which were still standing in 1979. Cave (1979:2-3) reported, in addition, some bracken "bedding". Our excavation of 14 m² (Figs 2.3-4) found a single, thin cultural layer (Layer 2) beneath a surface litter of dried leaves and roof-fall debris (Layer 1). The extent of cultural remains was slight, about 10 m², and of limited variety. There was evidence of three small fires, more or less in a row, and they had probably been lit beneath the drying rack. Bird bone was found concentrated in one area and there was also a small amount of fish bone

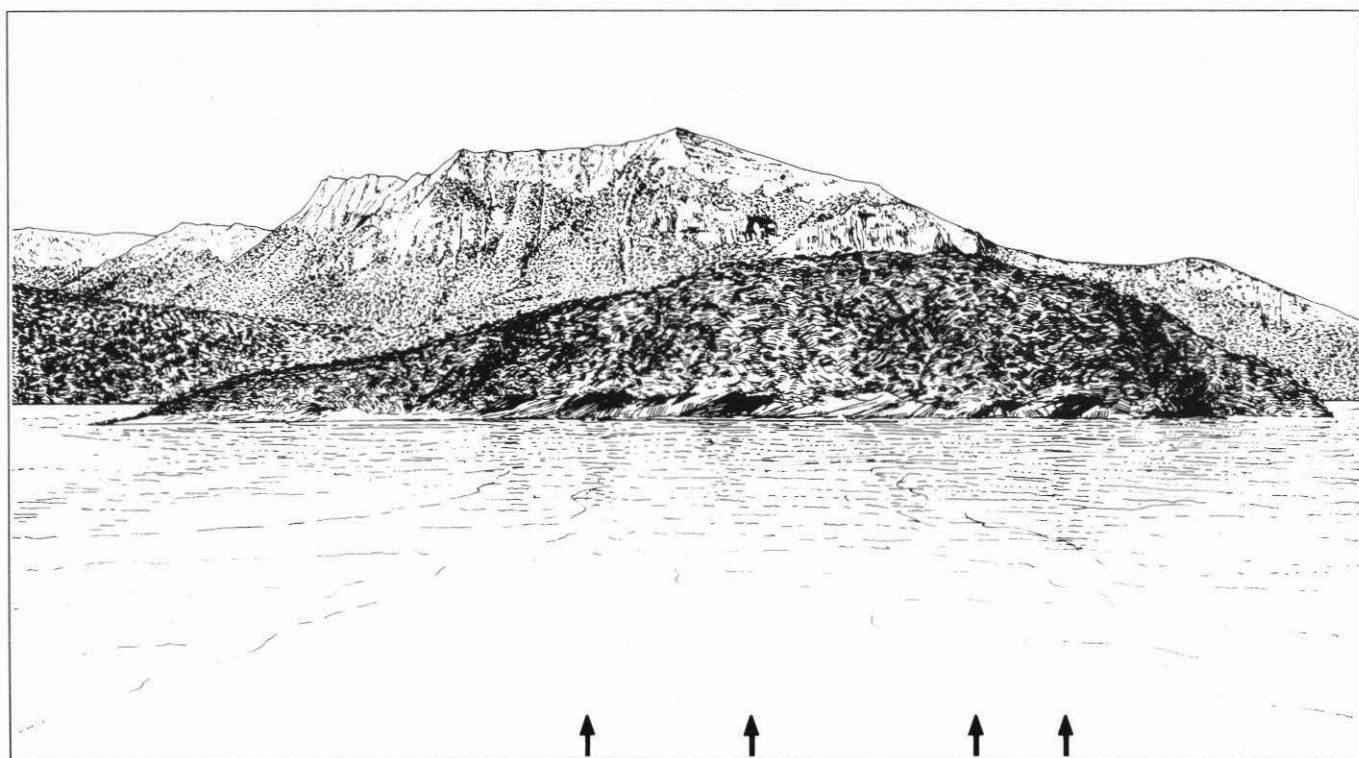


Figure 2.1. Sketch of the approach to Lee Island from the west, showing the position of shelters S131/3-6 from left to right.



Figure 2.2. Site S131/3 prior to excavation, with rack timbers as found.

(Chapter 6). Pieces of cordage, knotted flax and cut totara bark were also recovered. The drying rack lay mostly on and in the surface litter, but some pieces of it extended into Layer 2 (Figs 2.5-6).

SITE S131/4

Lying 40 m south-west of S131/3, this is Lee Island 2 in Cave (1979). The site lies well back in a large shelter (Fig. 2.7) and it occupies about 35 m² of a floor some three times that size (Fig. 2.8). The

northern edge of the site consists of a natural wall of boulders and drift-piled logs about 1.5 m high. Above it the slope is steep, averaging 24 degrees, but it is divided into three terraces which seem to be of natural origin, although accentuated by the concentration of cultural activity upon them (Fig. 2.9). Cave (1979:3-7) described two main areas of remains. In Area I, the lowest terrace, she recorded bracken "bedding" and a cooking area. In Area II, the highest terrace, she recorded more bracken

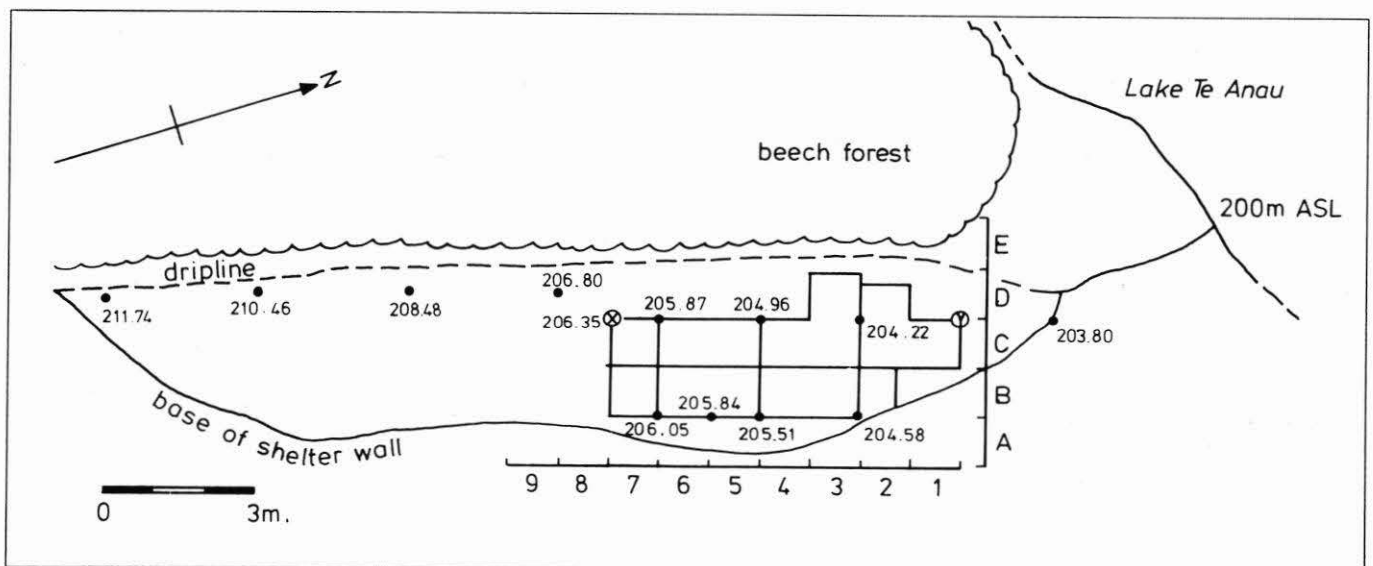


Figure 2.3. Plan of S131/3 showing excavated area and spot heights (in m above sea level).

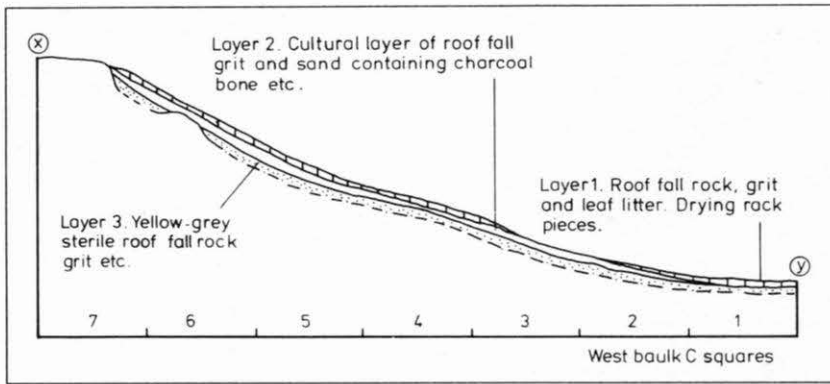


Figure 2.4. Section through excavation of S131/3 (see Fig. 2.3).

fronds, a collapsed drying rack and a hearth. On the slope between were bracken, burnt wood and a hearth.

The initial arrangement of the excavation squares had to be slightly extended along the shelter

wall as a rich cultural deposit proved to extend just beyond the original baulk line in several squares, hence the slight difference in the plan shape between the surface of the deposit and Layer 2, which necessitated the somewhat awkward -A line of squares. Similarly, at the bottom end of the site it became necessary to add a -1 line of squares for concealed cultural remains in Layer 2.

The excavation, 36 m², encountered a quite simple stratigraphy. On a surface of loose dust and roof fall debris there was a drift of dried leaves, mostly of

beech, and some bracken (Fig. 2.10). There was nothing about the latter to indicate that it had been cut or used as bedding. Cultural debris, including bird bones, feathers and worked wood and fibre were observable, but mostly near the recent fossick

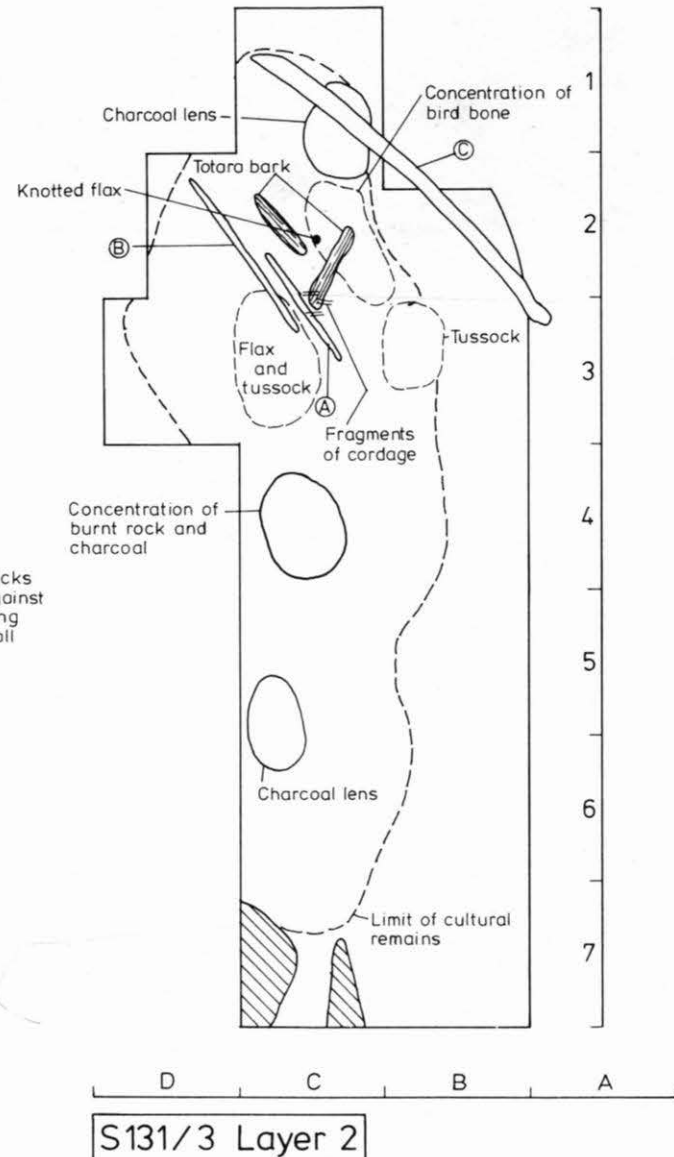
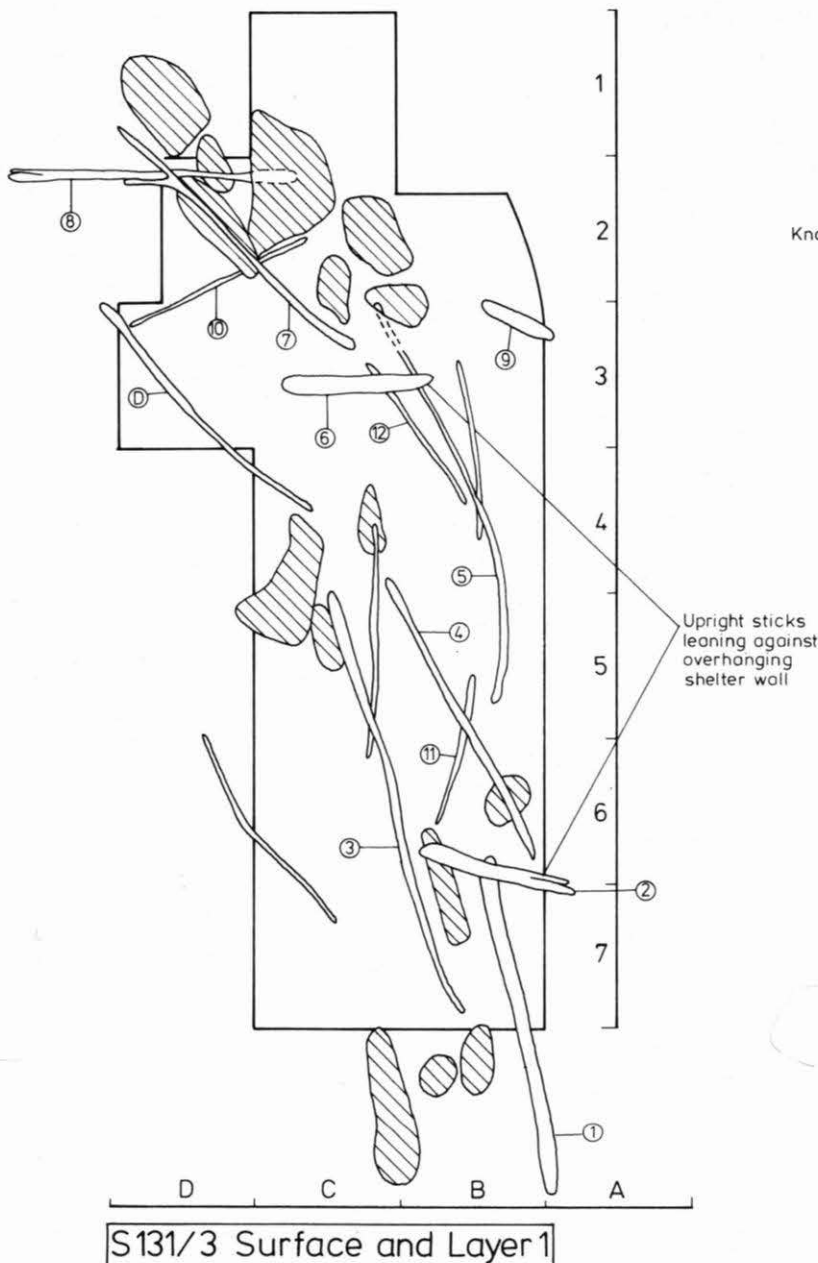


Figure 2.5. Disposition of drying rack timbers in S131/3 (see Table 4.14).

Figure 2.6. Archaeological material and features in Layer 2, S131/3.

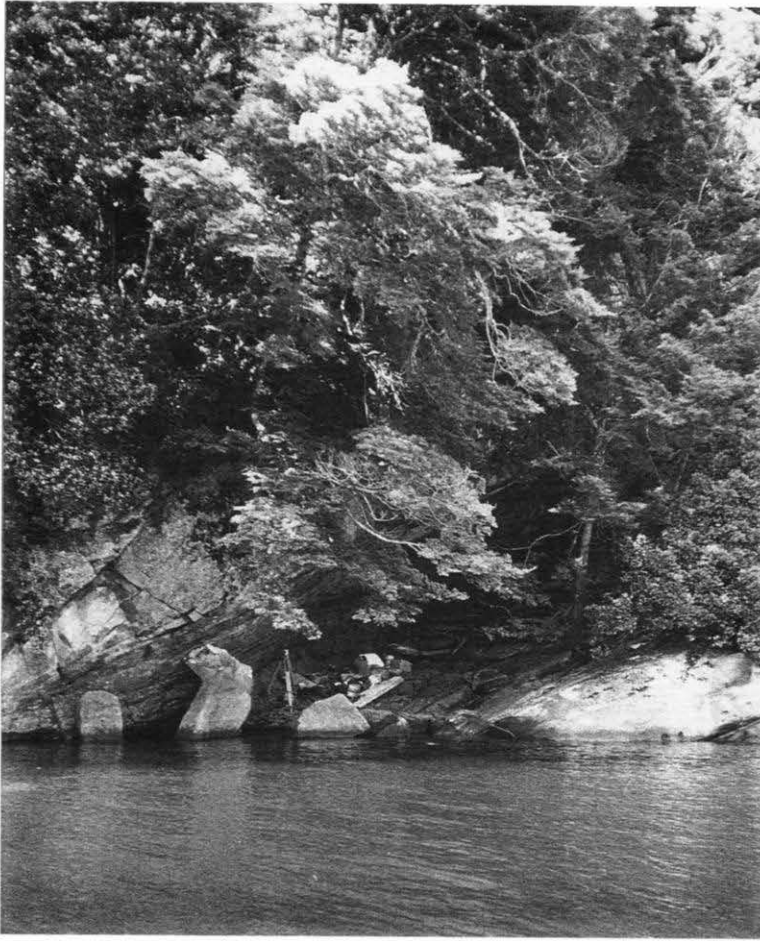


Figure 2.7. Entrance to shelter S131/4 from the lake.

holes and they probably originated in layers beneath (Fig. 2.11).

Layer 1 consisted of dry, loose material of sand and silt size, generally light-brown in colour and containing many small pieces of roof-fall rock. There were also some large slabs near the shelter wall and several water-rolled boulders in Square C6, evidently the remains of a hearth.

Layer 2 consisted, in the main, of a chocolate-brown silty sand containing some roof-fall debris. The difference between it and Layer 1 is only in colour and it seems to be caused merely by greater dampness with depth. On the lowest terrace, however, there was a discontinuous deposit of thin plates of roof-fall rock, in various colours, which separated Layers 1 and 2; otherwise there was no very clear boundary (Fig. 2.9).

Layer 3 was an underlying, sterile, yellow and grey sand which was densely packed with roof-fall rock. Pressed into the surface of it were some water-rolled boulders representing a hearth and occasional pieces of bone and charcoal.

Most cultural material was found in Layer 2, where the organisation of the site was also clearly evident. There had been a scoop-hearth or firepit area on each terrace. On the upper and lower terraces the hearths had been used intensively, and had shifted location slightly on one occasion in each case (features

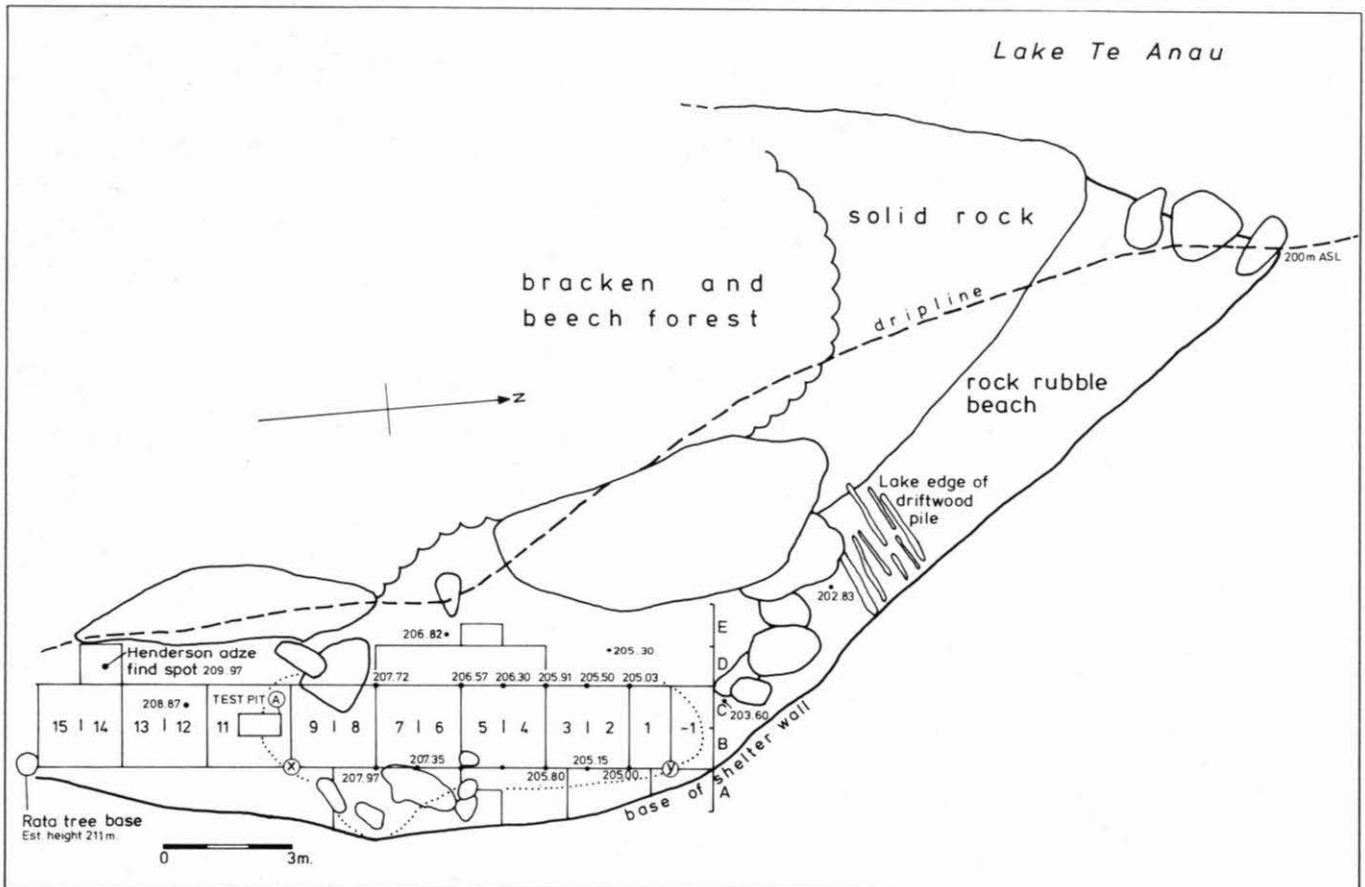


Figure 2.8. Plan of S131/4 showing excavated area and spot heights (in m a.s.l.).

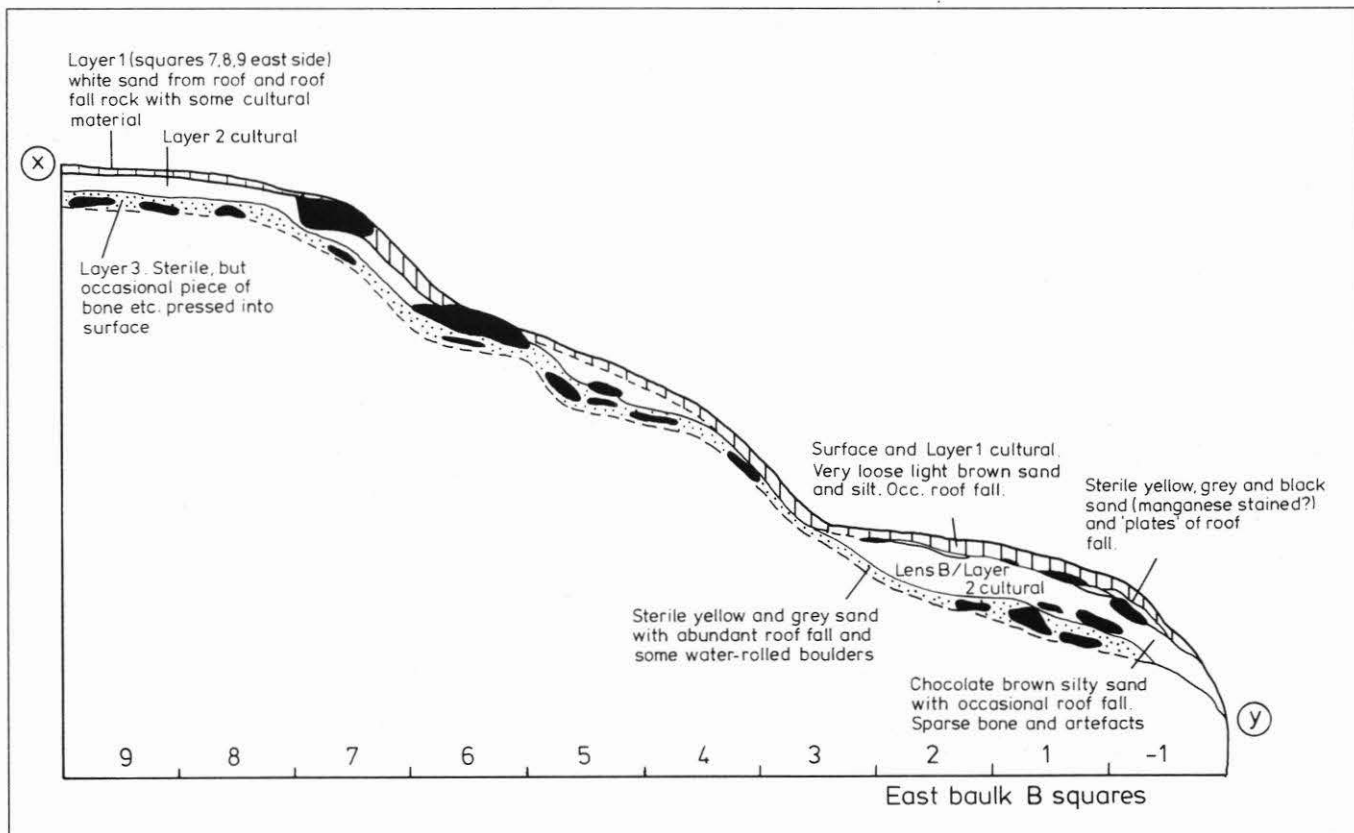


Figure 2.9. Section through excavation of S131/4 (see Fig. 2.8).

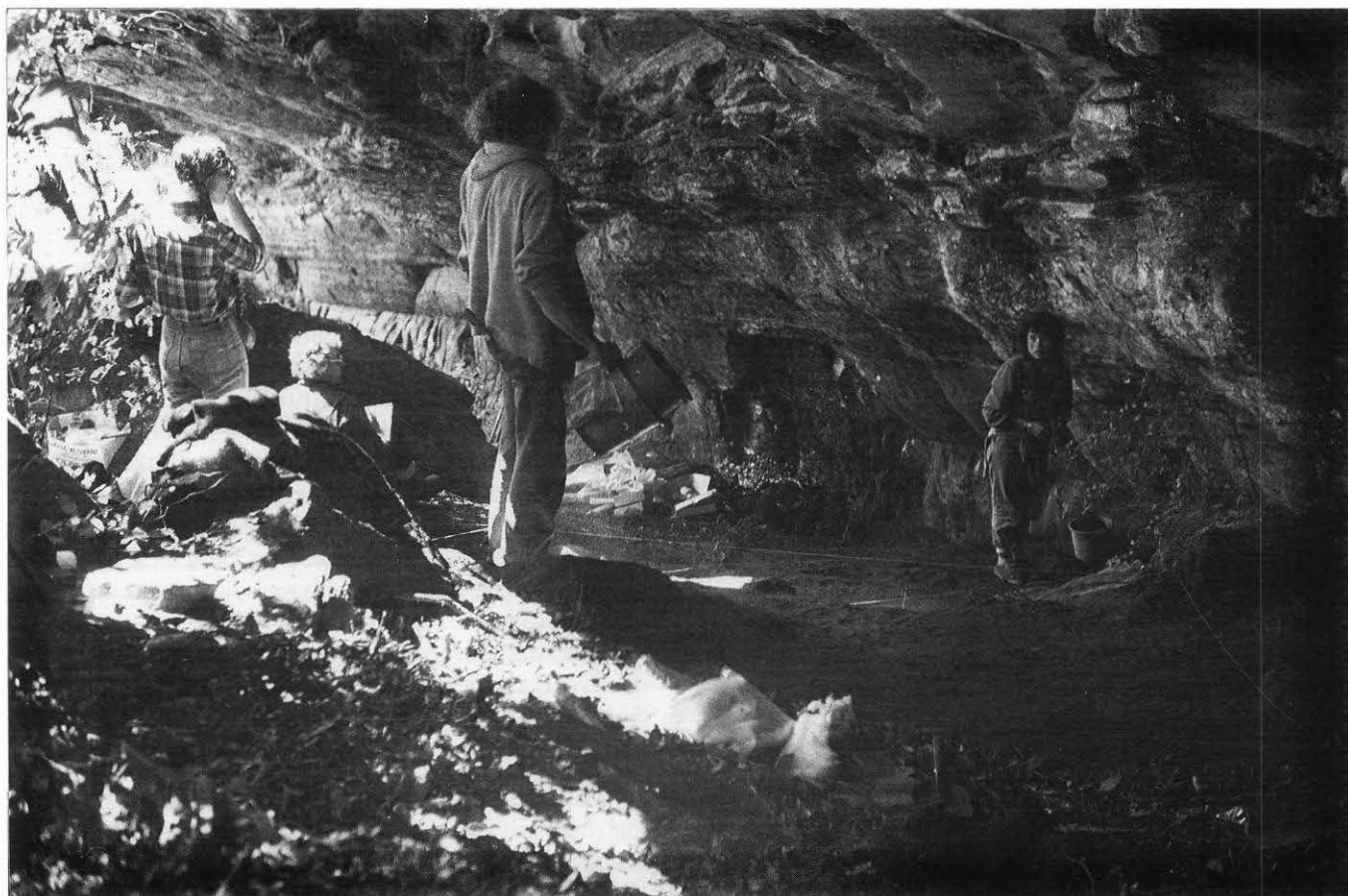


Figure 2.10. Excavations in progress at S131/4.

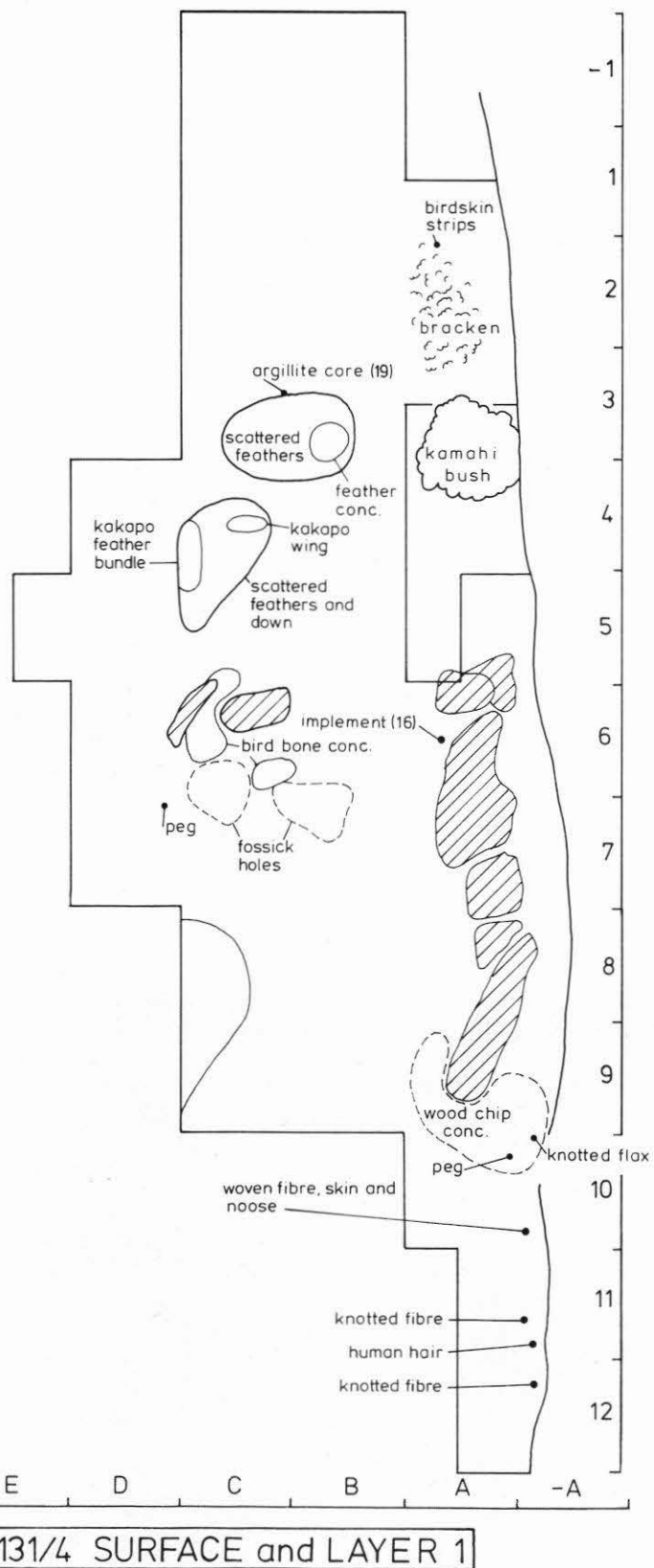


Figure 2.11. Main archaeological features and finds in S131/4, Surface and Layer 1.

1 and 2 and lenses A and B in Fig. 2.12).

On the upper terrace, three adzes and two bird-spear points were recovered (Chapter 3). A chopped wooden core or peg, and wood chips and shavings (Chapter 4), had been found in Layer 1 immediately above the adzes in Layer 2 (Fig. 2.11), an indication

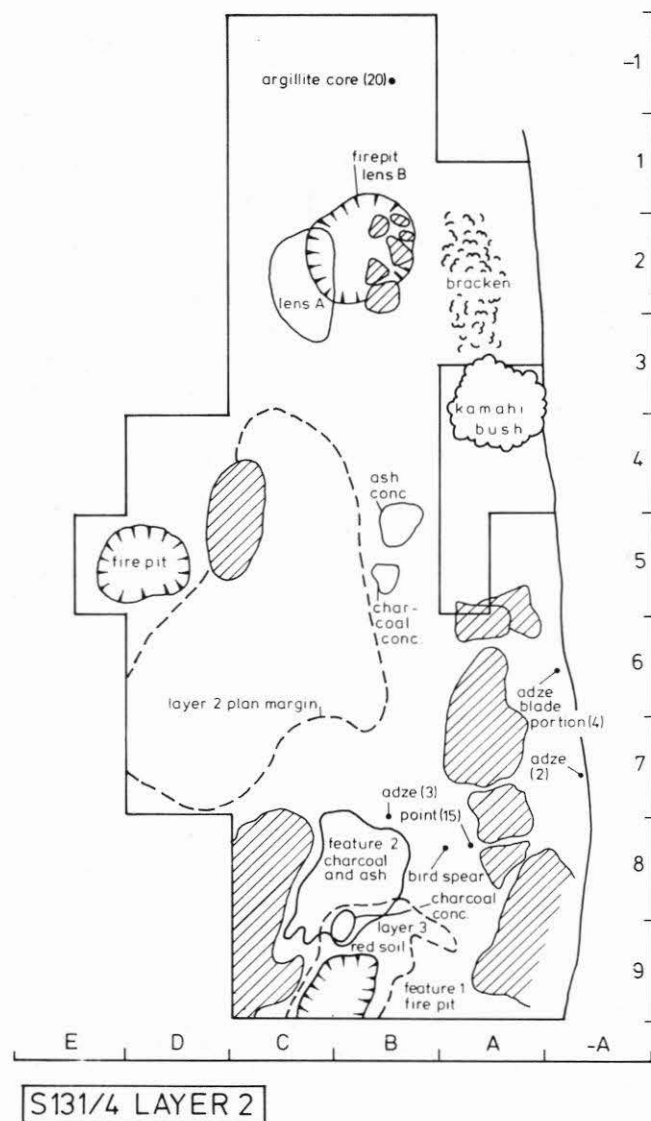


Figure 2.12. Main archaeological features and finds in S131/4, Layer 2.

that the distinction between Layers 1 and 2, at least in this part of the site, does not reflect an hiatus in occupation. Further back on the upper terrace some knotted fibre and human hair was located near the shelter wall (Chapters 5 and 8).

Bird bones and other midden were concentrated near the hearth on the middle terrace, while feathers, most of them found in two bundles (Chapter 7) were distributed down the slope beneath. There was some midden on the lowest terrace but the main activity there seems to have been domestic fires and cooking.

In terms of organisational complexity, abundance of cultural material and variety of components, S131/4 stands out as the main site at Lee Island.

SITE S131/5

This small, dark, cave-like shelter contained virtually no soil and very few cultural remains. It is Lee Island 3 in Cave (1979:7-8) and is notable for the bark basket found there. Some additional strips of bark were recorded.



Figure 2.13. Shelter S131/6 prior to excavation.

SITE S131/6

This is Lee Island 4 in Cave (1979). Above the rubble beach the shelter is 15 m long and up to 6 m wide at the dripline (Fig. 2.13). Cave (1979:8) recorded bracken and manuka brush "bedding" over an area of 8 x 5 m, a small patch of shell midden and a possible collapsed drying rack.

Since 1979 a large slab had fallen from the shelter ceiling at the dripline and shattered into the three large pieces shown in Figure 2.14. The blocks were too heavy to shift but it seems very unlikely that they cover any cultural material.

Approximately 32 m² of the site was excavated and the stratigraphy was straightforward (Fig. 2.15). The surface (Layer 1) consisted of a loose deposit of dry roof-fall debris, particularly small slabs, together with dessicated bracken and other plant remains. The bracken was not cut foliage so far as we could see, but rather naturally-broken fronds and whole plants. The latter had roots embedded in Layer 2 and in general were lying with the foliage downhill and towards the dripline. There was nothing to suggest that any of the bracken had been bedding, or indeed that it had been brought into the site. Bracken grows nearby on Lee Island and it seems that it had grown in the shelter at some time in the past. We could not establish when that had been, since the plants may have penetrated earlier layers, or have had cultural material dumped on them. It is possible, of course, that the bracken grew from material brought into the site for some reason

other than bedding, e.g. as roots for eating. The manuka brush was considered to form part of an artefact which also included fragments of netting found with it (Chapter 5). These, and other remains, extended into Layer 2, the apparent source of all cultural evidence.

Layer 2 was a fine dark-grey to brown organic silt in which were scattered pieces of charcoal and several small concentrations of charcoal and ash (Fig. 2.16). There was a patch of freshwater mussel shells in Square D2 and this was probably the source of other shells found scattered elsewhere on the site in both layers. Small concentrations of bird bone, skin and feathers were also located, along with cut bark. Various artefacts were recovered from Layer 2 (Fig. 2.16). Five nephrite adzes and chisels (Chapter 3) were clustered in a small area immediately below the charcoal lenses; initially they may have been cached together. More widely scattered were three small adzes, several preforms and a core and flakes, all of metamorphosed argillites. There was also a hammerstone, a grindstone and an obsidian flake, the last possibly having been used to slice the tips from kaka feathers (Chapter 7).

Layer 3 was encountered as a fine yellow to orange-coloured silty matrix containing numerous small pieces of roof-fall rubble. It was lying upon large flat slabs and was culturally sterile.

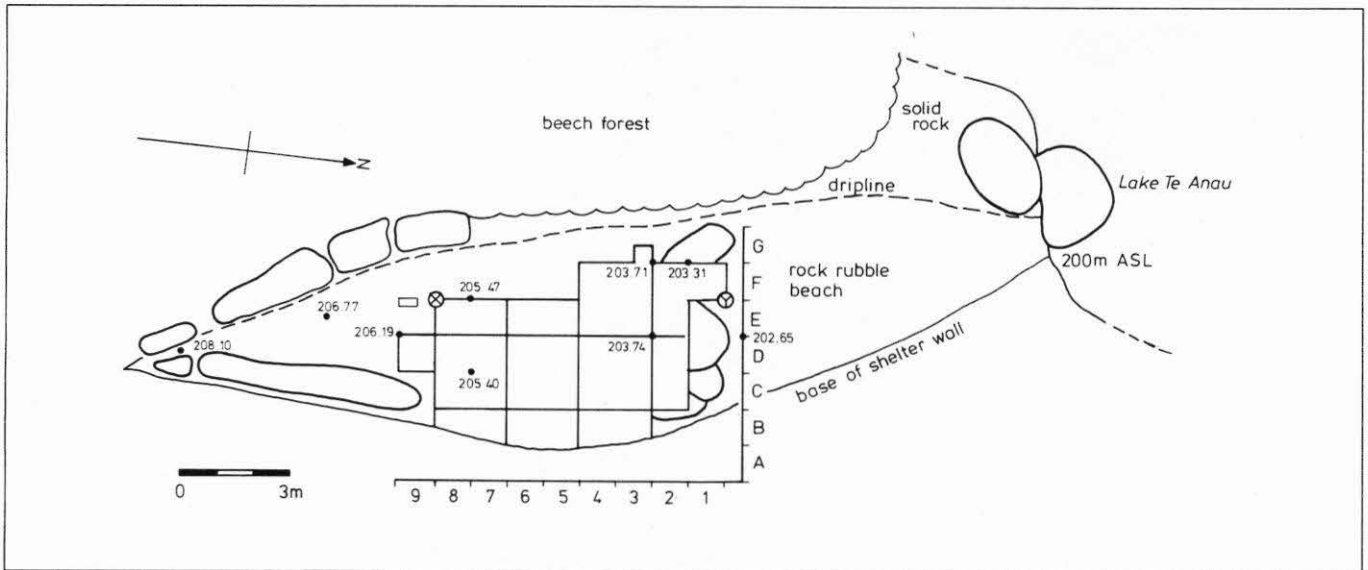


Figure 2.14. Plan of S131/6 showing excavated area and spot heights (in m a.s.l.).

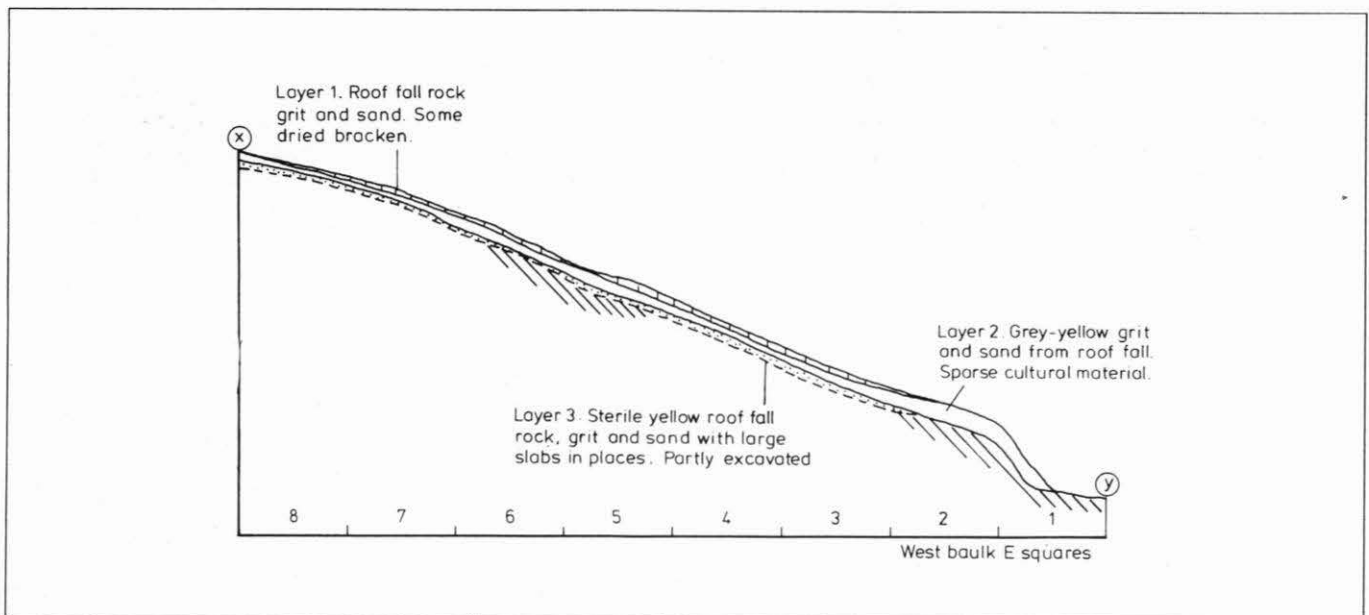


Figure 2.15. Section through excavation of S131/6 (see Fig. 2.14).

RADIOCARBON CHRONOLOGY

Five charcoal samples were submitted to the Institute of Nuclear Sciences, Lower Hutt. These, the wood identifications determined by Dr Brian Molloy and his comments, were as follows:

Sample LI06: S131/6 Layer 2, Square D5.

Leptospermum scoparium - dominant
Coriaria arborea - sub-dominant

Podocarpus totara/hallii and *Nothofagus solandri* - both minor

Phyllocladus alpinus, fern, and unidentified - all traces

Comment: "mostly short-lived"

Sample LI07: S131/3 Layer 2, Square C4.

Nothofagus, probably *solandri* - total sample

Comment: "large pieces, probably all from same source - no point in subsampling for C14"

Sample LI08: S131/4 Layer 2 (lens B), Square C2.

Nothofagus, probably *fusca* - dominant
Plagianthus/Hoheria, *Leptospermum* c.f. *scoparium*, and unidentified - all minor

Comment: "large pieces of *Nothofagus* screened out"

Sample LI09: S131/4 Layer 2 (feature 2), Squares B8 and B9.

Nothofagus, probably *solandri* - dominant

Leptospermum scoparium, *Weimannia racemosa* - both sub-dominant

Pseudopanax colensoi/arboreus, *Coriaria arborea* - both minor

Comment: "apart from *Nothofagus* probably all short-lived"

Sample LI10: S131/4 Layer 2 (feature 1), Squares B9, C8, C9.

Nothofagus solandri - dominant

Leptospermum scoparium, *Coriaria arborea*, *Schefflera digitata*, *Podocarpus totara/hallii*, and

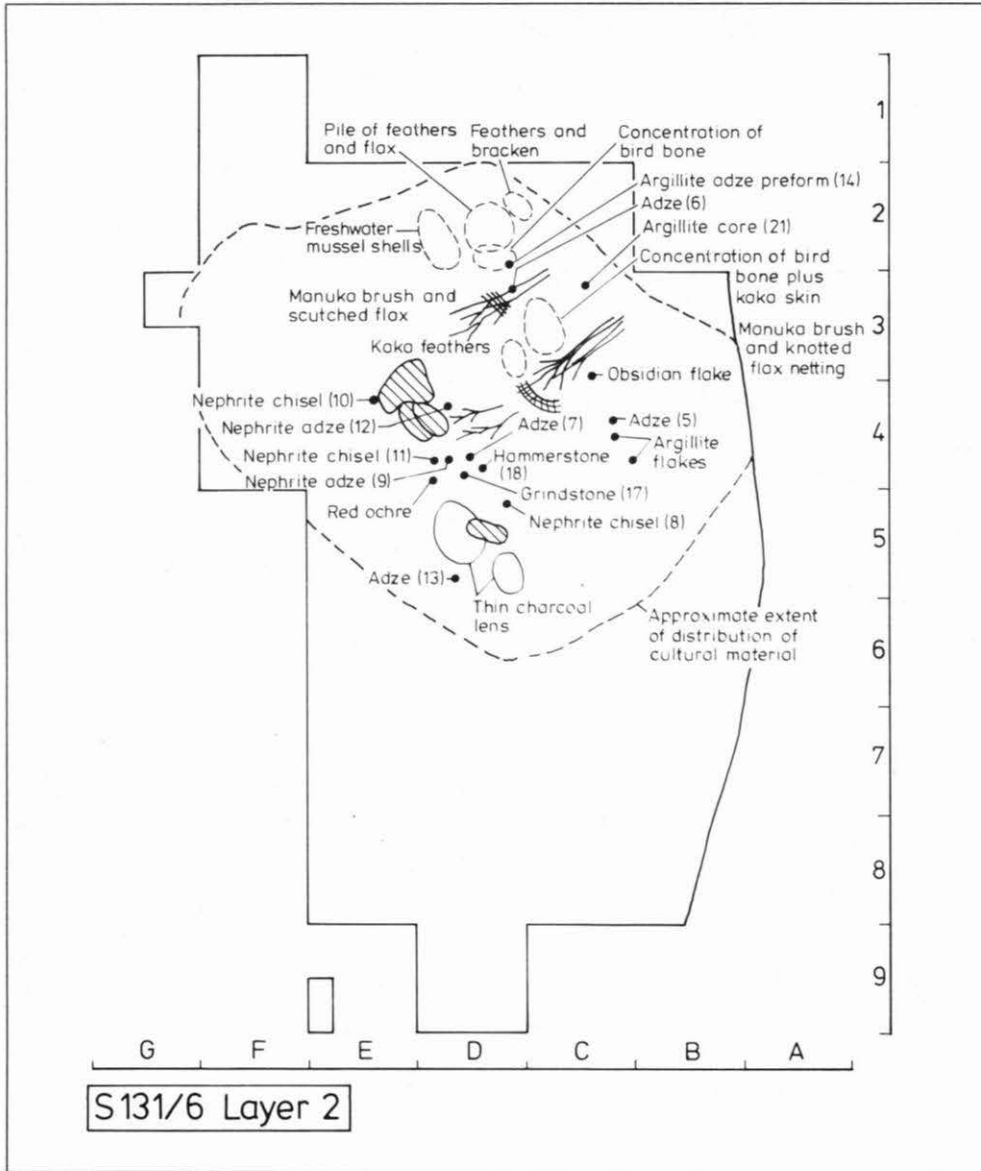


Figure 2.16. Main archaeological features and finds in S131/6, Layer 2.

Hebe sp. - all subdominant

Pittosporum sp. - minor

Comment: "large pieces separated from C14 subsample"

The dating results are shown in Table 2.1. All are approximately the same on calibrated ages, indicating a period of occupation around 400 years bp, or 16th to early 17th centuries. This will be taken as the general interpretation of the results, but they also bear some closer consideration. The nature of sample LI07 hardly warranted its analysis

Table 2.1. Results of radiocarbon dating.

NZ Numbers	Site Number	Sample	Conventional Age (Years bp)	Calibrated Age (68% confidence interval. Years A.D.)
NZ6733	S131/6	LI06	281 ± 51	1522-1570(19%), 1628-1674(27%), 1750-1797(18%), 1945-1954(4%).
NZ6742	S131/3	LI07	399 ± 34	1456-1518(48%), 1592-1622(19%).
NZ6755	S131/4	LI08	355 ± 33	1513-1634(71%).
NZ6758	S131/4	LI09	339 ± 40	1515-1598(53%), 1618-1642(15%).
NZ6769	S131/4	LI10	344 ± 52	1512-1642(68%).

but it went forward automatically without further reference to the submitter. Sample LI06 appears the most reliable in terms of constituents, and it may be younger than the others. However, the probability distribution extends between periods as separated as the 16th and 20th centuries, with only a small peak in the mid-17th century. It is possible that S131/6 was occupied later than the other sites, a point discussed in Chapters 3 and 9.

The dates from S131/4, in which the sample selection was designed to pick up any significant differences in age between occupation of the upper and lower terraces, and changes in hearth location upon them, are all essentially the same. The sample constituents are also much the same so that unless the results are coincidental it would be fair to conclude that they describe a single occupation. Site S131/3 was probably occupied at the same time, although the single and unreliable date is almost certainly too old and it offers only a very broad indication of possible contemporaneity.

REFERENCE

Cave, J. 1979. The Lee Island Shelters, Lake Te Anau. *Southland Museum Publication*, 1979/3.