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EXCAVATIONS AT THE ARCHAIC SITE OF
WAIANAKARUA MOUTH, NORTH OTAGO

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Introduction

During a site recording survey of the North Otago coast in January 1978 (Anderson et al., 1978), abundant surface evidence was noted of the site on the south bank of the Waianakarua estuary. Recorded by Michael Trotter and Peter Gathercole in 1959 this site (S146/7) has produced quantities of moa bone and Archaic artefacts (Trotter, 1968). It has been ploughed on some half dozen occasions but the fact that areas of midden, stone flakes and oven stones remained substantially discrete (Figure 1), provided some hope that contextual information was not irrecoverable and that intact stratigraphy might remain below the plough layer or in the narrow strip of unploughed land along the river bank.

In February 1978 a small number of trial squares were excavated and a controlled sample of surface evidence recovered. The results of this work, conducted under New Zealand Historic Places Trust Permit 1978/39, are reported below.

Surface Collection

An area of 10m x 5m in the most dense part of the flake scatter was pegged out and all the cultural stone lying on the surface was collected. The numbers of flakes, sorted into basic stone types, are shown in Table 1. Of the stone identifications it must be said that it is difficult to tell whether the fine grained volcanic rock is a true basalt without detailed petrological examination and the same is the case with the cherts and chalcedony. It can, however, be said that these stone varieties are the same in hand specimen as types known to outcrop on Moeraki Peninsula, some 12km to the south, and to be transported, as beach-rolled material, as far north as the Canterbury Bight (M. Watson, pers. comm.). Many of the flakes on the site have been, in fact, struck from water-rolled boulders or cobbles.

Amongst the basalt were numerous flakes representing all the stages of adze preform flaking (cortex removal, primary shaping, face reduction and so on), but stopping short of hammer dressing. Also in the surface collection were four preform fragments of the same material. Three are approximately quadrangular in cross-section and the fourth, a more finished blade section, is of triangular, apex down, cross section.

	Surface Collec-	Square A	Square B	Square C	Square E
Basalt	468	6	8	4	-
Grey Chert	21	95	12	4	1
Chert/Chalcedony	12	51	46	-	1
Chalcedony	15	93	5	-	-
Silcrete	7	-	5	-	-
Mudstone	6	22	-	-	-
Flint	1	2	-	-	-
Obsidian*	1	1	1	1	-
Limestone	-	-	1	-	-
Argillite	-	2	-	-	-

*All green in transmitted light except Square A flake-grey banded transparent material.

TABLE 1. Stone flakes from Waianakarua (S146/7).

No complete adzes were found but polished specimens have been collected by the land owner. These include six small (10-13cm long) ungripped quadrangular specimens and a remarkable triangular cross-sectioned and parallel-sided chisel of black basalt or argillite (Plate 1). Nearest in type to Duff's (1956) 3D it is certainly rare, perhaps unique in New Zealand, although rather similar specimens are known from elsewhere along the South Island east coast, Pitcairn Island (Duff, 1956:176) and further afield in Southeast Asia (Van Heekeren, 1957).

Two flake knives were amongst the surface collection; one in chalcedony and another in dark grey chert (Fig.2). In addition there was a fragment of a fine side scraper in chalcedony (Fig.3). A number of silcrete blades have been recovered from the site and a partially re-touched example, from a private collection, is shown in Figure 4.

Excavations

Seven 1m x 1m squares were excavated (Fig.1). Squares A and B were located to test the depth and condition of the main flake area and C was excavated as a control square from the unploughed land. Square D was intended to test the nature of the shallow depression running across the site, and Squares E, F and G to determine the depth and condition of midden patches.

In all cases the cultural material lay entirely within a single 10-20cm thick layer of grey-brown silty soil which overlay compacted

yellow silt and river pebbles. All the cultural material had thus been disturbed by ploughing, except for the narrow strip along the river bank. Nevertheless, while the evidence of various activity areas remains more or less separate, valuable information could still be obtained from it.

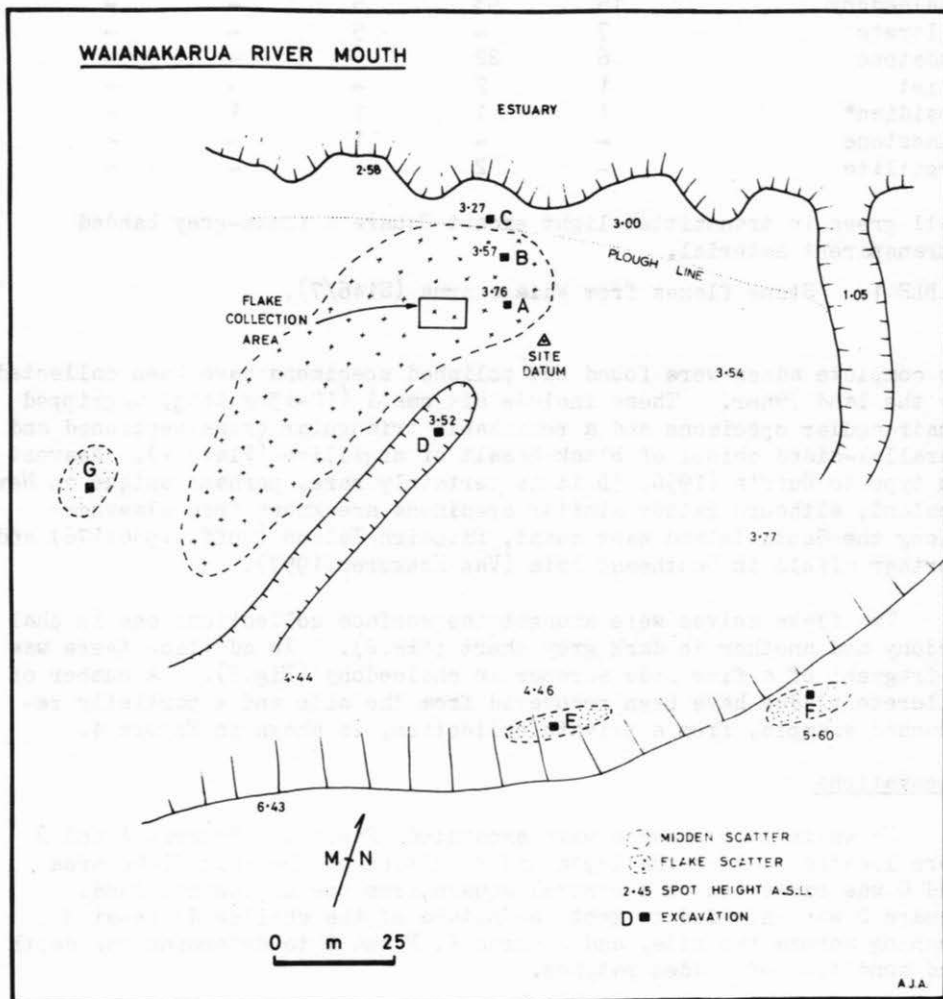


FIGURE 1. Waianakarua River mouth (S146/7).

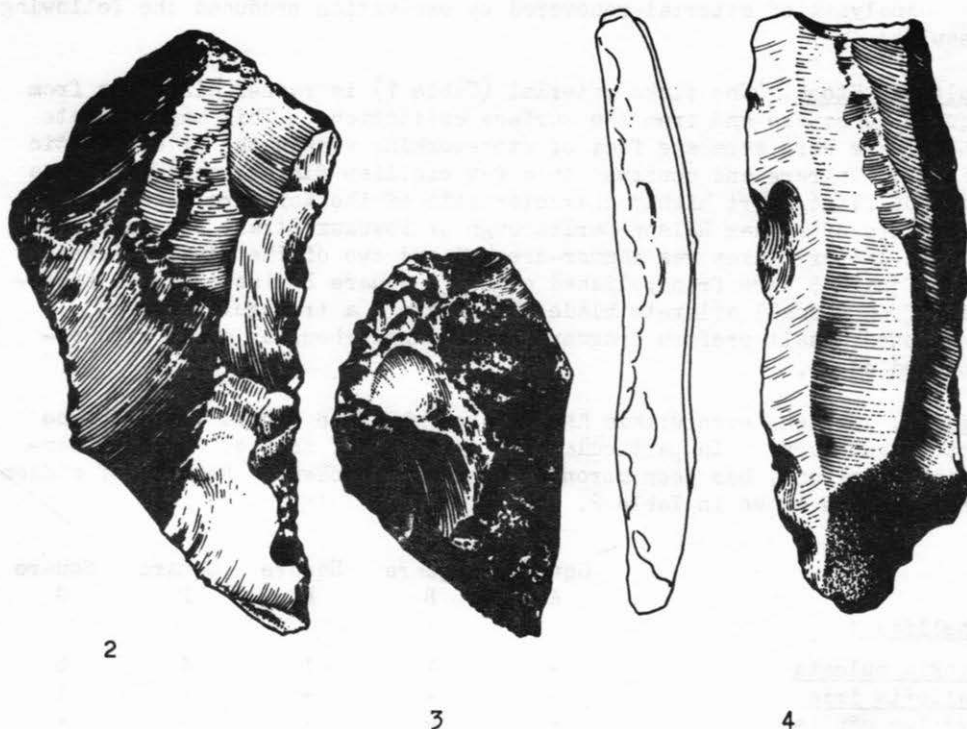
Analysis of material recovered by excavation produced the following results:

Cultural Stone. The flake material (Table 1) is rather different from square to square and from the surface collection. This may indicate that there were separate foci of stoneworking within the site. Exotic material is rare and confined to a few obsidian flakes, several flakes each of flint/chert highly characteristic of the Kaikoura coast and argillite of either Nelson-Marlborough or Foveaux Strait origin. One of the latter flakes was hammer-dressed and two of the basalt flakes from Square B were from polished adzes. Square B also produced a section from a small silcrete blade and Square C a triangular cross-sectioned basalt preform fragment and a basalt boulder spall with re-touched edges.

Midden. Midden, even within the patches shown in Figure 1 was sparse and fragmentary. In particular the large bone, some of which is certainly moa bone, has been strongly burnt and broken. Results of midden analysis are shown in Table 2.

	Square A	Square B	Square E	Square F	Square G
<u>Shellfish:</u>					
<u>Cookia sulcata</u>	-	1	1	4	6
<u>Haliotis iris</u>	-	-	-	-	1
<u>Mytilus edulis</u>	-	-	1	-	-
<u>Ostrea sp.</u>	-	-	-	-	5
<u>Paphies sp.</u>	1	-	-	-	-
<u>Perna canaliculus</u>	-	-	-	-	2
<u>Turbo smaragda</u>	-	-	148	3	1
<u>Fish</u>					
<u>Physiculus bacchus</u>	-	-	1	-	-
<u>Thyrstites atun</u>	1	-	2	-	-
Unidentified	-	X	-	-	X
<u>Bird:</u>					
<u>Anas chlorotis</u> (?)	1	-	-	-	-
Unident. small bird	-	-	X	-	-
<u>Moa sp.</u>	X	-	-	-	X
<u>Mammal:</u>					
<u>Arctocephalus forsteri</u>	-	-	-	1	-

TABLE 2. Minimum numbers fauna from Waianakarus (S146/7).



FIGURES 2, 3 and 4. Flake knife in dark grey chert (length 11.0cm).
Chalcedony scraper (7.1cm). Silcrete blade (11.4cm).

Conclusions

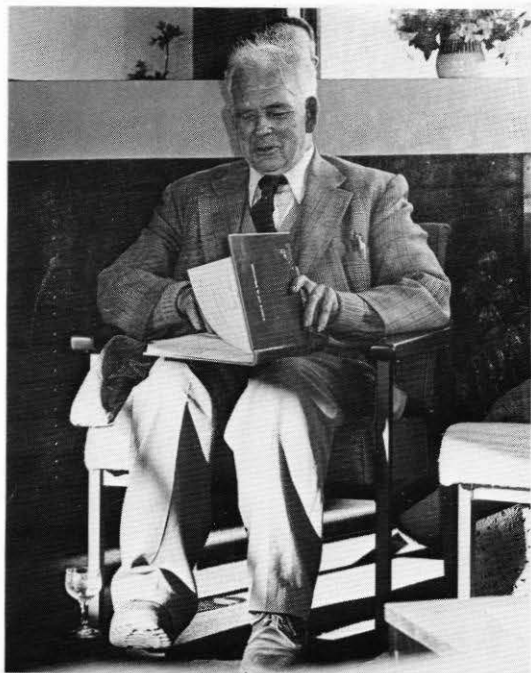
Site S146/7 at Waianakarua River Mouth was probably a temporary and single phase settlement. It exhibits the spatial separation of activity areas common in South Island Archaic sites of this kind and has produced adzes, flake knives and faunal material typical of Archaic date - one might say on largely negative evidence that later Archaic (15-16th century) appears most likely. The site has been badly disturbed by ploughing but although much of the vital contextual information has thereby been lost, valuable artefactual and subsistence information remains.

Acknowledgements

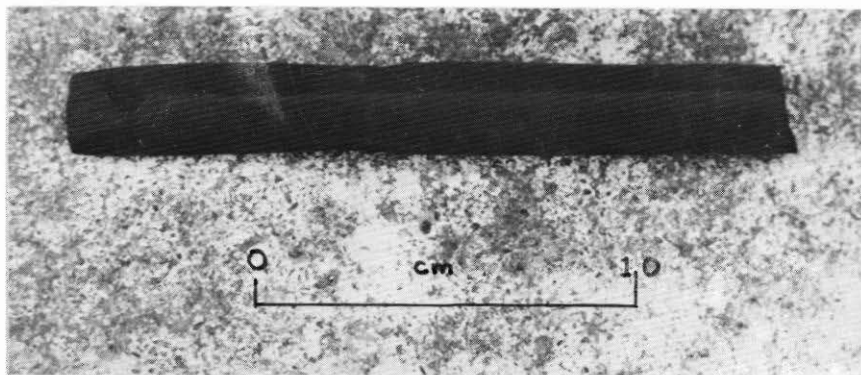
My thanks to Mr R.J. Alexander for his information, interest and permission to work on the site, and to Ian Smith, Trudy Crerar, Annabelle Wilson, Karl Gillies and Megan Huffadine for their assistance. Maurice Watson identified the stone varieties, Murray Webb drew some of the figures and Ann Harrison assisted with analysis.

References

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SCARLETT PRESENTATION. Atholl Anderson presents Ron Scarlett with 'Birds of a Feather'.



WAIANAKARUA. Parallel-sided chisel in black basalt or argillite.