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UNIVERSITY OF OTAGO 1998 FIELD SCHOOL EXCAVATIONS AT SHAG POINT, NORTH OTAGO

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Introduction

During late 1997, discussions with Gerard O'Regan, representing Te Runanga O Moeraki, lead to combining the needs of cultural resource management, teaching and research at the Shag Point archaeological site (J43/11), situated about an hour drive north from the University of Otago. In late 1996 a car park (ca. 20 by 40 m) was bulldozed on Department of Conservation land just inland from Shag Point (Fig. 1). Unfortunately, the north-east portion of the site, as well as cultural deposits along newly graded access roads, were destroyed. Te Runanga O Moeraki requested that I conduct archaeological survey and excavations at Shag Point to determine the extent of site destruction and to recover a sample of cultural material in the bulldozer spoil dirt. In addition to these cultural resource management objectives, it was necessary, from a research point of view, to determine: (1) the site area; (2) dates of site use; (3) the nature of occupation, subsistence practices and stone-tool technology: (4) evidence of interaction through analysis of imported artefacts; and (5) relationship of the Shag Point site to the major prehistoric village at Shag River mouth, located less than 1 km south.

With permission from Te Runanga O Moeraki, the Historic Places Trust and the Department of Conservation, the 1998 University of Otago field school was conducted at Shag Point from 9 to 13 March. The 13 field school students were supervised by Dougald O'Reilly (teaching assistant), Jeremy Habberfield-Short (demonstrator) and Marshall Weisler as site director; four post-graduate volunteers also helped with excavations for a few days during the week.

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Figure 1. Shag Point and environs looking west. The recently bulldozed car park is in centre frame. *Photo: M. Weisler*

The Shag Point site encompasses most of the point with the densest concentrations of cultural material noted in the north and south extents (Fig. 2). Brian Allingham has found, from time to time, artefacts eroding out of the north coastal sections (personal communication, March, 1998), while only sparse cultural material was recently observed along the extreme western portions of the point. In the early 1950s turf and soil were removed along the central length of the point for bowling greens and tennis courts (Trotter 1970:471); our excavations recovered little or no prehistoric cultural material in this area (Fig. 2, units S30E1 to S30E40). Further site disturbance includes a low area (Fig. 2) believed to be subsidence related to underground coal mining activity (Brian Allingham, personal communication, March, 1998). In sum, more than half of the Shag Point site has been destroyed by turf and soil removal, bulldozing and artificial subsidence. The remaining portions, then, are highly significant for understanding the prehistory of this coastal area.

During 1964-5 Michael Trotter excavated, in whole or in part, 25 five-foot squares confined to the northern portion of the point (Fig. 2). Most cultural material was found in a "black earth matrix from three to ten inches below surface" (1970:471). Flakes and flaked tools, mostly of chalcedony, obsidian, orthoquartzite and porcellanite, were recovered along with siltstone, sandstone and schist abraders, a basalt adze, and 67 fragmentary fishhooks. Large amounts of fish bone relative to those of birds and mammals and

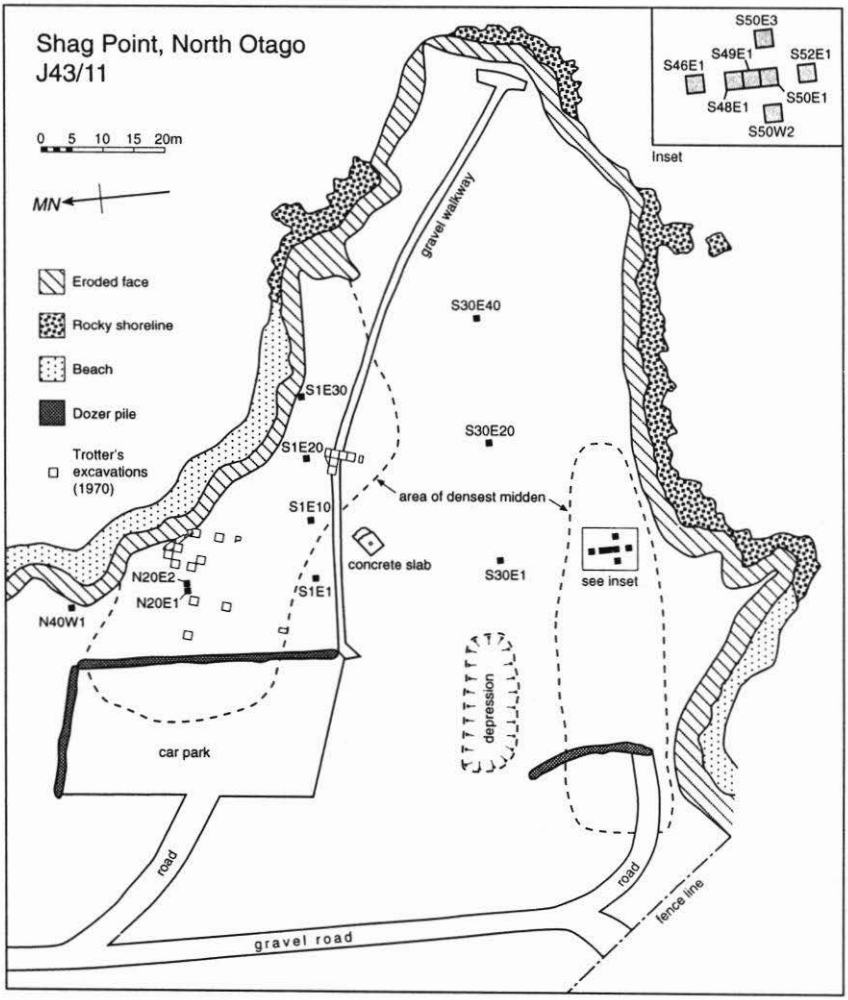

Figure 2. Map of the Shag Point site J43/11 showing approximate location of Trotter's excavations and recent test pits.

shellfish included the subsistence remains. No food moa bone was found, although several small pieces exhibited evidence of working. The main objective of Trotter's excavations was to place the Shag Point site within the local cultural sequence. Because artefact types seemed to span the early and late periods of the cultural-historical sequence, Trotter was uncertain when the site was occupied. However, one radiocarbon age determination on

marine shell was reported as about 400 BP (Trotter 1970:479). Our excavations sought to augment Trotter's work, but determining the amount of site destruction and teaching field techniques to stage 4 students were the main objectives.

Methods

Using a plane-table and alidade, a detailed map (1:300 scale) was made of the site including the modern features (e.g., gravel roads, the car park and fences), excavation grid layout and cliff margins. The concrete slab shown in Figure 2 served as a useful point in which to determine the approximate location of Trotter's excavations (Trotter 1970:Fig. 1). A 1-metre grid was oriented magnetic north with a east-west baseline established along the S1 axis, while the E1 axis served as the north-south baseline (Fig. 2). All excavation units were then labelled by their alpha-numeric designation, for example, S1E20. After turf removal, unit excavations proceeded in arbitrary 5 cm spits and all information was recorded on standardised Excavation Level Records (Weisler and Somerville-Ryan 1996:Fig.3). About 4 m^2 were excavated in the bulldozed spoil dirt adjacent to the car park to recover displaced artefacts and subsistence material. Systematic excavations were initiated at S1E1, then along the S1 baseline every 10 m. This way students were grouped in a relatively small area facilitating supervision. Upon completion of the S1 units, students learned the basic excavation procedures and additional excavations were placed at N20E1 and N40W1 to establish the northern limits of the site. Another transect was completed along S30 with units established every 20 m through the central portion of the point to identify areas disturbed by turf and soil removal during the 1950s. Next, the S50E1 unit was excavated to confirm Trotter's observation of a thin occupational deposit cut by the coastal road (1970:470). Here, cultural deposits were intact with some of the densest material encountered. Units were expanded as time permitted to delimit oven and shell dumping features. In total, 17 m^2 were systematically excavated at the Shag Point site.

Sediment from all excavations was sieved with 6 mm mesh, while the following units were also sieved with 3 mm screens: S1E1, S1E10, S1E30, N40E1, N20E1, N20E2 and S49E1. Aside from fire-altered rock, all cultural materials were retained - not just "diagnostic" specimens - and sorted into artefacts, bone, lithics, shellfish and charcoal, then bagged separately in the field. The 6 mm material was sorted in the field for units N20E2 and S49E1, while the 3 mm size class from both units and sediment retained in the 1 mm sieve from unit N20E2 were returned to the University of Otago archaeology

labs for water-screening. All fire-altered rock was counted and weighed by spit in the field and only samples representing the variation of rock types retained. Representative stratigraphic profiles were drawn from each unit (19 m of sections in total) and eight sediment samples were taken from selected layers for textural analysis and for determination of pH and percent organic matter and carbonates. The site and the coastal environment, stratigraphic sections and subsurface features were photographed in colour slide and black-and-white film formats.

One prime objective is dating the cultural deposits at Shag Point. Three shell samples have been submitted thus far to the Waikato Radiocarbon Lab. Samples of Cook's turban (*Cookia sulcata*), associated with the sea mammal butchering and disposal at units N20E1 and N20E2, will provide a date for these activities at the north end of the site. Two samples of pipi (*Paphies australis*) will date the discrete shell dumping features in and around units S50W2 to S50E3 and provide associated dates for the earth ovens and rake-out material found there. All cultural material has been washed and inventoried. Analyses are ongoing, but some results are presented below.

Results

As found by Trotter, the cultural layer was both shallow and thin with little vertical differentiation. Activity areas included discrete shell dumping features about 2 m^2 located near ovens and rake-out events at the southern extent of the site. While it was confirmed that the cental portion of the point was destroyed by turf and soil removal, the northern area, seaward of the car park, still evidenced intact, dense concentrations of sea mammal bones suggesting a locale for butchering and disposal.

Formal artefacts were few but consisted of a large silcrete blade associated with the sea mammal butchering area, basalt, chalcedony and silcrete cores, fragments of bone fishhooks, worked moa bone, obsidian flakes from several sources, but only one possible sandstone abrader - an ubiquitous artefact class reported by Trotter. To date, lithic debitage totalled 387 specimens weighing 5.874 kg; these figures may double after tabulation is complete.

Some 9981 bones retained in the 6 mm sieves are currently being identified to nearest taxon. Barracouta is by far the dominant taxon, with much lesser amounts of red cod. Only a few otoliths were observed in the 3 mm sieved material suggesting the true dominance of barracouta over red cod. This is a different abundance ranking from the Kakanui site where a similar sieving

procedure was utilised (Weisler and Somerville-Ryan 1996). Paul Rivett will be completing the analysis of the fish bones. A number of bones from large sea birds (especially albatross and shags) were seen during the excavations and Trevor Worthy is currently working on this material. Mammal bones, containing at least those of fur seal, will be studied by Tom Wake (Director, Zooarchaeology Laboratory, Institute of Archaeology, University of California, Los Angeles).

The excavations produced 20.067 kg of shellfish mostly from the sandy beach taxon pipi, while species associated with the rocky shore include paua, Cook's turban and Catseye.

Summary

Archaeological investigations at Shag Point were designed to satisfy the requirements of cultural resource management and the needs of the local Māori group, teaching and research. Excavations of 17 m^2 revealed distinct prehistoric activity areas where sea mammal butchering and disposal were identified at the intact, northern portion of the site, while at the southern margin, earth ovens and associated rake-out lenses and discrete pipi dumping areas were located. Excavations also confirmed that the central portion of the point was previously destroyed by turf and soil removal sometime during the 1950s. Radiometric dating is underway as well as further identification of shellfish and bones. Both should help in understanding the relationship of Shag Point to the major prehistoric village just south at Shag River mouth. To this end, the chemical analysis of imported lithic materials should pinpoint the geological origins of this material to establish ancient patterns of interaction of the Shag Point inhabitants with distant groups. Future excavations and analysis should prove of value in determining further the activity areas and nature of site use within a regional context.

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