NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER

CLUTHA VALLEY ARCHAEOLOGY 1980 - 1981 : AN INTERIM REPORT

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The third full fieldwork season has been completed on the Clutha Valley archaeological programme. The environmental setting, raison d'etre and objectives of the programme have been previously described (Ritchie, 1979a, 1979b). Of necessity, the archaeological programme is structured within the work schedule of the Clutha Valley Development hydro construction project. To date, excavations have been concentrated within the area affected by Lake Dunstan, the first and largest of the hydro lakes to be created by the project.

Fieldwork this summer centred on four prehistoric sites (S124/4 and 16, S133/169 and S132/4) in the vicinity of Cromwell. In addition another prehistoric site (S122/1), Dart Bridge, near Glenorchy, was jointly excavated with Dr Atholl Anderson (Anthropology Department, University of Otago). This was followed by a field survey of the Carrick goldfield near Cromwell. During excavations in January a substantial cache of sub-fossil fauna (predominantly moa), which was exposed during highway construction near Cromwell, was also investigated.

Other major work concluded during the past year includes survey reports of the impact areas and environs around the future Luggate and Queensberry hydro lakes, and a site survey of the Bendigo goldfield.

Excavations

This summer, fieldwork was focused on threatened prehistoric sites. The aim was to expand the impoverished prehistory of Central Otago by substantially increasing the amount of archaeologically derived data, thus enabling a determination of the interior's inter-site diversity, economy and antiquity. Prior to this field season only three prehistoric sites had been excavated in the Upper Clutha basin; the Italian Creek Shelter S133/258 (Ritchie, n.d.) the Hawksburn moa butchering camp S133/5 (Anderson, 1979) and the Rockfall I Shelter (Ritchie, ms).

Owens Ferry excavation

The excavations commenced with a major investigation of a moa butchering campsite on the Kawarau river near Arrowtown (Plates 1 and 2). The site (S124/4) was named Owens Ferry because of its location near the site of an historical hotel and river punt crossing operated by Richard Owens between 1866 and 1881.

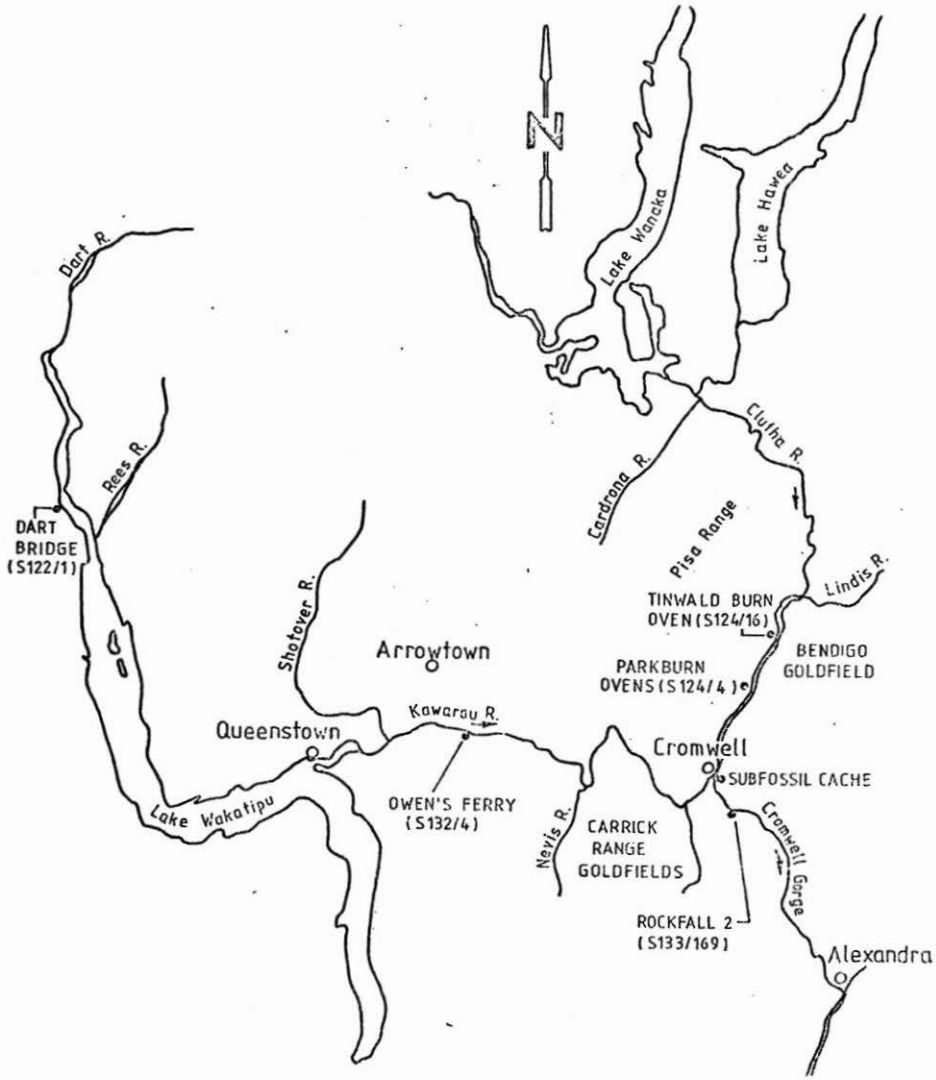

FIGURE 1. Central Otago showing location of investigated sites.

The site was initially located some eight years ago by an Arrowtown resident who was digging for bottles on the hotel site. His bottle hunting was unsuccessful but he did uncover pieces of worked moa tibiotarsus, a silcrete blade and several porcellanite flakes. This material was found in an eroding river bank section, 1.5 m below the present ground surface. Testpitting to determine the extent of the cultural deposit proved extremely difficult because of tangled overgrowth and the depth of overburden. It was eventually decided to go ahead with the excavation, although the extent of the site was unknown. A rubber tyred excavator was used to dig three trenches in order to determine the depth and extent of the site. Following this, 400 m^3 of sterile multilayered floodwash overburden was removed mechanically, both the machine and its skilled operator proving ideal for the task. The overburden was termed Layer 1, the excavation proper commencing from the surface of Layer 2, a dark silt layer which contained a very fragmentary secondary deposition of historic material in the form of glass, bone china, nails and scraps of iron. This material appeared to be scattered rubbish from Owen's hotel. Layers 3 to 7 consisted of successive light and dark sterile bands of flood borne silt. These layers covered the main occupation surface, Layer 8, over most of the site.

The cultural deposit was intact in that it had not been fossicked, but some lateral disturbance is suspected as the occupation debris had been initially buried in a floodwash event. An unknown portion of the site may have been eroded away by the Kawarau River in the past, but evidence of this was not readily apparent in the slumped section of bank adjacent to the river. Occupation was evidenced by the remains of butchered moas scattered around cooking pits with associated areas of rake-out and flaking debris.

Over the north-western quarter of the site a second occupation level (Layer 10) was present, separated from the main occupation level by a sterile lens of floodwash gravel (Layer 9). The stratigraphic evidence indicates that an initial occupancy of the site occurred during which at least one moa was butchered and consumed, followed by a temporary (and probably brief) abandonment of the site. During this period flood debris was washed over the site scattering the remains of the early occupation.

At a later date, possibly the same Maori party returned and established the main occupation. During this phase, at least eight cooking pits were prepared and several moas of at least three species (Dinornis maximus, Euryapteryx gravis and Anomalopteryx didiformis) were butchered and consumed. The butchered moa bones were found in varying densities but were predominantly scattered along the river side of the cooking pits. The whole range of moa skeletal material was present including crania, vertebrae and phalanges, indicating that the birds were killed near the site.

Other identifiable faunal remains include freshwater mussels, pigeon and dog. Bones of the latter were often fragmentary and it appears they were cooked for eating.

A considerable amount of blade production occurred as evidenced by the large volume of silcrete and porcellanite flakes. Relatively few intact blades were found, the completed tools presumably being transported from the site. Several polished chips of an argillite adze were also recovered, these completing the total artefactual assemblage from the site.

From an antiquity point of view, the indicators are all early; namely evidence of the consumption of several species of moa, and silcrete and porcellanite blade production, a ubiquitous feature of early Central Otago sites. The occupation is anticipated to date to before 1300 A.D.

In summary, the Owens Ferry site (S132/4) appears to have been a short to medium term camp site, its existence directly related to a successful moa kill in the vicinity of the site or immediately upstream (the birds may have been brought down to the site by canoe or moki).

Parkburn (S124/4) and Tinwaldburn (S124/16) oven excavations

The second excavation of the season was undertaken on a group of ovens (S124/4) sited near the Parkburn Stream north of Cromwell in the Upper Clutha Valley (Plate 3). The site had in fact been described as "completely destroyed" on a site record form submitted in 1973. Following an examination of the area in early 1980 it was considered possible that the entire site had not been destroyed and that an excavation might yet provide worthwhile data from a site that had been pronounced 'officially dead'.

Discussions with the landholder confirmed evidence of Maori ovens in the form of concentrations of burnt and fire fractured stones located along 200 m of a backwater channel of the Clutha river. The ovens, of which the farmer could recall about twelve, were sited on a natural levee which had been partially levelled in order to facilitate border dyking of the adjacent paddock.

Pre-excavation inspection revealed that one location, a stony area measuring 30 x 10 m had the highest likelihood of containing undisturbed material. Systematic test pitting and probing revealed two undisturbed ovens in this area and two more 200 m west of the first group, the intervening area having been considerably modified by the removal of up to a metre of soil.

Despite methodical excavation of the ovens and an area measuring 5 x 5 m around each one, no trace of faunal or lithic material or structural evidence was uncovered to indicate the original usage of the ovens. A similar pattern was found during the next excavation on site S124/16 (Tinwaldburn), a single oven sited on the river bank 5 km up river from Parkburn. It is concluded that both sites were used as temporary eeling camps, the food product probably being dried and conveyed from the site. In neither instance is the failure to find cultural material other than the ovens, attributed to human disturbance. It is known that periodic flooding inundates both sites - this (and bone dissolution) may account for the lack of cultural material.

The lack of corroborative cultural evidence makes it difficult to predict an age estimate. However, judging from the size, configuration and location of the ovens, there is little doubt that they are of prehistoric origin. Charcoal samples have been submitted for radiocarbon dating.

Station sub-fossil fauna cache

Near the end of the Parkburn excavation, a contractor's bulldozer working on a new highway alignment near the site of the former Cromwell railway station exposed some moa bones. The overseer contacted the project archaeologist who arranged a small crew to commence an immediate field investigation. The bulldozer had exposed the base of an infilled cleft within schist bedrock. The deep cleft had acted as a trap for several species which are now largely extinct in the Cromwell area. Species identified to date include eight Anomalepteryx didiformis moas, two specimens of the South Island extinct goose (Cnemiornis calcitrans), two tuataras, two laughing owls, two owlet nightjars, a lizard, a kiwi and a grey duck.

This is the second major cache of sub-fossil fauna that has been recovered by the Clutha Valley Development archaeology section. It is anticipated that several more will be uncovered before the new Cromwell Gorge highway is completed. The faunal deposits have made a considerable contribution to the knowledge of past wildlife in the Cromwell area.

Rockfall II excavation

Rockfall II is one of two prehistoric rockshelters within a massive rockfall in the Cromwell Gorge (Plate 4; the other being Rockfall I, Ritchie ms). Rockfall II stratigraphy was quite straightforward, consisting of a single layer occupation within the shelter, during which an oven pit was excavated and at least one moa (Euryapteryx gravis) was butchered and cooked.

Artefactual material consisted primarily of waste flakes from silcrete and porcellanite blade production. One large silcrete blade was recovered, as well as chips broken from a polished argillite adze. A similar artefactual assemblage was found in the neighbouring Rockfall I shelter (S133/121) excavated in 1976 (Ritchie, ms), which produced radiocarbon dates on oven charcoal of c. 1400 A.D.

The Rockfall II shelter appears to have served a similar role to other prehistoric rockshelters in the Cromwell Gorge (Rockfall I and Italian Creek, S133/258), that is, a short term transitory campsite located near water and used for brief sojourns by Maori parties travelling through the gorge. In the case of the Rockfall II shelter, it appears that the stop at that particular location may have been initiated by the kill of a moa in the vicinity. The rockfall within which the Rockfall I and II shelters are located forms a reasonably prominent landmark within the gorge. Although it is tempting to speculate that the location may have served as a regular stopping place, the stratigraphy does not support this contention.

The site typifies a form of short term encampment which was probably quite common along the main inland routeways, especially in the narrow river gorges where potentially good shelters abound and foot traffic would be restricted to the riverbank.

Dart Bridge excavation

The final excavation undertaken during the 1980/81 fieldwork season was the jointly directed investigation of the Dart Bridge site (S122/1). An interim report on this excavation has been recently published (Anderson and Ritchie, 1981).

Discussion

The 1980 81 summer excavations will add substantially to the understanding of prehistoric man's exploitation and subsistence strategies in Central and western Otago. The five excavations have doubled the total number of scientific investigations within the upper Clutha and Wakatipu basins and this in itself considerably adds to the sum of knowledge of the area's prehistory.

Some twenty oven pits were fully excavated or half sectioned during the five excavations, revealing some diversity in circumference, depth, volume, usage (or inferred usage) and oven stone type. Three types can be clearly distinguished:

1. umu ti : approximately 1.5 m in diameter and 1 m deep. Characterised by half or fully raised rims with distinct separation between ovenstone layer and charcoal derived from the wood fuel.
2. Common form : 30 - 80 cm deep and 1 - 1.5 m in diameter. Probably used for moa cooking, or alternatively moa bone and fat were used as fuel. This oven type is characterized by burnt, fragmentary moa bone intermixed with the wood fuel.
3. Shallow pit : 15 cm deep and 1 m in diameter. Probably used primarily for grilling on heated rocks, rather than steaming.

In all cases the ovens were located near substantial rivers, the oven stones usually being obtained from the adjacent riverbanks. Oven stone selection varied from site to site: in the Upper Clutha sites (Parkburn and Tinwaldburn) greywacke cobbles were utilized, whereas in the Owens Ferry, Rockfall II and Dart Bridge sites schist was dominant. Although schist is readily available at most Central Otago sites it is highly susceptible to fragmentation. Its use for ovenstones at Dart Bridge therefore was unexpected as there is an abundance of quartz cobbles in the bed of the adjacent Dart River. The stones were used in an experimental umu ti established at the excavation base camp and proved ideal.

Evidence for early discovery and exploitation of the Central Otago silcrete and porcellanite sources for blade production was substantiated by the excavations. The presence of polished argillite, believed to be from the Foveaux Strait sources is consistent with the pattern found in other Upper Clutha sites, eg, Rockfall I (Ritchie, n.d.) Hawksburn (Anderson, 1979) and Schoolhouse Creek (George, 1937), and indicates an early penetration of the interior by southern coastal Maoris.

The lack of faunal and lithic material from the Parkburn and Tinwaldburn sites was frustrating, but the negative evidence is not entirely inconsistent with the general paucity of eeling evidence in excavated sites, despite ethnographic records to the contrary.

Beyond the artefactual and faunal material the main corpus of new information to be derived from the recently excavated sites is a two fold increase in the number of radiocarbon dates from Central Otago. It is anticipated that the dates will support cases for repetitive occupation of the extensive Parkburn and Dart Bridge sites, and the contemporaneity of the many ovens within the Owens Ferry site.

When the radiocarbon dates are available and the excavated materials from each site are analysed, the role of the sites can be niched within the broader framework of southern South Island prehistoric economic strategies.

Carrick goldfield survey

Following the excavations a site survey of the Carrick goldfield near Cromwell was undertaken. The survey was prompted by queries from mining companies concerned about fulfilling their obligations under the Historic Places Act.

Some 150 sites were recorded during the systematic survey, predominantly reflecting the main activity on the goldfield which was quartz reef mining. The associated sites can be divided into work sites (comprising drives, shafts, mullock heaps, sluiced gullies and alluvial workings), energy production and supply sites (water races, dams and waterwheels), processing and maintenance sites (such as batteries and forges) and habitation sites (isolated dwellings, Chinese miners huts and settlements such as Carricktown).

The survey, whilst not producing any new discoveries in the way of unanticipated site types, enabled the establishment of a complete and permanent record of the sites within the Carrick goldfield and provides a basis for comparative evaluation with other reef mining areas. Some 200 sites exist within the Carrick goldfield, 50 of which had been recorded prior to the survey.

The Carrick survey is the third major goldfield survey undertaken within the Clutha Valley Development archaeological programme. Report production is proceeding on the first two, the Shotover survey undertaken in March 1979 and the Bendigo goldfield survey of August 1980. These complete inventories of goldfield areas are proving extremely useful for management purposes. Such fieldwork is an essential precurser to the fair evaluation of mining proposals which may affect early mining sites.

Other 1980 work

During 1980 two survey reports were completed. These were the Luggate Archaeological Survey (Ritchie, 1980a) and the Queensberry Archaeological Survey (Ritchie, 1980b). These reports describe the sites in the northern and central areas of the upper Clutha Valley and include discussion and evaluation of the sites affected by the Luggate and Queensberry power schemes. A classification and interpretative evaluation of tailing sites has also been completed (Ritchie, 1981).

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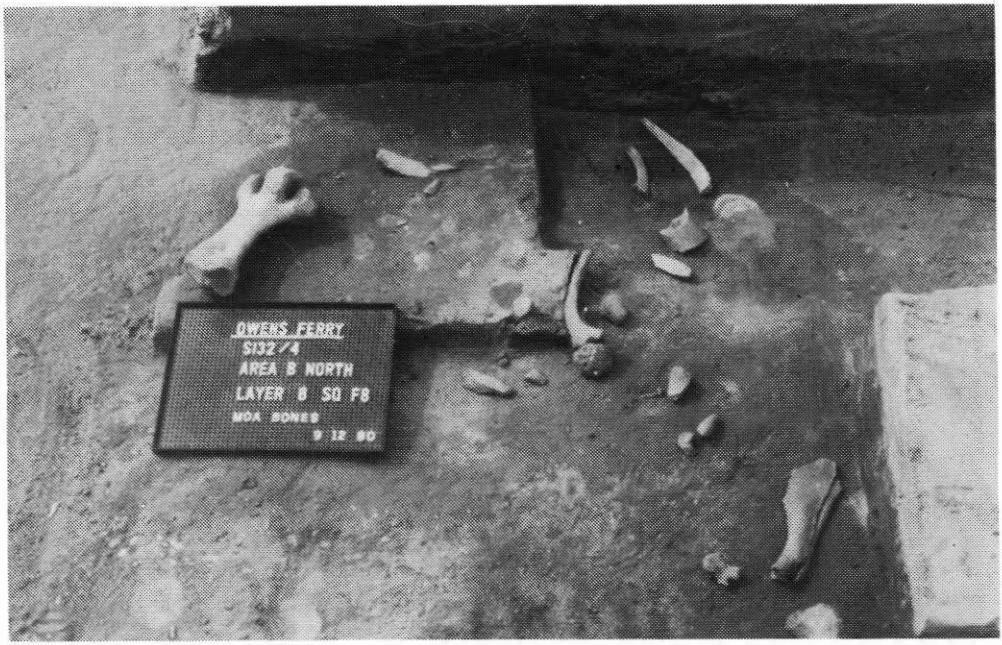

CLUTHA ARCHAEOLOGY, Plate 1. Moa bones at Owens Ferry excavation.

CLUTHA ARCHAEOLOGY, Plate 2. Owens Ferry excavation in progress.

CLUTHA ARCHAEOLOGY, Plate 3. A typical oven at the Parkburn site.

CLUTHA ARCHAEOLOGY, Plate 4. Rockfall II excavation.