NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER

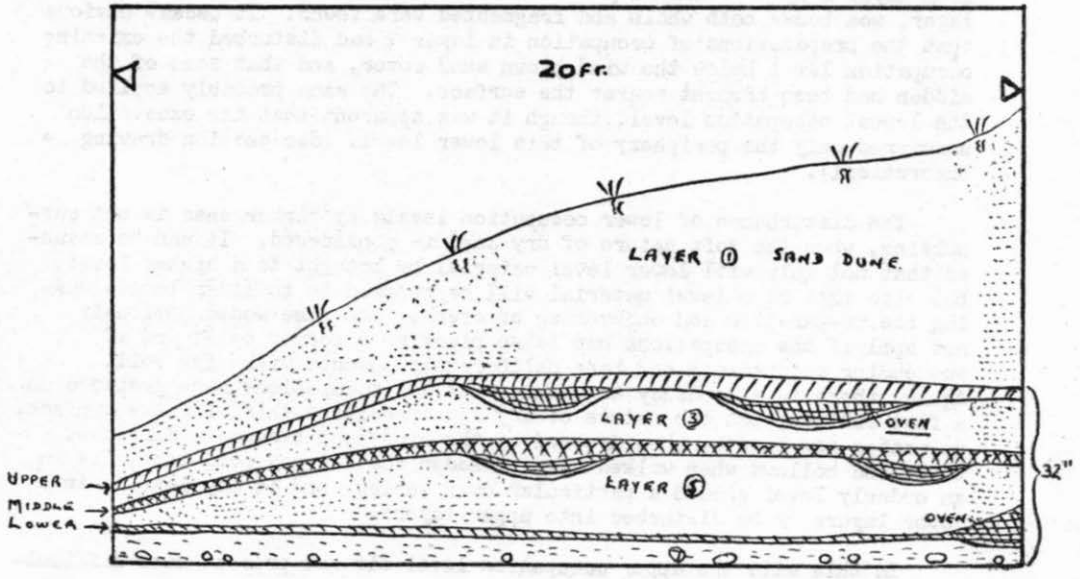
KAUPOKONUI MIDDEN, SOUTH TARANAKI
N128/3
Preliminary Report

A.G. Buist

On the west side of the mouth of the Kaupokonui River is an area of some 100 acres of sand dunes. In 1962, wind erosion exposed a large occupation area which we have reason to believe was Archaic Maori. (See Newsletter 5:235 Dec 1962).

Late in the year a small area of disturbed cooking stones was exposed some 50 yds from the river and 20 yds from high-water mark. This area had also been covered by sand dunes. D.W. Robinson made a preliminary investigation of these stones and found that there were a number of moa bones beneath them. A ten foot square was laid out, and excavation revealed a stratified series of ovens and midden.

In February 1963, the excavation was extended north into an area still covered by low sand dune and marram grass. Three week-ends work confirmed the presence of a stratified midden. There were three occupation levels, each containing ovens still in a set position (in situ) as well as a scatter of oven stones.



Layer 1 Dune sand with modern midden (beer bottle) scatter

Layer 2 Upper occupation level with ovens, stones, fish-bones, sea shells, dog bones and droppings

Layer 3 'Sterile sand' (see below)

Layer 4 Middle occupation level with ovens, stones, sea-shell, moa bones, bird bones, obsidian, chert and argillite fragments

Layer 5 'Sterile sand' with fragmented bone and stones

Layer 6 Lower occupation level with ovens, stones, sea-shells, moa bones, bird bones, bone and stone artifacts, obsidian, chert and argillite.

Layer 7 Sterile sand going down to large beach pebbles and pumice

LEVEL DIFFERENTIATION:

The occupation levels extended 20 to 32 inches from Layer 2 to Layer 6, and Layer 6 was 8-10ins above the large beach-peeble base. An area of 400 sq.ft was excavated. The layers were more clearly defined under the existing sand dune, and it was apparent that some erosion and subsequent consolidation of layers had taken place in the area first examined. In the better preserved area, it was found that further difficulties inherent in a sand beach site presented themselves. Layer 2 was separated from Layer 4 by a 16-inch Layer 3 of wind-blown sand, but in this 16 inch layer, moa bones both whole and fragmented were found. It became obvious that the preparations of occupation in Layer 2 had disturbed the existing occupation level below the wind-blown sand cover, and that some of the midden had been brought nearer the surface. The same probably applied to the lowest occupation level, though it was apparent that the excavation uncovered only the periphery of this lower level. (See section drawing - theoretical).

The disturbance of lower occupation levels by higher ones is not surprising, when the soft nature of dry sand is considered. It can be assumed that not only will lower level material be brought to a higher level, but also that high level material will be pressed in to lower levels during the preparation and uncovering of ovens. The same would obviously not applyif the occupations had taken place on a former soil, and if succeeding occupations had been deliberately covered with firm soil. Again, there is a tendency to assume that all occupations were prepared on a flat surface; but the nature of dry sand precludes this, for the surface, no matter how smooth, when dressed by the wind soon becomes a series of bumps and hollows when walked over. Midden scatter may not, then, lie in an orderly level around a particular oven series, and it may intrude into lower layers or be disturbed into upper layers.

In this site the upper occupation level did not present much difficul-

ty, as it was found to be well defined by charcoal staining in the sand, and by an even and heavy scatter of dog droppings. The middle occupation level however, was clearly defined by charcoal only on the same level as the ovens, the adjacent layers containing a scatter of midden material which we can safely assume derived from the middle occupation level. The lowest occupation layer was very thin and clearly defined though some of the larger bones may have been misplaced by the middle occupation. In the recording of the findings, I was so conscious of this problem that I probably placed in the middle occupation more than was correct, but at least the lowest occupation was kept 'pure', if somewhat reduced in content.

FINDINGS:

Upper Occupation Level.

There were two in-situ ovens, in and around which were fish bone, a few seashells, dog bones and a large amount of dog droppings. A few bird bones and moa bone fragments were also present in the lower parts of this occupation level, but these were interpreted as being from the middle occupation. The ovens had been cut down into Layer 3, and although the bone lay close to the oven, it was in all cases sealed by the charcoal from the oven.

Middle Occupation Level.

In-situ ovens, moa bones, whole and fragmented, bird bones, seashell, moa eggshell, obsidian, chert, argillite and bone artifacts, crop stones. Five species of moa were present in 103 identifiable bones. (Mr R. Scarlett of Canterbury Museum identified all the bone in the following lists. He will be preparing a separate paper in due course.)

Dinornis giganteus (Owen)
" struthoides (Owen)
" gazella (Oliver)
Pachyornis mappini
" septentrionalis
possibly Euryapteryx geranoides

Over half the total bones found were P. mappini. excluding the whole body in a position of articulation. (See photo). There were 60 bones of this species, 35 of P. septentrionalis, 10 D. giganteus, and one each of the other three.

In addition bones of the following extinct birds were present.

Takahe - Notornis mantelli
Giant Rail - Aptornis otidiformis
Extinct Crow - Palaeocorax moriorum (Forbes)
North Island Kokako - Callaeas cinerea Wilson (now rare)
Huia - Heteralocha acutirostris (probably now extinct)
Coot - Pyramida hodgeni (Scarlett)
Hawk - Circus sp. (?North Island form)
Little Grey Kiwi - Apteryx oweni Gould (a South Island sp.)

Other birds present: North Island Little Blue Penguin, Tui, North Island Weka, North Island Kaka, North Island Kiwi, Red-fronted Parakeet, Black-billed Gull, Teal Duck sp., Large Duck sp., Grey Duck, Black Shag, Spotted Shag, Diving Petrel, New Zealand Pigeon.

There were also fish, seal, dog and rat bones.

The greatest excitement during the excavation was the clearing from the sand of the complete body of a Pachyornis mappini, lying as it was thrown. The legs were missing, although one broken leg lay in close proximity, this having been dis-articulated at the head of the femur. The tracheal rings were all present near and in the head, and the crop stones lay in a group just superior to the sternum. The neck had been twisted so that there was a distinct break in the continuity of the cervical vertebrae, and the skeleton lay probably as it had been killed - by ringing the neck.

This middle level was obviously the main occupation in the area excavated, as it contained the greatest amount of material.

Lower Level Occupation.

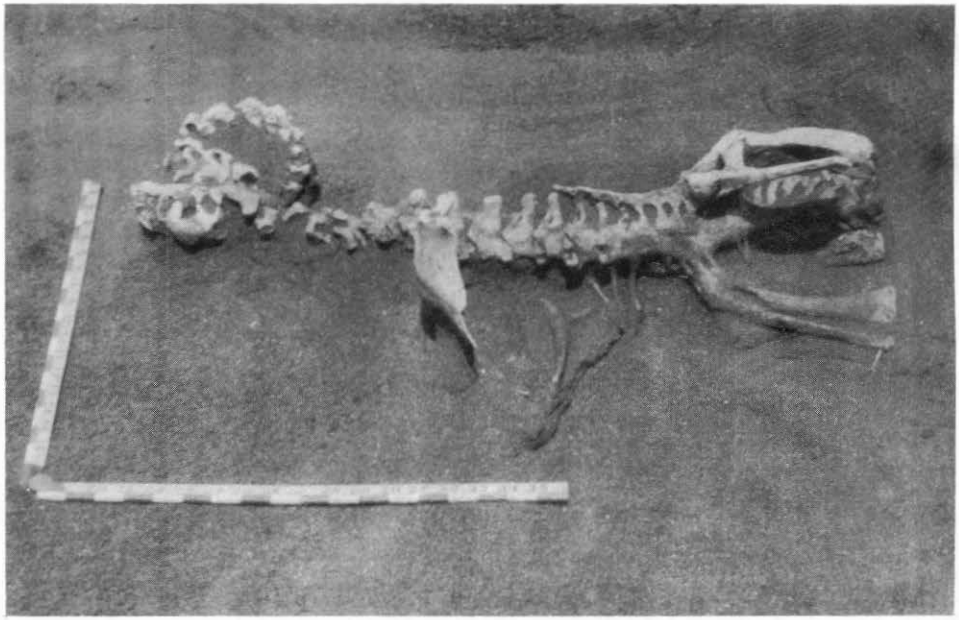
As already mentioned, it is probable that we excavated only the fringe of this occupation. The material found, had much the same range as the middle occupation, but there was a much greater quantity of artifactual material, together with indications that the occupation was in part a working floor. (This aspect is dealt with elsewhere in this issue by D.W. Robinson). In the extremity of the finl square excavated, under an 8 ft sand dune, the edge of an oven was excavated, indicating that the main part of the occupation was yet to be uncovered.

There were only 5 moa bones - 4 complete femurs and one broken one, P. mappini and septentrionalis, but a greater quantity of egg-shell. The range of other birds was the same, with fewer bones and species. Seven species of the extinct birds and ten of other birds were present, together with dog and rat bones.

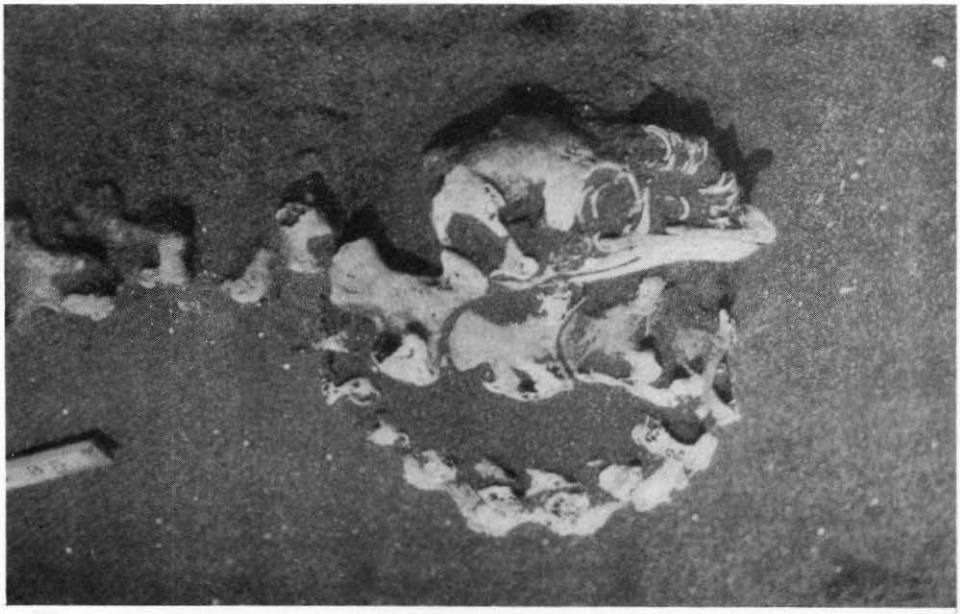
CONCLUSIONS:

It would be foolish to draw too firm conclusions from the excavation of so small an area, no matter how rich the material finds. However, it is possible to note the sudden change of diet from the upper to the middle level. The reason for this is not obvious, and as I see it there are two possibilities: 1. The moa and the other extinct birds were no longer available for consumption and other food had to be sought.

2. The area excavated in the upper occupation level exposed only that part of the occupation which happened to contain different food. It is possible that moa bones will be present in other parts of this upper occupation. I am rather more inclined to favour this second view, being prejudiced by the fact that seashells and dog bones occur in all three levels. I consider that the constants, rather than the variables, should receive the greatest consideration. The variables obtrude according to chance circumstances; a successful hunting trip or a determined expans-



PACHYORNIS MAPPINI IN SITU 5.



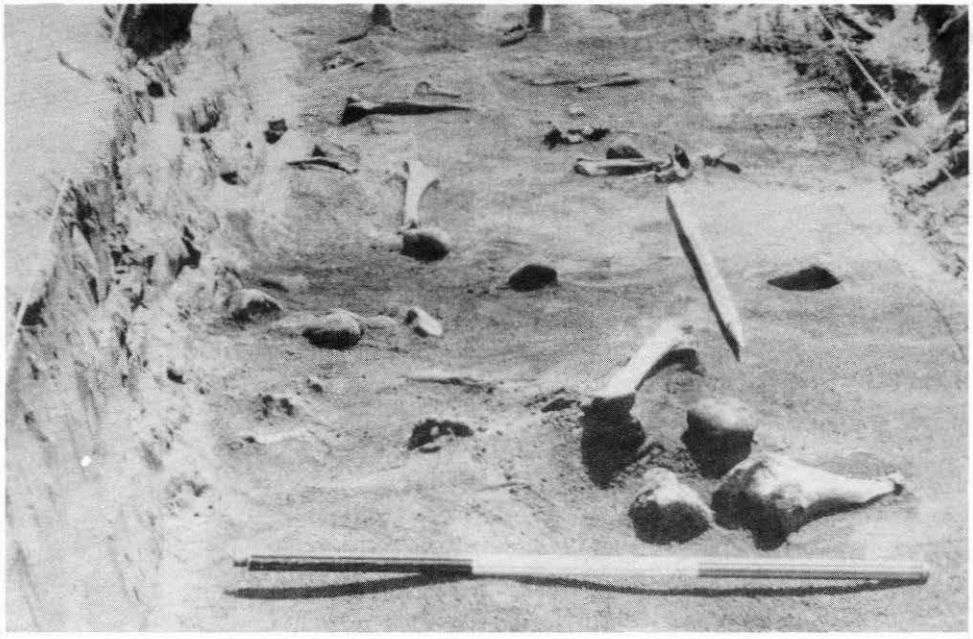
HEAD AND NECK OF SAME. 6.

KAUPOKONUI

MIDDEN RIGHT LOWER CORNER, OCCUPATION AREA LEFT ABOVE. 1.

LAYER 2 AND 4. 2.

KAUPOKONUI



LAYER 4. 3.

LAYER 2 OVEN - 3FT. RANGING POLE. 4.

ion of diet to mark an 'occasion'. It is possible to increase the proportion of the constants, and so reduce the significance of the variables, only by a larger excavation. The dangers of drawing too firm conclusions from too small a sample area may be greater than is generally appreciated.

However, the present sample excavation does give an interesting glimpse into the diet of the moa-hunting Maori, and into the range of birds he had to entertain him.

Postscript : All the shells from each layer were analysed by Miss Janet Davidson of Auckland University. On the small number present in each layer, her findings suggest ' a general picture of exploitation of a medium range of rockyshore shell fish with occasional beach shells.' The small amount of shell found suggests that this site was primarily a moa cooking site and, as at Chawe, shell fish were not greatly exploited at the same time.

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The Artifacts

D.W. Robinson

In evaluating the assemblages of artifactual material recovered from the various occupation layers, it is well to keep in mind the relative smallness of the area so far excavated, and the obvious limitations this places even on a pro-tem hypothesis as to function.

It is however significant, that all the artifacts were in secure positions, embedded in occupation floors etc., unlike some of the bones, which by their size alone, were likely to be encountered and disturbed by later occupations.

A fully itemizeddescription of all the artifacts will appear in the excavation Report, and this preliminary report is restricted to a schedule which provides ready comparison of occupation assemblages to date, and to brief references to the more significant items from each assemblage.