NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION

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NOTES ON SOME MORPHOLOGICAL CHARACTERISTICS OF KURI CRANIA

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The few notes made here were abstracted from a report which attempted to assess whether or not an unprovenanced dog's cranium (No. 1183), stored in the Anthropology Department of Auckland University, could have been a Maori dog of pre-European date. Dog 1183 was compared with:

A. Six specimens of sheep dog known as the 'Huntaway' type commonly found on New Zealand sheep farms.

B. Kuri documented by Allo (1970, 1971). Her sample consisted of 389 mandibles and 240 crania from a total of 90 sites ranging throughout New Zealand.

C. A total of 10 kuri crania and mandibles at the Auckland Institute and Museum.

Admittedly, it is unwise to generalise too much on the basis of small sample size when comparisons are being made. However, in relation to the large body of data presented by Allo (1970) together with the marked morphological differences found between Kuri and the sheep dogs studied, the following observations may provide some additional information that help to identify Kuri. Of the few observations, it is suggested that one on the mandible, concerning the anterior border of the ascending ramus, might be diagnostic of Kuri in general. Since Allo does not discuss this feature, it could well mean that her comparative samples did not reveal the marked difference this study found. Consequently, the ascending ramus needs to be investigated further with an assessment of its range of morphological variation.

The Vault

In all Kuri a sagittal crest, if present, does not seem to develop until a significant distance behind the junction of the coronal and sagittal sutures. This distance appears to be constant, being about 1½ cm to 2 cm in length. In dog 1183, and the sheep dogs, the sagittal crest begins anterior to this point and is immediately continuous with the superior temporal line (see Fig. 1).

In her measurements, Allo notes that for Kuri there is a range of 51-63 for the cephalic index. This index is an indication of the relationship of head length to head width. Dog 1183 and the sheep dogs fell within this range and had a mean cephalic index of 60. On this basis the cephalic index appears to have little discriminatory use.

On the basis of the cranio-facial index, the relationship of muzzle length to braincase length, Kuri indices ranged from 10.6 to 10.8. Dog 1183 and the sheep dogs all had an index of 12.5. In conjunction with other measurements the cranio-facial index might be useful in helping to identify Kuri but in this study, because of the unrealistic sample size available for sheep dogs, no statistical significance of the difference between the indices was attempted.

The Frontal Angle

The angle the frontal bones make with the orbital-porion plane, similar to the Frankfurt Horizontal plane used with human crania, is greater in dog 1183 and the sheep dogs, than in the 10 Kuri observed at Auckland Museum. In Kuri this angle varied from 50^{o} to 53^{o}. In the other dogs the angle was 60^{o}. The implication here is that Kuri probably had a more gently sloping forehead (see Fig. 2).

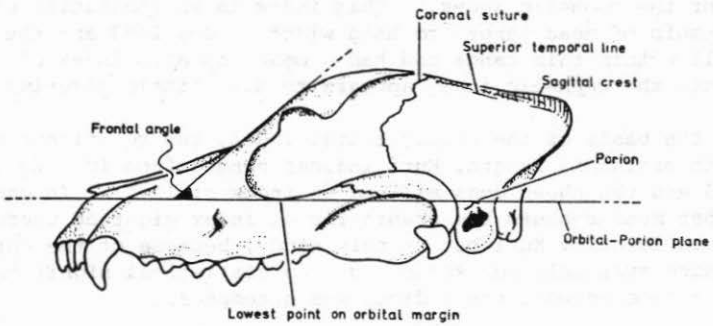
The Occipital Area

The lamboidal sutures meet the sagittal suture at an angle which is more acute in dog 1183 and the sheep dogs than in Kuri. In the latter, the cranium in relation to its height is broader and the sutural intersection is almost a right angle (see Fig. 3).

The Mandible

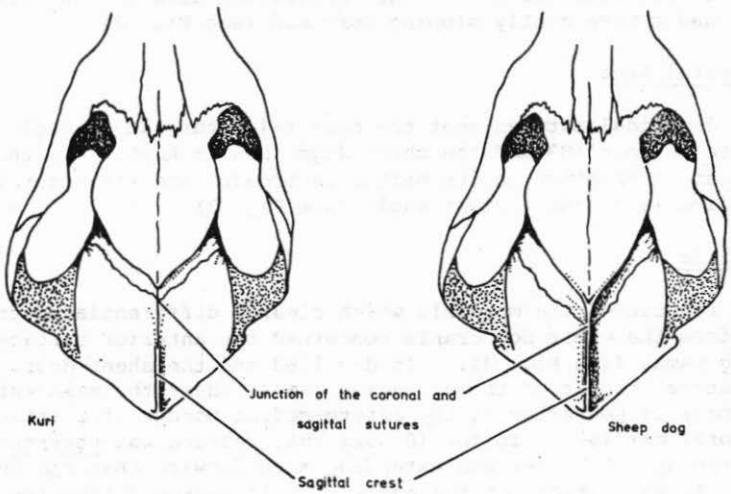
The feature of the mandible which clearly differentiated the 10 Kuri studied from the other dog crania concerned the anterior surface of the ascending ramus (see Fig. 4). In dog 1183 and the sheep dogs, the antero-lateral border of the ascending ramus (where the masseter muscle is attached) is posterior to the antero-medial border (for attachment of the temporal muscle). In the 10 Kuri this feature was reversed so that the antero-lateral border was extending more forward than the antero-medial border. It was largely on the basis of this marked difference that dog 1183 was excluded from being accepted as representative of Kuri.

Fig.1 A DOG SKULL



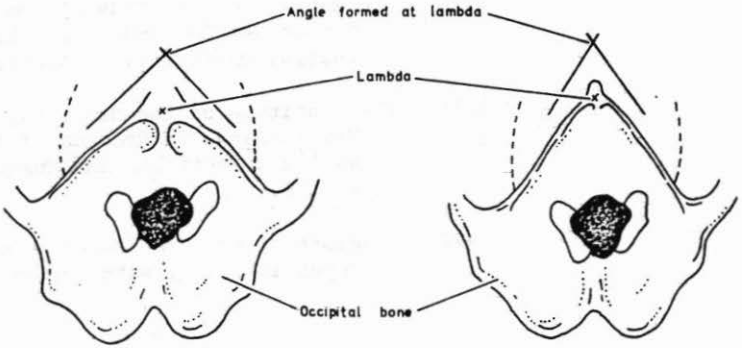
LEFT SIDE [not to scale]

Fig.2 EXTENT OF THE SAGITTAL CREST



SUPERIOR ASPECT [not to scale]

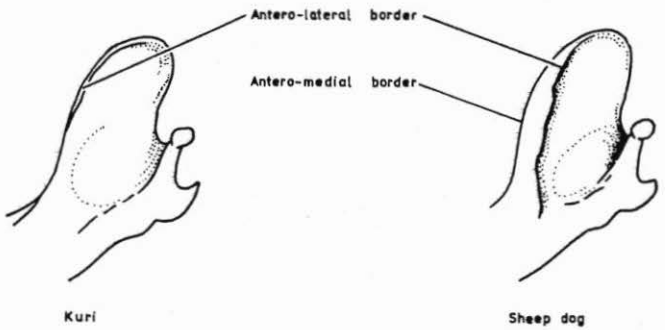
Fig. 3 THE ANGLE AT LAMBDA



OCCIPITAL ASPECT

[not to scale]

Fig. 4 DIFFERENCE OF THE RAMUS



LEFT SIDE LATERAL ASPECT

[not to scale]

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