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## DENTALIUM ANKLETS ON A KAIKOURA BURIAL

MICHAEL TROTTER

A human burial recently excavated at Kaka Road, South Bay, Kaikoura, was particularly interesting because of the number of *Dentalium nanum* beads found around the lower legs.

The burial, which was uncovered while excavating for the foundations of a new house at E1656222 N5302736, had originally been placed in a folded supine position with the head to the southeast, the spine oriented at about 282° and largely horizontal, with the forearms up against the chest, and the knees folded up close to them. The head would have been bent forward so that it was approximately upright, and it stayed more or less in this position until uncovered and broken by the excavating machine. Lack of prominent brow ridges, a gracile mandible and the shape of the pelvis indicated that it was female, and bone size, fused epiphyses and teeth indicated she was an adult. Stature estimation from the femur and tibia suggested that she was 1.67 m tall (about 5 ft 6 in), a little taller than average.

From around the position of the right shoulder to in front of the skull, the sandy limestone gravel had been stained red by haematite. This is likely to have been on an article of clothing or ornamentation at the time of interment but which had since disintegrated, leaving only the colouring in the ground.

Of the artefacts found with the excavated burial, by far the most impressive were the accumulations of small shell beads around the ankles of each leg. These had moved slightly out of their original positions, but it is assumed that at the time of burial they were probably threaded on a fine line and wrapped around each lower leg to form anklets. The shells from which the bead units were made are generally referred to as *Dentalium nanum* (not to be confused with the much larger fossil *Dentalium giganteum* which was used in moa hunter times). Time constraints prevented the collection of every one of these units but it is estimated that 75% of them were recovered from the coarse sandy gravel matrix.

*Dentalium nanum* is a fairly deep water species, the shells of which are seldom seen on beaches (Powell 1975: 31; 1979: 353). I have personally found

them only on sandy beaches, quite unlike much of Kaikoura's rocky and pebbly shoreline.

A detailed study of the beads was not possible as the local rūnanga wished to rebury all the artefacts elsewhere with the skeleton. Those collected (Figure 1) weighed 40.3 grams, and four random samples gave an average weight of 4.7 grams per hundred units or 21.28 units per gram. From this it is estimated that the number of units collected was about 858, making an original total of 1144 or more units. The average length of each unit was 9.7 mm, the largest being 26 mm long and the smallest under 2 mm.

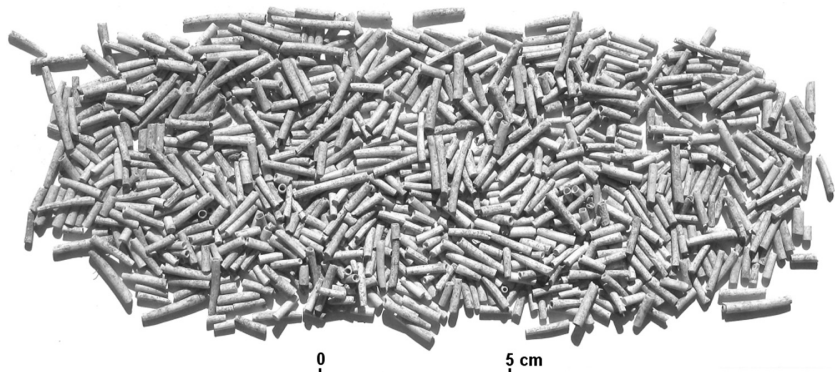


Figure 1. *Dentalium* anklet units collected from the burial.

Placed end-to-end as if strung on a fine line, 1144 units would measure over 11 m, enough to loosely go round each ankle more than 22 times.

Under a binocular microscope at 15x magnification, it could be seen that many of the units had rounded ends (Figure 2). As the natural shell is not rounded in this manner, this indicates either deliberate fashioning or considerable wear, but as the rounding was very even, it seems unlikely to be the latter. It could also be seen that what might have appeared to the unaided eye as cut marks around the outside of the shells were in fact lines of arrested growth in the shells while they were alive. Some units, especially smaller pieces, had broken ends, some of the breaks being jagged and probably occurring subsequent to interment. None of the units had the fine tapered ends of the natural shells.

Another burial with anklets was excavated by Alan Nilsen at 35 Avoca Street, Kaikoura (site O31/92) in 1958. In describing his excavation he wrote: "Around each ankle were numerous tusk shells. Total number of pieces – 65. About half of these were more or less complete shells. The shells appeared to have been threaded into several small loops around each ankle." (O31/92).



*Figure 2. Photomicrograph showing the rounded end of a unit.*

Multiple strand ornamentation – necklaces, bracelets or anklets – does not seem to be recorded for Māori, but multiple loops of shell necklaces are currently common on some Polynesian islands. Similar fashions may well have occurred here in the past.

At the very bottom of the burial pit, beneath the lowest level of bones, were two other artefacts that would have been placed with the body as burial goods – a bone needle and a nephrite chisel. It seems improbable that they had been placed in this position at the time of interment and unlikely that they would have found their way there under normal conditions of decay and soil movements. A more feasible explanation is that they were moved to that position by an earlier disturbance to the burial that also caused some damage to the skeleton (detailed in Trotter 2011).

The needle had been made from a piece of bird limb bone (Figure 3). Wear polish in the upper side of the perforation was relatively greater than wear polish at the point of the needle, indicating that it had been used as a pendant more than as a utility implement. The quality of the bone used, however, and the workmanship suggested that the original intention, at the time of manufacture, was for utilitarian purposes.



*Figure 3. Bone needle used as a pendant.*

An interesting aspect of the nephrite chisel is that the cutting edge appeared to have been deliberately blunted and partly ground over (Figure 4). The over-all shaping of the chisel indicated that it had once had an edge at least 2 mm below the present end. The missing piece is unlikely to have come off through normal usage but more likely through striking it on stone. There had subsequently been some rounding of the angle between the sides and the broken edge, and the break itself had been lightly ground. The reasons for this are not clear.

The burial has been recorded as site number O31/111 within the ‘umbrella’ South Bay site record O31/27.

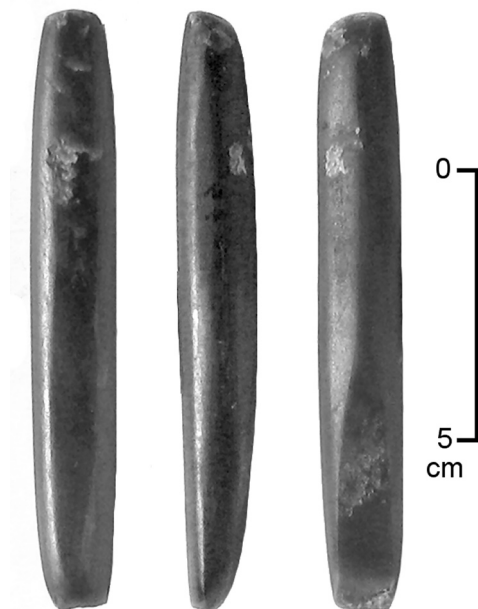


Figure 4. Front, side and back views of nephrite chisel.

### Acknowledgements

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