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THE AGE OF THE QUARRY SITES ON D'URVILLE ISLAND

by I. W. Keyes

The quarry sites on the eastern side of D'Urville Island, in outcropping exposures and in isolated blocks of metamorphosed argillite, have been assigned to the earliest occupiers of the district - the Waitaha (Keyes 1960, J.P.S., 69:249). Though, because of their isolated situations it is not possible to obtain direct evidence at or near the sites themselves as to their period of utilization, it is on good grounds that they are confidently related to the Waitaha people only. It has been suggested, however, (Wilkes, N.Z. Archaeological Assn. Newsletter 4(1):29), that because there is no evidence of chips of metamorphosed argillite in the upper middens (stratigraphically), assigned to the Ngati-Kuia, it still remains possible that the quarries were utilized by these later inhabitants as well as by the earliest people.

On several sites where continued rapid accumulations of drift sand have preserved the cultural stratigraphy, two distinct well-separated horizons are present which can be correlated with very little variation in different parts of the Island. The lower, belonging to the Waitaha as first inhabitants and with the greater depth of accumulation, has revealed a predominantly moa with sparse molluscan dietary remains, associated with quantities of metamorphosed argillite chips and flakes. The upper horizon, related to the Ngati-Kuia period of occupation (being the most numerous and longest residing of the later occupiers), discloses mollusc and fish remains without any trace of metamorphosed argillite flakes. This is also the case with the other scattered middens composed entirely of mollusc shells. At Camp Bay, from the lower occupation layer amongst numerous chips of metamorphosed argillite, a broken but distinctly tanged adze was located which was also reminiscent of the Waitaha people. This was suggested at the quarry site on the south shore of Port Hardy, where scattered roughed adze shapes, discarded because of defects, were suggestive of finished products of heavy quadrilateral form. On the south coast of Greville Harbour at Ragged Point Beach, there are the remains of a large working site, with an abundance of metamorphosed argillite flakes, partly worked, and broken adzes. All these artifacts which are sufficiently complete, can be decisively related typologically to the Waitaha people. Of the numerous artifacts seen in various collections to date, obtained from D'Urville Island and of Waitaha cultural affinities, all have been made from metamorphosed argillite. There have been, apart from Waitaha adzes, several specimens seen resembling more those of "Ngai-Tahu typology", and most likely to be of Ngati-Kuia origin. All of these, however, have been made from imported stone. On this evidence then, there is little basis on D'Urville Island for any suggestion that the quarry sites were used in times other than during the period of Waitaha occupation. Unfortunately, there is no such reliable evidence to check the age of the Whangamoā and Maitai Valley quarries, but it is thought certain that these would also be restricted to the same period of occupation.

The grounds on which Wilkes has assumed that the D'Urville Island quarries were used in times later than that of the Waitaha period of settlement is provided by his finding of large quantities of metamorphosed argillite chips on several sites around North-West Nelson, in close proximity to apparently recent midden remains and to the present ground surface. These suggestively "recent" deposits he assigns on these grounds only, to the Ngati-Kuia, the most numerous of the later occupiers of this region, who also simultaneously occupied D'Urville Island and Pelorus Sound after having driven the Ngati-Mamoe south. It has been assumed that this territorial

domination by the Ngati-Kuia gave them access to the quarries on D'Urville Island from which suitable rock could be quarried for working into artifacts either there or more particularly back on the beach sites around North-West Nelson. However, if these quarries were worked by the Ngati-Kuia at all, then the section on D'Urville Island would have been primarily responsible for their use, and abundant evidence of this would be available. Unfortunately for that contention this is not the case. On grounds of proximity also, the quarries at Whangamoa, still within the sphere of Ngati-Kuia influence (being on Ngati-Apa territory, with whom they were closely allied), would have been closer to the "Granite Coast" than those on D'Urville Island, and would have been more likely to have found favour if they had been used, but this is extremely unlikely.

A factor of basic fundamental importance which should be stressed however, is the correct identification of the flake material seen. Readers are informed (Wilkes p.29) that the chips from the working floors are of metamorphosed argillite, but in the discussion of each of the six sites which has yielded flake remains, the material present in each case is referred to as argillite. From this then it becomes very uncertain as to whether the material found has any real association with the metamorphosed argillite of the D'Urville Island - Nelson "Mineral Belt", as argillite (*sensu strictu*) is a very different material. An endeavour has been made to point out on a simple non-technical basis (Keyes 1958, J.P.S., 67:158-61) the difference between normal argillite and the specialized radically altered variety, termed simply as "metamorphosed argillite", well known from the Nelson "Mineral Belt". If the material present on the sites around North-West Nelson is an altered argillite, there is a probability that it may have come from a quarry, even closer at hand than those at D'Urville Island and others on the "Mineral Belt", situated on the Pearce River (off the Motueka River) that has been mentioned by Peart (1937, "Old Tasman Bay", p.67). The territory through which this river passes offers a great variety of rock types, ranging mainly from those of ultrabasic granitic composition, to various originally sedimentary types, now altered by regional, contact intrusive, metamorphic and metasomatic processes to variously changed forms. Also present are dolerite sills and dykes, which if displaying an aphanitic texture, are not easily separable by general observation from the metamorphosed argillites connected with the Nelson "Mineral Belt". It should be remembered also that metamorphosed argillites will show an apparent textural and fractural variation, depending on the degree and type of alteration they have suffered, and this change can be observed between the quarries on D'Urville Island.

A noticeable feature regarding the "Granite Coast" region, owing to the resistance of the batholithic granite, is the relatively shallow depth of top-soil that has formed by atmospheric weathering, apart from stream laid or wind blown accumulations. In general it is not possible to expect any great depth of soil formation above or below human occupation horizons, and unless there are other criteria on which to base age, close proximity to the present ground surface should not necessarily be taken as an indication of lack of any antiquity. If the flake material observed on the various beaches around North-West Nelson should prove to be of more ancient (Waitaha) origin than the heaped, apparently "recent" middens with which they almost appear to be continuous, then the lack of any stratigraphic break (as a time interval would supply) would fit in well with the occupational succession for this region. There is abundant evidence from the area, in the form of distinctive artifacts, to indicate that the Waitaha people were present in the area in large numbers for some time. There is little traditional indication, however, that the Ngati-Mamoe people asserted their influence upon this district to any extent, they

being restricted largely to the eastern portions of the South Island. This would allow the Waitaha people a longer period of undisturbed residence in the district, before being supplanted by the numerous Tiniotoi tribes (Ngai-Tara, Ngati Kuia, etc.) from the north, who quickly established widespread and total dominance over the area. This rapid cultural change, (with possibly a partial amalgamation) would provide a seemingly continuous sequence of midden deposits without any obvious differentiation.

