

TABLE I

The sites and specimen numbers used for this study.

Site	Number of specimens examined	Specimen numbers
Waitaki River Mouth .....	5	25-29
Pounaweia .....	1	80
Papatowai ... ..	6	49-54
Shag River Mouth .....	20	5-24
Little Papanui .....	5	63-66, 78, 79
Murdering Beach, moa-hunter	2	55, 77
Kyeburn .....	4	42-45
Murdering Beach, Classic Maori	3	56-58
Anita Bay .....	1	46
Oturehua .....	6	81-86
Gray's Hills Quarry .....	4	3, 4, 73, 74
Nenthorn .....	4	1, 2, 75, 76

Specimens identified as quartzite from external appearance were selected from a very large collection of implements and waste flakes in the Otago Museum by sorting flakes from each locality into groups of superficially similar aspect. The criteria applied for this were grain size, presence or absence of glassy inclusions, and colour, i.e., exclusively lithological criteria. Representatives from each of these hand-specimen groups were selected for sectioning.

## PETROGRAPHIC EXAMINATION

### NOTE ON NOMENCLATURE

Quartzite flakes similar to those examined here have also been described by Coombs (*in* Lockerbie, 1959: 83) who emphasised their sedimentary origin. The induration is secondary and not of metamorphic origin, and the rocks would be better termed siliceous quartz sandstones or possibly orthoquartzites (*cf.* Coombs). Since the name quartzite has become so widely used by archeologists, however, it seems simpler to continue using it, provided these qualifications are borne in mind.

### EXTERNAL APPEARANCE

Superficial (hand specimen) criteria are generally an unreliable guide to the lithological classification of quartzite flakes—see Pl. 1, Fig. 1.

*Colour* varies considerably, from dark to pale greys, through cream and yellow to various shades of brown and red. Inhomogeneities of surface colouration are common and may be blotchy or veinlike. There is little relation between external colour and the amount of pigment visible in thin section. Thus a very dark-brown specimen, such as 65, is less obviously pigmented in thin section than specimen 2, which is cream-coloured in the hand specimen. Again, specimen 27 is pale yellowish grey with dark-grey veins, but the veins are less stained in thin section than the paler matrix. Where the colour is yellow or brown the pigment is probably limonite; where reddish tints are prominent hematite may well be responsible.

*Surface-weathering rinds* are quite common and present features of interest. On some specimens (e.g., 21, Pl. 1, Fig. 2a) it is complete over the shaped fragment, while others have been shaped from material which already had a rind, part of which is preserved (e.g., 9, Pl. 1, Fig. 2b). It is worth investigating in future studies the possibility that worked fragments with complete weathering rinds are of significantly greater age (archaeologically) than the rest.