

TWO PEBBLE INDUSTRY SITES OF HOABINH IEN I TYPE ON THE NORTH COAST OF NEW SOUTH WALES.

By FREDERICK D. MCCARTHY,
The Australian Museum.

(Plates v-vi.)

During a reconnaissance on the north coast of New South Wales I examined two occurrences of water-worn pebbles, at Yamba and Crescent Head, which had been quarried for the manufacture of Hoabinhien I type implements. Their importance lies in the fact that each site presents a single industry unmixed with the numerous extraneous influences found on kitchen-middens south of Port Macquarie. Moreover, it appears probable that neither site has been visited previously by collectors.

Yamba.

Yamba Point, at the south end of the surfing beach, is flattened and considerably eroded; although the greater part of it is covered with wind-blown sand, patches of dark soil are exposed, and large weathered blocks of sandstone, fantastically shaped, project here and there. Several acres of this headland are covered with water-worn stones of all sizes from small pebbles up to boulders which extend down the beach into the water; a layer of pebbles occurs in the sand dune skirting the shore end of the headland, and where the sand has blown away the pebbles lie upon the eroded surface of a "raised beach". Implements were collected over the whole area covered by the pebbles, and the following is a description of the various types.

Cores.—E.48707-12. Originally spherical or thick pebbles from which flakes have been struck; two are irregular in shape and two are roughly triangular with vertical faces on two sides. They are 8, 10-15 cm. in length. 48712 (Pl. vi, fig. 1) is the only *horse-hoof* core, and the edge of its flat ventral cleavage surface is carefully chipped all round; it is $12\frac{1}{2} \times 10 \times 6$ cm., and weighs 33 oz. 48713 has a domed top slightly chipped.

Pebble Core Implements.—E.48710, 48717-21, 48765. Pebbles chipped from both surfaces at one end so as to produce a bevelled blade or striking platform. On some specimens the edge of the blade end is undulating as a result of alternate flaking and they would appear to be cores; others have a comparatively straight trimmed edge, and appear to be hand axes. They are from 9 to 15 cm. long, and weigh from 20 to 36 oz.

Karta.—E.48713-4, 48797 (Pl. vi, fig. 2), 48809. Made from either the core or slice portions of a split-pebble, though all may be regarded as core implements. The working edge is chipped from the cleavage surface. 48714 has a carefully trimmed edge along the two lateral margins and the curved end, and only an island of the dorsal crust remains. They are from $8\frac{1}{2}$ to $11\frac{1}{2}$ cm. in greatest diameter, $2\frac{1}{2}$ to 5 cm. in thickness, and from 8 to 17 oz. in weight.

Uniface Pebble Implements.—This type constitutes the majority of the implements at Yamba, and comprises five varieties:

- A. Working edge on one lateral margin (Pl. vi, fig. 3). E.48722-49, 48751-62, 48764, 48789. 43 specimens. The working edge varies from concave to convex, and on some specimens is irregular and gapped. The trimmed "nose" occurs on 48761. Secondary chipping has been carried out on many examples, especially those made of fine-grained stone. The series range from 7 to 18 cm. in length, $5\frac{1}{2}$ to $11\frac{1}{2}$ cm. in width, 2 to 6 cm. in thickness, and from 6 to 44 oz. in weight.