

HEIGHT: 28 mm, width across last two varices, 14 mm (holotype).

HOLOTYPE: New Zealand Geological Survey, TM 3079.

LOCALITY: Pakaurangi Point, Kaipara Harbour, coll. P. Marshall, 1916 (?).

AGE: Otaian Stage (Lower Miocene).

REMARKS: The holotype is accompanied by a label in Suter's handwriting. The fragmentary body whorl recorded by Laws (1944) from the same locality, has not been examined. *P. kaiparaensis* differs from *P. laetificus* in having three axial cords between varices instead of a single axial tubercle, in its smaller size and in its fewer spiral threads. Most species of *Pterynotus* (including species sometimes separated as *Pteropurpura*) have a single intervariceal axial tubercle; three axials have been noted in the species figured as *P. tortuosus* (Sowerby) from the Vienna Miocene (Hörnes, 1856, Pl. 25, fig. 12) which, however, is a much larger shell with a posterior channel interrupting the outer lip, and therefore classed in *Pterochelus* by Sieber (1958).

***Pterynotus* (*Pterynotus*) *laetificus* Finlay (Plate 1, figs. 2-8)**

1930. *Pteronotus* (s. str.) *laetificus* Finlay, Trans. N.Z. Inst. 61: 76.

1931. *Pteronotus* n. sp., Marwick, N.Z. geol. Surv. Palaeont. Bull. 13: 118, Pl. 12, fig. 226.

Finlay's holotype, recorded as from "Clifden, band 7 C, close to band 8" is a battered and fragmentary body whorl of a large specimen, filled with yellow-brown sandstone, and has not previously been figured. Finlay's label indicates that it was collected by Nissen from a bed designated "Nissen 7 CC", or "Clifden—37" of an unpublished scheme of Finlay's. Recent work at Clifden by Messrs B. L. Wood, N. de B. Hornibrook and the writer has led to recognition of the several horizons from which Mr K. I. Nissen collected mollusca for Finlay in 1927 or 1928, by lowering himself over the cliff by rope to a small ledge on a back-water of the Waiau River. At this point in the Clifden section, several shellbeds are exposed in the cliff, the lowest ("Nissen No. 1") containing the oldest Waiauan Foraminifera in the section. A fragmentary spire of *P. laetificus* (Fig. 4), from a silty sandstone immediately above the fourth shellbed, matches the holotype very precisely in preservation and matrix. The type horizon is thus low in the Waiauan Stage. Another topotype was collected by Dr C. R. Laws from Clifden Band 8 (AM 8033). An adult specimen, almost complete (Fig. 6), is available from the Waiauan of Alton Mill (GS 5623). A juvenile from "Clifden 7" (GS 2939) and an apex from the north bank of the Waiau River (GS 2155) show that a very similar if not identical form of *Pterynotus* ranges back into the Lillburnian and Clifdenian stages, and the spire figured by Marwick (1931) carries its upper limit into the Tongaporutuan. The following revised description is based on the above material. Shell very large, thick and solid, elongately fusiform, with three thick even varices giving a trigonal cross-section, the varices almost vertical and not spinous, but expanded into a broad projection at the periphery. Protoconch (Fig. 3) paucispiral, dome shaped, weakly deviated. Apical whorls with lamellate varices, about 6 per whorl on the second post larval whorl, three per whorl thereafter. A single stout blunt axial tubercle midway between varices, a further low axial bulging below and in front of each varix on the adult shell. Spiral sculpture of low spaced cords, prominent in young stages and persisting most conspicuously in the peripheral region, about 4 visible on spire whorls and up to 14 on body whorl, but their number difficult to count owing to abrasion of the shell surface. Aperture strongly callused and still pigmented in both adult specimens, suggesting an orange-yellow colour (as in the living *P. tripterus* (Born), Reeve, 1848, Fig. 55). External lip armed with 8 short stout tubercles. Parietal callus variable in development. Siphonal canal long, open, straight.