

**A Note on *Sigapatella terraenovae* Peile.  
A new *Montfortula*.**

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PLATES 72, 73.

THE two species here dealt with belong to two widely different families, yet both have a comparatively simple shell, and apparently similar habitat.

The *Sigapatella* appears to live below low-water mark, as so far I have seen no reference to its discovery within the tidal zone.

The *Montfortula* also probably lives well below low-water mark, and this solitary specimen was washed up among rubbish. I have collected around Lyall Bay for many years, but have never seen it alive.

I would most gratefully acknowledge my indebtedness to Lieut.-Col. A. J. Peile, and Mr. G. C. Robson for the photograph of the type tablet of *Sigapatella terraenovae*, in the British Museum Collection. Also to Miss J. K. Allan for her drawings of two other specimens of *S. terraenovae* and the drawings of the *Montfortula*.

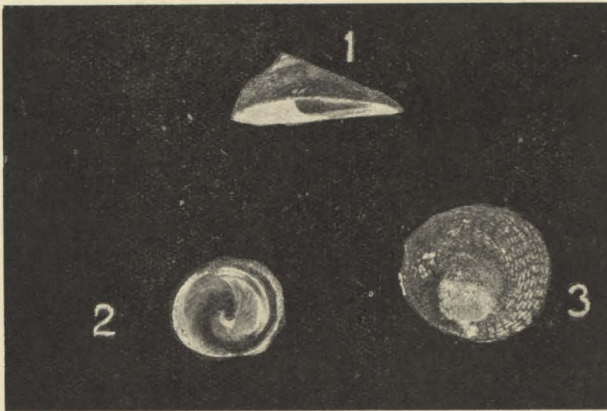
Dr. H. J. Finlay has figured a Curvier Island specimen, but the two specimens from off the Hen and Chickens Islands, 50 fathoms, that Miss Allan has drawn, were picked from those Lieut.-Col. Peile compared with the type material in the British Museum; so their identity is indubitable. These drawings had been made before I saw Dr. Finlay's paper.

***Sigapatella terraenovae* Peile. (Figs. 1-6.).**

*Proc. Mal. Soc.*, vol. 16, p. 21-22. *Trans. N.Z. Inst.*, vol. 57,  
p. 391-392. Pl. 18, Fig. 1-2, Finlay.

The type of this species was obtained by the British Antarctic (Terra Nova) Expedition, 1910, in a dredging (Station 134) near North Cape, New Zealand, in 11-20 fathoms. They got several specimens, which the late Mr. E. A. Smith determined as *Sigapatella calyptraeformis* (Lam.); but a study of the radulae of the Australian *S. calyptraeformis* in comparison with the New Zealand species convinced Lieut.-Col. A. J. Peile that he had two different species to deal with. He accordingly, in the above reference, described the New Zealand specimen, and figured the radulae.

In order to get confirmation of Dr. J. Marwick's and my own determination, I sent specimens to Lieut.-Col. Peile asking if they were correct. He confirmed our identification and I herewith give figures of two of the specimens he saw. Also, through his and Mr. Robson's kindness I am enabled to publish figures (Figs. 1-3) of the Holotype and 2 Paratypes from the British Museum Collection..



*Sigapatella terraenovae* Peile.

FIG. 1.—Holotype. FIGS. 2, 3.—Paratype. Type shells in British Museum.

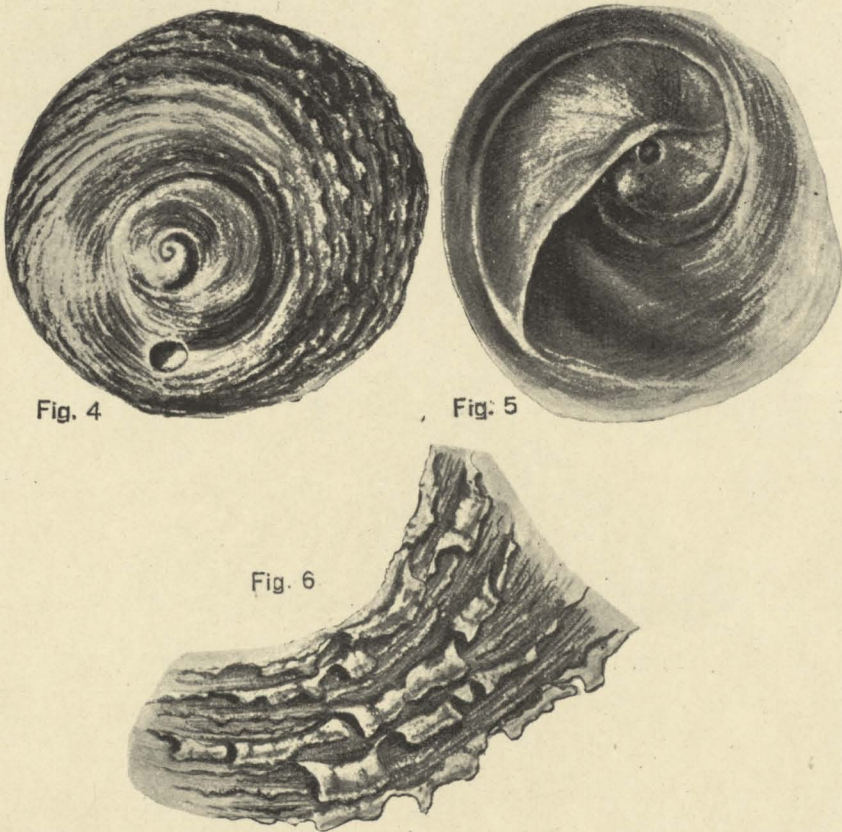


FIG. 4.—Outer surface. FIG. 5.—Inner surface. FIG. 6.—Epidermis.  
Compared with Types in Brit. Mus.

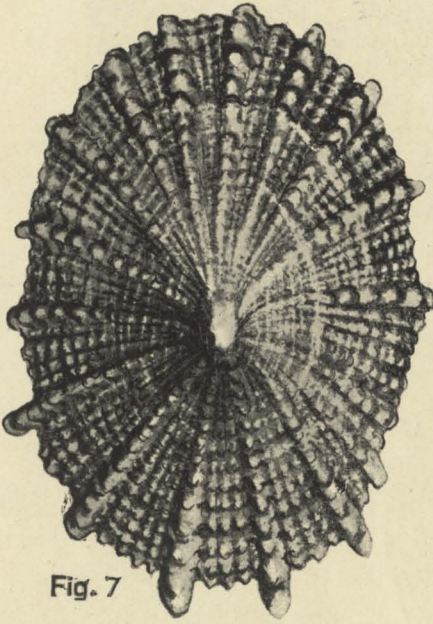


Fig. 7

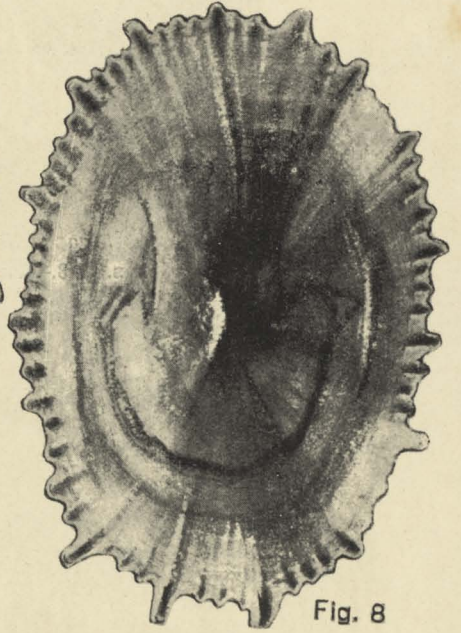


Fig. 8

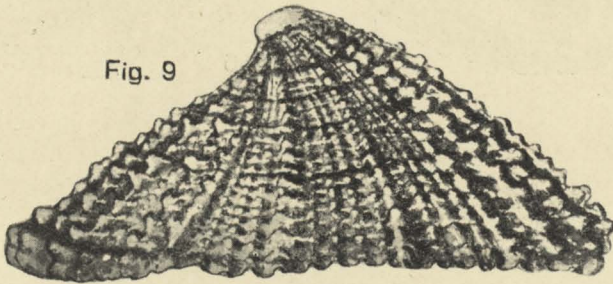


Fig. 9

FIGS. 7-9.—*Montfortula lyallensis* n. sp. Holotype.

As the *Proc. Mal. Soc.* are not readily available for New Zealand workers I append the author's description:—

“The shell is almost circular in plan; apex prominent, distant about one-third diameter from the circumference. Whorls  $4\frac{1}{2}$ ; convex, rapidly increasing, but not as rapidly as in *S. calyptraeformis*. Suture well marked. Nepionic shell sculptured with half a dozen spiral grooves, interspaces slightly pitted. Sculpture of rest of upper surface of shell consists of strong, rugose, oblique growth ridges (rather less than 1 mm. apart on the last whorl). In the interspaces are half a dozen finer, wavy growth marks. Under surface is concave; base of last whorl is convex near the axis and concave near the circumference, so as to form a gutter inside the periphery, which is fairly sharply keeled. Basal margin oblique, thin, and sharp, slightly reflexed near the axis to cover a minute umbilical chink resembling that of *calyptraeformis*, but smaller. The whorls are so coiled as to leave a free axial channel between base and apex like that found in *S. tenuis* (Gray), but not so open owing to the axis not being so central. The upper surface of the shell is white, tinged with purple on the earlier whorls, and is covered with a thin yellowish periostracum bearing scattered spine-shaped processes based on the main growth ridges, spines 1 to 2.5 mm. apart on the last whorl). The base is white, tinged with purple, with a brownish band near the periphery. Diam. maj. 26, min. 23, alt. 8.5 mm.

“The radula of *S. terraenovae* has forty-seven rows in the type specimen. The lateral tooth has a broadly triangular point, whereas in *S. calyptraeformis* (with an average number of thirty-four rows) the denticles fringing the inner and posterior edges of the lateral extend to the point.

“The shell differs from that of *calyptraeformis* in that the suture is less well marked, although the convexity of the upper surface persists to the periphery, whereas in the latter species the surface flattens towards the circumference, resulting in a sharper keeling of the last whorl. Further differences exhibited by *calyptraeformis* are as follows: The growth ridges are smoother and closer together; the periostracum is brown and much more dense, the processes springing from the growth ridges forming a continuous succession of square-ended blades; the base, though tinged with colour in young shells, is white in the adults examined.

“*S. novaezelandiae* Lesson, can always be distinguished from the other species mentioned above by the presence of a small depression, or false umbilicus, near the axis of the shell. The periostracum is dense and quite unlike that of *terraenovae*.”

### **Montfortula lyallensis** n. sp. (Figs. 7-9).

*Shell*, small, oval, left side nearly straight, right side slightly convex. *Anal rib*, just on right of centre line. *Apex*, nearly central, curved backwards, smooth, polished. *Sculpture*: Sixteen primary ribs, starting just below the apex; of these the anal and the one on its left run together and form a faintly-raised inverted V on the apex; in all the interspaces are three thread-like riblets. The three posterior ribs are the strongest and project farthest at the margin. There are about 13 concentric threads, which vary slightly in strength.

On the main ribs these form rounded upstanding nodules, and similar, but very much smaller ones are formed on the interstitial riblets, with squarish pits between them. *Colour*: White, apex, the front 4 ribs and 6th and 7th on each side grey-green, some of the nodules darker than others. When held to the light 4 dark wedge-like rays show; the laterals being darkest, and the posterior much the lightest. *Interior*, porcellanous, glossy, the mushroom-shaped muscle-scar distinctly visible; the colour is rather obscured by a whitish film, as if decaying animal matter had affected it; but through it the dark green outline and incurved scar are visible. The anal groove runs almost to the apex. The colour-bands show clearly at the margins, between them, and surrounding the muscle-scar, the shell is creamy-white. *Margin*, crenulate, denticulated by the main ribs which are more or less projecting, especially the posterior three. The annal groove forming a slight notch.

*Measurements*: Length 13 mm., width 4 mm., height 5 mm.

*Locality*: Lyall Bay, Cook Strait. I found this specimen some years ago, among drift material, washed up near the top of the beach.

Holotype, in my collection.

*Remarks*: On comparison of this new species with *Montfortula conoidea* (Reeve) from Sydney, N.S.W., the most striking difference lies in the sculpture. In *M. conoidea* the primary ribs are weaker and the interstitial riblets stronger than in *M. lyallensis*, also the margin of *M. conoidea* is evenly crenulate. The nodules on the ribs also appear to be weaker in the Australian species. Through the kindness of Prof. J. A. Bartrum I have been able to compare his *Montfortula kaawaensis* with my specimen. The fossil is much smaller, lower and smoother, than *M. lyallensis*; but the characteristic muscle-scar is the same in both. In *M. kaawaensis* the strongest ribs are anterior, while in *M. lyallensis* they are posterior.

In part 2 of this volume, p. 235, pl. 41, figs. 34-35, Dr. Finlay describes and figures *M. chathamensis*, from which *M. lyallensis* differs in sculpture, the ribs being sharper, with greater marginal projection. The shell is very much narrower in proportion to length, and with a very different profile.