A New Genus, Planulinoides, and some Species of Foraminifera from Southern Australia

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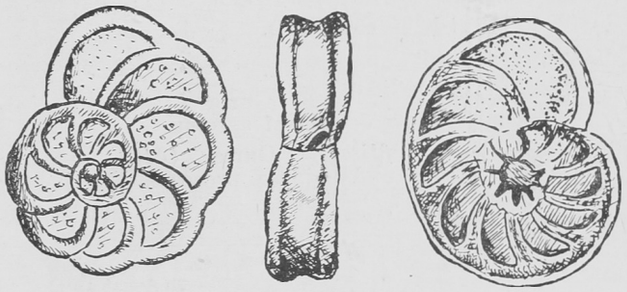
During the course of the writer's work on the fossil and Recent foraminifera of Southern Australia, it has become apparent that some revision of the nomenclature hitherto used is necessary. As part of this revision, the following notes have been prepared.

PLANULINOIDES, gen. nov.

Description.—Test calcareous, finely perforate, trochoid, with both sides concave and a grooved peripheral margin; aperture peripheral, an oblique slit at the base of the chamber a little below the median line and directed towards the ventral side.

Genotype, *Discorbina biconcava* Jones and Parker.

This genus is erected for the reception of a well-known Southern Australian species, *Discorbina biconcava* Jones and Parker, which, although originally placed in *Discorbina*, and afterwards removed by the present writer to *Planulina*, represents a new generic type. It appears to be more closely related to *Discorbis*, particularly the flattened forms of the *D. disparilis* (Heron-Allen and Earland) group, than to any other genus, but the aperture is peripheral instead of being situated on the under surface as in *Discorbis*. The shell wall is finely perforate on both sides of the test and is therefore unlike that of *Planulina*, from which the present form also differs in the shape and position of the aperture.



TEXT FIG.—*Planulinoides biconcavus* (Jones and Parker).

P. biconcavus was first figured in Carpenter's "Introduction to the Study of the Foraminifera" (1862, text-fig. XXXII. G), but the aperture is not correctly drawn. The figured specimen, for the identification of which Jones and Parker were responsible, was from the southern coast of Australia. The species is common in shallow water on the coasts of Victoria and South Australia and occurs as a fossil in the Kalimnan and in the Cheltenhamian of Victoria. The genus is not known to occur elsewhere.

STREBLUS PAUPERATUS, sp. nov.

Rotalia perlucida Parr (*non* Heron-Allen and Earland), 1932, Proc. Roy. Soc. Vic., vol. 44 (N.S.), pt. 2, p. 231, pl. 22, figs. 35 *a-c*.

This species was previously recorded by the present writer as *Rotalia perlucida* Heron-Allen and Earland, which was described from the west coast of Ireland. The Australian specimens were from shore sand, Hardwicke Bay, South Australia. It is now considered that the Irish and the Australian specimens represent two quite distinct forms, with the local form distinguished by its flatter dorsal side, less inflated chambers, closed umbilical area and limbate suture lines on the ventral surface. It can best be described as a weak, although distinct, modification of the widely distributed *Streblus beccarii* (Linné). The holotype is the specimen figured from Hardwicke Bay. The species attains a diameter of 1 mm.

QUINQUELOCULINA PSEUDORETICULATA, sp. nov.

Miliolina reticulata Brady (*non Triloculina reticulata* d'Orbigny 1826), 1884, Rept. Voy. *Challenger*, Zool., vol. ix., p. 177, pl. 9, figs. 2, 3 (*non* fig. 4)).

This name is proposed for the species represented by figs. 2 and 3 of plate 9 of the *Challenger* report, which, except that the surface is reticulate, do not resemble Soldani's two figures on which d'Orbigny's *Triloculina reticulata* was based. Soldani's figures are reproduced by Parker, Jones, and Brady in Ann. Mag. Nat. Hist., ser. 4, vol. 8, p. 249, pl. viii., fig. 18, and show a species with bordered margins, closely related to the West Indian *T. carinata* d'Orbigny. Brady's specimens have rounded and not angulate margins and represent a species of the *Quinqueloculina vulgaris* d'Orb. group. They were from *Challenger* Station 188, south of New Guinea, 28 fms. This is a common tropical and sub-tropical form in Australian waters, also occurring in the Great Australian Bight, near Eucla, and in the Great Barrier Reef Committee's boring into Michaelmas Reef, near Cairns, Queensland. The specimen represented by Brady's fig. 3 is selected as the holotype of *Q. pseudoreticulata*.

TRILOCULINA STRIATOTRIGONULA Parker and Jones.

Triloculina striato-trigonula Parker and Jones, 1865, Phil. Trans. Roy. Soc., vol. 155, p. 438 (*nomen nudum*).

Miliolina insignis Brady, 1884, Rept. Voy. *Challenger*, Zool., vol. ix., pl. 4, fig. 10 (*non* fig. 8). Parr, 1932, Proc. Roy. Soc. Vic., vol. 44 (N.S.), pt. 1, p. 11, pl. 1, fig. 19.

The writer has already remarked (*loc cit.*) that Brady's figures of his species *Miliolina insignis* seem to represent two species. Fig. 10 is of a specimen from *Challenger* Station 162, off East Moncoeur Island, Bass Strait, 38-40 fms. The specimen represented by fig. 8 was from *Challenger* Station 24, off Culebra Island, in the West Indies, 390 fms. Through the kindness of Mr. Frederick Chapman, some of the original material from *Challenger* Station 24 has been made available and this has provided sufficient examples of the form represented by Brady's fig. 8 to show that it is not the same as the Australian form. As Brady did not designate a holotype, the specimen first figured by him as *M. insignis*, viz., fig. 8 is here selected as the holotype. This leaves fig. 10 to be named. There can be no doubt that it is the same form as that "from coast sand, near Melbourne," to which Parker and Jones, in 1865, gave the name of *Triloculina striato-trigonula*, nov., although it was neither described in detail (the name is, however, sufficiently descriptive) nor figured. In view of the fact that there is no other Australian species which could be described as a striate form of *Triloculina trigonula*, the name used by Parker and Jones is accepted as valid and is accordingly available for Brady's fig. 10.

T. striatotrigonula is a common species in shallow water on the south coast of Australia and occurs as a fossil in the Lower Pliocene (Kalimnan) of Muddy Creek, Victoria.