

Trochammina proteus, Karrer (Pl. XL. figs. 1-3).

Trochammina proteus (pars), Karrer, 1866, Sitzungs. d. k. Ak. Wiss. Wien, p. 494, pl. i. fig. 8.

Test free, spiral, subdiscoidal; consisting of a tube of somewhat irregular diameter, and more or less distinctly segmented, coiled on itself, the successive convolutions being nearly in the same plane. Aperture large, terminal, with thickened border. Diameter, $\frac{1}{20}$ th inch (1.25 mm.).

Under the general name *Trochammina proteus*, Dr. Karrer has figured a large and interesting series of fossil *Trochammininæ*, from the Older Vienna Sandstones.¹ That the specimens which form the subject of his illustrations are all varieties of a single type, will not be questioned by anyone who has had the opportunity of examining similar series, whether recent or fossil, but several of the forms had previously received varietal names from Parker and Jones; for example,—figs. 1, 2, 3 (*loc. cit.*), may be referred to *Trochammina* (*Ammodiscus*) *gordialis*; fig. 4 to *Trochammina* (*Ammodiscus*) *charoides*; and fig. 6 to *Trochammina squamata*. Fig. 8, however, of the same plate, does not accord in minor characters with any of the forms enumerated, but represents a discoidal, planospiral, distinctly-segmented test; and I propose to retain Karrer's name in a restricted sense, associating it with these particular features.

In the living condition such specimens are very rare, nevertheless the Challenger collections furnish examples from four localities, namely:—off Culebra Island, West Indies, 390 fathoms; east coast of South America, off Pernambuco, 675 fathoms; South Pacific, Low Archipelago, 2350 fathoms, and off Sydney, 410 fathoms.

The fossil specimens already mentioned are from beds of Early Tertiary age in the Vienna Basin; and Hæusler gives a figure of the same variety from the Jurassic formation of Canton Aargau, Switzerland.²

Trochammina conglobata, n. sp. (Pl. XL. figs. 8, 9).

Test convoluted, subglobular; composed of an irregularly segmented tube, coiled upon itself in a constantly changing plane. Segments inflated, varying in size and contour. Aperture terminal, arched; with thickened or everted margin. Surface smooth; colour pale brown. Diameter about $\frac{1}{20}$ th inch (1.25 mm.).

Little need be added to the foregoing description. The species is closely allied to *Trochammina coronata*, with which it is also associated in distribution; the chambers are of similar size and shape, but in *Trochammina conglobata* they are irregularly combined, so as to form a rounded mass, instead of being coiled on one plane.

¹ Ueber das Auftreten von Foraminiferen in den älteren Schichten des Wiener Sandsteins. *Sitzungs. d. k. Ak. Wiss. Wien*, 1866, vol. lii., pl. i. figs. 1-8.

² *Ann. and Mag. Nat. Hist.*, 1882, ser. 5, vol. x., pl. iii. fig. 41.