

Planispirina sigmoidea, n. sp. (Pl. II. figs. 1-3; Woodcut, fig. 5, c.).

Test free, oblong, with slightly projecting or pointed ends, the two faces unequally convex, peripheral edge thin, and slightly rounded: composed of numerous segments, two to each convolution, arranged on the Milioline plan, the aperture alternately at either end of the shell. Segments seldom exceeding twelve in number, arched longitudinally, and set on at the outer margin of the alternate sides—the inner margin of the wall of each segment spreading over one lateral surface of the test, whilst the lateral extension of its successor in its turn covers the opposite side. Aperture a curved transverse orifice in the prominence at the anterior end of the shell. Length, $\frac{1}{30}$ th inch (0·85 mm.).

A glance at the figures, and especially at the woodcut (fig. 5, c.), which represents the transverse section of the shell, will explain more accurately than any verbal description the peculiarities of structure exhibited by this somewhat anomalous form. Previous to the publication of Dr. Steinmann's paper, already referred to, the Challenger specimens had been placed amongst the *Biloculinae*, next to *Biloculina contraria*, the accepted type of the present genus. From the last-named species *Planispirina sigmoidea* differs, *inter alia*, in two important particulars, namely, the invariably Milioline arrangement of the chambers, two in each convolution, and their oblique setting attended by the production of only a single alar flap to each segment. *Planispirina contraria*, on the other hand, as already stated, may have five or six segments in its later convolutions, and they are arranged symmetrically on one plane, whilst the alar flaps are developed equally on the two sides. The trivial name "*sigmoidea*" was suggested by the curve of the line of chambers, as seen in the transverse section of the shell.

Planispirina sigmoidea is by no means a common species, and the record of its distribution is confined to five Challenger Stations, three of which are in the North Atlantic, and two in the South Atlantic, as follows:—off Sombrero Island, West Indies, 450 fathoms; off Culebra Island, West Indies, 390 fathoms; off the Azores, 900 fathoms; and at two points on the coast of South America not far from Pernambuco, 675 fathoms and 360 fathoms respectively. The bathymetrical range appears from these to be from about 300 to 900 fathoms.

Planispirina celata, Costa, sp. (Pl. VIII. figs. 1-4).

Spiroloculina celata, Costa, 1855, Mem. Accad. Napoli, vol. ii. p. 126, pl. i. fig. 14;—1856, Atti dell' Accad. Pont., vol. vii., pl. xxvi. fig. 5.

Quinqueloculina asperula, Seguenza, 1862, Atti dell' Accad. Gioenia Sci. Nat., vol. xviii., ser. 2, p. 118, pl. ii. figs. 6, 6 a. b.

„ *asperula* and *rugosa*, Schwager, 1866, Novara-Exped., Geol. Theil, vol. ii. pp. 203, 266, pl. iv. fig. 16, a. c.

Spiroloculina celata, Brady, 1877, Geol. Mag., dec. II., vol. iv. p. 534.

This is an exceedingly interesting species, and one which, notwithstanding its abundance in many localities, seems either to have been overlooked, or what is more probable,