

aspects. They represent transverse sections of *Planispirina contraria*, *Planispirina exigua*, and *Planispirina sigmoidea* respectively, accurately drawn by Mr. Hollick from specimens. Fig. *b.* is magnified to double the scale of the others, and shows that even the minute varieties have the same laminated shell as their larger congeners. In one of the lithographed figures of *Planispirina communis* (Pl. CXIV. fig. 5), the abraded surface of the specimen demonstrates, even more strikingly than a transparent section, the thickening of the shell by successive layers.

*Planispirina contraria*, d'Orbigny, sp. (Pl. XI. figs. 10, 11 ; Woodcut, fig. 5, *a.*).

" Nautilus " (pars), Soldani, 1780, Saggio Oritt., p. 100, pl. ii. fig. 14, *S.*

*Biloculina contraria*, d'Orbigny, 1846, For. Foss. Vien., p. 266, pl. xvi. figs. 4-6.

" " Brady, 1864, Trans. Linn. Soc. Lond., vol. xxiv. p. 466, pl. xlvi. fig. 2.

" " Reuss, 1867, Sitzungsber. d. k. Ak. Wiss. Wien, vol. lv. p. 70, pl. i. fig. 10.

*Nummuloculina contraria*, Steinmann, 1881, Neues Jahrb. für. Min., &c., N. S., vol. i. p. 34, pl. ii.

*Hauerina borealis*, Brady, 1881, Quart. Journ. Micr. Sci., vol. xxi., N. S., p. 46.

This species, the external features of which are well known from d'Orbigny's description and drawings, may be accepted as the type of the genus. It has a stout discoidal planospiral shell, with thick rounded margin. The test is composed of six or seven convolutions, the number of segments increasing from two, in the early Milioline whorls, to five or six in the peripheral circuit; the chambers are equitant, their umbilical margins spreading in Nummuline fashion over the two lateral faces of the test (Woodcut, fig. 5, *a.*). The aperture is arched or dome-shaped, formed by the slightly constricted end of the terminal segment; either open or partially closed by a shelly tongue projecting from the margin of the previous convolution.

Between *Planispirina contraria* and the true *Biloculina* every degree of modification exists, *Biloculina irregularis*, d'Orbigny (Pl. I. figs. 17, 18), being one of many intermediate varieties.

*Planispirina contraria* is very widely distributed, but it does not seem to be abundant in the recent condition in any one locality. On our own shores it has been dredged off Shetland, in the Farøe Channel, among the Hebrides, and off the south-west of Ireland, at depths of from 40 to 100 fathoms. It occurs at three of the Challenger Stations in the North Atlantic at 1000, 1125, and 1675 fathoms respectively, and at three in the Pacific, namely, north of Papua 1075 fathoms, off Amboyna, 1425 fathoms, and off Valparaiso (?) 2160 fathoms.

Its geological range does not appear to extend beyond the middle of the Tertiary epoch. It is found in the Miocene beds of the Vienna Basin (d'Orbigny), of Wieliczka (Reuss), and of Kostej (Karrer); and in the Pliocene of Coroncina (Soldani), and of Fossetta (Steinmann).