## Biloculina, d'Orbigny.

Miliolites, pars, Lamarck [1804].

Lagenula, pars, Fleming [1822].

Miliola, pars, Defrance [1824], Blainville.

Pyrgo, Defrance [1824], Blainville.

Biloculina, d'Orbigny [1826], Reuss, Bornemann, Costa, Parker and Jones, Williamson, Terquem, Karrer, Carpenter, Seguenza, Brady, Schwager, Schulze, &c.

Renoidea, Brown [1827].

Nummulina, Macgillivray [1843], Thorpe.

The genus Biloculina requires no minute description. It may be said to comprise just those Milioline Foraminifera which have only two chambers visible externally, each successive segment entirely embracing the previous ones on the same side; and although the Biloculine form of shell merges by insensible degrees through such varieties as Biloculina tubulosa, Costa, Biloculina lucernula, Schwager, Triloculina cuneata, Karrer (the Biloculine form of which is shown in Pl. I. figs. 19, 20), and others, into the Triloculine condition, the typical arrangement of the segments is less liable to variation than that of the allied groups of Miliolæ.

The geographical distribution of the genus is world-wide, and its bathymetrical range includes every depth from the rock-pools of the littoral zone down to 3000 fathoms.

Perhaps the most noteworthy fact in connection with the occurrence of the Biloculine type is that brought into notice by Prof. G. O. Sars, of Christiania, in his official report on the Norwegian sea-fisheries for the year 1876,1 in which he gives a short account of the biological conditions of the "deep-water cold area" of the northern part of the North Atlantic. The area so designated occupies a considerable portion of the region between Norway, Bear Island, and Spitzbergen on one side, and the Faröe Islands, Iceland, and Greenland on the other. It has a tolerably uniform bottom temperature of from 0° to 1°.6 C. (32° to 34°.9 Fahr.), and the depth ranges from 300 to 2000 fathoms. The sea-bed, especially of the deeper portions of the area, consists of a soft, light-coloured, sticky mud, of which the most important organic constituent is the porcellanous foraminifer, Biloculina ringens. This deposit has been named "Biloculina clay," but the term is not to be understood in quite the same sense as that in which the words "Globigerina ooze" or "Radiolarian ooze" are employed; for although of the microzoa present, by far the most conspicuous are Biloculinæ, the entire number of specimens of that genus is stated not to amount to more than two per cubic centimetre.2 Nevertheless, the deposit has certain well-marked peculiarities, and the following results of the

<sup>&</sup>lt;sup>1</sup> Indberetninger til Departementet for det Indre fra Professor Dr. G. O. Sars om de af ham i Aarene, 1864–1878, anstillede Undersøgelser angaaende Saltwandsfiskerierne. Christiania, 1879.

<sup>&</sup>lt;sup>2</sup> Vide Schmelk, on Oceanic Deposits, Norwegian North Atlantic Expedition, 1876-1878, pt. ix., Chemistry, p. 49 et seq.