

In 1882 Bütschli still further increased the number of known Radiolaria from Barbados both by figures and descriptions (L. N. 40), and gave in particular a very accurate morphological analysis of 12 new NASSELLARIA (3 Stephoidea, 3 Spyroidea, and 6 Cyrtoidea; L. N. 40 Taf. xxxii., xxxiii.). The number of the fossil species collected in the Barbados marl is, however, greater than would appear from the above-quoted communications. My respected friend, Dr. R. Teuscher, of Jena, has, at my request, made a large number (about a thousand) of very accurate drawings with the camera lucida of Polycystina from Barbados (see p. 1760). From these it appears that the variations in the structure of the shells, with respect to number, size, and form of the lattice-pores, of the spines, &c., is much greater than would be supposed from the figures of Ehrenberg and Bury. I have thus come to the conviction that the number of species from Barbados (using the word "species" in the sense understood by those authors) is not less than 400 and probably more than 500. Descriptions of some particularly interesting new species from this series have been included in the systematic account of the Challenger Radiolaria. A complete critical investigation of the Radiolaria of Barbados, and especially an accurate comparison of these Cainozoic species with the Mesozoic forms from the Jura, on the one hand, and with recent types on the other, must be left to the future for its accomplishment (see § 246).

B. The Cainozoic Polycystine tripoli or marl of the Mediterranean coast, which is probably always of Miocene origin, forms very extensive mountain ranges both in the south of Europe (Sicily, Calabria, Greece) and in the north of Africa (from Oran to Tripoli) (§ 246). Hitherto, however, only one locality has been thoroughly investigated, namely, Grotte in the province of Girgenti in Sicily (L. N. 35). In the accurate account which was given of it by Stöhr in 1880, 118 species were described, distributed in 40 genera (L. N. 35; pp. 72-84); of these 118 species 78 are quite new, 25 are identical with previously known fossils, and 29 identical with living forms. Among them are 73 SPUMELLARIA (28 Sphæroidea, 8 Prunoidea, and 37 Discoidea), but only 40 NASSELLARIA (1 Stephoidea, 6 Spyroidea, and 33 Cyrtoidea), and 5 PHÆODARIA (Dictyochida). The other parts of Sicily from which the same upper Miocene tripoli has been investigated (belonging to the Tortona stage) have proved less rich than Grotte. The best known of these places is Caltanissetta, since upon three genera discovered here (*Haliomma*, *Cornutella*, *Lithocampe*) the group Polycystina was founded by Ehrenberg in 1838 (see L. N. 16, p. 3). Afterwards 31 species were described from this locality, of which 23 were again found in Grotte. The richest deposit on the Mediterranean coast, however, appears to be at Oran. A small specimen of the Kieselguhr found there, which was recently sent to me by Professor Steinman, proved to be pure Radiolarian ooze, very similar to that now found in the Central Pacific, and contained many hitherto undescribed species; it is deserving of careful investigation and comparison.

C. Regarding the Tertiary Radiolarian clay of the Nicobar Islands, see § 247 and L. N. 25, pp. 116-120. Its fauna is incompletely known; probably it is of Miocene or Oligocene origin.

D. Cainozoic tripoli, containing larger or smaller quantities of Radiolaria, appears to be rather widely distributed in America. Ehrenberg has described such from South America (polishing-slate from Morro di Mijellones, on the coast between Chili and Bolivia), and from North America (Richmond and Petersburg in Virginia, Piscataway in Maryland). Similar deposits are also found in the Bermuda Islands (L. N. 4, 1855-56; L. N. 6, Taf. 18; L. N. 16, pp. 3-9; L. N. 41, pp. 475-478, and L. N. 25, pp. 2-6).