

are related to those forms which are found in the recent Radiolarian ooze of the depths of the Pacific, especially to the species which are characteristic of the Challenger Stations 225, 226, 265 and 268. Many living genera and families (*e.g.*, most *Larcoidea* and *Stephoidea*) have not yet been found in the Tertiary formations.

A. The famous Polycystine marl of Barbados in the Antilles, which Robert Schomburgk discovered forty years ago, belongs to the Miocene formation, and is the richest and best known of all the important Radiolarian deposits (see L. N. 16, pp. 5-8). After Ehrenberg had published in December 1846 the first preliminary communication regarding its composition out of masses of well-preserved Polycystina, he was able in the following year to describe no less than 282 species from it; he distributed these in 44 genera and 7 families (L. N. 4, 1847, p. 54). In the year 1854 Ehrenberg published figures of 33 species in his *Mikrogeologie* (L. N. 6, Taf. xxxvi.); but it was only in 1873 that he published descriptions of 265 species (*Monatsber. d. k. preuss. Akad. d. Wiss. Berlin*, Jan. 30, pp. 213-263). Finally there followed in 1875 his *Fortsetzung der Mikrogeologischen Studien, mit specieller Rücksicht auf den Polycystinen-Mergel von Barbados* (L. N. 25). On the thirty plates which accompany this the last work of Ehrenberg, 282 species are figured and named, of which 54 are *SPUMELLARIA* (13 *Sphæroidea*, 8 *Prunoidea*, 33 *Discoidea*), and 228 *NASSELLARIA* (2 *Stephoidea*, 38 *Spyroidea*, and 188 *Cyrtoidea*). The fourth section of this memoir contains a survey of the Polycystine formation of Barbados (pp. 106-115), and the fifth section the special description of a large specimen of rock from Mount Hillaby in Barbados (see also L. N. 28, p. 117, and L. N. 41, pp. 476-478). The account given by Ehrenberg of the Polycystina of Barbados is in many respects very incomplete, and very far from exhausting this rich mine of remarkable forms. This may be readily seen from the twenty-five plates of figures of Polycystins in the Barbados Chalk Deposit published by Bury in 1862 (L. N. 17). The number of species here figured (140 to 142) is about half of those given by Ehrenberg; and there are among them numerous generic types, some of great interest, which were entirely overlooked by the latter; *e.g.* *Saturnalis* (*Sphæroidea*), *Cannartidium* (*Prunoidea*), *Tympanidium* (*Stephoidea*), *Cinclopyramis* (*Cyrtoidea*), &c. Finally, Ehrenberg always (until 1875) ignored Bury's atlas, which had been published thirteen years ago and was quite accessible to him. How different were the contents of the two works may easily be seen from the following abstract.

*Comparative View of the Species of Fossil Radiolaria from Barbados made known by the figures of Bury in 1862 and of Ehrenberg in 1875.*

Legion.	Order.	Bury.	Ehrenberg.	Total.
I. Legion SPUMELLARIA (PERIPYLEA).	1. Sphæroidea	16	13	29
	2. Prunoidea	10	8	18
	3. Discoidea	37	33	70
II. Legion NASSELLARIA (MONOPYLEA).	4. Stephoidea	5	2	7
	5. Spyroidea	13	38	51
	6. Cyrtoidea	60	188	248
	Total,	141	282	423