

Grotte in Sicily (L. N. 35) that its Radiolarian fauna is much richer than Ehrenberg supposed. The same is the case in the Tripoli of Caltanissetta, and also in the Baden marl of the Vienna basin. The richest deposit appears to be the pure Kieselguhr-like Tripoli from Oran; a small specimen, which was recently sent to me by Professor Steinmann of Freiburg, i. B., contained many hitherto undescribed species, and was at least as rich as the purest Barbados marl.

247. *Radiolarian Clays*.—Among the Radiolarian or Polycystine clays we include the firm, often plastic, formations, which contain a larger proportion of Radiolaria than of other organic remains. The first of these to be mentioned is the Cainozoic formation of the Nicobar Islands in Further India, which rises to a height of 2000 feet above the level of the sea, and consists for the most part of coloured masses of clay of varying constitution; on Car Nicobar these are mostly grey or reddish, on the Island of Camorta they are partly strongly ferruginous and red and yellow (*e.g.* at Frederickshaven), partly white and light, like meerschaum (*e.g.* at Mongkata). The latter varieties appear to pass over into pure loose Polycystine marl like that of Barbados, the former into calcareous sandstone. Although the Polycystine clays of the Nicobar Islands are as yet only very incompletely known, it may be concluded with great probability that they are true deep-sea formations and nearly allied to those recent forms of red clay, which by their abundance in Radiolaria most nearly approach the Radiolarian ooze, such for example as the red clay of the North Pacific between Japan and the Sandwich Islands (Stations 241 to 245, compare §§ 229 and 239). With this view agrees also the greater or less quantity of pumice dust and other volcanic products. Probably Radiolarian clays like those of the Nicobar Islands occur also in other Tertiary rocks; part of the Barbados marl passes by gradually increasing content of clay into such; and in this case also the amount of included pumice is often considerable. Many mixed Radiolarian marls of the Mediterranean (*e.g.*, of Greece and Oran) also appear to pass over at certain points into Radiolarian clay.

The Radiolarian clays of the Nicobar Islands are unfortunately very incompletely known both as regards their geological nature and their palæontological composition. The communications of Rink (*Die Nikobaren-Inseln, eine geographische Skizze, Kopenhagen, 1847*) and of Ehrenberg (L. N. 6, p. 160 and L. N. 25, pp. 116 to 120) leave many important questions unanswered. The latter has only figured twenty-three species in his *Mikrogeologie* (L. N. 6, Taf. xxxvi.). In his tabular list of names (L. N. 25, p. 120) he only incompletely records thirty-nine species, although in 1850, immediately after the first examination of the Nicobar clay, he had distinguished "more than a hundred species, partly new, partly identical with those of Barbados" (L. N. 16, p. 8). I have unfortunately been unable in spite of many efforts, to obtain for investigation a specimen of Nicobar clay. The only microscopical preparation (from Ehrenberg's collection), which I was able to examine, contained several hitherto undescribed species. A thorough systematic examination of these important Radiolarian clays is a pressing necessity, especially as they seem to be markedly different from those of the Mediterranean (from Ægina, Zante, &c.).