

of silex contained in the sea-water. After death, the skeletons of the Radiolaria sink to the bottom of the ocean, where they accumulate as an abundant component of the mud.

In the island of Barbadoes, extensive rock strata of the Tertiary period, 1100 feet in thickness, consisting of marls, tripoli, and ferruginous sandstones, are largely composed of the siliceous skeletons of Radiolaria. Material from these strata called 'Barbadoes earth' is well known to microscopists, and is highly prized for the perfection and beauty of the forms it supplies. Likewise, in the Nicobar Islands, of the Indian Archipelago, the solid nucleus of the islands, consisting of clays, marls and arenaceous marls of Tertiary age, 2000 feet in thickness, is largely composed of the remains of Radiolaria.

According to Haeckel, the soft body of the Radiolaria is more highly organized than that of the Foraminifera and Heliozoa. It contains a central capsule of firm membrane enclosing masses of minute cells. The exterior protoplasm commonly contains numerous yellow cells enclosing starch-grains, and in some forms also large vacuoles, and from it emanate in all directions countless pseudopodal rays.

Most Radiolaria possess a highly complex skeleton composed of silex, exhibiting in different kinds a wonderful variety of the strangest and most elegant forms. Sometimes it consists of a simple trellised ball, sometimes a series of several such balls enclosed concentrically in one another, and connected together by radial bars. Generally delicate spines, often branching, radiate from the surface of the balls. In other instances, the skeleton consists of a star mostly composed of twenty spines, arranged in definite order and united in a common centre. In some Radiolaria, the skeleton is a delicate, many-chambered shell, as in the Foraminifera. Indeed, says Prof. Haeckel, no other group of organisms develop in the construction of their skeleton such a variety of fundamental forms, with such geometrical regularity, and such elegant architecture.

The **Foraminifera** (*foramen*, an aperture; *fero*, to bear) constitute by far the most important order of the Rhizopods, especially from the vast quantities in which they have existed in all times from the earliest known appearance of life on earth until now, and from the enormous extent in which their remains have contributed to the formation of rocks. They are marine shell-bearing animals, mostly living at the bottom of oceans and