

forated spot at one end of the longitudinal axis. The nucleus divides only at a late stage into numerous small spore-nuclei. The variously shaped skeletons consist mostly of a bell-shaped or conical perforated case, as in the *Cyrtellaria* (figs. 93, 94, 96). More rarely it consists only of a ring, or of a triradiate frame or a loose network of siliceous rods, as in the *Plectellaria* (see fig. 95). The principal division of this order is constituted by the family *Cyrtida*, in which the perforated shell is elongated in the direction of the principal axis, and is separated by one, two, or more constrictions into two, three, or more segments (see figs. 93, 94, 96).

“The *Phæodaria* have, like the foregoing group, only one primary opening for the protrusion of the pseudopodia, but there are usually, in addition, two (rarely, however, more) accessory openings. Around the primary opening, and outside the capsule, there is always a large mass of blackish or greenish-brown pigment, the ‘*Phæodium*.’ By means of this and of the double membrane of the central capsule, these are distinguished from all other *Radiolaria*. They are also, for the most part, much larger, and their flinty skeleton usually consists of hollow tubes. Up to the year 1872 only three genera of *Phæodaria* were known, namely, those described in 1862 by Professor Haeckel, under the designations *Aulacantha*, *Aulosphæra*, and *Cælodendrum*. During the Challenger Expedition, however, a great number of new genera and species were discovered, many with very curious siliceous skeletons, these being, for the most part, inhabitants of the deep sea. The most remarkable of these are, perhaps, the *Challengerida*, several forms of which were briefly described and figured by Mr. Murray in 1876;<sup>1</sup> a number of species of two genera (*Challengeria* and *Tuscarora*) are shown in Pl. A. The unicellular, egg-shaped case has a peculiar structure, resembling that of the *Diatomaceæ* (Pl. A. figs. 1–7), and is, in most cases, armed about the mouth with spines and hollow tubes (Pl. A. figs. 1–12).

“The majority of the *Radiolaria* are found near the surface of the open ocean, where they frequently appear crowded together in large numbers. Many species are, however,



FIG. 96.—*Clathrocanium reginæ*, n. sp.

<sup>1</sup> *Proc. Roy. Soc.*, vol. xxiv. p. 535, 1876.