

usually irregularly ovate or triangular; their outer aperture is armed with spines or bristles, which are commonly larger than in the other parts of the apophyses.

The mouth of the shell varies in form, according to the number and arrangement of the teeth on its corners. It is therefore a narrow transverse fissure, with two broad opposite lips and two corners, in the bidental forms (Pl. 100, figs. 5, 7), triangular in the tridental species (figs. 1-4), quadrangular or square in the quadridental species, *Tuscarora belknapii* (Narr. Chall. Exp., *loc. cit.*, pl. A, fig. 15). The singular genus *Tuscaridium* (fig. 8) exhibits four teeth, which are nearly horizontally divergent in two pairs, a dorsal and a ventral pair (corresponding in position to the four feet of *Tuscarusa*, fig. 7); the mouth is here prolonged into a cylindrical, spinulate proboscis, which is curved towards the ventral face of the shell (fig. 8).

The *central capsule* of the Tuscarorida is kidney-shaped or spheroidal, scarcely half as large as the dark olive-green phæodium, which surrounds its anterior (oral) face. Usually the capsule and the phæodium together fill up the aboral half of the shell-cavity, and are separated from its walls by the calymma. The latter is pierced by numerous branched and reticulately anastomosing pseudopodia, which arise from the matrix enveloping the capsule, and pass over into a thin layer of sarcode, adjacent to the inner surface of the shell. The astropyle or the main-opening of the central capsule exhibits the usual radiate operculum and tubular proboscis of the PHÆODARIA (Pl. 115, fig. 3), and is directed towards the mouth of the shell. The number of the parapylæ or accessory openings seems to be variable in this family, and to correspond to the number of radial feet which arise from the shell. Therefore *Tuscaridium* possesses only one parapyle, which is diametrically opposite to the mouth, lies on the aboral pole of the capsule, and is directed towards the single caudal tube. *Tuscarora* seems to have three parapylæ, corresponding to the three radial feet, and *Tuscarusa* probably has four parapylæ, directed towards its four radial feet; in the latter genus, however, the capsule was not observed (the shell being empty); and in the other Tuscarorida this important and difficult anatomical question must be solved by further accurate examinations.

The nucleus is nearly half as large as the central capsule, ellipsoidal, and contains numerous nucleoli. In one specimen of *Tuscarora belknapii* I observed two nuclei in the central capsule, and in another specimen of the same species John Murray observed two central capsules (figured by him in the Narr. Chall. Exp., vol. i. pl. A, fig. 15).

#### *Synopsis of the Genera of Tuscarorida.*

Three equidistant aboral radial feet, . . . . .	717. <i>Tuscarora</i> .
Four equidistant aboral radial feet, . . . . .	718. <i>Tuscarusa</i> .
One single aboral foot or terminal spine, . . . . .	719. <i>Tuscaridium</i> .