

these tracts, on the outer aspect of which run the longitudinal myophane fibrillæ of the podoconus (compare §§ 79 and 99).

The porous area of the MONOPYLEA was first described by Hertwig in 1879, and shown to be the characteristic main-opening of the central capsule in various families belonging to this legion (L. N. 33, pp. 71, 73, 83, 106, Taf. vii., viii.). According to his view "the capsule-membrane in the porous area becomes thickened around each pore into a rod, perforated by a canal," and the intracapsular protoplasm passes outwards through these fine canals (*loc. cit.*, p. 106). I am not able to share this interpretation, but think rather that I have convinced myself by the examination of some living NASSELLARIA, and of many well-stained and preserved preparations in the Challenger collection, that the rods are *solid*, specially modified portions of the capsular wall, and that the protoplasm does not pass through them but through pores which lie between them.

60. *The Capsule-Openings of the Cannopylea (or Phæodaria).*—The capsule-membrane of the CANNOPYLEA always possesses only a single large main-opening or osculum, which lies at the basal pole of the vertical main axis, and is closed by a circular radiated lid (operculum radiatum). This operculum appears, when seen from the surface, as a sharply defined stellate area (astropyle), from the middle of which arises a shorter or longer cylindrical tube, the proboscis. Hence the PHÆODARIA, like the MONOPYLEA, belong to the "Merotrypasta" or "Osculosa"; the structure and significance of the circular operculum, which closes the main-opening (osculum), are, however, quite different in the two legions. Whilst the operculum of the MONOPYLEA (porochora) is perforated by numerous fine vertical pores, and connected with the peculiar internal pseudopodial cone (podoconus), this structure is entirely wanting in the CANNOPYLEA, and instead of it there is a solid operculum, with radial ribs which originate at the base of its central tubular mouth; this tube (proboscis) is cylindrical, often conical at the base, of very variable length and with a round aperture at either end. In spite of the great difference which the various families of CANNOPYLEA exhibit in the formation of their skeleton and its appendages, the constitution of this characteristic stellate main-opening (astropyle) is always essentially the same; both the stellate operculum itself, and the proboscis which rises from its centre, show only slight differences in the various groups. In addition to this large main-opening most PHÆODARIA possess several small accessory openings (parapylæ); and usually two of these are present, placed symmetrically right and left of the aboral pole of the main axis and in the frontal plane (Pl. 101, figs. 2, 6, 10; Pl. 104, figs. 1, 2a). Sometimes there are more numerous accessory openings (three to six or more) regularly arranged, as in the two peculiar families, Circoporida and Tuscarorida; occasionally also there is only a single parapyle, at the aboral pole of the main axis (*e.g.*, in *Tuscaridium*). The parapylæ seem to be quite absent in the families Challengerida, Medusettida, Castanellida, and perhaps also in other PHÆODARIA. The form and structure of the small accessory openings appear to be always the same. The