distinguish the large pores of the ventral plate as facial pores (upper orbital, middle nasal, and lower maxillary pores), and the opposite large pores of the dorsal plate as occipital pores (upper epoccipital, middle mesoccipital, and lower suboccipital pores). A closer comparison of these pores, and of the separating bars in the numerous Spyroidea, may show a regularity of development similar to that offered by the homologies of the parts in the skeleton of the Echinodermata, or of the bones in the skull of the Vertebrata.

The two convex lateral plates of the cephalis, or the right and left sides, both symmetrically equal, do not exhibit the same regularity in the shape, number, and disposition of the pores that the four other sides do. Usually their pores are much smaller and more numerous. In very few forms only a distinct frontal ring is visible (corresponding to that of the Coronida), and in this case the lateral pores are sometimes disposed symmetrically on both sides of this ring. These Spyroidea may have arisen directly from corresponding forms of Coronida.

The sagittal ring (or the primary vertical ring, inherited from the Stephanida and Semantida, shows in the Spyroidea great variety in its form and in its relation to the cephalis. These variations are far greater than Bütschli (1882, *loc. cit.*) supposed. We may distinguish the following six principal cases :—A. The ring lies completely in the wall of the cephalis, and causes a deep sagittal constriction in it. In this case the lower part or basal segment of the ring separates the basal pores into pairs ; its anterior part or ventral rod the facial pores ; its upper part or coryphal rod the apical pores ; and its posterior part or dorsal rod the occipital pores. No part of the ring is free in the shell-cavity. B. The greater part of the ring lies enclosed in the shell-wall ; only its dorsal rod arises free in the shell-cavity and ascends vertically or obliquely to the apex, where it is usually prolonged into the apical horn. This seems to be the most common case. C. The coryphal and the basal part of the ring lie enclosed in the shell-wall, with its dorsal and ventral rod free in the shell-cavity ; the dorsal rod ascends vertically to the apex, the ventral rod obliquely upwards to the upper part of the facial plate (the nasal or orbital region). This case, regarded by Bütschli as the usual one, is far less common than he supposed. D. The greater part of the ring lies free in the shell-cavity, its basal rod only is enclosed in the shell-wall, and separates the right from the left group of the cortinar pores. This case seems to be rarer than the preceding. E. The whole ring lies free in the shell-cavity, and is connected with the sagittal constriction of the shell-wall by numerous short radial beams. The distance of the shell-wall from the enclosed ring is usually least on the basal rod, and greatest on the dorsal rod. F. The whole ring lies free in the shell-cavity (as in the preceding case), and is connected by numerous short radial beams with a secondary larger, concentric sagittal ring, which is developed in the longitudinal constriction of the shell-wall.