

tubes, which are sac-shaped, and which commence on the posterior lobate margin and run forwards, converging at the same time to a point in the median line near the anterior margin. These tubes are filled with the ordinary spherical gland-cells.

*c. Function.*

The light-reflecting spicule-layer renders it sufficiently certain that this organ is phosphorescent. It illuminates the water in front of and below the fish.

9. Differentiated barbels and fin-rays.

*a. Distribution.*

The extraordinary barbels of *Opostomias micripnus* (Pl. LXXII. fig. 39) and *Pachystomias microdon*, which are either attached to the mouth or developed from the first ray of the pectoral fin, bear on their distal portion the organ to be described below.

*b. Structure.*

This organ is attached to one side of the barbel only. It consists of gland-tubes which appear closed on all sides, and which are straight and conical, tapering proximally (Pl. LXXII. fig. 36). These tubes are perpendicular to the surface of the barbel. As the central gland-tubes are the longest, the whole structure has a very oblong, oval transverse section. They are covered by a granular layer which forms a kind of sheath to the whole organ, and which extends beyond the base of it, so as to enclose the opposite side of the barbel with a thin film (Pl. LXXII. fig. 36).

*c. Function.*

The gland-tubes are in every respect very similar to those found in some of the undoubtedly phosphorescent organs of fishes and it may therefore be assumed that they emit light. The only use to which they might be put would be to act as lures to attract other animals.

10. Glandular organs under the gill-covers.

*a. Distribution.*

These organs are only found in *Halosaurus macrochir*, where they form a conspicuous white patch just behind the last gill-arch in the clavicular region on each side of the fish.