

are, as is here supposed, phosphorescent; yet it seems by no means improbable that they are sense-organs. However problematical the function of this part of the organ may be, there can be no doubt that the small spindle-shaped organ attached outside to the scale is phosphorescent. It appears very similar to the suborbital organ of *Opostomias micripnus*.

In many of the phosphorescent organs of fishes, glands appear combined with slender spindle- or club-shaped elements which produce light with the aid of the secretion of the gland, in which they are immersed.

The membranes covering these phosphorescent organs in *Halosaurus* make it appear probable that we have here a similar case. The secretion of the glands observed at the sides and over the slime-canal, and probably also the slime produced in the latter itself, are stored in the lens-shaped spaces of the tissue between the scales and the slime-canal, are then poured into the pockets between the membrane and the scales, and surround the projecting phosphorescent organs, the spindle-cells of which may by the aid of the secretion produce light. The abundance of bloodvessels at the base of the organ and their great size indicate that some very energetic function goes on within it, and we may assume that this function is the production of light.

e. Development.

In the various species of *Halosaurus* the development of this organ from an ordinary lateral line can easily be traced. It is not indicated in *Halosaurus oweni*, and is most highly developed in *Halosaurus macrochir*.

This organ is therefore to be regarded as a further development or differentiation of that portion of the lateral slime-canal, with which it remains permanently connected.

B. IRREGULAR GLANDULAR ORGANS.

These are to be distinguished from the preceding group of regular ocellar organs by their larger size, their irregular shape, and particularly by their distribution over the surface of the body, which is never segmental.

7. Glandular organs of irregular position.

a. Distribution.

Such organs occur only in *Astronesthes niger*, and their histology has not been previously investigated.