of the skin (Pl. LXXIII. fig. 49). Ducts leading from the slime-canals of the skin to the outer surface pass through it, and form loops in the fibrous tissue, which is apparently quite transparent. It seems not improbable that the contents of these ducts are luminous.

6. Regular ocellar covered organs.

a. Distribution.

These organs are found in *Halosaurus macrochir* and other species of *Halosaurus*. They invariably form one single row on each side of the body, overlying the large lateral slime-canal. The scales of the lateral line are, in these fishes, much larger than the rest and form a conspicuous row on each side. They are covered by membranes. Each scale bears a transverse vertical ridge on its outer side, and behind this ridge a conspicuous spindle-shaped whitish organ is situated, which is 1 mm. broad and from 2 mm. to 3 mm. long. The ends are extended to form fine points. The long axis of the organ is vertical.

b. Structure.

a. General.

The large scales of the lateral line overlap about one-third or less, and appear slightly curved, S-shaped in longitudinal section. Outside, the row of scales is covered by two membranes, the outer one of which appears pretty continuous and attached particularly above, and loose only partially on the lower margin. The inner one extends from ridge to ridge of the successive scales (Pl. LXXIII. fig. 61, *r*). The lateral slime-canal is situated below these scales and sends branches up between them, which extend on the outer side of the proximal, anterior portion of each scale (Pl. LXXIII. fig. 61, *e*). The space between the slime-canal and the scales is filled with a peculiar tissue (Pl. LXXIII. fig. 63, *c*), and this extends outwards so as to fill the spaces between the scales; this tissue will be described below. At the sides of the slime-canal meandriform gland-tubes are met with (Pl. LXXIII. figs. 50, *b*, 59). The whole of the immersed portion of the scale is covered by a pigmented membrane (Pl. LXXIII. fig. 61, *m*). Between the pigment coat and the tissue underlying the scales a highly refracting membrane is observed. Just behind the transverse ridge a peculiar, apparently phosphorescent organ is attached outside to the middle of the scale; this is spindle-shaped and upright, and measures 1 mm. in width and 2 to 3 mm. in length in the vertical direction, being about 0·4 mm. high (in spirit specimens). Below this phosphorescent organ the scale is perforated by a conical canal leading outwards and backwards (Pl. LXXIII. fig. 61, *t*). The nerves and bloodvessels which supply the organ pass through this canal. The phosphorescent organ itself has a radiating structure.