

the Vertebrate type would be seen to take place in a manner as gentle as, and not essentially different from, the way in which the foliar organs of a single plant vary on the same stem, as they run through the series, from the cotyledons to the carpels.

Here, in this embryo, the occipital arch (Pl. X. figs. 1-5) images the vertebra behind it, but represents, in an undivided form, several vertebræ. The essentials of its composition are the same, but the development is different, for it has been brought under the power of that higher working of the morphological force by which the brain has been developed from the spinal cord, and the special sense-organs from the common sensory tracts.

The sides of the foramen magnum are now bony (Pl. X. fig. 5, *f.m.,e.o.*), for the sides of the exoccipital ossifications nearly reach each other above, and come down almost to the condyle (*oc.c.*); laterally they run far into the paroccipital wings of the skull. The condyle (*oc.c.*) is transversely oval, and contains in its lower part the large notochord. The basioccipital region is mammillate on each side, and in front of the condyle is beginning to be ossified (figs. 3, 11, 12, *b.o.*). This ossification first affects the cartilaginous sheath of the notochord, and then spreads into the paired basi-neural cartilages. At present it is a small lozenge, seen most on the lower side.

The unossified superoccipital region (*s.o.*) sends backwards a thick spine like the spine of a vertebra; it is a large roof, convex without and concave within, and runs below into the auditory capsule (*au.*). This capsule is a swollen or tuberiform mass, quite unossified at present, and confluent with the occipital arch above and below. In the tympanic region (figs. 3 and 5) it grows outwards to form, with the exoccipital, the "paroccipital process"; between it and the occipital arch the ninth and tenth nerves escape, whilst the twelfth (12) perforates the exoccipital wall. Near the middle of the lower third, inside, we see the meatus internus with paired passages (7, 8) for the portio dura and portio mollis. Its anterior margin is notched for the large trigeminal nerve (5); its upper part is a wide tuber, and contains the canals and much of the vestibule; the lower part has in it the rudimentary cochlea. Above the foramen ovale (fig. 1, 5) the capsule is crested; this sharp edge is all that remains of the alisphenoid (*al.s.*); it runs into the superoccipital (*s.o.*) above, but is separated by a wide, flabelliform space from the orbito-sphenoid (*o.s.*) in front. All that part has been absorbed since the last stage, thus the extinction of the alisphenoid is much more perfect than is seen in the Lizard, where it becomes very small. The basisphenoidal region (*b.o.*) is very extensive, having a middle pituitary, a posterior post-pituitary, and an anterior prepituitary region (fig. 1); in this part the three bars are seen to unite. The notochord, which was on a low plane behind, now appears on the inner face of the skull-floor (fig. 12, *nc.*), and here its sheath is enclosed in a cephalostyle, most of which lies free, above the paired cartilages (*iv.*).

The bone ceases behind, where the chord dips into the floor, but in front the bony matter is spreading freely into the post-clinoid wall (*p.cl.*), and besides spreading into the