

Second Stage. 6 lines ($\frac{1}{2}$ inch) long.—The number of somatomes has greatly increased; the three divisions of the heart are fairly formed; the rudiments of the sense-capsules are more distinct, that of the ear still showing the opening; the maxillo-palatine fold is seen in the form of a sessile pointed leaf, the base of which is attached to the top of the mandibular fold, the latter being more than twice the size of the former; the naso-frontal process is not yet formed; the pituitary involution is beginning (Pl. I. fig. 2).

Third Stage. $6\frac{1}{2}$ lines long.—The number of somatomes has now increased to about fifty-one, there being only about forty-one vertebræ in the adult, which thus aborts seven segments in the cervical region, and three in the caudal, there being the same number in the dorsal, lumbar, and sacral regions, both in these embryos and in the adult. In the latter parts, the somatomes form a sharp inferior edge above the upper margin of the limbs, which is the rudiment of the carapace. The limbs are rounded paddles, attached to a broad base, and the pectoral member is midway between the nose and the tail. The ear opening is covered with skin; rudiments of the naso-frontal process are seen; the maxillo-palatine has increased fourfold, and has, like each of the post-oral folds, a distinct opercular fold projecting over the cleft behind. Head cavities can be seen in the visceral folds; the pituitary involution is more distinct; the notochord reaches nearly to the top of the fold of the mid-brain (middle trabecula), and is curved over and enlarged at the end (Pl. I. figs. 3–6).

Fourth Stage. 9 lines long.—The number of somatomes is the same as in the last stage; the rudiment of the carapace is very distinct; the head is larger than the whole thoracic region of the body, and rudiments of the hemispheres are apparent in front of the pineal elevation; the mid-brain is very outstanding, and the hind-brain is much hidden by lateral growths; the maxillo-palatine, is twice as large as the post-oral, folds, which are now contracting upon all the clefts; the Eustachian openings are wide apart. The quadrate is already sickle-shaped, enclosing the bulbous distal end of the columella in the rudimentary membrana tympani, which closes up the upper part of the cleft. There are distinct lachrymal and nasal clefts, and between the latter a dilated, rounded naso-frontal process is seen, on the centre of which is the rudiment of the rostrum for breaking the shell. The racemose pituitary body has not yet united with the infundibulum; the olfactory lobes are quite distinct from the solid olfactory nerves, and the optic nerves are hollow. A chondrocranium is already formed, and the basis cranii runs high into the fold of the mid-brain, forming the post-clinoid wall, the notochord runs nearly as high as this latter, and is clubbed, and turned downwards. From the pituitary region are seen the broad trabeculæ segmented from the investing mass, and a long intertrabecular bar ending in the prenasal rostrum; from the trabeculæ grow the large orbito-sphenoids, which lie low down; the orbito-nasal septum is not developed (Pls. I. and II.).