

SECTION VIII.

NERVOUS SYSTEM.

With reference to the brain, we may single out as characteristic of the Testudinata the well developed hollow hemispheres, which are larger in proportion than in other Reptiles, especially when compared to the lobi optici. Their surface is generally smooth, but in some it is provided with a longitudinal fold. Their cavities are continued into the hollow roots of the olfactory nerves. The cerebellum is relatively larger than in Ophidians and Saurians, yet smaller than in Crocodiles. A longitudinal furrow divides it into halves. Between the two hollow lobi optici and the hemispheres, there are two lobi ventriculi tertii, which give rise to the optic nerves. Behind the large cerebellum follows a large vascular body, (plexus chorioideus,) which lies upon the sinus medullæ ablongatæ.¹

In relation to the nerves that originate from the brain and the medulla ablongata, we notice that, as in Ophidians and Saurians, the nervus hypoglossus receives roots from the spinal marrow, which is not the case in Crocodiles. As in Saurians and Ophidians, the nervus vagus and the glossopharyngeus have always each a root for itself, and, as in Saurians, each also a distinct passage through the os occipitale laterale; while in Ophidians there is only one passage, and in Crocodiles, with some exceptions, only one common root for both those nerves, which thus form also only one common ganglion. As in all Reptiles, the largest nerve is the nervus trigeminus; it is larger even than the nervus vagus, though this latter is more developed in Turtles than in other Reptiles.

The spinal marrow is rather thin along the middle of the body; and the nerves which originate in this region are very small, as there is not much room for their function, in consequence of the immovability of that part of the trunk which corresponds to the shield, and which moreover is covered by a thick, hard, horny roof. So much the larger, however, appear the two swellings of the spinal marrow in the shoulder and pelvis region, where the legs, which in this order of Reptiles have to support and to move the whole body, are to be provided with nerves. Thus the size of these swellings, when compared with the general diameter of the spinal marrow, is characteristic of the Testudinata, and more resembles that of

¹ For the differences of the brain in different families, see below under the head of The Family Characters. A beautiful illustration of the brain and

the whole nervous system of the European *Emys* has been given by Bojanus, in his *Anatome Testudinis Europææ*, Pl. xxi.-xxiii.