

Birds than of other Reptiles, in which latter the organs of locomotion are never confined to the legs alone. See above, p. 253.

The characteristic features of the N. sympathicus<sup>1</sup> are only to be appreciated by a minute comparison of all its original roots, anastomoses, ganglia, etc., with those of Crocodiles, Lizards, and Snakes. But, though there are many differences in its conformation in these different orders of Reptiles, we do not deem it necessary or useful to enter into the details of such a comparison; in the first place, because only some two or three species of Turtles have as yet been investigated with special reference to that nerve, so that there would be danger of confounding ordinal with family or even generic characters; and in the second place, because the differences which we have noticed do not show an intimate connection with the whole nature of the Turtles, in contradistinction to other Reptiles. It is, moreover, proper that in Comparative Zoölogy we should introduce only such anatomical characters as are understood in their connection with the whole nature of the animals under consideration. Other anatomical details would be useless for the zoölogist.

## SECTION IX.

### ORGANS OF SENSES.

*The Ear.* There is no movable external ear as in the Crocodiles; but in all Testudinata we find a *cavitas tympani* and a *membrana tympani*, which are wanting

<sup>1</sup> The N. sympathicus begins in Turtles as plexus splenoideus, and is connected with the second branch of the N. trigeminus. It runs as a simple trunk backwards, gives branches to the nose, and receives branches from the N. abducens facialis; then after passing through the os potrosun as N. Vidianus it receives branches from the N. facialis and glosso-pharyngeus, then from the N. vagus and hypoglossus, and then runs as one superficial stem along the neck to the thorax, connected by branches with the nerves of the neck. Then taking up branches of the vagus, it forms the ganglion thoracicum primum, which sends its threads to the plexus cardiacus and pulmonalis. Then the string forms several swellings,

connected with the plexus brachialis, forming several loops which unite again into ganglia and communicate with the anterior branches of the spinal nerves. Then after giving branches which go to the intercostal nerves, it forms again two plexus, the first sending branches to the stomach, and accompanying the arteria cœliaca; from the second plexus originate branches for the intestines, and others for the kidneys and the generative organs. See STANNIUS, Lehrbuch der Vergleichenden Anatomie der Wirbelthiere. Berlin, 1846, p. 192-93; BOJANUS, Anatomie Testudinis Europæe, Pl. xxii. and xxiii.; and SWAN, Illustrations of the Comparative Anatomy of the Nervous System, London, 1841, Pl. xv. and xvi.