pointed angle. This contraction is greatest in the Cinosternoidæ, less in Chelydroidæ, Trionychidæ, and Emydoidæ. The hind part of the ventricle, which follows the contraction, is very long in Trionychidæ, Cinosternoidæ, and Chelydroidæ, but less so in Emydoidæ. In land Turtles, the ventricle is very wide; the contraction in the middle is nearly wanting, and the whole is very short. In relation to this ventricle, Cistudo shows again beautifully its standing as the highest among the Emydoidæ, and next to Testudo. Its ventricle is broader and shorter than in any other of the Emydoidæ. The lobi olfactorii are generally very much developed in Turtles, and the nervi olfactorii rather strong. They are, however, different in different families: longest and most slender in sea Turtles, very short and strong in land Turtles, more slender again in Chelydroidæ, Cinosternoidæ, Trionychidæ, and Emydoidæ. Accordingly the cavity of the nose also is very large in the herbivorous land Turtles, smaller in Chelonii proper, as well as in Emydoidæ, Cinosternoidæ, Chelydroidæ, and smallest in Trionychidæ,[1] in which the sense of smelling, in spite of that long, protracted proboscis, seems very little developed, as is generally the case in aquatic animals. In Testudo, and in Chelonii proper, the hemispheres and the nervi olfactorii lie in a thick cartilaginous trough, which extends as far as the nasal cavity. This trough is very broad and rather short in Testudo; narrow and long, on the contrary, in Chelonii proper, according to the proportions of the lobi and of the nervi olfactorii. In all the other Turtles that trough is much thinner; in some, as in Cinosternoidæ, it is little more than a stiff membrane. This trough is in fact nothing but a part of the cartilaginous skull-box, which remains unossified throughout life. We find also some marked differences in relation to the nervi optici. In Trionychidæ, the two nerves pierce the trough, mentioned above, very near together, so as nearly to touch one another; on the contrary, in Testudo the nerves separate widely before they run through the skull-box, and the distance between the two holes through which they pass is about as great as the breadth of the lobi olfactorii above them. In Cinosternoidæ and Emydoidæ (including Cistudo) we find the holes for these nerves as near together as in Trionyx; in sea Turtles only they are more distant,

[1] The whole of that long, protracted nose so characteristic of the Trionychidæ, is not so much an organ of smelling (as the proboscis of some Mammalia, the South American Nasua, for instance) as an organ of respiration, and probably also of touch. These Turtles, while lying in shallow water, stretch out their nose from time to time to the surface of the water for the sake of breathing; but under the water, when moving in the mud, this long proboscis has very likely a similar function to the long, protracted proboscis of the Shrews and Moles, when burrowing under ground, and groping for worms and larvæ of Insects. Trionyx may find its food in the same way, which consists in mud shells (as Paludinas and Anodontas) and larvæ of Neuroptera, by feeling about with its proboscis. Its fleshy lips, the use of which is not yet known, may help in the search, as they are movable.