

The first of these is a very long muscle, originating from the posterior vertebra of the trunk, and attached to the foremost neck vertebra and the head. Its function is to draw back the head and the uppermost part of the neck, so that we may call it *musculus retrahens capitis collique superioris*. The second muscle is much shorter, originating from the anterior vertebræ of the trunk, and attached to the lower part of the neck. It lies below the first, and its function is to draw the lower part of the neck backwards. We may call this muscle *M. retrahens colli inferioris*. The form into which the neck is thus contracted is that of an S in a vertical plane. I regret deeply that I have not had an opportunity of examining the arrangement of the muscles of those Turtles which bend the neck sideways and fold it under the margin of the shield, as do the *Chelyoidæ* and *Hydraspides*.

Considering now the cervical muscles proper, we find a system of shorter muscles largely developed, running from one vertebra to the next or to the next but one. These muscles are particularly subservient to stretching the neck into a straight line, when it has been bent by the muscles described above, and thus to dart it forwards, as all Turtles do more or less rapidly. This action is, however, peculiar and very quick and powerful in the families of *Chelydroidæ* and *Cinosternoidæ*.

The posterior part of the dorsal column, with its free vertebræ between the sacrum, the anus, and the tail, is also provided, like the free movable neck, with a well developed muscular apparatus, which is particularly powerful in *Chelydra*. The muscles which move this part originate from the three pairs of pelvic bones.

The muscles of the shoulder and of the pelvis, which are all inside the bony box, are very difficult to homologize with those which we find in other Reptiles or in other Vertebrata. Two pairs of muscles, originating from the hind part of the plastron and attached to the ossa ischii and pubis, draw the pelvis, the first backwards, the second forwards. Stannius mentions traces of *Musculi recti* in some Turtles, originating from the anterior ventral part of the pelvis. *Musculi obliqui externi* and *interni* are obvious in almost all Turtles. The *obliqui externi* are particularly developed. Originating from the inside of the marginal bones of the dermal shield, they are attached to the os pubis.

The muscles for the shoulder are not much developed in comparison with those of the Saurians or Birds, in which the shoulder lies free on the outside of the ribs. There is one muscle in Turtles drawing the scapula forward, the *M. scalenus* or *levator scapulæ* of Bojanus, originating from the lower part of the vertebræ of the neck and attached to the acromion; and another, originating from that large crosspiece mentioned above, p. 265, (which may be looked upon as a