

them first in their more perfectly developed forms, as they are presented in the higher classes of quadrupeds. In the following descriptions, the skeleton of the Hog (Fig. 181) will be taken for the purpose of reference.

The ribs consist of arches of bone affixed at their upper ends to the bodies of the vertebræ, and also, by a separate articulation, to their transverse processes; where, in general, they are allowed a slight degree of motion. Their primary use is to defend the vital organs situated in the region of the chest, or *thorax*, (namely, the heart and the lungs;) but they are subservient also to the function of respiration, by the alternate movements which are given to them by their muscles. The two parts, of which they are composed, often form an angle by their junction, and at this angle a process occasionally extends, for the purpose of forming connexions with the neighbouring ribs.

The ribs are connected in front with the breast bone, or *sternum* (s,) often by the intervention of cartilages, which, from their similarity of form to the ribs, appear as continuations of them, and are provided apparently to eke out the remainder of the semicircle. These cartilages, which have been termed the *sterno-costal appendices*, often become ossified, either wholly or in part.

The sternum is formed of nine elementary pieces, each proceeding from a separate centre of ossification. Two of these occupy the end which is nearest to the head; four are lateral, and two are situated at the opposite extremity; one only being central and surrounded by the rest. Few subjects in comparative osteology are more curious and instructive than to trace the development of these several elementary parts in the different classes of animals, from the rudimental states of this bone as it occurs in fishes, to its greatly expanded conditions in the tortoise and the bird, which exhibit the most opposite proportions of these elements.

Last in the order of constancy come the bones of the extremities. As we ascend in the scale of animals we may observe the prevalence of a tendency to the concentration of organs, and consequently to the diminution of their num-