

only of elongated bodies, diminishing in size to the end of the tail, the last being only 1.4 cm. in length.

Ribs.—There were fifteen pairs of ribs, nine of which articulated with the sides of the sternum. The head of the 1st rib articulated with the side of the body of only the 1st dorsal vertebra, but the heads of the ribs from the 2nd to the 11th, both inclusive, articulated with the sides of the bodies of two vertebræ. The heads of the four most posterior ribs articulated each with the body of only a single vertebra. The 1st to the 11th ribs, both inclusive, possessed each a well-defined neck, with a distinct interval between the head and the tubercle; but in the last four ribs the neck was stunted and the head and tubercle were more closely approximated, so that in the last rib they were separated by an interval of only 8 mm. In a straight line the osseous part of the 1st rib measured 145 mm., and the bony shaft gradually increased in size to the 8th rib, which was 390 mm. in length, from which again the ribs diminished to the 15th, which was 232 mm. long. The ribs as a rule were curved; their shafts were thick and with three surfaces, external, anterior and posterior. The two last ribs were almost straight. The massive costal cartilages of the sternal ribs were either longer than, or closely approximated in length to, the osseous division of their respective costal arches. The cartilages of the asternal ribs were attenuated at their inner ends. In this animal the ligamentum conjugale costarum originally described by Professors Mayer¹ and Cleland² was seen to great advantage. As in the seal which Professor Cleland dissected, it consisted of a strong ligamentous band attached on each side to a depression situated immediately below the cartilage covering the undivided articular surface of the head of each of the ribs which articulated with the bodies of two vertebræ. It entered the spinal canal in the plane of the intervertebral disc, immediately above which it was situated, and its inferior surface as well as the superior surface of the disc was smooth and polished, and was covered by a synovial membrane, continuous with that of the costo-vertebral joint on each side. There can be no doubt therefore that this ligament plays upon the upper surface of the disc in the respiratory movements of the ribs. It was kept in its place by the superior common ligament which covered it.

Sternum.—This bone, formed of nine segments, was 960 mm. long. The 1st or præsternal segment was 85 mm. in length, and consisted of a præsternal cartilage, broader posteriorly than anteriorly, where it terminated in a pointed apex, so that it had somewhat of a triangular form. It extended forwards to the neck for 63 mm. in front of the 1st pair of costal cartilages. The 2nd to the 8th segments were plates of bone, the first, second and third of which were longer than broad, whilst the length and breadth of the remainder were almost equal. These segments articulated with each other by movable

¹ Müller's *Archiv f. Anat. u. Physiol.*, vol. i. p. 273, 1834.

² *Edinburgh New Philosophical Journal*, vol. viii., April 1859. See also J. B. Sutton, *Journ. of Anat. and Phys.*, vol. xviii. p. 225, 1884, and *Ligaments, their Nature and Morphology*, London, 1887.