

STERNUM.

The sternum was present in thirty of the skeletons. As a rule the præ-meso- and xiphi-sternal segments were not united to each other, and the xiphi-sternum had usually been lost. In the following specimens this rule was departed from. In the Perth Australian and the Sikh, the præ- was fused with the meso-sternum, but the xiphi-sternum was free. In an Andaman Islander and the Malay the xiphi-sternum was ossified and fused with the meso-sternum, but the manubrium was free. In an Andaman Islander, in which the epiphyses of the long bones were not fully ossified to the shafts, the præ-sternum was fused with the first segment of the meso-sternum, but the latter was not ankylosed to the second segment, and in the lowest segment of this division of the bone the two lateral halves were imperfectly united mesially. In the Chinese the first segment of the meso-sternum was free, but the second, third, and fourth segments were fused together, and the xiphoid was ossified but not fused with the meso-sternum; this skeleton, from the ossification of the long bones, apparently belonged to a man from twenty to twenty-four years of age. In the Manly Cove Australian, although all the segments of the mesosternum were ankylosed together, yet a distinct fissure marked the plane of fusion of the first and second segments.

In the Bush skeleton, the Malay and the male Lapp, the meso-sternum was perforated by a hole, large enough to admit a quill, situated at the junction of its third and fourth segments; in the Malay the first pair of costal cartilages were ossified on the surface. A meso-sternal hole due to defect in the ossification of the cartilaginous sternum is sometimes seen in Europeans.

These sterna do not throw much light on the question whether the manubrium or the xiphi-sternum unites first with the meso-sternum, for whilst there are two cases of fusion of the xiphi-sternum, without ankylosis of the manubrium, there are also two cases of fusion of the manubrium without ankylosis of the xiphi-sternum. There is also one remarkable instance of fusion of the manubrium with the first segment of the meso-sternum before the meso-sternum itself had completed its ossification, but this is quite exceptional. It is without doubt the rule for the manubrium not to fuse with the meso-sternum until comparatively late in life. The Malay skeleton and one of the Oahuan women show that ossification of the costal cartilages may have considerably advanced without the præ- and meso-sternum having become ankylosed together. The condition of ossification of the sternum does not, I think, afford any accurate guide to the age of the skeleton, and in this respect my observations conform with those of Dr. Thomas Dwight.¹

¹ The Sternum as an index of Sex and Age, *Journ. Anat. and Phys.*, vol. xv. p. 327, 1881.