

arm, although completely separate at an early period of growth, soon unite to form but one bone. 'This union begins at their lower end, and proceeds upwards to within a short distance from the top, where a separation may still be observed in the processes which project from that end, forming for some way down a distinct suture. This union of the two bones must, of course, preclude all rotatory motion; but it is calculated to give the joint great security: and this appears to have been the main object in the conformation of the whole limb. The same process of consolidation takes place in the hind leg, between the tibia and the fibula, which are so completely united, as to afford scarcely any trace of their having been originally separate.

The carpus and the tarsus are both of very limited extent, and consist of a smaller number of pieces than usually occur in these joints. The consolidation of parts is most conspicuous in the succeeding division of the limb, namely, that constituting the metacarpus in the anterior, and the metatarsus in the hind extremity. In either case we find it consisting not of five bones, as in the more highly organized carnivorous mammalia, but of a single bone only, termed the *cannon bone*. In the early periods of ossification, however, they each consisted of two slender bones, lying close and parallel to each other; but afterwards united by an ossific deposition, which fills up the interval between them, and leaves behind no trace of suture.\* In proportion as the young animal acquires strength, the union of these two bones becomes still more intimate by the absorption of the partition which separated their cavities; so that ultimately they constitute but one cylinder, with a single central cavity, which is occupied by marrow.

The cannon bone is much elongated, both in the fore and hind extremity; so that the carpus and tarsus, which are the commencements of the real feet, are raised considerably

\* The observations which establish this fact are detailed by G. St. Hilaire, in a paper in the "Mémoires du Muséum," x. 173.