lower end rests in a socket, in the foremost part of the sternum; but in Turtles the whole shoulder apparatus being drawn inwards and backwards, this bone had to be removed from the sternum, and lies free in the muscles.

The humerus is short, crooked, and turned inwards in such a way that it moves inwards in one plane with the scapula and coracoid. The forearm is articulated upon the large lower epiphysis of the humerus, but its position is peculiar to the Turtles, its transverse diameter standing vertically. This is effected by an overlying of the fibula upon the radius. In the structure of the hand, we find again, in the same manner as in the forearm, the transverse diameter standing vertically, the ulnar side above, the radial side below. This singular conformation of the shoulder, the arm, the forearm, and the hand, makes it possible for the fore leg to be drawn back under the upper shield by the bending of all the joints in the plane of the scapula. This motion is more or less extensive in different families, according to the degree of expansion of the carapace.

The conformation of the hand varies much in different families, according to its function as a paddle, as a fin, or as a pillar.[1]

The pelvis is much easier to understand than the shoulder. It is formed, on each side, by three permanently distinct bones, meeting in the condyloid cavity. Two pairs of these bones are flat and more or less horizontal, and rest upon the sternum, to which they are more or less closely attached. The larger pair, the ossa pubis, leans forwards, the smaller pair, the ossa ischii, backwards. The bones of each pair unite respectively with one another in the middle, in a median line, while the two bones of the same side, meeting laterally, form the lower part of the cavity for the femur. The upper part of this cavity is formed by the third pair of the pelvic bones, the ossa ilii; these are smaller cylindrical bones, much enlarged at both ends, running upwards and backwards, and meeting with the long transverse processes of the sacrum.

The bones of the hind leg agree generally with those of the fore leg, though the femur is straighter than the humerus. There are, however, great differences in different families, in respect to the relative size of the two pairs of the legs. These differences are so strongly marked between the marine Testudinata on one side, and the fluviatile and terrestrial types of the order on the other side, that they cannot be considered as family characters, but rather point out a natural subdivision of the whole group, already hinted at above,[2] and to which I shall again call attention hereafter.

[1] See the Family Characters, below, Chap. 2.

[2] See, above, Sect. 2, p. 241–249.