

ated from the model of quadrupeds in giving much greater length to the division corresponding to the foot. At the same time that the foot is brought forwards, the toes are lengthened, and made to spread out so as to enclose a wide base, over which the centre of gravity is situated. The extent of this base is so considerable that a bird can, in general, support itself with ease upon a single foot, without danger of being overset by the unavoidable vacillations of its body.

The femur is short compared with the tibia, which is generally large, especially in the order of *Grallæ*, or wading birds: the fibula is exceedingly slender, and always united, at its lower part, with the tibia; and there is a total deficiency of tarsal bones, except in the *Ostrich*, where rudiments of them may be traced. Already we have seen, in ruminant quadrupeds, that these bones have dwindled to a very small size, but here they have wholly disappeared. The long bone which succeeds to the tibia, though considered by some anatomists as the tarsus, is, properly, the metatarsal bone, and in the *Grallæ* is of great length. At its lower end it has three articulations, shaped like pulleys, for the attachment of the three toes: there is, besides, in almost all birds, a small rudiment of another metatarsal bone, on which is situated the fourth toe. The number of bones which compose each respective toe appears to be regulated by a uniform law. The innermost toe, which may be compared to a thumb, consists invariably of two bones: that which is next to it in the order of sequence has always three; that which follows has four; and the outermost toe has five bones: the claws in every case being affixed to the last joints, which have, therefore, been termed the *ungual bones*. This remarkable numerical relation, among the several bones of the toes, exists quite independently of their length.

There is one whole order of birds which are particularly fitted for climbing and perching upon trees, having the two middle toes parallel to each other, and the inner and outer toes turned back, so as to be opposed to them in their action. They are thus enabled to grasp objects with the greatest fa-