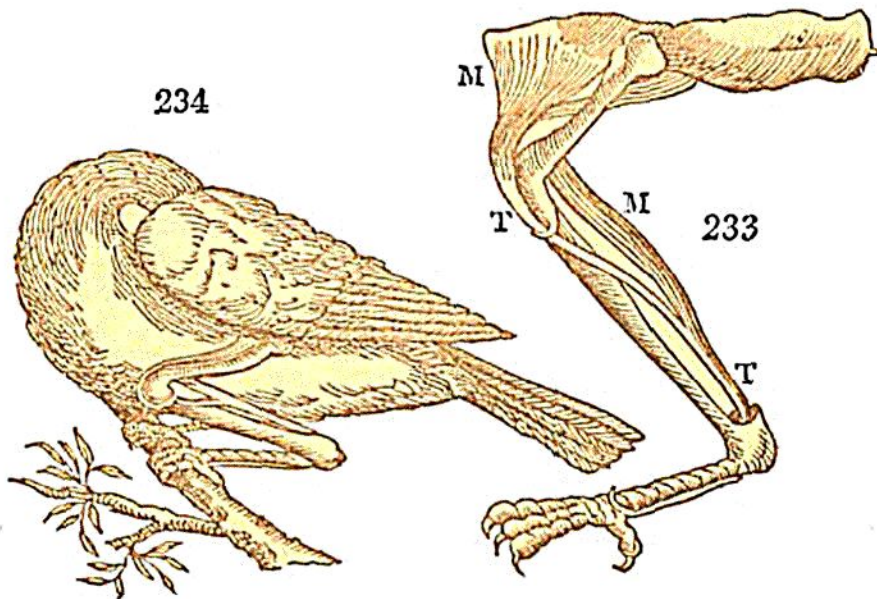


in walking, the head of a bird is in constant motion; whilst the duck and other birds, whose legs are very short, have a waddling gait. It may be observed that the more perfectly predaceous birds are not the best formed for walking; because, where they use their feet for that purpose, their talons, which are required to be kept sharp for seizing and tearing their prey, would be blunted; and accordingly the eagle, when moving along the ground, supports itself partly by the motion of its wings.

In roosting, birds often support themselves upon their perch by means of one leg only, the other being folded close to the body. They even maintain this attitude with greater ease and security than if they rested upon both feet. The true explanation of this curious fact was long ago given by Borelli. On tracing the tendons (τ , τ Fig. 233) of the muscles (m , m) which bend the claws, and enable them to grasp an object, we find them passing over the outer angles of each of the intervening joints, so that whenever these joints are bent, as shown in Fig. 234, those tendons are put upon the



stretch, and mechanically, or without any action of the muscles, tend to close the foot. When the bird is on its perch, this effect is produced by the mere weight of the body, which of course, tends to bend all the joints of the limb on which it rests; so that the greater that weight, the greater is