

water, and sometimes in the open air. The difference between these two conditions does not acquire much importance with reference to the characters of the sub-order, as will be seen from the fact that, in the family of Emydoidæ, one genus at least never goes into the water, while several genera live the greater part of the time in water, and there is a series of intermediates. These differences affect the structure and symmetry in a smaller degree, and are not to be compared in importance with those which distinguish the sub-orders; they do not essentially alter the mode of progression.

The locomotion is entirely different from that of the sea Turtles. It no longer takes place by a flying, but by a walking motion; the weight is not thrown upon the front limbs, but is almost equally supported by both pairs; the front pair are not carried up together, and then brought down simultaneously, but they alternate with one another, as do also the hind pair; the front legs of one side move with the hind legs of the other side, so that the two pairs act in concert; further, they move back and forth below the carapace, in a diagonal plane between the perpendicular and the horizontal diameter of the body. The two pairs are nearly equally developed, as also are the pelvis, and shoulder apparatus. As the bulk of the body is no longer thrown upon the front limbs, and as the muscular apparatus of the two pairs occupies about equal space, there is no such contrast between the two ends of the body as exists in sea Turtles. This mode of progression, and the consequent symmetry, allow greater development of the bony shield than can take place with the other sub-order. As the fore limbs are not raised high up, when moving, the carapace may be extended forward without interfering, and as they are not brought far down crosswise over the body toward one another, the plastron may be broad between them. The carapace is always broad above the pelvis, and covers all that part of the body, and the hind legs, when they are at rest; the plastron is sometimes broad under the pelvis and the hind legs.

The limbs are never reduced to paddles or wings; the feet are always distinct from the legs; the articulations at the wrist and ankle joints allow distinct movements, and not merely a kind of yielding to the turning of the whole limb, below the elbow, as with the sea Turtles. In the feet of this sub-order, the toes never have the great length which distinguishes them in the wings and paddles of sea Turtles. When the foot is adapted to walking on dry land, the toes are shortened, and the whole concentrated, and their joint with the leg above is rather stiffened; when it is more adapted to swimming, there is greater freedom of motion at the wrists and ankles, and between all the bones of the feet below; the phalanges are prolonged, and the toes joined by a broad web, capable of being spread far apart and closed together. When the blow is struck, a broad,