

It is easy to understand how the serpent can slowly advance, by this creeping, or vermicular motion, consisting in reality of a succession of very short steps. But its progress is accelerated by the curvatures into which it throws its body; the fore part being fixed, and the hind part brought near to it; then, by a reverse process, the hind part being fixed, and the head projected forwards. By an alternation of these movements, assisted by the actions of the ribs, serpents are enabled to glide onwards with considerable rapidity, and without attracting observation. But where greater expedition is necessary, they employ a more hurried kind of pace, although one which exposes them more to immediate view. The body, instead of being bent from side to side, is raised in one great arch, of which the two extremities alone touch the ground; and these being alternately employed as points of support, are made successively to approach and to separate from each other, the body being propelled by bringing it from a curved to a straight line.

There is yet a third kind of motion, which serpents occasionally resort to, when springing upon their prey, or when desirous of making a sudden escape from danger. They coil themselves into a spiral, by contracting all the muscles on one side of the body, and then, suddenly throwing into violent action all the muscles on the opposite side, the whole body is propelled, as if by the release and unwinding of a powerful spring, with an impulse which raises it to some height from the ground, and projects it to a considerable distance.

Thus these animals, to which nature has denied all external members, are yet capable, by the substitution of a different kind of mechanism, still constructed from the elements belonging to the primitive type of vertebrated animals, of silently gliding along the surface of the earth, of creeping up trees, of striding rapidly across the plain, and of executing leaps with a vigour and agility which astonish the beholder, and which, in ages of ignorance and superstition, were easily ascribed to supernatural agency.