

two divisions of the body. In some this pedicle is short, in others long: in the former case, an exceedingly refined mechanism is resorted to for effecting the necessary movements in a part so bulky, compared with the narrowness of the surface of attachment.*

Insects in their perfect state have constantly six legs, which are the developments of the six proper legs of the same animal in its larva condition; all the spurious legs having disappeared during its metamorphosis. We have seen that in the myriapoda, the result of development is an increase in the number both of segments and of legs; the reason of which is that, being terrestrial animals, a lengthened form was more useful and accordant with their destination; but in winged insects, where the object is to procure the means of flight, the organs require to be concentrated, and all superfluous parts must be retrenched and discarded from the fabric. The multiplication of organs, which in the former case indicated the progress of a higher development, would in the latter have been the source of imperfection. As long as the insect remains in its larva stage, its condition is analogous to that of the myriapode; but in the more elevated state of its existence, its structure is subject to new conditions, and regulated by new laws.

While the number of members is thus reduced, ample compensation is given by their increased activity and power, derived from their augmented length, and the more distinct lever-like forms of the pieces which compose them.

These pieces (see Fig. 150) are named, from their supposed analogy to the divisions of the limbs of the higher orders of vertebrated animals, the haunch (H,) the trochanter (T,) the femur (F,) the tibia (S,) and the tarsus (R.) In general the femur (or thigh) has nearly a horizontal, and the tibia (or legs) a vertical position, while the whole tarsus (or foot) is applied to the ground.

The haunch (H,) which is supposed to correspond to the

* For the details of this structure I must refer to writers on entomology, and in particular to Kirby and Spence's "Introduction to Entomology," vol. iii. p. 701.