

Rafflesia, and many *Orchidæ* may be quoted as equally remarkable examples of parasitism.

There exists the greatest variety of parasites among animals. It would take volumes to describe them and to write their history, for their relations to the animals and plants upon which they are dependent for their existence are quite as diversified as their form and their structure.

It is important, however, to remark, at the outset, that these parasites do not constitute for themselves one great division of the animal kingdom. They belong, on the contrary, to all its branches; almost every class has its parasites, and in none do they represent one natural order. This fact is very significant, as it shows at once that parasitism is not based upon peculiar combinations of the leading structural features of the animal kingdom, but upon correlations of a more specific character. Nor is the degree of dependence of parasites upon other organized beings equally close. There are those which only dwell upon other animals, while others are so closely connected with them that they cannot subsist for any length of time out of the most intimate relation to the species in which they grow and multiply. Nor do these parasites live upon one class of animals; on the contrary, they are found in all of them.

Among *Vertebrata* there are few parasites, properly speaking. None among *Mammalia*. Among *Birds*, a few species depend upon others to sit upon their eggs and hatch them, as the European Cuckoo, and the North American Cowbird. Among *Fishes*, some small *Ophidiums* (*Fierasers*) penetrate into the cavity of the body of large *Holothuriæ* in which they dwell¹. *Echeneis* attach themselves to other fishes, but only temporarily. Among *Articulata*, the number of parasites is largest. It seems to lie in the very character of this type, so remarkable for the outward display of their whole organization, to include the greatest variety of parasites. And it is really among them, that we observe the most extraordinary combinations of this singular mode of existence.

Insects, in general, are more particularly dependent upon plants for their sustenance than herbivorous animals usually are, inasmuch as most of them are limited to particular plants for their whole life, such as the Plant-lice, the *Coccus*, the Gall Insects. In others, the larvæ only are so limited to particular plants, while the larvæ of others still, such as the Bots, grow and undergo their development under the skin or in the intestines, or in the nasal cavities of other animals. The *Ichnæumons* lay their eggs in the larvæ of other insects, upon which the young larvæ prey until hatched. Among perfect Insects, there are those which live only in community with others, such as the Ant-Hill Insects, the Clavigers, the Clerus,

¹ See above, p. 74, note.