

object of its temporary sojourn upon earth. No insects have so wide a range of food as the beetles and, if for that reason alone, they are deserving of our consideration.

Roughly speaking, we may divide the beetles into carnivorous and vegetarian, and will take them in that order.

Firstly, however, we must be able to define Beetle, or Coleopteron.

All insects have normally four wings, though in some all four wings are rudimentary and left undeveloped. In others, such as the house-flies and gnats, there are apparently only two wings. In fact, however, there are really four, but the hind pair are rudimentary, so that only the two front wings are used for flight. In beetles, however, the hind pair only are used for flight, the front pair being very much thickened, useless for flight, and serving as covers for the hind pair when the insect uses its legs for locomotion.

As to their life-history, it is, in all the main points similar to that of other insects. It begins with the egg, from which is hatched the larva, or grub. In process of time the larva becomes a pupa, which in its turn becomes developed into the perfect insect.

Except in some few instances, where we can keep the creature under our eyes through all its stages, it is very difficult to trace the progress of an individual.

We can easily do so with the butterflies and the generality of moths, the eggs being laid in the open air, and the larva, or caterpillar, feeding upon leaves, so that it can be kept in sight. But most of the beetles pass their existence under very different conditions. As a rule, in the larval state they are darklings, and shun the light to such a degree that if they are compelled to live in the light their natural conditions are altered, and

the insect cannot be expected to thrive.

Some, however, have been watched throughout the whole, or the greater part, of their lives, and I purpose to take our examples almost wholly from them.

Beginning with the carnivorous beetles, we will first take those which feed on living prey, and which in consequence possess a highly organized structure. Externally, as they have to catch their prey in fair chase, they possess active limbs and powerful jaws, many of them being gifted with swift wings. Such are the Tiger Beetles.

Even if he had never heard of such an insect, any student of nature would know from the figure that the beetle must not only be carnivorous, but that it must be in the habit of chasing living and active prey. The firm and graceful outlines of the body and the formation of the legs show that the creature is swift of limb; but even if the rest of the body had been destroyed and nothing left but the head, an entomologist could at once deduce from it the character of the insect to which it belonged.

The enormous and projecting eyes, which occupy a very large portion of the head, denote that a large range of vision is required, while the long, sharp-pointed jaws, the tips crossing each other when closed, so that prey, when once seized, could have no hope of escape, show that the beetle must be rapacious as well as carnivorous.

There are many of these Tiger Beetles (*Cicindela*), as they are appropriately termed, several of which inhabit our country. One of them, the Green Tiger Beetle, is plentiful on most waste ground where the soil is sandy. I well recollect my first acquaintance with this beetle.

I was little more than a boy at the time, and had gone out with an insect