

stouter or grosser forms, and their greater diversity as to size and shape; in the jaws of the highest species being perfunctionate to a less degree; and, very decidedly in their metasthenic nature as regards the wings, the anterior pair being only wing-covers or elytra. The mouth is mandibulate, and often rodent as well as feeding. In some species there is a degree of care for the young that approaches somewhat that in the Hymenoptera. They never live in communities for mutual work. The food, like that of Diptera, is various, being either vegetable, articulate-animal or vertebrate-animal, the last either living, freshly dead or decaying. The species are mostly perterrestrial. They are all prematurative.

*b. Hemiptera.*—Among Hemiptera the structures are rather laxly put together compared with those of Coleoptera, the body thinner and softer, the wings usually more or less overlapping; and their strength for the same size very much less. There are some of the same differences between Hemiptera and Coleoptera as between Diptera and Hymenoptera. Though never very large, they appear to be amplificate species,—sometimes broad-amplificate, being thin for their breadth, and sometimes long-amplificate. The elytra are coriaceous only in the basal half; and this thinning of the wing-covers comports with their being systemically weaker animals than Coleoptera. All the wings are sometimes obsolete, as in the Pediculi. The mouth is suctional, and simply gnawing and feeding in function. The species are mostly perterrestrial, and all are prematurative.

*c. Orthoptera.*—The Orthoptera also have a lax structure and rather soft bodies. They are either broad- or long-amplificate, and sometimes extravagantly so, and by their occasional great size, as well as the non-occurrence of very small species, they exhibit the low inferiority of unconcentration: they are low *because* large. The elytra are semicoriaceous. Both pairs of wings are sometimes obsolete. The mouth is mandibulate, and simply gnawing and feeding in function. The species are mostly perterrestrial, never semiaquatic; all are prematurative.

The Orthoptera include three grand subdivisions,—the *first* and *second* representatives respectively of Coleoptera and Hemiptera, and the *third* typical.

(1) The *Cursors* or *Coleopteroid* species consist of the Blatta and Forficula groups, which, though elongate, are still comparatively short in body, and much like Coleoptera; the wings in the Blattids are rather lax, and the bodies soft for the size.

(2) The *Ambulators* or *Hemipteroid* species, that is, the Mantids and Phasmids. The species are often thin and broad, and simulate leaves, bark and sticks in color and markings; and in this respect this group and the Hemiptera show an approximation. There is also some approach between these groups in the