

or nervous system, have not been referred to among the above characteristics, because (1) they often undergo very wide variations under a given type, and especially in its inferior or degradational subdivision; further, (2) when any internal condition is distinctive of a natural group of species, there is always some type or plan of general structure corresponding to it in limits; and (3) the type or plan of structure is the surest criterion as to whether a group is natural or not. As an example of this last, it may be observed that the *Radiate* or *phytoïd* plan or type of structure overrides vast diversities, as to the nervous, digestive and reproductive systems; and so it is, though to a less degree, with subordinate types or plans of structure. Herbivores and Carnivores, regarding only the characteristic of food, blend as completely as any Lamarckian could desire; for there are omnivorous species of both tribes. And again, looking to the characteristics of the *placenta*, a point seemingly of great importance because connected with the process of development,—a *decidua* is developed, according to Huxley, in the *Herbivorous* Elephant and Hyrax, as well as in the Carnivores and higher Mammals, Bats, Insectivores and Rodents, but not in the Horse, Hogs, or Ruminants. And still Carnivores and Herbivores are in structure distinct natural groups. Besides other decisive distinctions, the former have without exception prehensile fore-feet, while in the latter, these organs are defunctionated of this power of prehension, and are simply locomotive organs.

#### CLASSIFICATION OF INSECTS.

The three grander subdivisions of Insects have been indicated in Article I, on page 344—namely (1) *Prosthenics* or *Ctenopters*, (2) *Metasthenics* or *Elytroters*, (3) *Thysanures* or *Apters*.

The transition from the Prosthenics to the Metasthenics has been shown to depend on a transfer of force and function away from the systemic centre; and this by an abrupt transition, producing an abrupt downward step in grade.

This *retroferent* transfer is exhibited prominently in the wings, the *anterior* wings in the Metasthenics having little or no use in flying. These organs have been stated to have eminent importance in the order of Insects because the type is *aërial*. There is additional reason for this importance in the fact that the *dorsal* side of an animal is the *superior*, and the *ventral*, the *inferior*; or, the former is the more *central* in the life-system, and the latter the more *circumferential*.

As the series of legs, as well as wings, may present cases of transfer of locomotive functions, the terms *Prosthenics* and *Metasthenics* become more precise if reference to the wings is included. They will thus be (*πτερον* being the Greek for wing) (1) *Pteroprosthenics*, and (2) *Pterometasthenics*. The two-winged species