amplification for any given size; and (3) structures below the archetypic size in inferior groups may be amplificate upon smaller life-systems. Thus the gigantic size of some beetles is evidence of their inferiority to the Hymenopters, however it may be among Coleopters themselves; the great size of some Longicorn Coleopters is unquestionably a mark of inferiority among Coleopters, as they belong to an inferior subdivision of the tribe of Coleopters; the extravagant size of some Orthopters is a mark of much lower inferiority, as this type is one of the lowest in rank; and the moderate size among Hemipters, which does not exceed the mean size of Coleopters, is amplificate, since the Hemiptertype is much inferior to the Coleopter-type.

b. Dipters.—The Dipters vary widely as to general form of body, and considerably in size, though never attaining the magnitude of some Coleopters; but in their wings and legs there is a general uniformity. The integuments are less firm than in Hymenopters. The mouth is simply suctorial, and self-feeding is the only function. Individuals never live in communities. The food is various, either vegetable, articulate-animal, or vertebrateanimal, and either living, freshly dead, or decaying. The species are mostly perterrestrial,—one group among the attenuate, and therefore inferior, kinds being semiaquatic.

The rudimentary condition of the posterior wings in Dipters is attended with (1) an enlargement of the mesothorax (the segment supporting the anterior pair) at the expense of the metathorax (or posterior segment of the thorax), and (2) an increased size in the wings, making their surface nearly equal to that of both pairs in Hymenopters. It is hence an example of forward transfer of function, such as attends higher cephalization, and not of ellipsis through degradation. But while this characteristic proves cephalic concentration, others of this type show that the degree of force thus concentrated is far less than that of the Hymenopter-type. For the Dipters evince in all points their inferiority:-for example, in the structure or functions of the mouth, in their vastly wider limits of variation as to shape and size, in their many imitations of Hymenopters, in the semiaquatic life of some species, their less strength as compared with size, their habits, &c. It is stated on page 12 that the transition from Hymenopters to Dipters is an example of a general lowering of grade not referable to the particular methods of cephalization enumerated; that is, it is a case of profound potential difference registered in the general structure rather than in any one structural characteristic.

The foot note on the preceding page states some of the relations between Dipters and Hymenopters. On this point Westwood says: "It seems to be admitted on all hands that the Insects which are the real analogues of the Hymenopters exist in AM. JOUR. SCI.—SECOND SERIES, VOL. XXXVII, NO. 109.—JAN., 1864.