opening laterally from the cavity of the intestine, and having no other outlet. Structures of this description have already been noticed in the infusoria,* and they are met with, indeed, in animals of every class, occurring in various parts of the alimentary tube, sometimes even as high as the pyloric portion of the stomach, and frequently at the commencement of the small intestine. Their most usual situation, however, is lower down, and especially at the part where the tube, after having remained narrow in the first half of its course, is dilated into a wider cavity, which is distinguished from the former by the appellation of the great intestine, and which is frequently more capacious than the stomach itself. It is exceedingly probable that these two portions of the canal perform different functions in reference to the assimilation of the food: but hitherto no clew has been discovered to guide us through the intricacies of this difficult part of physiology; and we can discern little more than the existence already mentioned, of a constant relation between the nature of the aliment and the structure of the intestines, which are longer, more tortuous, and more complicated, and are furnished with more extensive folds of the inner membrane, and with larger and more numerous cæca, in animals that feed on vegetable substances, than in carnivorous animals of the same class.

The class of *Insects* supplies numberless exemplifications of the accurate adaptation of the structure of the organs of assimilation to the nature of the food which is to be converted into nutriment, and also of the general principle that vegetable aliment requires for this purpose longer processes and a more complicated apparatus, than that which has been already animalized. In the herbivorous tribes, we find the œsophagus either extremely dilatable, so as to serve as a crop, or receptacle for containing the food previous to its digestion, or having a distinct pouch appended to it for the same object: to this there generally succeeds a gizzard, or apparatus for

* Page 73, of this volume.