

classes of animals, and next to that of Mammalia, also the most important. Although Flies develop a greater variety of genera and species than all other animals taken together, yet these are all in reality only superficial variations of a single type, which is entirely and constantly preserved in its essential characteristics. In all Flies the three divisions of the trunk—head, breast (thorax), and hinder body—are quite distinct. The *hinder body*, or *abdomen*, as in the case of spiders, has no articulated appendages. The central division, the *breast* or *thorax*, has on its ventral side three pairs of legs, on its back *two pairs of wings*. It is true that, in very many Flies, one or both pairs of wings have become reduced in size or have even entirely disappeared; but the comparative anatomy of Flies distinctly shows that this deficiency has arisen only gradually by the degeneration of the wings, and that all the Flies existing at present are derived from a common, primary Fly, which possessed three pairs of legs and two pairs of wings. (Compare p. 256.) These wings, which so strikingly distinguish Flies from all other Arthropoda, probably arose, as has been already shown, out of the tracheate gills which may still be observed in the larvæ of the ephemeral flies (*Ephemera*) which live in water.

The head of Flies universally possesses, besides the eyes, a pair of articulated feelers, or antennæ, and also three jaws upon each side of the mouth. These *three pairs of jaws*, although they have arisen in all Flies from the same original basis, by different kinds of adaptation, have become changed to very varied and remarkable forms in the various orders, and are therefore employed for distinguishing and characterizing the main divisions