

characters,—as, for instance, the mouth-organs and feet,—these so-called species differ from one another very little or not at all, the only distinctions being in the form and proportions of the various parts of the body, and sometimes in the structure of the antennæ. Many of the described species are doubtless distinct and well marked, but I cannot resist the conclusion that not a few have been founded on variable and uncertain characters,—the form and proportions of the abdomen and caudal stylets, for instance, often varying very considerably amongst specimens which, as it seems to me, ought to be referred to a single species, perhaps at different stages of growth or of slightly different race. Between the two sexes there is usually a marked difference of form and colour, the male being generally of a broadly ovate shape, without any distinct constriction or line of separation between abdomen and thorax, and being, moreover, often highly iridescent or opalescent; the females, on the other hand, are devoid of colour, or nearly so, and the abdomen is generally much narrower than the cephalothorax, and separated from it by a distinct constriction. The abdomen is five-jointed in both sexes; the cephalothorax usually also five-jointed, but occasionally the first segment is incompletely (or altogether) divided so as to form a sixth segment. There may be slight sexual differences in the anterior antennæ, and the posterior antennæ are usually more robust and more strongly armed in the male than in the female. The mouth-organs are small and crowded together, consisting of a stout falciform mandible which has ciliated margins but no teeth; a subquadrate, sparingly setiferous maxilla, and two pairs of foot-jaws,—the anterior quite rudimentary, small, and subtriangular, the posterior stouter and simply unguiculate at the apex. The anterior antennæ are usually short and five- or six-jointed, more or less setiferous, and nearly alike in the two sexes; the posterior are larger, stout, prehensile, and strongly clawed; in the female usually more slender and with weaker armature. The eyes are complex, consisting of a small, median, “unpaired” eye, somewhat vesicular in appearance, and of two much larger “paired” or “lateral” eyes, each of which is composed of an anterior conical lens and a posterior more or less distant vitreous body, with which is connected a long, fusiform, and variously-coloured pigment body.

The nervous system, owing to the considerable size and frequent glassy transparency of the animals, is much more plainly visible than in most Copepoda, and consists of a large central ganglion lying a little behind the eyes, and giving off numerous branches to the limbs, viscera, and tegumentary structures.

The alimentary apparatus—stomach, intestine, and liver—and the generative organs in both sexes occupy a large part of the body cavity, but call for no special remark here. Indeed in spirit-hardened specimens the internal structure becomes almost totally obscured and unfitted for minute examination. Hæckel has proposed to divide the genus *Saphirina*, into two sub-genera,—*Pyromma* (or *Saphirina* proper), and *Cyanomma* (or *Saphiridina*), the following being the characters on which the separation is based.