

it in the contrary direction, and complete the circuit of its course. The ramifications and lateral connexions of the minuter branches are often so numerous as to compose a vascular net-work, covering a considerable extent of surface. This general description of the circulatory system is applicable to the tribes of Annelida possessing the simplest structure, such as the *Nais*, the *Nereis*, and the *Leech*; genera which include a great variety of species of different shapes and sizes.

Although the vessels themselves may be plainly discerned, it is not so easy to determine the real course which the blood takes while circulating within them; and we accordingly find very great discordance in the reports of different physiologists on this subject. De Blainville asserts that in all the Annelida, the blood in the dorsal vessel is carried backwards, that is, from the head to the tail; a motion, which, of course, implies its return in the contrary direction, in either the lateral or the abdominal vessels. In the *Nais*, the *Nereis*, and the *Leech*, these last vessels are two in number, situated at the sides of the abdominal surface of the body. Carus adds his testimony in favour of this mode of considering the circulation in the Annelida. On the other hand, Spix, Bonnet, Sir Everard Home, and Dugès, describe the course of the blood as quite the opposite of this, and maintain that it moves backwards, or towards the tail, in the abdominal vessels; and forwards, or towards the head, in the dorsal vessel. Morren, who is the latest authority on this subject, gives his testimony in favour of the latter view of the subject, as far as relates to the dorsal vessel of the *Erpobdella vulgaris*,\* an animal allied to the *Leech*, and already noticed in the account of the mechanical functions of this tribe:† but he considers the abdominal vessel as performing also the same function of carrying the blood forwards towards the head, and the two lateral vessels as conveying it backwards, thus completing the circuit. This is illustrated by the diagram

\* *Hirudo vulgaris*. (Linn.) *Nepheleis vulgaris*. (Savigny.)

† Vol. i. p. 195, where a delineation of this animal was given, Fig. 130.