

Branchiæ or *Gills*; and the arteries which bring the blood to them are called the *branchial arteries*; the veins, which convey it back, being, of course, the *branchial veins*.

The larger *Crustacea* have their branchiæ situated on the under side of the body, not only in order to obtain protection from the carapace, which is folded over them, but also for the sake of being attached to the haunches of the feet-jaws, and thoracic feet, and thus participating in the movements of those organs. They may be seen in the *Lobster*, or in the *Crab*, by raising the lower edge of the carapace. The form of each branchial lamina is shown at c, in Fig. 354:* they consist of assemblages of many thousands of minute filaments, proceeding from their respective stems, like the fibres of a feather; and each group having a triangular, or a pyramidal figure. The number of these pyramidal bodies varies in the different genera; thus, the lobster has twenty-two, disposed in rows on each side of the body; but in the *Crab*, there are only seven on each side. To these organs are attached short and flat paddles, which are moved by appropriate muscles, and are kept in incessant motion, producing strong currents of water, evidently for the purpose of obtaining the full action of that element on every portion of the surface of the branchiæ.

In the greater number of *Mollusca*, these important organs, although external with respect to the viscera, are within the shell, and are generally situated near its outer margin. They are composed of parallel filaments, arranged like the teeth of a fine comb; and an opening exists in the mouth for admitting the water which is to act upon them.† In the

* Page 193, of this volume.

† These filaments appear, in many instances, to have the power of producing currents of water in their vicinity by the action of minute cilia, similar to those belonging to the tentacula of many polypi, where the same phenomenon is observable. Thus, if one of the branchial filaments of the fresh water muscle be cut across, the detached portion will be seen to advance in the fluid by a spontaneous motion, like the tentaculum of a polype, under