

the form of the flagellum of the maxillipeds of the crabs, and serves to retain the eggs in the thorax of the mother," p. 49.

The Crustacean mouth-opening is described, p. 61, as bounded in front by a small horny or bony plate called the labrum or upper lip, and behind by a plate, generally bifid, called the tongue, *languette*, but which "might better be called the lower lip." The sides of the mouth are occupied by the mandibles, "which often carry an articulated appendage, that has been called the mandibular palp, but which appears to be the continuation of the stem of the limb, and not the analogue of the part above-called the palp." After treating of the maxillæ and maxillipeds, he comes to the *Canal digestif*, which runs from the mouth to the anus, which is always in the terminal segment. This canal is composed of three parts, the œsophagus, stomach and intestine. In the *Edriophthalma* he observes that the stomach is constructed on essentially the same lines as in the *Podophthalma*. He notes, p. 72, that in *Orchestia* "there exist in the anterior part of the stomach, near its œsophageal opening, two little ciliated teeth." These are the structures for which in this Report the expression *tritulating organs* has been adopted. On page 80 he remarks that "in the Amphipoda and Læmodipoda it is the flagella (*les fouets*) of the thoracic limbs that appear specially assigned to the exercise of the respiratory functions; these organs, from eight to twelve in number, take the form of large membranous vesicles suspended below the thorax between the ambulatory feet, and a current of water set in motion by the natatory feet of the abdomen continually bathes them."

In describing the antennæ of Crustacea, p. 111, he says that the *tige* or stem is composed in general of a stouter part called the peduncle, with one, two, or three joints, and a more or less elongate terminal portion, many-jointed, which he calls "*tige terminale*." The "palp" takes the form either of a second terminal multiarticulate lash, fixed at the extremity of the peduncle, or of a large horny plate inserted at the base of the antenna, while the remaining accessory portion, when present, also constitutes a terminal lash (*un filet terminal*).

He notices, p. 113, that the Crustacea known under "le nom de *Talitres* ou de *Puces de mer*" must have the sense of smell, as they gather round decaying food after it has been buried. On p. 116 he gives the following account of the eyes as examined in "*Amphitoe Prevostii*" and a few other *Edriophthalma*; "chez ces animaux on trouve d'abord pour chaque œil composé une cornée lisse sans division; mais immédiatement derrière cette lame tégumentaire il existe une seconde tunique, de même nature et également transparente, qui y adhère intimement, et qui est divisée en une multitude de facettes hexagonales; derrière chacune de ces facettes ou cornéules est situé, comme d'ordinaire, un cristallin dont la face antérieure est convexe et dont la face postérieure, qui se prolonge en un cône à sommet obtus, est contiguë à un petit cylindre gélatineux, avec lequel le filet correspondant du nerf optique se confond." On p. 121 he says that in *Cyamus* there are two smooth eyes and two compound faceted eyes, as to which see Note on Savigny, 1816. He repeats the account of the nerve-system of *Talitrus* from a paper by Audouin and himself read in 1828, and at page 147 he says that, combining Rathke's observations with theirs, "on peut conclure que le système nerveux des Crustacés se compose toujours de noyaux médullaires dont le nombre normal est égal à celui des membres, et que toutes les modifications qu'on y rencontre, soit à diverses époques de l'incubation, soit dans différentes espèces de la série, dépendent principalement des rapprochemens plus ou moins complets de ces noyaux, agglomération qui s'opère des côtés vers la ligne médiane, en même temps que dans la direction longitudinale; mais peuvent tenir aussi en partie à un arrêt de développement dans un certain nombre de ces noyaux."

In the chapter on development it is remarked, page 199, that among the *Edriophthalma* the head is much larger [proportionally] in the young than in the adults, that the abdomen often shows analogous differences, and that when in the adult one of the pairs of feet exhibits some peculiarity of structure, the anomaly is either not found, or is little apparent, in the