

separated by a smooth, narrow space from the stomach folds; these folds could be traced as far as the anal papilla (Pl. V. fig. 2).—The *alimentary canal* contained a quantity of whitish, rather hard matter, which was less abundant in the œsophagus and intestine; it consisted of calcareous matter and numerous littoral Algæ,<sup>1</sup> among which were species of *Calothrix* and *Percursaria* (*Enteromorpha*) *percursa*, Ag., mixed with the débris of a species of *Cladophora*.<sup>2</sup>

Of the three divisions of the *liver*, which were all of a dark greenish-grey colour, the *anterior* (Pl. V. fig. 27, *f*) was 16·5 mm. broad by 9 mm. in breadth and 10 mm. in height; its shape was concavo-convex, and it was traversed on its upper surface from the right margin by three deep furrows, reaching almost to the middle, and dividing it into four portions; further it was divided into lobes by numerous smaller superficial furrows; the intestine occupied a furrow on its upper surface; the anterior liver opens into the first stomach (Pl. VI. figs. 6, *c*, 7, *c*), to the left of and above the cardia. The *lower* and smallest liver mass, lying beneath the anterior stomach (Pl. VI. fig. 7, *d*), was only 13·5 mm. in length, by 14 mm. in breadth and 4·5 mm. in height; it is somewhat flattened in form, and traversed by superficial furrows, and opens by a short bile duct below the cardia into the anterior stomach (fig. 6, *d*). Finally the *hindermost* and largest liver, divided from the anterior by the masticatory stomach, has a length of 22 mm., a breadth of 15 mm., and a height of 8 mm. (Pl. V. fig. 27, *g*; Pl. VI. fig. 7, *g*); from the left margin two furrows run into the middle, and so divide the liver into three lobes; it opens into the recess behind the masticatory stomach (Pl. VI. figs. 6, *g*, 8, *b*). The *bile ducts* are short but wide; the undermost is the shortest (fig. 6, *d*); the hindermost is the longest (fig. 6, *g*, 8, *bc*), and is divided into three or four branches, which are again subdivided, and can be followed into the smallest lobes. On the main bile ducts were here and there smaller and larger liver lobes (Pl. VI. fig. 10); the walls of the chief bile ducts are strong and muscular, the inside provided with longitudinal folds with a thick epithelium.

The inner wall of the *pericardium* (Pl. V. fig. 27) is thinner in front than behind, where it passes directly into the walls of the lung cavity; the outer wall of the pericardium is thinner. The contracted yellowish-white ventricle of the *heart* was (flattened and) pear-shaped, about 7·5 mm. long; the atrium generally 12 mm. long; the atrio-ventricular valves (Pl. VI. fig. 11, *a*) are crescentic, with numerous thin *habenæ musculares*; the aortic valves were also conspicuous. The *truncus aortæ* (within the pericardium) (Pl. V. fig. 27) is strong, and is prolonged in front along the right side wall of the body, and there gives

<sup>1</sup> These species were determined by help of the Algologist, Kolderup-Rosenvinge.

<sup>2</sup> In *Onchidium palaense*, S., I found the contents of the digestive tract to be calcareous matter and sand, among which were many Polythalamia, and this seems generally to be the case in *Onchidium*. Cf. Semper, Einige Bemerkungen über die Nephropneusten v. Jherings, *Arb. aus dem Zool. Zoot. Inst. in Würzburg*, Bd. iii., 1877, p. 484, Note 1 ("Sie fressen wie die Holothurien nur Meeressand"). According to Joyeux Laffuie (*loc. cit.*, p. 14), the *Onchidium celticum* appears to live upon Algæ, especially Ulvæ, but it swallows a small quantity of sand to aid it in mastication.