

The transverse vessels are large, and are provided with slight horizontal membranes (Pl. XXIX. fig. 14, *tr.*).

The endostyle is conspicuous; its course is very undulating (Pl. XXIX. fig. 15, *en.*). The nerve ganglion is large and almost globular in form.

The alimentary canal forms a narrow loop. The œsophagus is a slightly curved funnel-shaped tube (Pl. XXIX. fig. 15, *œ.*). The stomach is not large; its anterior end is wider than the posterior, and the wall is folded longitudinally. The intestine extends for a considerable distance behind the stomach (Pl. XXIX. fig. 15, *i.*), and then turns abruptly to the dorsal edge and anteriorly to pass into the long rectum which runs forwards along the dorsal edge of the abdomen and thorax (Pl. XXIX. fig. 15, *r.*).

The post-abdomen is variable in size. Some of those that lie detached in the lower part of the colony (Pl. XXIX. fig. 13) are larger than those forming parts of the Ascidi-zooids. Probably the separation of the post-abdomen from the remainder of the body is connected with a process of rejuvenescence in the colony, consisting in the death and expulsion of the older Ascidi-zooids and the formation of new ones from the detached post-abdomens. There was, however, no evidence in the colony examined that the latter process had commenced. Kowalevsky has shown that in *Amaroucium proliferum* a process of gemmation, resulting in the formation of new Ascidi-zooids in the old colony, takes place by the breaking up of the post-abdomen after its separation from the body of an old Ascidi-zooid.

A few large tailed larvæ, with almost globular bodies and two pigmented sense-organs placed close together, were found in the peribranchial cavities of some of the Ascidi-zooids.

This is one of those species in which the use of the post-abdomen as a distinguishing feature between *Aplidium* and *Amaroucium* might cause an error in classification. In some of the Ascidi-zooids the post-abdomen is shorter than the combined thorax and abdomen, and, therefore, judging from this character alone, the species is an *Aplidium*. The shortness of the post-abdomen, however, is merely the result of gemmation having taken place, and the species really belongs, I consider, not to *Aplidium* but to *Amaroucium* (see p. 200).

*Amaroucium hepaticum*, n. sp. (Pl. XXV. figs. 13, 14).

*The Colony* was probably of moderate size and rounded in form. It is of a pale liver-colour, and is smooth externally.

*The Ascidi-zooids* are small, not more than 2 mm. in antero-posterior extent, and very narrow; the body is not distinctly divided into regions.

*The Test* is rather soft except on the outside of the colony, where it is distinctly firmer and tougher. It is of a pale grey tint internally, and becoming gradually darker, passes into a pale liver-coloured tint in the outer layer. It is almost opaque. The