

We have never succeeded in detecting the inhalent openings of the chambers, nor, so far as we are aware, has any one else done so in a Monaxonid sponge. Possibly this is due partly to the fact that they are excessively minute and close up almost or quite entirely when the sponge is treated with reagents; and also to the difficulty in obtaining very thin sections of siliceous sponges. That they exist there can be no reasonable doubt, and there is no need for us to take refuge in the novel theory, recently propounded by Mr. Carter,¹ that the flagellated chambers ("ampullaceous sacs") have each only a single opening.

(5) The Exhalent Canal System.

We have been obliged, in speaking of the flagellated chambers, somewhat to forestall our observations on the exhalent canal system, and we have little to add. It is usually, at any rate in its finer ramifications, lacunar like the inhalent system; so that we have a system of interdigitating, ramifying lacunæ, some inhalent and some exhalent, separated from one another by the mesodermal tissues in which the flagellated chambers are embedded. This appears to be always the condition in the *Halichondrina* (Pl. XLVIII. fig. 2*d*; and Pl. XLIX. fig. 2), and, sometimes at any rate, in the *Clavulina* (Pl. LI. fig. 1*a*). But, as already pointed out, we may also, in the *Clavulina*, find narrow exhalent canaliculi leading away from the flagellated chambers, as in *Stylocordyla* (Pl. L. fig. 1*a*) and *Polymastia* (*Weberella*) *bursa*. The small exhalent channels gradually unite together into wider and wider and usually more and more definite canals, which ultimately open on to the surface at the oscula. Even in species in which the ultimate ramifications of the exhalent system are lacunar, the larger canals are usually perfectly distinct and definite, as, for example, in *Esperella murrayi* (Pl. XLVIII. fig. 2, *e.c.*) and *Latrunculia apicalis* (Pl. LI. fig. 1); and they are occasionally (*e.g.*, *Spirastrella solida*) provided with very definite, circular diaphragms, occurring at intervals, for the purpose of regulating the outflow of the water; while at other times (*e.g.*, *Latrunculia apicalis* and *Stylocordyla stipitata*, var. *globosa*) they are surrounded by a sheath of fibrous tissue which probably serves the same purpose.

(6) The Oscula.

The structures described under this name by various authors are not, in many cases, as pointed out already by Vosmaer, homologous one with another. Indeed, in the present state of our knowledge it is impossible to unravel the intricate question of the homologies of the oscula. In this work we shall, therefore, use the term in a purely

¹ *Ann. and Mag. Nat. Hist.*, ser. 5, vol. xix. p. 203, *et seq.*