And further: "Supposing that these invaginations of the gastric wall take place near one another, not so regularly, and that on their walls secondary invaginations arise in their turn; supposing that along with this a stronger growth of the connective tissue takes place, it becomes obvious that the ectoderm and endoderm cannot continue to progress side by side, in other words, that both the layers of epithelium can no more, as in the Ascon and partly in the Sycon, run parallel to each other. We have seen that in the Sycon the flagellated epithelium is confined to the radial tubes alone; if now in the case just mentioned it recede still more, we have the picture of the exhalent canal system of a Leucon. The ectoderm, which at first lay close upon the endoderm, is often displaced from the latter by the connective tissue; it cannot follow the invaginations of the endoderm throughout. And yet both the layers are, so to speak, attracted one to another, and where there is a less quantity of the mesoderm, the original pores break through. One may also picture to oneself the matter in this manner, that the ectoderm in its turn becomes invaginated, and that in this way the primitive form of the inhalent canal system originates. From what has been said above, there follows:—(1) that the radial tubes are a kind of flagellated chambers, although not complete homologues of these; (2) that Sycon being immediately derivable from Ascon, can also change into Leucon; (3) that the so-called simple Leucon is homologous with a simple Sycon or a simple Ascon, each of the three having the value of an individual ('individuum' of the third order)." [1]

If I understand Dr. Vosmaer rightly, he considers Leucones and Sycones to be divergent branches of the same bough of the genealogical tree, although not in the same sense as Prof. Hæckel. It will be proved, by and by, that it is not the case, that Leucones descend from Sycones, still less from a form representing a secondary, not primary, Sycon-type. Independently of this, I completely agree with the first and the third of his conclusions. Like Dr. Vosmaer, I regard the radial tubes as nothing but a kind of flagellated chambers; I also consider a Sycon as well as a Leucon to be homologous with an Ascon. But though agreeing with these two conclusions, I cannot do so with their postulates. Vosmaer says: "Now it is evidently profitable to the sponge that the surface washed by the water be great,' and, considering an eventual extension of the flagellated epithelium-layer to be a favourable factor in the struggle for existence, he tries to explain by it the metamorphosis of an Ascon into a Sycon. This opinion of Dr. Vosmaer has no foundation in fact. He regards a Sycon as better fitted for the struggle for existence than an Ascon. I am forced to remark that had Vosmaer been perfectly logical he would have come to an exactly opposite conclusion. For, compared with an Ascon, a Sycon is more scantily provided with flagellated epithelium: each of its tubes being physiologically equivalent to an Ascon, we have there the whole inner surface deprived of flagellated, and covered with pavement, cells. This is the difference between a Sycon and a colony of

[1] *Loc. cit.*, pp. 159, 160.