

with a protoplasmic substance, often containing nuclei. No doubt it is the protoplasmic epithelium which fills these latter canals. A nerve passes through them, and terminates at the surface of the cuticle in what Dohrn (*loc. cit.*, p. 38) calls a "Borstenapparat." Dohrn never observed a single seta¹ at the end of these canals; but always two or more (sometimes even a rosette of eight or nine) together. This observation of Dohrn's seems to be most accurate; as a rule I found the integument of the species of *Nymphon* furnished with forked setæ (Pl. XVI. figs 1, 2, 4, 7), one of the setæ being often split again (fig. 3); that of *Pallene australiensis* shows also forked setæ; the integument of *Ascorhynchus glaber* is also furnished with double setæ, which are here extremely small and rudimentary. One of the species of *Phoxichilidium* (*P. patagonicum*) shows a combination of four or five (Pl. XVI. fig. 17), while in another species (*Phoxichilidium pilosum*) two combined setæ are always observed.

In *Colossendeis* setæ are totally wanting; and thus in this respect the genus *Ascorhynchus*, with its rudimentary setæ, stands between *Nymphon* and *Colossendeis*.

According to Dohrn,² this pore-canal, which terminates in these forked setæ, "often" takes its origin from one of the integumentary cavities, which he saw filled up with glands. Dohrn therefore considers these setæ as tactile organs, having probably the special function of causing on irritation, by reflex action, the secretion of a poisonous fluid by the glands, which are situated in the conical cavities of the integument. I think this a very ingenious supposition, but I wish to state in opposition to it, that according to what I have seen of the matter—(1) as a rule the cylindrical and narrow pore-canals do not originate in the conical cavities; and (2) that the occurrence of the glands in the conical cavities is the exception, and that, as a rule, these cavities are empty or partly filled up with a protoplasmic substance, nuclei, blood-corpuscles, &c. In the different species of *Nymphon* it hardly ever happens that the pore-canal with the setæ takes its origin in a conical cavity; in the species of *Phoxichilidium* it does not seem to be so rare (Pl. XVI. fig. 17), even in these species, however, it is by no means the rule.

With regard to the form of the conical cavities, in the first place it must be mentioned, that they have a most regular conical shape in the different species of the genus *Nymphon*, and also in some species of *Pallene*. In *Phoxichilidium* they are of a more elongated form, and often a small lateral branch passes from the main canal near the extremity (Pl. XVI. fig. 17, *b*). The genus *Colossendeis* shows these cavities of a much more irregular shape. As a rule every cavity is bifid, and terminates in two narrow pore-canals (Pl. XVI. fig. 12, *c*). The cavities are usually almost quite filled up with protoplasmic substance. In this genus I once observed distinct cells, with large

¹ Huxley calls "setæ" all the hair-like processes from the fine microscopic down to stout spines, which are found on the outer surface of the cuticle (Crayfish, London, 1880, p. 197). I use the word here, and on the following pages, in a much more restricted sense; having already used the words hairs and spines for the integumentary appendages, I call "setæ" those which I consider as being more particularly of a sensory nature.

² *Loc. cit.*, p. 38.