simple or dichotomously branched cæca, attached one on each side of the medio-dorsal mesentery. But in several representatives of the Elpidiidæ, as, for instance, *Elpidia glacialis*, *Scotoplanes globosa*, *Scotoplanes robusta*, *Achlyonice paradoxa*, &c., there is only a single fascicle to be seen. As to their general appearance the generative organs of this order present a great resemblance to those of the Dendrochirotæ and the Aspidochirotæ, the former having two fascicles, the latter, with a few exceptions, but a single one.

Concerning the form, number, and size of the cæca which compose the reproductive organs, there exists a great variation in the different species. The cæca of *Oneirophanta mutabilis* are always unbranched, being more numerous, narrower, and more regularly cylindrical in the males than in the females (Pl. XLVI. figs. 6, 7). *Deima fastosum* has the generative cæca, six to seven in each fascicle, unbranched and cylindrical, (Pl. XLVI. fig. 8), while the other species of the same genus has each fascicle made up of five to six elongated very slender tubes, bearing larger and smaller spherical cæcal branches (Pl. XLVI. fig. 5). The reproductive organs in *Euphronides depressa* are very remarkable, for each fascicle—in the largest specimen, about 125 mm. long—is reduced to a single tube, the posterior half of which is greatly distended so as to take the shape of an oval elongated sac, covered with tuberculate protuberances (Pl. XLVI. fig. 4). In most cases, however, the reproductive organs of the Elasipoda are formed after the same plan as those in other Holothurioidea, wherefore I refer to the description of the species instead of detailing their shape here.

But the genital glands of the different sexes do not always quite agree with one another, of which fact *Benthodytes abyssicola*, *B. sordida*, &c. (Pl. XLVI. figs. 9 and 10), afford striking examples, their male organs being composed of very numerous and minute dichotomously branched cæca, while the female organs are very thin, and made up of comparatively very few, large and voluminous, slightly dichotomous cæca.

The single efferent duct, attached to the medio-dorsal mesentery, passes forwards and always opens in the medio-dorsal line, its communication with the exterior being commonly at a rather considerable distance from the crown of tentacles. As a rule, the genital aperture is situated immediately in the body-wall, but it is not infrequently placed at the top of a genital process, which in *Lætmogone* and *Ilyodæmon* attains a considerable length (Pl. XLIII. fig. 4, *c*, and Pl. XXXVIII. figs. 6, 7, 9). In one individual of *Lætmogone wyville-thomsoni* I noticed that this genital process bore a small branch near its middle, and in another specimen the top itself was divided into four parts.

A transverse section of the genital process shows very distinctly that it is built up of a very thick, dense, almost cartilaginous layer of connective tissue, the canal itself being thus very narrow. At the base it may easily be observed that this layer is composed of three different layers; the outer, which is a continuation of the integument of the body-wall itself, is separated from the inner, which has a yellow colour, by a dense