

first distinction, viz., that the carinal latus is flatter and has the umbo not so far projecting outwards, may arise from the difference in age, hence in size. Yet the largest specimen of the three is probably a full-grown one, as it is furnished with a complementary male at each side. The difference in the number of scales of the peduncle is very considerable. Whereas the number of horizontal rows is about equal to that of the full-grown specimen of Station 335, the number of scales in each horizontal row is only three or four.

The complementary males of this species are relatively large; there are not more than one on each side. One of these (attached to the left hand scutum of the largest specimen of Station 3) is still in the pupa-stage. I have figured it Pl. IX. fig. 7. It has all the characteristics of a true pupa of a Cirriped; however, one feels inclined to say that the interior of the body is only feebly developed. The specimen figured in Pl. IX. fig. 8 has been taken from the right hand scutum of the full-grown *Scalpellum velutinum* from Station 335. In this male the retrogressive metamorphosis is already far advanced. The body is covered by a mantle clothed with numerous slender spines, and having two openings or slits, one anteriorly, through which the prehensile antennæ are stretched forth, and the other at the posterior extremity, which lets out a tuft of very delicate hairs. These hairs were originally attached to the six pairs of rowing feet of the pupa, but of these feet only the exuviae are still visible. Of the interior of this young male the testis (*t.*), with a part of the vas deferens, is easily distinguished, and so are two glandular bodies, which, to judge from their position, probably represent the cement glands (fig. 8, *c.gl.*). The complementary male taken from the right side of the largest specimen from Station 3 is a well-developed one. At least its metamorphosis is finished, and the body, enclosed by the mantle with its slender spines, contains a large testis, with well-developed receptaculum seminis. I have figured this male in fig. 9 of the same plate. With regard to the size of the different stages, the length of the pupa-stage of fig. 7 is 1.3 mm.; the more advanced pupa-stage of fig. 8 measures only 1.1 mm., and the well-developed male of fig. 9, 1.2 mm. So we see that the size during the retrogressive metamorphosis slightly diminishes.

When we consider 1st, that it has been proved that in *Scalpellum stroemii*, Sars, the metamorphosis of the Nauplius-larva into the Cypris takes place within the mantle cavity of the mother; 2nd, that a larva in the Cypris-stage in different species of the genus *Scalpellum* (*Scalpellum velutinum*, *Scalpellum eximium*, &c.) has been observed at the place occupied also by the complementary male; and 3rd, that stages forming a link between the larva and the male itself have been observed at the same place—we may trace the life-history of these males in the following words:—

- a. Species of the genus *Scalpellum* (whether all of them, or only those which inhabit the deep sea, cannot be said with certainty) have lost the Nauplius as a free swimming larval stage.
- b. After the metamorphosis into the Cypris-stage, some of them become