dried, to demonstrate the absence of the vesiculæ seminales and testes. The male animals were lodged in a pouch on the under side of the scutum, and in that case should not bear the name of "complemental" males. From the state of the specimens of *Scalpellum rutilum*, Darwin, which Darwin examined, it was quite impossible to ascertain whether the individual was a hermaphrodite or a female; from the analogy of its nearest congener, *Scalpellum ornatum*, the latter, Darwin says, is the more probable.

Darwin's supposition as to the unisexuality of some species of *Scalpellum* proves to be in very striking accordance with the facts. What I at first considered to be the hermaphrodite form of *Scalpellum regium* (Wyv. Thoms.), Hoek, is not furnished with a penis, and does not show a trace either of a testis or a vesicula seminalis. To have full certainty in this respect, I divided the whole thoracic part of the body of a specimen of this species into a series of sections, and in none of them did even the smallest trace of a part of the male genital apparatus appear. The body was stained *in toto* by means of aluminium carminate, a most brilliant staining for the testis and for the spermatozoa within the vesicula seminalis when present. I then repeated the examination of *Scalpellum vulgare*, Leach; I found the animal a true hermaphrodite; it is furnished with a well-developed penis, and the vesiculæ seminales have exactly the structure of these organs in species of the genus *Lepas*. The only difference is shown in their small size. Slightly more developed testes pour out their products into the vesiculæ seminales.

The specimen of *Scalpellum regium*, of which I examined a series of sections, was a full-grown animal; it was furnished with males and there were ova in the ovigerous lamellæ. I got the same results when making a series of sections of *Scalpellum parallelogramma*, Hoek (Pl. IV. fig. 9), and *Scalpellum nymphocola*, Hoek (Pl. IV. fig. 10). So I think that we may safely draw the following conclusions:—

There are species of the genus *Scalpellum*, Leach, which show a very characteristic dimorphism. Some of these consist of large hermaphrodite and small rudimentary male specimens; others have large female and small rudimentary male forms.

However, I do not believe that these are the two most divergent cases in the sexual relations of the genus *Scalpellum*. I think there is still a third category of species in this genus, viz., those which are as true hermaphrodites as other Cirripedia, and in which no complemental males are developed. As a supposed species of this third division I will point out *Scalpellum balanoides*, Hoek. In the descriptive part of my report I have communicated the fact (p. 130) that one of the specimens contained eggs, though no complemental male was present at the place it ordinarily occupies. Though I have studied some more specimens of this species with great care, I have not once observed a male; yet they were nearly all furnished with eggs. I then studied the body of one of the specimens by the aid of transverse sections (Pl. IV. fig. 8, *a–f*); I found that the specimen was furnished with a very largely developed testis greatly surpassing the same organ in *Scalpellum vulgare*. The penis of this specimen was also of considerable