

one of these I will point out myself. Those species which are unisexual and have very small and rudimentary males, which, therefore, according to the sketch given above, are the youngest of the hypothetical course in which the different stages of sexual differentiation have developed, are at the same time those which closely resemble the species from the oldest geological strata from which species of *Scalpellum* are known. But I think this objection is weakened by admitting that the sexual differentiation in the genus *Scalpellum* was already achieved at the period from which these fossil remains date. The somewhat aberrant shape of *Scalpellum balanoides*—the species in the supposed original condition of true hermaphroditism—is also difficult to explain at first sight. We might have expected to observe the original condition (hermaphroditism without complementary males) in a species as closely resembling *Pollicipes* as possible, as, for example, in *Scalpellum villosum*, Leach, sp. ; or *Scalpellum trispinosum*, Hoek.<sup>1</sup> The condition of the genital apparatus and the external shape of the valves (the whole capitulum), however, are two factors which need not necessarily stand in so very close a relation to each other. So it may be easily imagined that the original condition of the sexual apparatus is left in a form in which the external shape of the capitulum has been altered, and, on the other hand, there is no reason why the sexual relations of a form should not become altered without the external shape undergoing considerable changes at the same time.

When, however, all these considerations are weighed I do not believe that there are trustworthy grounds for doubting the exactness of the hypothesis that in the genus *Scalpellum* the hermaphroditic condition is the original, and the unisexual the secondary stage in the development.

<sup>1</sup> I did not observe the male of *Scalpellum trispinosum*. I suppose that this species is furnished with a complementary male with capitulum and peduncle from its resemblance to the species *Scalpellum villosum*. I did not study its genital apparatus. I can only say that it is furnished with a well-developed penis.