

not covered laterally by the free edges of the rostral latera, seventeen have the rostrum laterally covered.

For the right understanding of the nomenclature used for the valves and their margins in the genus *Scalpellum* the woodcuts figs. 1 and 2 will prove useful.

Fig. 1 represents a *Scalpellum* with a rostrum, and therefore with fourteen valves. Fig. 2 one without a rostrum, having therefore only thirteen valves. (A species with a sub-carina is figured on Pl. III. fig. 19.) In most valves the umbo is situated at the same place in both figures. The exceptions to this rule are the upper-latus, infra-median latus, and carinal latus. The upper latus, as a rule, has the umbo at the apex, as in fig. 1. In *Scalpellum distinctum*, n. sp. and *Scalpellum planum*, n. sp. however, it is nearly in the middle of the scutal margin. The infra-median latus, ordinarily, is triangular, and in that case it has the umbo at the apex. Sometimes, however, its shape is that of an hour-glass or of an elongate wine-glass on its stand, and then the umbo is seated near or under the middle of the valve. Very interesting are the differences which the carinal latus shows in the different species. There are two types which are represented in the two figures 1 and 2. In fig. 1 the valves of the lower whorl (the rostrum—when there is one—the rostral latus, the infra-median latus, and the carinal latus) are not very much developed in the direction of the long axis of the capitulum. On the contrary, the same valves are much higher or more elongate in the other type (fig. 2). This influences the shape of these valves, but specially that of the carinal latus. In the one (fig. 1: type, *Scalpellum maximum*, Darwin) the umbo is placed at the apex, as closely as possible to the upper latus. In this case the whole of the carinal margin of this valve extends beneath the umbo. In the other case (fig. 2: type, *Scalpellum vulgare*, Leach) the umbo is placed at a somewhat considerable distance from the apex, and then either at the base of the carinal margin or about the middle of that margin.

These two forms of the carinal latus were known to Darwin. It is curious enough that all the recent forms known to Darwin have the carinal latus of the shape of fig. 2, and all the fossil forms in which he was able to describe this valve—with the exception of one—show the type of fig. 1. However, this latter type is also represented in the living forms; a considerable number of the species inhabiting the deep-sea and dredged by the Challenger give proof of it. There are in all thirteen species corresponding with the fossil *Scalpellum maximum* with regard to the form of the carinal latus, and nine of these inhabit a depth greater than 500 fathoms. On the other hand, we must not lose sight of the fact that of the remaining twenty-nine species only three were taken at a depth less than 500 fathoms; that the other type, therefore, is represented by twenty-six species in the deep-sea! In the case of the present genus we find, therefore, that the abyssal fauna consists partly of species resembling fossil forms, and for a much more considerable part of species of a true shallow-water type.

Nor does the study of the form of the carina give a more decided result. Darwin