

Sycandra arctica, *Sycandra ramosa*, *Sycandra compressa*, *Sycandra utriculus*, and *Sycandra hystrix*. For my own part I must emphatically deny their "intercanal-less" nature. It will be proved later that the seventeen species just named belong not to seven, but only to three genera, *Sycon*, *Grantia*, and *Amphoriscus*. I found amongst the Challenger sponges the representatives of all the three genera. I had examined also *Sycon utriculus* (*Sycandra utriculus*, H.), *Grantia compressa* (*Sycandra compressa*, H.), and *Amphoriscus chrysalis* (*Sycilla chrysalis*, H.), and wish to lay stress upon the fact that the specimens of *Sycon utriculus* and *Amphoriscus chrysalis* were obtained from the collections revised twelve years ago by Prof. Hæckel himself, and that *Grantia compressa* is a sponge so well known that there can be no doubt that the specimens I have had for investigation belonged to this species. Though not nearly so regular as in some other cases, the intercanals could always be very easily found—their course in *Sycon arcticum* and *Grantia tuberosa* is represented in Pl. III. figs. 5 and 6, in *Amphoriscus poculum* and *Amphoriscus elongatus* in Pl. IV. figs. 4 and 5. And there is no doubt that what Hæckel declares to be "dermal ostia" and "dermal pores" in the individuals of his "Syconusa-type" were merely the pores of the intercanals, and that what he calls "conjunctive pores" (*loc. cit.*, p. 260), these latter uniting, according to him, the cavities of the radial tubes, were nothing but the common pores on the side-walls of the radial tubes connecting these latter with the intercanals. To any one who will notice Prof. Hæckel's remark (*loc. cit.*, Bd. i. p. 248) that these "conjunctive pores" are best to be observed in sections of *dry* Sycones, the error into which he fell will be easily comprehended. The refutation of these erroneous statements has not only an anatomical, but also a systematic weight. There is in the genus *Sycandra* a whole sub-genus, whose principal character is, according to Hæckel, the non-existence of the intercanals, and I fancy I am very near to the truth in my supposition that it was merely the finding of quite evident intercanals which induced Dr. Vosmaer, in his report on the sponges collected by the "Willem Barents,"¹ to put a query before his diagnosis of the three Calcarea determined by him as *Sycandra compressa*, *Sycandra utriculus*, and *Sycandra arctica* (*loc. cit.*, p. 4). These three Sycones possess such a characteristic set of spicules that I really cannot find any other explanation, except the above mentioned, for Dr. Vosmaer's remark that the specimens in question being very small he could not obtain sections enough for a thorough examination.

With regard to the Leucones, there are in Prof. Hæckel's Monograph still more serious errors. He distinguishes four modifications of their canal system. The first modification is termed "dendroid" ("baumförmig"), and is characterised as follows:—"The dendroid type is, the most primitive and simple, but nevertheless the rarest modification. It is to be found in *Leucetta primigenia*, *Leucyssa cretacea*, *Leucandra*

¹ Vosmaer, Report on the Sponges dredged up in the Arctic Sea by the "Willem Barents," in the years 1878 and 1879, *Niederländ. Archiv f. Zool.*, Supplement-Bd. i. 1882.