

*Sycon raphanus*, O. Schmidt.*Sycon raphanus*, O. Schmidt, Spong. d. adriatisch. Meeres, Bd. i. p. 14, 1862.*Sycandra raphanus*, Hæckel, Kalkschwämme, Bd. ii. p. 312.

There are amongst the Challenger Syconidæ two specimens which I determine as *Sycon raphanus*, var. *tergestinum*, H., their skeleton presenting no difference from that of the variety just named, and the chief specific character of *Sycon raphanus*, i.e., the slenderness of the subgastric triradiate spicules in comparison with other spicules of the skeleton, being expressed very clearly. Most of these slender spicules are clearly triradiate, some of them are provided with a short apical ray, rarely exceeding 0.05 mm. in length. This is, however, no special character of the Challenger specimens; I have also observed it in those from the Adriatic, and think it to be common to the whole species. Both the specimens proved to be full of Amphiblastulæ.

*Colour*.—Pale yellowish.

*Habitat*.—Station 135, October 16, 1873. Island of Tristan da Cunha. Depth, 60 to 90 fathoms; rock, shells. Station 209, January 22, 1875; lat. 10° 10' N., long. 123° 55' E.; Philippine Islands; depth, 95 to 100 fathoms; mud.

*Sycon arcticum*, Hæckel, sp. (Pl. III. fig. 5).*Sycandra arctica*, Hæckel, Kalkschwämme, Bd. ii. p. 353.

*Sycon arcticum* can be easily distinguished from all other species of the genus by the equal size of its tubar, gastric, and subgastric spicules, by their slenderness, and by the circumstance that most of the tubar spicules are not triradiate but quadriradiate, with a more or less developed apical ray.

There is also, according to Hæckel, another more important distinction, viz., the absence of the intercanals; but we have already seen that this is erroneous. The intercanals are in *Sycon arcticum*, as in every *Sycon*, in their usual places, and their course is represented on Pl. III. fig. 5. Both the Challenger specimens of the species, one from the Philippine Islands, the other from the Bermuda Islands, must be determined as var. *maximum*, H. I did not find any generative elements in the former; but, on the contrary, the specimen from the Bermuda Islands proved to be full of larvæ (Amphiblastulæ) and spermospores.

*Sycon arcticum* has hitherto been considered to be an exclusively arctic sponge; its distribution must now be extended southwards, but it is to be noticed that while its arctic forms belong to the largest of the Syconidæ, their body reaching 50 mm. in length