tendency towards sagittal differentiation, and the rays of the larger triradiate spicules being of still greater dimensions and rather stouter. They attain the length of 0·5 mm. with a diameter of 0·06 mm. I do not think that these differences would justify the establishment of a new variety.

Hitherto *Leucosolenia lamarckii* has been found only in the Atlantic; its distribution is now extended into the Pacific.

Colour.—White.

Habitat.—Station 163A, June 3, 1874; off Port Jackson, Australia; depth 30 to 35 fathoms; rock.

Leucosolenia blanca, Miklucho-Maclay, sp. (Pl. I. fig. 2; Pl. III. fig. 3).

Guancha blanca, Miklucho-Maclay, Jenaische Zeitschr., Bd. iv. p. 220, 1868.
Ascetta blanca, Hæckel, Kalschwämme, Bd. ii. p. 38.

No auloplegma-forms of *Leucosolenia blanca* had previously been observed with well-developed peduncle. Miklucho-Maclay (*loc. cit.*, p. 223) states that the Sponge can occasionally sink down instead of growing upright, and extend upon the ground in the form of a bolster. Such bolster-like specimens are the only colonies presenting the auloplegma-form, but their peduncles become rudimentary. Now both the specimens of this species collected by the Challenger, although without any trace of the osculum, are provided with a peduncle one and a half times as long as the longitudinal axis of the colony itself. Taking into consideration that the specimens observed by Miklucho were found in shallow water, while those of the Challenger Expedition, on the contrary, were dredged up from the depth of 450 fathoms, and further, that while no colonial specimens of Miklucho-Maclay exceeded 3 to 4 mm. in length, and 1·5 to 2·5 mm. in diameter, the larger Challenger specimen is 25 mm. long, with a broadest diameter of 15 mm.; taking all this into consideration, I think it very probable that the typical *Leucosolenia blanca* belongs to the comparatively deep-water forms. If this could be proved, the possession of a solid peduncle might be used as a generic character, and a new genus, *Guancha*, established amongst the Asconidæ. This conjectural genus would consist of *Leucosolenia blanca*, presenting a transition form to the sessile Asconidæ, of the species described by Metschnikoff,[1] and characterised by the horn-shaped triradiate spicules in the peduncle, and of my *Leucosolenia challengeri*.

Future investigations will decide the question, and meanwhile I establish for my two specimens a third variety with the following diagnosis:—

Leucosolenia blanca, var. *bathybia* (Pl. I. fig. 2).—Basal ray of the triradiate spicules not more than 1·2 to 1·5 times as long as lateral rays.

[1] Spongiologische Studien, *Zeitschr. f. wiss. Zool.*, Bd. xxxii. p. 361, 1879.