

end by an irregular broad basal plate. The mouth-opening—or the osculum (*o*)—on the opposite distal end is circular, 2 mm. in diameter. The total length of the sponge is 15 to 20 mm.

The opaque white body of this species is composed almost entirely of calcareous shells of Foraminifera and their fragments. After being dissolved in dilute hydrochloric acid, there remains a thin membranous wall, pierced by numerous small pores (*p*). These dermal pores are shown in fig. 2 in the complete body, although they are not distinct until the removal of the calcareous matter. On the inside of the thin wall were visible fragments of delicate epithelium, composed of small granular cells; these were, however, not so distinct as in the closely-allied *Ammoconia auloplegma* (Pl. VIII. fig. 4, *n*).

Genus 2. *Ammosolenia*,¹ n. gen.

Definition.—Ammoconidæ with arborescent body, forming tubular branches, which are not connected by anastomoses. Each branch with a terminal opening (osculum).

The genus *Ammosolenia* is derived from the preceding *Ammolyntus* by branching, and therefore bears the same relation to it as among the Calcareæ *Leucosolenia* (or, more strictly speaking, *Soleniscus*) does to *Calcolyntus*. The branched or arborescent body of the tubular sponge bears a number of thin-walled porous branches, and each of these has on the distal end a wide simple mouth-opening. Branched tubes like these are not rare in many deep-sea soundings of the Challenger collection, and are described by Brady in his Report on the Foraminifera (p. 274, pl. xxviii.) under the name of *Rhizammia algæformis*. Their arenaceous pseudo-skeleton is usually composed of Globigerina ooze, as also in our *Ammosolenia rhizammia*. But two important differences separate the latter from the former. The thin wall of the arenaceous sponge (*Ammosolenia*) is pierced by numerous small pores or inhalent openings (fig. 4, *p*), whilst the solid wall of the similar arenaceous Rhizopod (*Rhizammia*) is not perforate. The cavity of the branched tubes is lined in the former by a flagellated epithelium, filled up in the latter by simple sarcode or protoplasm. It must be recorded, however, that this sarcode, as the most important part, in *Rhizammia* as well as in many other large arenaceous Foraminifera, has not been demonstrated by observation, but only assumed theoretically. It may be, therefore, that many of these latter belong to our *Ammoconia* or similar Ammoconidæ.

Ammosolenia rhizammia, n. sp. (Pl. VIII. fig. 3).

Habitat.—Tropical Pacific, Station 216A; February 16, 1875; lat. 2° 56' N., long. 134° 11' E.; depth, 2000 fathoms; bottom, Globigerina ooze.

¹ *Ammosolenia* = Arenaceous tubes, ἄμμα, σαλήνιον.