

only partially incorporated sponge-spicules with which it delights to surround itself. It has a tolerably distinct bulbous primordial chamber, and the tubular limb issuing from it is wide and trunk-like at first, but narrower as it becomes subdivided. The finer ramifications are more uniform in diameter, and are exceedingly thin and fragile. Specimens are seldom obtained in even approximately perfect condition, and very rarely show the initial chamber, but fragments of branching arenaceous tubes, easily recognised as belonging to the species, are exceedingly common in deep-sea material from almost every part of the world. Such fragments are often triradiate, and bear some resemblance in form to *Rhabdammina*, but they are looser in texture, lighter in colour, and smaller than radiate specimens of the latter genus, and the tubular rays are less straight and regular.

The best specimens of *Hyperammia ramosa* hitherto met with occur at one of the "Porcupine" Stations in the North Atlantic, south of Rockall Bank, 630 fathoms, and at one of the Challenger Stations in the North Pacific, 2050 fathoms; but fragments present themselves at depths of from 60 fathoms to 3000 fathoms wherever arenaceous organisms abound. It was one of the species obtained on the Austro-Hungarian North-Polar Expedition, off Franz-Josef Land, at about lat. 80° N.

Broken specimens have been found by Dr. Haeusler, associated with *Hyperammia vagans*, in some of the Jurassic beds of the Canton Aargau, Switzerland.

*Hyperammia arborescens*, Norman, sp. (Pl. XXVIII. figs. 12, 13).

*Psammotodendron arborescens* (Norman, MS.), Brady, 1881, Denkschr. d. k. Akad. Wiss. Wien, vol. xliii. p. 98, No. 13;—Ann. and Mag. Nat. Hist., ser. 5, vol. viii. p. 404.

Test in the form of an erect branching arenaceous tube growing attached at the base. Basal or primordial portion consisting of a more or less inflated chamber; main stem and branches of nearly even diameter, cylindrical, compactly cemented, nearly smooth externally, and brown in colour. The ends of each branch rounded and contracted, so as to leave an irregular orifice with thickened lip. Entire length about  $\frac{1}{8}$ th inch (5 mm.).

This interesting form was discovered by the Rev. A. M. Norman growing on a polyzoan (*Menipea ternata*) dredged during the cruise of the "Valorous," off Holstenborg, Greenland, at a depth of 20 fathoms, and the name *Psammotodendron arborescens* was at first assigned to it. The original specimen, figured in Pl. XXVIII., was most kindly lent to me by Mr. Norman when it was the only known example that was even approximately perfect. Quite recently however, the species has been found in some abundance by Mr. David Robertson, off Cumbrae, on the west coast of Scotland, and the specimens from that locality elucidate one or two points not previously apparent. The most important of these is that the stem, instead of commencing abruptly in the