

dition. The finer and smaller fragments were almost wholly made up of broken pieces of larger shells. The small specimens and primordial chambers, so common in shallower deep-sea soundings, were nearly absent. In the same way Rhabdoliths were not complete, if present at all, and the Coccoliths were very minute. The mineral particles in the soundings along the African coast sometimes reached 0·7 mm. in diameter, but in Mid Atlantic they seldom exceeded 0·05 mm. Quartz and glauconite were present only in the deposits near the African continent, the mineral particles in the other deposits consisting of fragments of felspars (sanidine), magnetite, hornblende, and glassy rocks. Radiolarians, Diatoms, Sponge spicules, and arenaceous Foraminifera never made up more than 3 per cent. of the deposits, which were of a red or rose colour, except in a few of the soundings near the African coast, where they had a black or slate colour, owing, apparently, to the presence of fine mud or river detritus.

Pelagic organisms were very abundant at or near the surface throughout this trip, and the sea was brilliantly phosphorescent, especially on the evenings of the 14th and 16th August, off the African coast. The trawlings at 2500 fathoms and 1850 fathoms yielded many interesting deep-sea species, some of which are referred to in the following notes.

Balanoglossus. Dr. v. Willemoes Suhm writes as follows:—"Station' 101, 19th August 1873, 2500 fathoms. Among the worms there is a fragment of *Balanoglossus*. Originally discovered by Delle Chiaje in Naples, this worm remained unknown for a long time, until Kowalewsky came to that place and made astonishing discoveries in its anatomy, showing that *Balanoglossus* is an animal in which the beginning of the intestinal tube is in connection with a branchial apparatus similar to that which is found in Ascidians. There are, besides, so many peculiarities in the structure and anatomy of *Balanoglossus*, that Gegenbaur established for it a special order among the class of worms. The interest in *Balanoglossus* was subsequently increased when, four years ago, Metschnikoff published a paper in which he stated that *Tornaria*—the larva discovered by Joh. Müller, and since that time believed to be an Echinoderm-larva—was really the larva of *Balanoglossus*.¹ Another paper confirmed this supposition,² and quite recently A. Agassiz has shown more fully, in an American species of *Balanoglossus*, the metamorphoses which *Tornaria* undergoes.³ Two additional species are known from Naples, and one from Hellebek near Copenhagen. The one we got to-day was

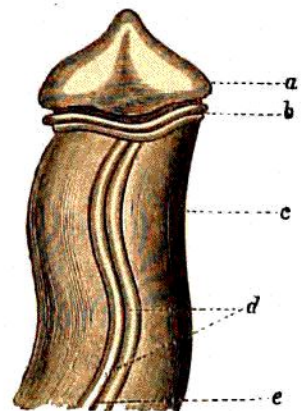


FIG. 78.—Fragment (head) of *Balanoglossus*, n. sp.; natural size. Station 101, August 19, 1873; lat. 5° 48' N., long. 14° 20' W.; depth, 2500 fathoms; a, proboscis; b, collar-like neck; c, body; d, walls of the branchial apparatus; e, median vessel. From a drawing by v. Willemoes Suhm.

¹ *Nachricht. v. d. Georg.-Aug. Univ. zu Göttingen*, No. 15, p. 287, 1869.

² *Zeitschr. f. wiss. Zool.*, Bd. xx, pp. 131-144, pl. xiii., 1870.

³ *Amer. Acad. Mem.*, vol. ix, pp. 421-436, 1873.