

From the records, this species is very widely distributed, but is characteristic of cold waters. The Arctic specimens do not have the same shape as those from the Pacific coast of America, for instance, and it may be that more than one species has been included by various writers under this specific name.

**Tholosina vesicularis** (H. B. Brady.)

*Placopsilina vesicularis* H. B. Brady, Quart. Journ. Micros. Sci. vol. 19, 1879, p. 51, pl. 5, fig. 2, Rep. Voy. *Challenger*, Zoology, vol. 9, 1884, p. 316, pl. 35, figs. 18, 19.—Heron-Allen and Earland, Proc. Roy. Irish Acad. vol. 31, pt. 64, 1913, p. 47.

*Tholosina vesicularis* Rhumbler, Arch. Prot., vol. 3, 1903, p. 227, fig. 53 (in text). Awerinzew, Mem. Acad. Imp. Sci. St. Petersburg, ser. 8, vol. 29, No. 3, 1911, p. 8.—Cushman, Bull. 104, U.S. Nat. Mus. pt. 1, 1918, p. 65.

A single incomplete specimen attached to a fragment of worm tube was obtained from station 20 b-c. It has the characteristic mosaic appearance on the exterior, due to the rather evenly distributed dark and light sand grains and the still lighter cement, the surfaces evenly placed so that the whole exterior is comparatively smooth.

*T. vesicularis* is a characteristic species of northern latitudes and cold waters. Awerinzew records it from 35-42 meters in the Siberian Arctic, and Kiaer from the Arctic, near King Oscar's land and Greenland. I have found it abundant in the cold water off the New England coast, and it is common in cold waters of the Shetland-Faroe channel, according to Heron-Allen and Earland.

**Ammobaculites cassis** (Parker.)

(Plate I, figure 3.)

*Lituola cassis* Parker, in Dawson, Canad. Nat., vol. 5, 1870, pp. 117, 180, fig. 3. *Haplophragmium cassis* B. H. Brady, Rep. Voy. *Challenger*, Zoology, vol. 9, 1884, p. 304, pl. 33, figs. 17-19.—Goës, Kongl. Svensk. Vet. Akad. Handl., vol. 25, No. 9, 1894, p. 24, pl. 5, figs. 152-157.—Flint, Ann. Rep. U.S. Nat. Mus., 1897 (1899), p. 275, pl. 19, fig. 4.—Awerinzew, Mem. Acad. Imp. Sci. St. Petersburg, ser. 8, vol. 29, No. 3, 1911, p. 20.

A rather broad form of this species occurred at station 20 b-c. The material of the test is made up of rather coarse quartz grains, smoothly cemented with a reddish brown cement, making a neat and even surface. Occasional sponge spicules are included in the test.

The species seems to be characteristic of cold shallow water of Arctic and subarctic regions. It was described by Parker from Gaspé bay, at the mouth of the St. Lawrence, in 16 fathoms. Brady records it from Lieveley harbour, Disko, Greenland, in 5-20 fathoms, and from Deva bay, Spitzbergen, in 7 fathoms. Flint records it from Portland, Maine, in 4-5 fathoms. Kiaer records it off Nova Zembla, at a depth of 15 fathoms, and Awerinzew from the Siberian Arctic, north of the New Siberian islands, at a depth of 38 meters.

**Haplophragmoides canariensis** d'Orbigny.

Specimens referred to this species were obtained at stations 23 and 43a. They are not typical. So many forms have been included under this name that the original characters, described by d'Orbigny, have nearly been lost sight of, and the name has come to stand for a varied assemblage of things. Under this name Awerinzew records specimens from several Siberian Arctic localities, but gives no figures or description. Further research may show that there is a characteristic Arctic species, which has been included under this name.