

Distribution of scaphopod molluscs (Mollusca, Scaphopoda) in the North Atlantic and Arctic oceans, based on materials of Russian and Soviet expeditions

Dmitry L. IVANOV*, Evgenia M. ZARUBINA**

*Zoological Museum of the Moscow State University, Bolshaya Nikitskaya Str. 6, Moscow, 125009, Russia. ivanovdl@zmmu.msu.ru

**Nature Protection Department, kvartal 60 let VLKSM, 18, Yuzhno-Kurilsk, Sakhalin Region, 694500, Russia.

ABSTRACT. The study of more than 700 lots of scaphopod molluscs collected by Russian and Soviet expeditions in 1898-1980 in the North Atlantic and Arctic ocean, has revealed the presence of six species of Scaphopoda: *Entalina tetragona*, *Siphonodentalium lobatum*, *Cadulus subfusiformis*, *Antalis entalis*; *A. agilis* and *A. occidentalis*. Previously recorded for the region *Pulsellum lofotense* was not found in the collection; information about localities, distribution, and ecological preferences is given for all the species found. In contrast to previous publications, only four species of Scaphopoda (*S. lobatum*, *C. subfusiformis*, *A. entalis* and *A. agilis*) were recorded in Russian territorial waters.

Scaphopod molluscs are very characteristic of bottom communities in the Arctic ocean and North Atlantic. Nevertheless, very rich materials collected by Russian and Soviet expeditions during more than hundred years were never examined, and there were no special publications on the distribution and ecology of Scaphopoda in the Russian seas. For the present work, we studied collections of the Zoological Museum of Moscow State University and the Zoological Institute of the Russian Academy of Sciences. In total, 709 lots (more than 1500 specimens) of Scaphopoda were identified (Table 1). Six species of 4 genera, 3 families and 2 orders were found.

Scaphopoda Bronn, 1862
Gadilida Starobogatov, 1974
Entalinidae Chistikov, 1979

Entalina Monterosato, 1872

Type species: *Dentalium tetragonum* Brocchi, 1814 (OD)

Entalina tetragona (Brocchi, 1814)

(Figs. 1D, 2)

Dentalium tetragonum Brocchi, 1814: 627.

[= *Dentalium quinquangulare* Forbes, 1844; *Siphonodentalium pentagonum* M. Sars, 1865]

Type locality: Pliocene of Italy.

The species was found at 12 stations (samples from 3 stations contained only empty shells) from Greenland, Norwegian and Barents seas at depth from 315 to 445 m, on silty and sandy-silty bottom. The most northwestern locality is off Finnmark. Places of habitat are characterised by a very narrow range of salinity (34.69 to 35.3‰) and wide range of temperature (+1.84 to +8.12°C).

Remark. This species occurs predominantly in the Mediterranean and East Atlantic, from the Bay of Biscay to Northern Norway, at depth from 10 to 2664 m [Steiner, 1997], and the finding westward of Iceland extends the range of the species. *Entalina tetragona* was not found in Russian territorial waters.

Gadilidae Stoliczka, 1868

Siphonodentalium M. Sars, 1859

Type species: *Siphonodentalium vitreum* M. Sars, 1851 (OD)

Siphonodentalium lobatum
(Sowerby, 1860)

(Figs. 1E, 3)

Dentalium lobatum Sowerby, 1860: 100, pl. III, fig. 44.

Type locality: unknown.

The species was found at 485 stations (samples from 50 stations contained only empty shells) from northern part of the Atlantic, Arctic Basin, Greenland, Norwegian, Barents, Kara, Eastern Siberian, Laptevskh and Chukcha seas, at depth 16 to 2754 m, on silty and sandy-silty bottom. The most western locality is in the Greenland sea, the most southern – off Shetland Islands, the most northern – near the North Pole. Places of habitat are characterised by a very wide range of salinity (27.8 to 35.2‰) and the range of temperature from –2.0 to +5.8°C. The finding of *S. lobatum* near the neck of the White Sea indicates the wide ecological preferences of the species.

Remark. See *Antalis entalis*.