

Ammonicera rota in Norway (Mollusca, Gastropoda: Omalogyridae)

THIERRY BACKELJAU, MARC DE MEYER, LUC JANSSENS, RUDY PROESMANS & WIM VADER

Backeljau, T., De Meyer, M., Janssens, L., Proesmans, R. & Vader, W. 1984. *Ammonicera rota* in Norway (Mollusca, Gastropoda: Omalogyridae). *Fauna norv. ser. A* 5, 6–8.

The authors report *Ammonicera rota* from shell grit from a beach near Bleik on the western coast of Andøy, Vesterålen (69°18'N, 16°08'E). Furthermore two unpublished Norwegian records of the species are mentioned viz. a specimen from Lågøy, Sogn og Fjordane (61°13'N., 05°02'E.) and a specimen from Gjøsøy, Troms county (69°50'N., 18°24'E.). Both Bleik and Gjøsøy are situated about 1000 km north of previous records of the species. In addition a complete list of the molluscs found in the shell grit from Bleik is presented.

Thierry Backeljau & Marc De Meyer, IWONL-bursalen, Laboratorium voor Algemene Dierkunde, Groenenborgerlaan 171, B-2020 Antwerpen, Belgium.
Luc Janssens, Fransmanstraat 1, B-1020 Brussel, Belgium.
Rudy Proesmans, Sparrelaan 8, B-3610 Diepenbeek, Belgium.
Wim Vader, Tromsø Museum, Univ. of Tromsø, N-9000 Tromsø, Norway.

INTRODUCTION

During a student excursion through northern Norway, the Belgian authors took a shell grit sample of about 5 kg intertidally on a beach north of Bleik, a village on the western coast of the isle of Andøy, Vesterålen (69°18'N, 16°08'E) (Fig. 1). The grit contained several empty shells of the minute prosobranch gastropod *Ammonicera rota* (Förbes & Hanley, 1850). This species is considered to be very scarce (Fretter & Graham 1978) and its geographical distribution is poorly known. Here is therefore presented our record from the Vesterålen and some unpublished material collected by the Norwegian author.

RESULTS

The grit sample from Bleik was collected on 16. August 1981. Besides *A. rota* it contained the following gastropod shells (+ = less than 10 spp., ++ = 10–100 spp. and +++ = more than 100 spp.): *Puncturella noachina* (L., 1771) ++, *Patella vulgata* L., 1758 +, *Patina pellucida* (L., 1758) ++, *Acmaea testudinalis* (Müller, 1776) ++, *A. virginea* (Müller, 1776) ++, *Margarites helacinus* (Phipps, 1774) + + +, *M. groenlandicus* (Gmelin, 1791) +, *Gibbula cineraria* (L., 1758) + + +, *Moelleria costulata* (Møller, 1842) +, *Lacuna vincta* (Montagu 1803) + + +, *L. pallidula* (Da Costa,

1778) + +, *Littorina littorea* (L., 1758) + +, *L. obtusata* agg. + + +, *L. saxatilis* agg. + +, *Alvania punctura* (Montagu, 1803) +, *Alvania* sp. +, *Cingula alderi* (Jeffreys, 1859) +, *Onoba*

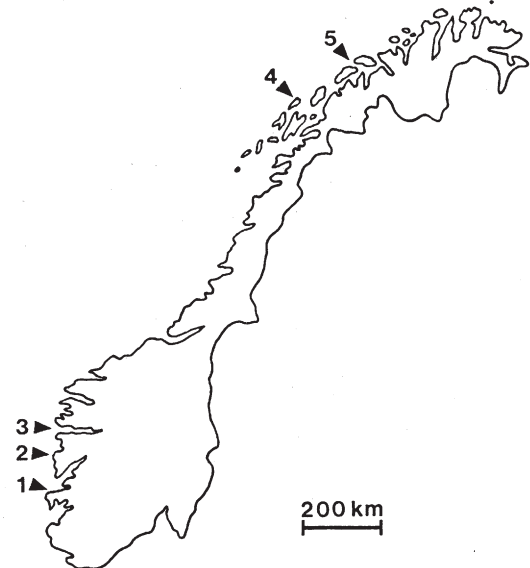


Fig. 1. Map showing the known records of *Ammonicera rota* in Norway. 1. Bømlafjorden near Førdespollen. 2. Bergen area (Raunefjorden and Grimstadfjorden). 3. Lågøy, off Sognefjorden. 4. Bleik, western coast of Andøya, Vesterålen. 5. Gjøsøy, Troms county (specimen lost).

aculeus (Gould, 1841) + + +, *O. semicostata* (Montagu, 1803) + +, *Rissoa parva* (Da Costa, 1778) + + +, *Omalogyra atomus* (Philippi, 1841) +, *Skeneopsis planorbis* (Fabricius, 1780) + + +, *Lunatia alderi* (Forbes, 1838) +, *Natica clausa* Broderip & Sowerby, 1829 + +, *Amauroopsis islandica* (Gmelin, 1791) + +, *Bo-reotrophon truncatus* Strøm, 1768 + +, *B. clathratus* (L., 1767) +, *Nucella lapillus* (L., 1758) +, *Astyris rosacea* (Gould, 1841) +, *Buccinum undatum* L., 1758 +, *Hinia incrassata* (Strøm, 1768) + +, *Oenopota pyramidalis* (Strøm, 1768) + +, *Oe. turricula* (Montagu, 1803) +, *Diaphana minuta* Brown, 1827 +, *Retusa truncatula* (Bruguière, 1792) +, *Chrysallida eximia* (Jeffreys, 1849) +, *C. spiralis* (Montagu, 1803) +, *C. interstincta* (Montagu, 1803) +, *Odostomia* sp. +, and *Limacina retroversa* (Fleming, 1823) +.

Among the bivalve shells we noted: *Musculus discors* agg. + +, *Crenella decussata* (Montagu, 1808) + +, *Dacrydium vitreum* (Møller, 1842) +, *Modiolus modiolus* (L., 1758) + +, *Mytilus edulis* L., 1758 + +, *Tridonta borealis* Schumacher, 1817 + +, *T. elliptica* (Brown, 1827) +, *Arctica islandica* (L., 1767) +, *Lucinoma borealis* (L., 1767) +, *Kellia suborbicularis* (Montagu, 1803) +, *Mysella bidentata* (Montagu, 1803) +, *Altenaeum dawsoni* (Jeffreys, 1864) + (concerning this species see Backeljau et al. in press.), *Turtonia minuta* (Fabricius, 1780) + + +, *Timoclea ovata* (Pennant, 1777) +, *Chamelea striatula* (Da Costa, 1778) +, *Venerupis pullastra* (Montagu, 1803) +, *Spisula elliptica* (Brown, 1827) +, *Hiatella arctica-rugosa* complex + +, *Cochlodesma praetenue* (Montagu, 1803) +, *Thracia* sp. + and *Ixartia distorta* (Montagu, 1803) +.

In addition valves of the two chiton species *Tonicella marmorea* (Fabricius, 1780) and *T. rubra* (L., 1767) were found.

With some few modifications the nomenclature follows Fretter & Graham (1976, 1977, 1978, 1980, 1981) and Sars (1878) for the Prosobranchia, Abbott (1974) and Thompson (1976) for the Opisthobranchia, and Bowden & Heppell (1966, 1968) for the Bivalvia.

Single specimens of *Ammonicera rota* have twice earlier been found in intertidal algal samples, taken primarily for studies of Peracarida biotopes by Vader. The specimens were probably taken alive, but as the samples were preserved before sorting and the Gjøssøy specimen is lost, this is not entirely certain.

1. One specimen (Tromsø Museum Coll. nr. Gastr. 14107) was collected from small red algae

at a semi-protected site near LWS at Lågøy (Sogn og Fjordane) in the archipelago of Sula just off the Sognefjord, on 5 April 1966 (Fig. 1). It was found together with some hundreds of *Rissoa inconspicua* Alder, 1844 and *Rissoa parva*, about 25 *Margarites helicinus* and single specimens of *Lacuna vineta*, *L. pallidula*, *Onoba aculeus* and *Diaphana minuta*.

2. Another single specimen of *Ammonicera rota* (later unfortunately lost) was taken from quite coarse, but short *Corallina* (3–5 cm high) on a *Lithothamnion* substrate with lots of small mytilids and *Hiatella*, at Gjøssøy (Tromsø) on 2 May 1966 (Fig. 1). Here *A. rota* was found together with *Rissoa parva*, *Onoba aculeus*, *Skeneopsis planorbis*, *Littorina* sp. juv., *Nucella lapillus*, *Heteranomia squamula*, *Kellia suborbicularis* and *Turtonia minuta*. The abundance of *Hiatella* sp., *Heteranomia squamula* and *Kellia suborbicularis* indicates a typical *Lithothamnium* community (Snell 1968). The presence of the amphipod *Hyale pontica* Rathke signifies moderately high exposure (Dommasnes 1968), that of *Dexamine thea* Boek the presence of clean detritus (Vader 1969).

DISCUSSION

The very characteristic shell morphology of *Ammonicera rota* makes this minute species, once found, easy to identify. Its closest relative, *Omalogyra atomus*, was also present in the grit sample from Vesterålen. It seems to be somewhat more common in northern Norway than *A. rota*, although both species have no doubt often been overlooked.

The only prior records of *Ammonicera rota* in Norway were published by Höisæter (1968). His material, comprising about 250 specimens, was collected in the Bergen area and Bomlafjorden in western Norway (Fig. 1). Höisæter's results, and Vader's unpublished data from the same area, indicate that *A. rota* may be a widespread and quite common inhabitant of shallow-water, hard bottom habitats; the species may even be characteristic of coarse, detritus-rich *Corallina* vegetation.

The new data suggest that the known geographical range of *Ammonicera rota* (Fretter & Graham 1978) is underestimated, as already surmised by Fretter and Graham, and that the species occurs at least 1000 km further north along the Norwegian coast. At present *A. rota* is known from the Adriatic Sea, the western Mediterranean, Madeira, the Atlantic coasts of

France, Britain and Ireland, the Shetland islands, the Netherlands (no living specimens), the West coast of Sweden and the Norwegian coast (Ankel 1936, Høisæter 1968, Entrop 1972).

The present data are insufficient to confirm that *A. rota* actually lives in northern Norway, but all indications are that it does. Some of the shells in the Vesterålen sample look very fresh, and the specimen in the Gjøssøy sample was in precisely the habitat in which *A. rota* is most common in W. Norway. Also Rodriguez Babio & Thiriou-Quévieux (1974) found their material (sub nom. *Ammonicera fischeriana* Monterosato) in *Lithothamnion*.

The largest specimens in our material have a diameter of 0.9 mm. The same figure is given by Høisæter (1968). Graham (1971) gives 0.5 mm, Ankel (1936) 1 to 1.25 mm and Nordsieck (1968) 5 mm, probably a misprint for 0.5 mm.

There is still some discussion concerning the taxonomy and nomenclature of *Ammonicera rota*. Høisæter (1968) considered *rota* to be generically distinct from *Omalogyra atomus*, the type species of *Omalogyra* Jeffreys, 1867 but very similar to, and in fact probably conspecific with, *Ammonicera fischeriana* (Monterosato, 1869), the type-species of *Ammonicera* (Vayssière, 1893). Høisæter based his opinion, with which we concur, on shell characters, morphology of head and tentacles, radula and operculum. His opinion is also shared by Nordsieck (1968), Winckworth (in McMillan 1973) and Fretter and Graham (1978). Ankel (1936), Abbott (1974) and Hubendick and Warén (1972), on the other hand, consider *rota* to be congeneric with *O. atomus*; Abbott (l.c.) recognized *Ammonicera* as a subgenus of *Omalogyra*.

ACKNOWLEDGEMENTS

We wish to thank Dr. Ö. Stokland (Trondheim Biologiske Stasjon) and Mr. R.A. Van Belle (Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussel) for checking some of our identifications. Prof. Dr. W.N. Verheyen (Rijksuniversitair Centrum Antwerpen) kindly provided working facilities.

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