

**The slug *Limax maximus* (L.) in mid and northern Norway
(Gastropoda: Pulmonata: Limacidae)**

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The anthropochorous slug *Limax maximus* now occurs commonly in reproducing populations in mid Norway and in Fauske in northern Norway. Specimens have been found as far north as Tromsø (69°40'N).

Key words: Gastropoda, Pulmonata, Limacidae, *Limax maximus*, distribution, Norway.

On 26 June 1991 an adult specimen of the large anthropochorous slug *Limax maximus* (L., 1758) (Gastropoda, Pulmonata, Limacidae) was brought in to the Tromsø Museum. It was found on the grounds of Gyldenvang Kindergarten on the outskirts of Tromsø (69°40'N, 19°00'E) in northern Norway. The living (creeping) specimen measured 15 cm and is now kept in the collections of Tromsø Museum (reg. no. Gastr. 14208). The slug was very pale in ground colour, quite like the 'spotted form' in Kerney et al. (1983, pl. 13) (fig. 1). One year later, on 6 August 1992, a 16 cm long slug, according to the descriptions undoubtedly the same species, was found in a returned beer bottle at the Tromsø brewery. This brewery has its costumers almost exclusively in northern Norway.

In July 1992, two adult slugs (15 cm long) of *L. maximus* were found in a garden in Fauske (67°17'N). Slugs of the same species were also present in this garden in 1993 and 1994. The owner of the garden, S. Hamran, believes the slug may have been brought to Fauske with garden plants from Bergen.

L. maximus is a species that clearly is very easily transported with earth or plant material. Its natural area of distribution is southern and western Europe, north to southern Norway (cf. Kerney et al., 1983). In Scandinavia outside Skåne and southernmost Norway most records are clearly anthropochorous. In Norway Oslo and Bergen at latitude 60°N have traditionally been considered to be near the northern boundary of distribution (Ökland, 1925). In central and northern Sweden and in Finland all records have been from greenhouses (Valovirta, 1967; Waldén 1960, 1984), but recently *L. maximus* has been collected from a cemetery in SW. Finland (Holyoak & Seddon, 1983).

In Norway *L. maximus* probably occurs regularly along the West coast, at least up to Trondheim (fig. 2). The Zoological Museum in Bergen has material from Ålesund (62°30'N) and Kristiansund (63°00'N), and Backhuys (1969) collected a specimen at Hambåra in the outer Trondheimsfjord (63°40'N). In 1992 *L. maximus* was again found in Møre & Romsdal province, and also in some numbers in the Trondheim region (Winge, 1993). In 1993, it was confirmed that these slugs are quite common in the

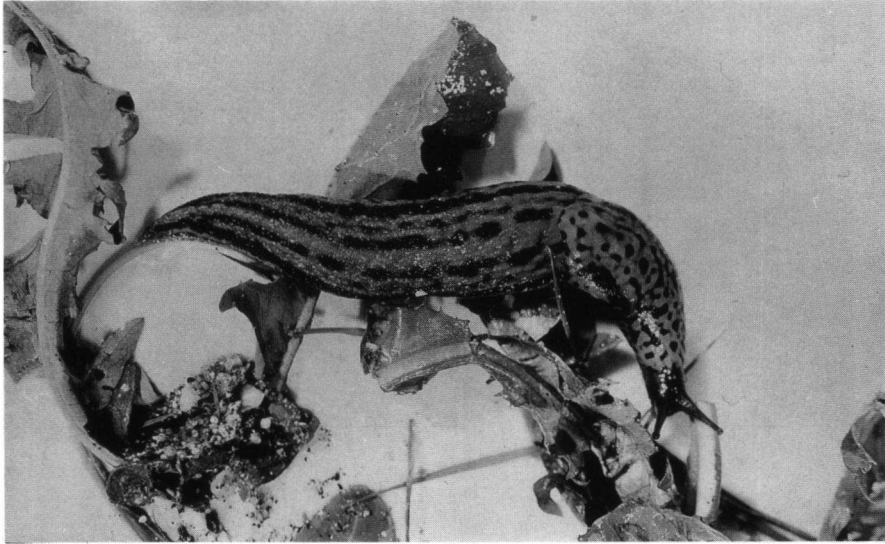


Fig. 1. *Limax maximus*, caught in Tromsø 26 June 1991. Length of the creeping slug 15 cm (photograph Olga Kvalheim).

Molde area (62°45'N), as well as on Smøla (63°25'N). In the Trondheim region, *L. maximus* was found in considerable numbers both in 1993 and 1994, and it is obvious that these slugs are now quite common there.

The early 1990's have in Norway been characterized by a succession of uncommonly mild winters. These may well have played a role in ensuring better survival and higher productivity of a species at the northern edge of its range. In 1993-94, however, the winter was 'old-fashioned', with long cold periods and lots of snow. In spite of this, *L. maximus* clearly has survived well, and even reproduced, both in the Trondheim region and in Fauske.

The Tromsø records are most probably incidental and based on import of eggs or young slugs with earth or plant material during the spring from further south in Norway. No large slugs of any kind occur naturally so far north.

We are grateful to Marit Christiansen (Oslo) and Endre Willassen (Bergen) for data on *L. maximus* in their museum collections, and to Svein Block (Molde) and Svein Hamran (Fauske) for useful information. Identification in some cases was confirmed by dissection.

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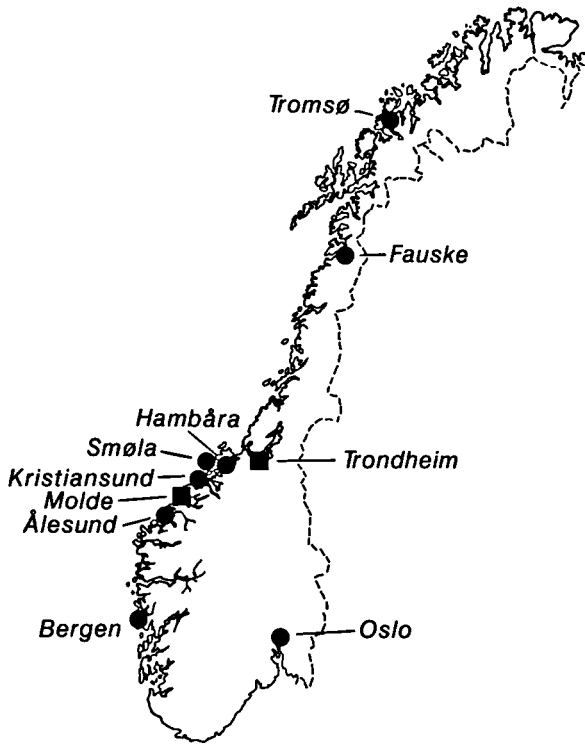


Fig. 2. Distribution of *Limax maximus* in Norway north of 60°N. The dots denote single records or repeated records in the same garden, the squares stand for multiple records in Molde and Trondheim and the surrounding regions.

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