Towards a compilation of an atlas of the freshwater molluscs of Belgium: a preliminary report

by Rose SABLON & J.L. VAN GOETHEM

Abstract

After the publication of a preliminary atlas of the land snails of Belgium, a long term project aiming at the realization of a similar atlas of the freshwater molluscs was started.
Investigations as well as checking and compiling the records began with the family Lymnaeidae. Preliminary distribution maps for five species of Lymnaeidae are presented.
There are large gaps in our knowledge of the occurrence and distribution of freshwater molluscs in Belgium. This is regrettable since many species of freshwater molluscs are considered valuable bio-indicators.
Key-words: atlas, freshwater molluscs, Belgium.

Samenvatting

Na de publikatie van de "Voorlopige atlas van de landslakken van België" werd op de afdeling Malacologie van het Koninklijk Belgisch Instituut voor Natuurwetenschappen begonnen aan de voorbereiding van een gelijkaardige atlas van de zoetwatermollusken.
Het onderzoek, het nazicht en het samenbrengen der gegevens begon bij de familie Lymnaeidae. Voorlopige verspreidingskaarten voor vijf soorten Lymnaeidae worden hier voorgesteld.
De kennis inzake het voorkomen en de verspreiding van zoetwatermollusken in België vertoont grote lacunes. Dit is te betreuren vooral indien men weet dat vele soorten zoetwatermollusken beschouwd worden als waardevolle bio-indicatoren.
Trefwoorden: atlas, zoetwatermollusken, België.

Introduction

After the publication of a preliminary atlas of the land snails of Belgium (DE WILDE, MARQUET & VAN GOETHEM, 1986), we started to compile an atlas of the freshwater molluscs of Belgium. Obviously this will turn out to be a long term project, for there are still large gaps in our knowledge of the occurrence and distribution of the Belgian freshwater molluscs.

Material and methods

We are currently 1) revising and updating the K.B.I.N. collection of Belgian freshwater molluscs; 2) studying material obtained during recent field excursions or put at our disposal by individuals, laboratories and institutions; 3) screening the literature and 4) compiling all additional information.

Thus far, records from over 4,000 localities have been studied.

Distributional data are presented by standard maps with an UTM-grid (Universal Transverse Mercator), as used in the context of the European Invertebrate Survey project (EIS). The UTM-grid is composed of 10 x 10 km squares of which 376 pertain to the Belgian territory, those partly located in Belgium and some trapezoïdal spaces in the eastern part of the country included.

Results and discussion

We started our investigation with the family Lymnaeidae of which nine species can be found in Belgium (VAN GOETHEM, 1988, p. 12 ; VAN GOETHEM, 1989, p. 84). At this moment we can present preliminary distribution maps for five of these species.

Lymnaea truncatula (MÜLLER, 1774), Fig. 1, map based on 2,766 specimens from 216 localities.

Lymnaea glabra (MÜLLER, 1774), Fig. 2, map based on 480 specimens from 50 localities.

Lymnaea auricularia (LINNAEUS, 1758), Fig. 3, map based on 1,514 specimens from 190 localities.

Lymnaea stagnalis (LINNAEUS, 1758), Fig. 4, map based on 3,930 specimens from 426 localities.

Myxas glutinosa (MÜLLER, 1774), Fig. 5, map based on 413 specimens from 29 localities.

Furthermore, SABLON & VAN GOETHEM (1989, p. 114) presented two preliminary distribution maps for *Anisus leucostomus* (MILLET, 1813) and *Anisus spirorbis* (LINNAEUS, 1758).

Although our compilation of locality data is far from complete, the distribution maps show that some areas haven't been sampled adequately. Especially from 1950 to 1970 data are scarce. However in the early seventies new information became available due to the activities for the atlas of the land snails from Belgium. In addition some collections resulting from a project carried out by a university or resulting from individual investigations (theses, dissertations, ...) have been put at our disposal. Yet a regular cooperation with students or volunteers still does not exist.

The disposal of old collections supplemented by more recent material will enable us to process and compare information of a period of about 100 years of field explorations, which in turn can give us an idea on possible distributional changes. These data are very useful, because freshwater molluscs are widely used as biological indicators in environmental studies.

Conclusion

At present any conclusion about the actual distribution of the above mentioned freshwater species and their evolution is premature. Data on other species of freshwater molluscs are currently being compiled. Hence we would appreciate to receive any additional collection or information on the subject.

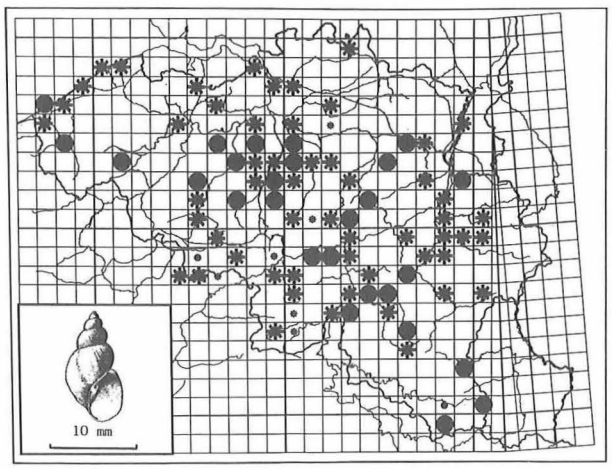

Fig. 1. *Lymnaea truncatula*.

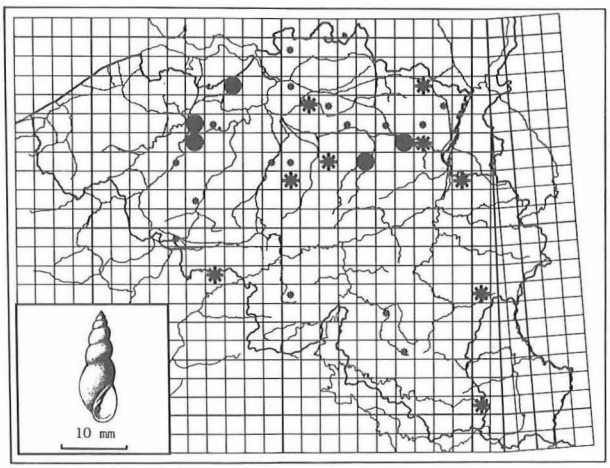

Fig. 2. *Lymnaea glabra*.

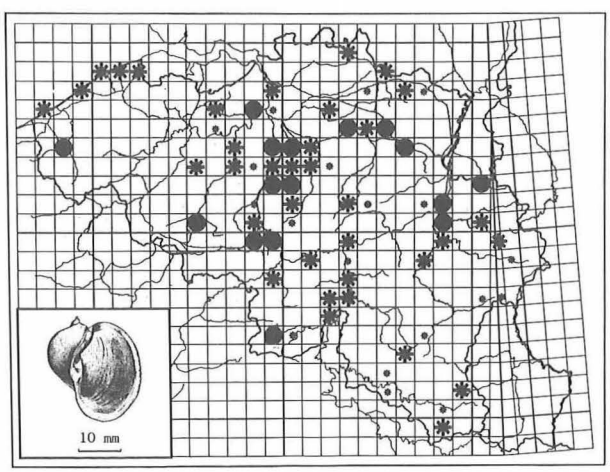

Fig. 3. *Lymnaea auricularia*.

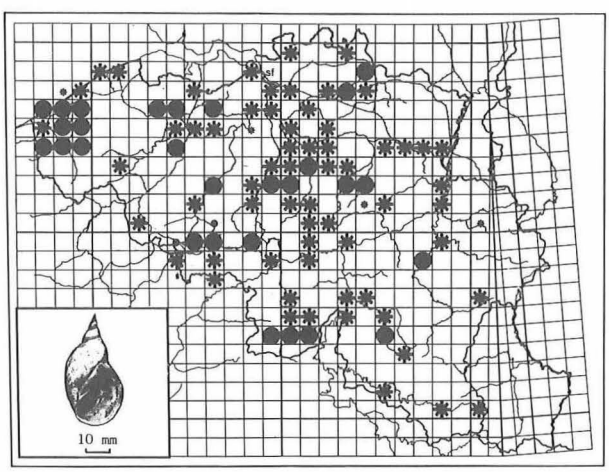

Fig. 4. *Lymnaea stagnalis*.

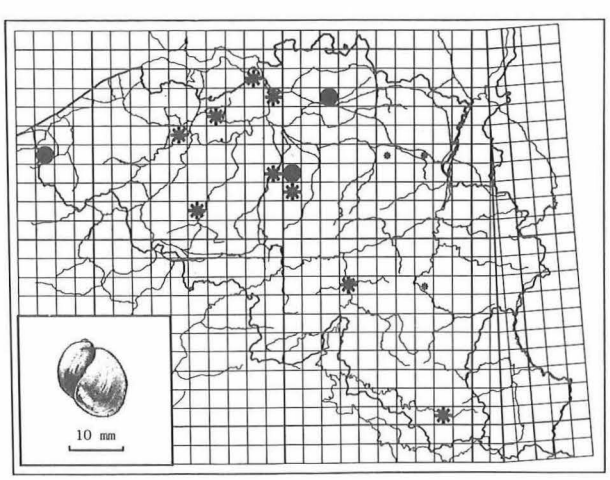

Fig. 5. *Myxas glutinosa*.

Legend

- ✱ **pre 1950,** empty shells, decoloured or broken
- ✱ **pre 1950,** collected alive or observed alive
- ● **1950 onwards,** empty shells, decoloured or broken
- ● **1950 onwards,** collected alive or observed alive
- **Sf** subfossil

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