

RECORDS OF *CEPAEA NEMORALIS* (LINNAEUS, 1758) (GASTROPODA: PULMONATA) IN THE BIAŁOWIEŻA REGION IN POLAND

KEES (C) J. P. J. MARGRY, WIM J. KUIJPER

Mozartlaan 41, 5283 KB Boxtel, The Netherlands (e-mail: margry@home.nl)

ABSTRACT: In April 2014, numerous specimens of *Cepaea nemoralis* were found in Budy, a village in the Białowieża region of eastern Poland. This record sets the total number of mollusc species known to this region to 115. The other locality, in the village Brok about 140 km west of Białowieża, indicates that the species is spreading to the northeast.

KEY WORDS: forest malacofauna, Białowieża, *Cepaea nemoralis*

In the last decades, the range of *Cepaea nemoralis* (Linnaeus, 1758) was confined to a few regions in the southern and western parts of Poland (KERNEY et al. 1983, WIKTOR 2004). No records were given for the Białowieża region (GEYER 1917, GUTOWSKI & JAROSZEWICZ 2001, CAMERON & PROKRYSZKO 2004). OŹGO (2005) found *C. nemoralis* in the south-east of Poland, close to the border with Ukraine. SILVERTOWN et al. (2011) and WELTER-SCHULTES (2012) provide distribution maps that indicates the presence of populations in northeast Poland as well. OŹGO (2012) studied populations of *C. nemoralis* along the 52°N parallel and found that the species was much more common and abundant in its eastern part. On the easternmost plot on the 23°E meridian however the species was rare and only formed local populations in urban environments. CAMERON et al. (2011) described the presence of 260 populations in the region of Gdańsk, the most north-eastern limit known to this species until now. As in SILVERTOWN et al. (2011) he also indicated scattered introduced populations in the south of Sweden and the Baltic Republics. SYSOEV & SCHILEYKO (2009) mention a record in a park in Lvov (Ukraine).

On April 6th 2014, a few specimens of *C. nemoralis* were found close to the ruins of the village of Brok (52°42'02"N, 21°52'15"E), about 140 km west

of Białowieża (Fig. 1). This indicates that the species is spreading to the northeast. On April 14th, eight live adult yellow and pink unbanded specimens of *C. nemoralis* (Fig. 2) were found in the village of Budy (52°43'57"N, 23°43'32"E), one of the clearings in the

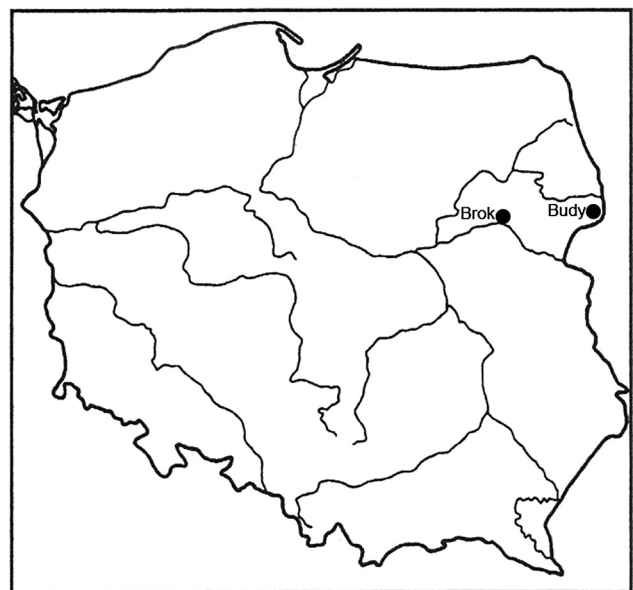


Fig. 1. Map showing the two localities from the records of *Cepaea nemoralis*



Fig. 2. *Cepaea nemoralis*, posing on the traffic sign “Hajnówka” in Budy. Photo: K. MARGRY



Fig. 3. The locality of *C. nemoralis* in Budy. Photo: K. MARGRY



Białowieża forest. The specimens were found during rainy weather in an open area at a roadside (Fig. 3). On April 18th, on the same spot on a sunnier day, one empty juvenile pink midbanded shell was found. Only the last specimen is kept in the collection of the first author. Because this immature shell lacks the typical black-brown edge of the aperture margin, this specimen could only be distinguished from *C. hortensis* (Müller, 1774) due to the shape of the aperture.

This is the easternmost record for Poland for *C. nemoralis*. This species has likely reached this area by human introduction. The Białowieża region is known for its pristine ecosystem and its biodiversity. Until now, 114 mollusc species were recorded in the Białowieża region (GUTOWSKI & JAROSZEWICZ 2001, CAMERON & PROKRYSZKO 2004, OKOŁOW et al. 2009,

MARGRY 2011). The current record of *C. nemoralis* sets the total number of mollusc species known to this region to 115. This is an aspect of great interest in the context of diversity as discussed by CAMERON (2013). Further research should clarify how this polymorphic land snail will survive in the Białowieża region and if it may be a link in the eastward spreading of this species.

ACKNOWLEDGEMENTS

We are grateful for the perceptiveness of the excursion group of Helicon-opleidingen MBO Den Bosch. Also highly appreciated thanks to ROBERT CAMERON for helping us with comments and literature.

REFERENCES

- CAMERON R. A. D. 2013. The diversity of land molluscs – questions unanswered and questions unasked. *Am. Malacol. Bull.* 31: 169–180. <http://dx.doi.org/10.4003/006.031.0108>
- CAMERON R. A. D., OŹGO M., HORSACK M., BOGUCKI Z. 2011. At the north-eastern extremity: variation in *Cepaea nemoralis* around Gdańsk, northern Poland. *Biologia* 66: 1097–1113. <http://dx.doi.org/10.2478/s11756-011-0128-9>
- CAMERON R. A. D., PROKRYSZKO B. M. 2004. Land mollusc faunas of Białowieża Forest (Poland), and the character and survival of forest faunas in the north European plain. *J. Mollus. Stud.* 70: 149–164. <http://dx.doi.org/10.1093/mollus/70.2.149>
- GEYER D. 1917. Zur Molluskenfauna des Urwaldes von Białowies (Bjelowjesh). *Nachr. Bl. dtsh. malak. Ges.* 3: 97–109.
- GUTOWSKI J. M., JAROSZEWICZ B. 2001. Catalogue of the fauna of Białowieża Primeval Forest. IBL, Warszawa.
- KERNEY M. P., CAMERON R. A. D., JUNGBLUTH J. H. 1983. *Die Landschnecken Nord- und Mitteleuropas*. Paul Parey, Berlin.
- MARGRY C. J. P. J. 2011. Records of *Truncatellina cylindrica* (Férussac, 1807) (Gastropoda, Pulmonata, Vertiginidae) in the Białowieża region in Poland. *Folia Malacol.* 19: 81–86. <http://dx.doi.org/10.2478/v10125-011-0012-9>
- OKOŁOW C., KARAŚ M., BOŁBOT A. 2009. Białowieża National Park. Know it – Understand it – Protect it. Białowieski Park Narodowy, Białowieża.
- OŹGO M. 2005. *Cepaea nemoralis* (L.) in southeastern Poland: association of morph frequencies with habitat. *J. Mollus. Stud.* 71: 93–103. <http://dx.doi.org/10.1093/mollus/eyi012>
- OŹGO M. 2012. Shell polymorphism in the land-snail *Cepaea nemoralis* (L.) along a west-east transect in continental Europe. *Folia Malacol.* 20: 181–253. <http://dx.doi.org/10.2478/v10125-012-0015-1>
- SILVERTOWN J., COOK L., CAMERON R., DODD M., MCCONWAY K., WORTHINGTON J., SKELTON P., ANTON C., BOSSDORF O., BAUR B., SCHILTHUIZEN M., FONTAINE B., SATTMANN H., BERTORELLE G., CORREIA M., OLIVEIRA C., PROKRYSZKO B., OŹGO M., STALAŹS A., GILL E., RAMMUL Ü., SÓLYMOS P., FÉHER Z., JUAN X. 2011. Citizen science reveals unexpected continental-scale evolutionary change in a model organism. *PLoS ONE* 6: e1927. <http://dx.doi.org/10.1371/journal.pone.0018927>
- SYSOEV A., SCHILEYKO A. 2009. Land snails and slugs of Russia and adjacent countries. Pensoft, Sofia-Moscow.
- WELTER-SCHULTES F. W. 2012. European non-marine molluscs, a guide for species identification. Planet Poster Editions, Göttingen.
- WIKTOR A. 2004. *Ślimaki lądowe Polski*. Mantis, Olsztyn.

Received: May 30th, 2014

Revised: June 24th, 2014

Accepted: June 30th, 2014

Published on-line: July 21st, 2014

