

Malacological news from the Czech and Slovak Republics in 2023

TOMÁŠ ČEJKA¹, LUBOŠ BERAN², TEREZA ADAMCOVÁ³, VERONIKA BRONIŠOVÁ⁴, RADOVAN COUFAL⁴, MAREK ČILIAK⁵, MAGDA DRVOTOVÁ³, JITKA HORÁČKOVÁ⁶, VERONIKA HORSÁKOVÁ⁴, LUCIE JUŘÍČKOVÁ³, ALENA KOCURKOVÁ³, ONDŘEJ KORÁBEK³, ŠTĚPÁNKA PODROUŽKOVÁ⁷, DAGMAR B. ŘÍHOVÁ⁸, ERIKA ŠLACHTOVÁ⁴ & MICHAL HORSÁK⁴

¹Institute of Botany, Plant Science and Biodiversity Center, Slovak Academy of Sciences, Dúbravská cesta 9, SK-845 23 Bratislava, Slovakia, e-mail: t.cejka@gmail.com,  <https://orcid.org/0000-0002-6485-5660>

²Regional Office Kokorínsko – Máchův kraj Protected Landscape Area Administration, Nature Conservation Agency of the Czechia, Česká 149, CZ-276 01 Mělník, Czechia, e-mail: lubos.beran@nature.cz,  <https://orcid.org/0000-0002-5851-6048>

³Department of Zoology, Faculty of Science, Charles University, Viničná 7, CZ-128 44 Praha 2, Czechia,

e-mail: terez.kosova@gmail.com,  <https://orcid.org/0000-0003-4705-0737>

e-mail: lucie.jurickova@seznam.cz,  <https://orcid.org/0000-0001-5163-1222>

e-mail: Alyk.B@centrum.cz,  <https://orcid.org/0009-0007-1552-3815>

e-mail: ondrej.korabek@gmail.com,  <https://orcid.org/0000-0002-2522-9165>

⁴Department of Botany and Zoology, Faculty of Science, Masaryk University, Kotlářská 2, CZ-611 37 Brno, Czechia,

e-mail: veronika.bronisova@gmail.com,  <https://orcid.org/0009-0006-4836-7057>

e-mail: radovan.coufal39@seznam.cz,  <https://orcid.org/0000-0002-5870-5041>

e-mail: veronika.horsakova@seznam.cz,  <https://orcid.org/0000-0002-3264-7728>

e-mail: erslachtova@gmail.com,  <https://orcid.org/0000-0002-5386-9418>

e-mail: horsak@sci.muni.cz,  <https://orcid.org/0000-0003-2742-2740>

⁵Department of Applied Ecology, Faculty of Ecology and Environmental Sciences, Technical university in Zvolen, T. G. Masaryka 24, SK-960 01, Zvolen, Slovakia, e-mail: marek.ciliak@tuzvo.sk,  <https://orcid.org/0000-0002-6720-9365>

⁶Department of Landscape and Urban Planning, Faculty of Environmental Sciences, Czech University of Life Sciences, Kamýcká 129, CZ-165 00 Praha 6 – Suchdol, Czechia, e-mail: jhorackova@fzp.czu.cz,  <https://orcid.org/0000-0003-3776-041X>

⁷Department of Zoology, National Museum of the Czechia, Cirkusová 1740, CZ-193 00 Praha 9 – Horní Počernice, Czechia, e-mail: stepanka.podrouzkova@nm.cz,  <https://orcid.org/0000-0002-0356-531X>

⁸Department of Biology and Environmental Studies, Faculty of Education, Charles University, Magdalény Rettigové 4, CZ-116 39 Praha, Czechia, e-mail: dagmar.rihova@pedf.cuni.cz,  <https://orcid.org/0000-0002-2122-130X>

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This paper presents important faunistic records conducted in the Czech and Slovak Republics during 2023. We also include records generated before 2023, which have yet to be published, mainly because their correct identification was unavailable earlier. In a separate section we present records of unintentionally introduced species, reported for the first time for the countries from greenhouses (*Dryachloa dauca* and *Guppya gundlachii*). The first outdoor colony of *Melanoides tuberculata* was found in a stream artificially heated by wastewater from the Dukovany nuclear power plant and *Planorbella duryi* found in a brook with thermal water flowing from the Sliač spa. Records of native species include findings of protected and rare species (e.g., *Aplexa hypnorum*, *Ladislavella occulta*, *Daudebardia brevipes*, and *Theodoxus danubialis*), but also still poorly known species (*Ampullaceana lagotis* and *Pyramidula saxatilis*). During 2023, many new records were made for non-native and currently spreading species as for example *Clathrocaspia knipowitschii*, *Corbicula fluminea*, *Hygromia cinctella*, *Krynickillus melanocephalus*, *Sinanodonta woodiana*, and *Tandonia kusceri*.

Key words: mollusc fauna, faunistic survey, new records, species list

Introduction

Since the last comprehensive monograph on molluscs of the Czech and Slovak Republics has been published in 2013 (HORSÁK et al. 2013), we decided to publish malacological news from the territory of former Czechoslovakia annually to keep track of new important records. All these

new data are used to regularly update an annotated checklist of molluscs and distribution maps of selected species (HORSÁK et al. 2024). The previous summary of new records covers the years 2015–2019 (ČEJKA et al. 2020), 2020 (ČEJKA et al. 2021), 2021 (ČEJKA et al. 2022), 2022 (ČEJKA et al. 2023). In this consecutive paper, we present important faunistic records obtained from the territory

conducted in the Czech and Slovak Republics in 2023. The paper presents essential faunistic records conducted in the Czech and Slovak Republics (former Czechoslovakia) during 2023. The rules for the selection of the records are (i) the first record in Bohemia, Moravia, or Slovakia, (ii) a regionally significant new record, (iii) new and important records of species listed in NATURA 2000 and the national Red Lists as critically endangered or endangered species (usually except records of regularly monitored sites and populations), or (iv) recently introduced and currently spreading non-native species. From this year onwards, we present the records of unintentionally introduced species in a separate section. These species are



Fig. 1. Four specimens of the *Cernuella neglecta* from Prague. Photo by D. Říhová.

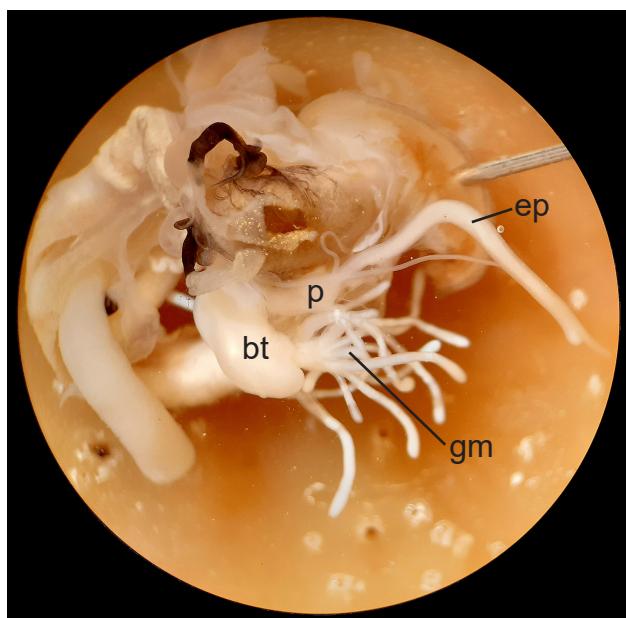


Fig. 2. Anatomy of the distal part of the genital system of *Cernuella neglecta* from Prague: bt – bursa telae (dart sac); ep – epiphallus; gm – glandulae mucosae; p – penis. Photo by D. Říhová.

usually found in greenhouses, garden centres and shops with ornamental stoneware. They are introduced through natural and other materials or as ‘stowaways’ with cargo or animal vectors. This also includes thermophilic species that can only survive in thermal and artificially heated water bodies. Detailed information on the occurrence of each species follows in the text, and the records are provided (Tab. 1).

Comments on individual species

Aegopis verticillus (Lamarcck, 1822)

The species is nearly threatened in Czechia. Findings from 2023 confirm its occurrence in the National Nature Reserve Rohová, where it was first found in 1966 (Hrubý 1966). The new record from the Velký Blaník Nature Reserve represents one of the few isolated occurrences of the species in central Bohemia.

Ampullaceana lagotis (Schrank, 1803)

The species was not distinguished in the past, and its occurrence in Czechia and Slovakia still needs to be known better (Čejka et al. 2021). The new records originate in central and northwestern Bohemia, southern Moravia, and western Slovakia.

Aplexa hypnorum (Linnaeus, 1758)

Less common and vulnerable species inhabit mainly temporary pools and wetlands. The findings in the Blanský les PLA in southern Bohemia and the Malé Karpaty in western Slovakia are outside their known distribution range.

Bithynia leachii (Sheppard, 1823)

This species is rare and endangered in Czechia, with the only known occurrence in southern Moravia (Beran & Horská 2009, Horská et al. 2024). The occurrence of this species in wetlands on the western edge of the pond in Hlohovec in southern Moravia was confirmed in 2023.

Cepaea nemoralis (Linnaeus, 1758)

The second outdoor record in Slovakia originates from an unexpected site – a submontane settled area (910 m asl) in the central mountainous part of the country. It is believed to have been introduced through gardening materials.

Cernuella neglecta (Draparnaud, 1805)

The new locality of the Dune Snail is located in Prague, Ocelářská Street, and was found in May 2023. The identification was confirmed by genital characters (Fig. 1, 2). The large population of this large hygromiid snail (dozens of live adult individuals) lives on the fence around the car park. It is not in contact with the other Prague population in Šeberov, and long-distance transport by car is most likely origin of this new colony. The Dune Snail is in the Czechia of relatively recent origin, its early finds date back to the middle of the last century (Ložek 1957). Nowadays, the species lives both in natural habitats (e.g. Horáčková et al. 2018) and on anthropogenic sites (e.g., Říhová et al. 2011), and further spread is expected.

***Clathrocaspia knipowitschii* (Makarov, 1938)**

This Ponto-Caspian species first appeared in the Slovak part of the Danube in 2020 (ČEJKA et al. 2021). Two new localities with this species have been recorded in the Slovak section of the river Danube, with an abundant population (40 ind./m²) found close to the village of Medved'ov.

***Corbicula fluminea* (O. F. Müller, 1774)**

The new records of this non-native and invasive bivalve document its gradual spread. In Bohemia, findings in the river Berounka document the spread upstream of this river. The finding in the river Bodrog is the second record from eastern Slovakia (basin of the river Tisa) (Fig. 3). This invasive mussel was previously known only from the Danube basin in Slovakia.

***Cornu aspersum* (O. F. Müller, 1774)**

Three new finds of the species come from Slovakia, and five from Czechia. All finds are from built-up areas, except one, which is situated on the cycling trail that runs alongside the river Labe near the wood factory with the veneer production line.

***Daudebardia brevipes* (Draparnaud, 1805)**

Daudebardia brevipes lives in decaying leaves in scree forests. The species has probably spread from Posázaví, the only region in Bohemia where it is more common, to the southeast of Prague.

***Deroceras invadens* Reise, Hutchinson, Schunack & Schlitt, 2011**

In November 2023, a single individual of *D. invadens* was discovered on the bank of the brook Říčanský potok in the Prknovka Forest Park (Prague – Uhříněves), along with *H. cinctella* and native Czech species (ŘÍHOVÁ et al. 2024).

***Euglesa pseudosphaerium* (J. Favre, 1927)**

The occurrence of this critically endangered species was confirmed in 2023 in some sites in central and northern Bohemia. See ČEJKA et al. (2020) for details.

***Gyraulus rossmaessleri* (Schmidt, 1852)**

The occurrence of this rare species was confirmed in the Pastvisko National Nature Monument in southern Moravia. See ČEJKA et al. (2022) for more information on the species.

***Helix lucorum* Linnaeus, 1758**

A user on the citizen science project “Určování bezobratlých” (Identification of invertebrates) on Facebook recorded a live individual in her garden in Dušníky village near Roudnice nad Labem town in northern Bohemia. The collector did not share more precise data on the finding; the identification was based on photos (FARSKÁ 2023).

***Hygromia cinctella* (Draparnaud, 1801)**

Originally from the Mediterranean region, this snail was first recorded in Prague in 2011 (ŘÍHOVÁ & JUŘÍČKOVÁ 2011). It has spread to several locations within Prague (ŘÍHOVÁ et al. 2024). Now, we have the first record outside

of Prague, in the Bohemian Karst. *Hygromia* is currently spreading through Central Europe; further discoveries within Czechia will surely follow.

***Krynickillus melanocephalus* Kaleniczenko, 1851**

According to ČEJKA et al. (2021), this snail first appeared in eastern Slovakia in 2020, but has now also been recorded from Prešov and Nižné Nemecké. In the city of Prešov, it occurs locally in numerous semi-natural and urban sites (e.g., back gardens, on the edge of the trail lined with a spruce tree hedge near the riverbank) (Fig. 4).

***Ladislavella occulta* (Jackiewicz, 1959)**

In 2023, we confirmed the occurrence of this rare snail at one of two known sites in Czechia. In Slovakia, a presumably abundant population was found at five sites in the Šúr National Nature Reserve in western Slovakia (BERAN 2023). This finding is the second known site in Slovakia. See ČEJKA et al. (2020, 2021) for more information on the species.

***Lucilla scintilla* (R. T. Lowe, 1852)**

The Oldfield coil snail is a terricolous, non-native species in Europe that appeared here after the Second World War. The exact distribution of this snail in Czechia and Slovakia is poorly known, as finds from the wild come mainly from flood deposits. The find in the Prknovka Forest Park in Prague is therefore unique, as the individual comes from a detritus sample and the occurrence of the snail can therefore be localized with certainty (ŘÍHOVÁ et al. 2024). The only two precisely localized populations in Czechia are located in Hradec Králové (JUŘÍČKOVÁ 1998) and from an archaeological site near Mikulčice (HORSÁK et al. 2024), where a huge colony with many live individuals was found during excavations; further information on findings from Czechia and Slovakia can be found in HORSÁK et al. (2009).

***Menetus dilatatus* (Gould, 1841)**

In the Czechia, this non-native species occurs in the Elbe Lowland and in reservoirs on the river Vltava. The new record documented in 2023 is from the sandpit in the Třeboňsko Protected Landscape Area. See ČEJKA et al. (2020) for more information on the species.

***Potamopyrgus antipodarum* (Gray, 1843)**

In 2023, we discovered several new sites. Only the more remarkable records outside the known range are presented (fringe of the Krkonoše Mts, Třeboňsko PLA). See ČEJKA et al. (2020) for more information about the species.

***Pseudanodontia complanata* (Rossmässler, 1835)**

The new records of this rare species are from the river Elbe and the Třeboňsko PLA. It usually inhabits larger rivers and sometimes also dam reservoirs. See ČEJKA et al. (2020) for more information on the species.

***Pyramidula saxatilis* (Hartmann, 1842)**

For the first time, it was recorded in Slovakia in the Velká Fatra Mts (RAZKIN et al. 2016) and later in the Súľovské

skaly NNR in the Strážovské vrchy PLA (HORSÁKOVÁ et al. 2022, ČEJKA et al. 2021). The new record was obtained in 2022 in the Malá Fatra Mts, and numerous other local populations were found in the Súľovské skaly NNR, in some cases syntopically with *P. pusilla*. The previous

report on its occurrence in the Slovenský raj NP (ČEJKA et al. 2021) was based on erroneous identification, now reexamined by molecular methods. See ČEJKA et al. (2020) for more information about the species.

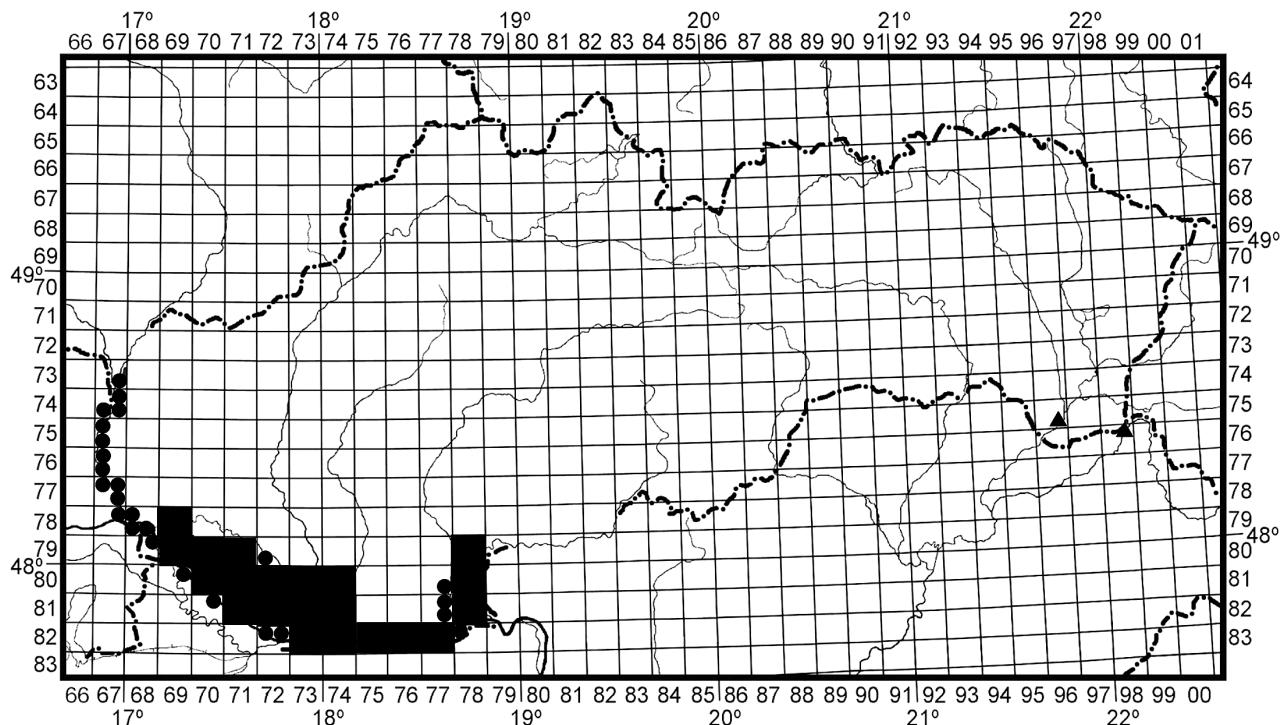


Fig. 3. Current distribution of the Asian clam (*Corbicula fluminea*) in Slovakia (triangles indicate the most recent records in eastern Slovakia).

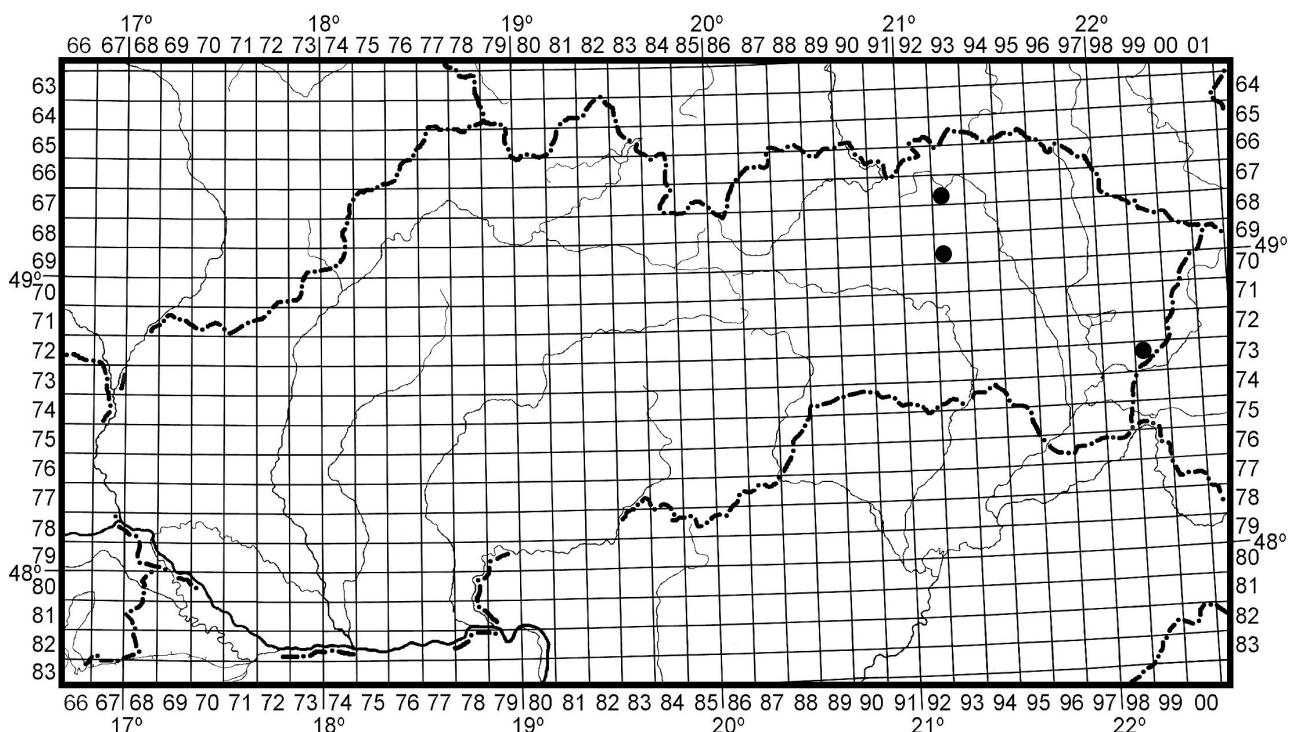


Fig. 4. Current distribution of *Krynickillus melanocephalus* in Slovakia.

***Sinanodonta woodiana* (Lea, 1834)**

A non-native species that has been spreading rapidly lately. The new finding of numerous population in the Vysočina Region is remarkable. See ČEJKA et al. (2020) for more information about the species.

***Sphaerium nucleus* (Studer, 1820)**

It is a species that lives mainly in vegetated, stagnant waters, having its distribution still poorly known. We discovered new sites in Czechia in 2023. These sites are situated in southern Bohemia (near Stříbrnec), central and northern Bohemia (Mšeno, Dubá) and Vysočina (Havlíčkova Borová) (BERAN & BERAN 2024). See ČEJKA et al. (2020) for more information about the species.

***Sphaerium rivicola* (Lamarck, 1818)**

The largest European orb mussel in the Czech and Slovak Republics inhabits the largest rivers (Elbe, Vltava, Morava, and Danube). An abundant population was confirmed in the river Elbe near Mělník (central Bohemia).

***Tandonia kusceri* (H. Wagner, 1931)**

So far, records of this invasive species have been collected mainly in the southwestern part of Slovakia. During a systematic survey of Slovakian cemeteries, we found several sites in the central part (Zvolenská kotlina basin) and three sites in the eastern part of the country (Rožňava and Michalovce County). The species was recently recorded in Czechia, with the first record from Praha (50.0857°N

14.4018°E, the year 2021), posted on iNaturalist (P_STIP-TICUS 2021). We verified the presence of *T. kusceri* at this site in February 2024; the identification was verified by genital characters (WIKTOR 1996). In summer 2023, *T. kusceri* was found in a street in Kutná Hora, and in February 2024 an established population was confirmed there in a neighboring garden (Fig. 5). Further spread is likely, as *T. kusceri* is now reported as an expanding species from several sites in Ukraine (BALASHOV & MARKOVA 2023), Hungary (TURÓCI et al. 2020), Serbia (GOJŠINA 2021), Bosnia (GOJŠINA et al. 2023), and Austria (DUDA et al. 2022). *Tandonia kusceri* is closely related to our native *Tandonia rustica* (MILLET, 1843). It has been questioned whether the characteristics of the genital system used to distinguish between them are always reliable (SCHALLEN-BERG et al. 2022), but *T. kusceri* still does appear to have a longer epiphallus than the *T. rustica* individual with a coiled epiphallus depicted by the authors. The two species appear to possess well-differentiated mitochondrial lineages, although data from type localities are missing for both (SCHALLENBERG et al. 2022).

***Theodoxus danubialis* (C. Pfeiffer, 1828)**

This species was found in the river Dyje in Břeclav downstream of the weir in 2023, and this find is situated several kilometers upstream of previous records (ČEJKA et al. 2021). See ČEJKA et al. (2021) for more information on the species.



Fig. 5. *Tandonia kusceri* from Kutná Hora, Masarykova Street. Photo by O. Korábek.

Theodoxus fluviatilis (Linnaeus, 1758)

The find is notable because it is the first record in the Eastern Slovak Lowland (Východoslovenská nížina). This species was first found in Slovakia in 2002 (ČEJKA & HORSÁK 2002); it behaves expansively, probably outcompeting the native species *Theodoxus danubialis*. The populations

in the Slovak part of the Danube basin originate from the Black Sea area and are not related to the population native to Central Europe, which are found in Germany. HIRSCHFELDER et al. (2011) suggest that the non-native populations could belong to *Theodoxus danasteri* (Lindholm, 1908). Furthermore, there is clear evidence that introduced populations of this species also carry a parasite lethal to Central European populations (ROTHMEIER et al. 2011). This may also be the reason for the relatively rapid decline of the *Theodoxus danubialis*, although this remains to be confirmed.

Trochulus hispidus (Linnaeus, 1758), *Trochulus sericeus* (Draparnaud, 1801)

PROĆKÓW (2009) synonymized the *T. hispidus* and *T. sericeus* complex as *T. hispidus* in her study. However, unpublished genetic data suggest that there may be two different lineages living in Bohemia, whose taxonomic status is unclear. Shell forms corresponding to *T. sericeus* were previously found in some mountain sites in Brdy (Ložek 2005). This form is also common in Hradec Králové (JUŘÍČKOVÁ 1998). Transitional forms are practically unknown in Bohemia; in Hradec Králové both forms even live syntopically (JUŘÍČKOVÁ 1998). The exception is a newly found locality, where individuals exhibit characters that cannot be unambiguously assigned to the species *Trochulus hispidus* or *T. sericeus* and form a kind of transition. The shell is lower, and the umbilicus is slightly wider than in the Czech form of *T. sericeus*. However, the hairs are twice as long as those of *T. hispidus*, corresponding entirely to those of *T. sericeus*. The occurrence of these individuals was recorded in faunistic quadrate 6248 in the deciduous forest near the road between the villages of Svojkovice and Holoubkov, east of Rokycany. Many live individuals and empty shells were found. This locality could be significant for possible studies on the genetic diversity of this species complex.

Unio crassus Philipsson, 1788, *Unio nanus* Lamarck, 1819

According to LOPES-LIMA et al. (2024) two species from the *Unio crassus* species complex (*Unio crassus* and *U. nanus*) occur in Central Europe, including the Czechia and Slovakia. Identification is currently not possible without the use of molecular genetic methods, and therefore it is not clear to which species the findings relate. In 2023, valuable records of these endangered species were documented in Czechia. The occurrence was confirmed in Morava and Bečva rivers.

Viviparus acerosus Bourguignat, 1862

In the Czechia and Slovakia, this species is native to the river Danube basin and inhabits slow-flowing rivers and canals in lowlands. The new sites in the Vysočina Region outside its native range were found in 2023. For more information about the species, see BERAN et al. (2019) and ČEJKA et al. (2020).



Fig. 6. A specimen of *Dryachloa daуca* collected in a greenhouse in Brno. Photo by M. Horsák.

Non-native species in greenhouses and other human-made habitats

This section primarily refers to unintentionally introduced species that are often found in greenhouses, garden centres, and shops selling ornamental plants. These species are often transported with various natural or other materials or as ‘stowaways’ via cargo. If such species are discovered outdoors, they will probably not survive the coming winter.

***Dryachloa dauca* Thompson & Lee, 1980**

The species belongs to the Helicarionidae and was described in Florida and Alabama as a representative of a new genus (Fig. 6). Since then, however, it has spread rapidly across the southeastern United States (J. Nekola pers. com.), which, along with its frequent association with human-altered habitats, suggests that it is likely not native to the US. In 2004, a colony was discovered in a tropical greenhouse in the arboretum of Mendel University in Brno, long awaiting identification. Many individuals were observed crawling in wet mosses around a small pool. It matches the original work of THOMPSON & LEE (1980), reporting that the species lives in wet and marshy habitats.

***Gulella io* Verdcourt, 1974**

The snail is native to tropical Africa (PREECE & WHITE 2012). It can be found in woodland, grassland, and even

urban areas outside its native range (SOW-YAN & WING LUP 2020), typically in shady areas with lots of leaf litter and decomposing vegetation. It has also been introduced to other countries such as Czechia and Slovakia (FLASAR & KROUPOVÁ 1976). The species was first recorded in 1976 in Bratislava – Karlova Ves, in the former Horticultural Centre and Leisure Services (ZARES) greenhouses. However, it is no longer possible to verify its occurrence in these greenhouses (FLASAR & KROUPOVÁ 1976). Last year a single living specimen was found under a bamboo (*Lithachne pauciflora*) in the Botanical Garden in Bratislava (Fig. 7). Ben Rowson from the National Museum in Cardiff, Wales, confirmed the identification.

***Guppya gundlachii* (L. Pfeiffer, 1840)**

This species is native to southern North America and northern South America (PILSBRY 1946, HUBRICHT 1985). The first record for the Western Palaearctic region was made in Israel in 2015 by MIENIS et al. (2016), who incorrectly identified it as *Euconulus praticola* (Reinhardt, 1883), a synonym of *Euconulus alderi* (Gray, 1840) (HORSÁKOVÁ et al. 2020). *Guppya gundlachii* differs from all *Euconulus* by having more pronounced spiral lines on the bottom side of the shell and mainly regular growth ridges with clear spiral lines on the upper side (Fig. 8).

This species is globally expanding and was introduced to New Guinea, adjacent islands and Java. It is likely established in mainland Southeast Asia, as ROBINSON (1999)



Fig. 7. A specimen of *Gulella io* collected in the Bratislava Botanical Garden in 2023. Photo by F. Bednár.



Fig. 8. A specimen of *Guppya gundlachii* collected in the Bratislava Botanical Garden in 2023, used in molecular analysis. Photo by M. Horská.

reported regular finds of this species in shipments from Thailand. *Guppya gundlachii* has been reported for the first time in Peru (WENDEBOURG & HAUSDORF 2019) and mainland Ecuador (RAMIREZ PEREZ & HAUSDORF 2022). It is uncertain whether the South American occurrences result from introductions or are part of the species' native range. ROBINSON (1999) even considered the occurrences of *G. gundlachii* in North America to be introduced. The species also occurs in Central America and the Caribbean (GBIF 2023). From Europe, it is known from Austria (Vienna Botanical Garden, REISCHÜTZ et al. 2018), Poland (JASKUŁA et al. 2019), and for the first time from Czechia, and Slovakia (this study). The identification of the specimen from Slovakia was confirmed by COI barcode (GenBank accession number PP896552).

***Melanoides tuberculata* (O. F. Müller, 1774)**

This invasive species inhabits tropical, thermal, and artificially heated water bodies. The first outdoor record in the Czech Republic was made in 2023 in the Skryjský potok stream, which flows from the cooling water reservoir below the Dukovany nuclear power plant (COUFAL & BERAN 2024).

***Planorabella duryi* (Wetherby, 1879)**

This aquatic species, originally from Florida, was first reported in Slovakia as *Helisoma trivolvis* (Say, 1818) from the greenhouses of the Botanical Garden in Bratislava (FLASAR & KROUPOVÁ 1976). Later, it was also found outside the greenhouses, mostly as empty shells in flood deposits (e.g., ČILIAK & ŠTEFFEK 2013) and even as live specimens in an oxbow of the river Hron (ŠTEFFEK 2004). However, its survival in such a habitat during winter is unlikely. Recently, a live population was found in a brook with thermal water flowing from the Sliač spa (Fig. 9, 10). A second visit in spring 2024 confirmed its survival in winter at this site. The species was accompanied by two other non-native species, *Potamopyrgus antipodarum* (Gray, 1843) and *Physa acuta* Draparnaud, 1805.

***Striosubulina striatella* (Rang, 1831)**

This species originates in tropical western Africa (GBIF 2023). It has been discovered in several greenhouses in Czechia, frequently with *Subulina octona* (HORSÁK et al. 2013). This record is from 2022 and it is the first record from Slovakia (Fig. 11).

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Fig. 9. Thermal stream coming from Sliač Spa, inhabited by *Planorabella duryi*. Photo by M. Čiliak.



Fig. 10. Thermal stream coming from Sliač Spa, inhabited by *Planorabella duryi*. Photo by M. Čiliak.

Šafárik University, Košice, Slovakia), Zuzana Martíková, Miroslav Mláka (Water Research Institute, Bratislava, Slovakia), Jeff Nekola (Masaryk University, Brno, Czechia), Jozef Oboňa (University of Prešov, Slovakia), Adrián Purkart (Comenius University, Bratislava, Slovakia), Ben Rowson (National Museum Cardiff, Wales, UK), Ľubomír Volnár (Botanical Garden, Bratislava, Slovakia), Lívia Želisková (Zemplín Museum in Michalovce, Slovakia). We thank František Bednář (<https://orcid.org/0009-0003-4209-0155>) for the photos.

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Fig. 11. Specimens of *Striosubulina striatella* from the Bratislava Botanical Garden. Photo by F. Bednář.

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Table 1. Location data of the newly discovered occurrences reported herein.

Species; live/empty; Nearest municipality; Coordinates (°N, °E); Location (briefly) and habitat; Date of coll.; Altitude; leg./det.
<i>Aegopis verticillus</i> (Lamarck, 1822); 4/6; Pohledy; 49.7204, 16.5842; Rohová National Nature Reserve Rohová; 18.7. 2023; 600; T. Adamcová
<i>Aegopis verticillus</i> (Lamarck, 1822); 1/0; Louňovice pod Blaníkem; 49.6402, 14.8713; Velký Blaník Nature Reserve; 13. 10. 2023; 570; M. Drvotová
<i>Ampullaceana lagotis</i> (Schrank, 1803); 150/0; Devín; 48.1751, 16.9767; an oxbow of the river Morava by the confluence of rivers Morava and Danube; 3. 6. 2023; 140; L. Beran
<i>Ampullaceana lagotis</i> (Schrank, 1803); 40/0; Lanžhot; 48.7144, 16.9192; the pool by the hunting lodge Lány; 14. 5. 2023; 158; L. Beran
<i>Ampullaceana lagotis</i> (Schrank, 1803); 13/0; Lednice; 48.8122, 16.8015; the canal around the Pastvisko National Nature Monument; 27. 5. 2023; 175; L. Beran
<i>Ampullaceana lagotis</i> (Schrank, 1803); 4/0; Lysá nad Labem; 50.2150, 14.8281; the bigger pool in the Hrabanovská černava National Nature Monument; 31. 5. 2023; 183; L. Beran
<i>Ampullaceana lagotis</i> (Schrank, 1803); 10/0; Komořany; 50.5411, 13.5504; the overgrown pool in the quarry; 11. 9. 2023; 219; L. Beran
<i>Ampullaceana lagotis</i> (Schrank, 1803); 25/0; Vysoká Pec; 50.5428, 13.4919; the concrete pool to the SW of Jezeří; 11. 9. 2023; 290; L. Beran
<i>Ampullaceana lagotis</i> (Schrank, 1803); 13/0; Vrskmaň; 50.5099, 13.5255; the overgrown pool to the SE of the water reservoir Marcela; 17. 11. 2023; 266; L. Beran
<i>Ampullaceana lagotis</i> (Schrank, 1803); 4/0; Vrskmaň; 50.5078, 13.5204; the more extensive water reservoir to the S of the water reservoir Marcela; 17. 11. 2023; 268; L. Beran
<i>Aplexa hypnorum</i> (Linnaeus, 1758); 4/0; Štefanová; 48.3790, 17.3896; the NE bank of the water reservoir Budmerice; 5. 6. 2023; 195; L. Beran
<i>Aplexa hypnorum</i> (Linnaeus, 1758); 7/0; Rojšín; 48.9252, 14.2544; the flooded meadow in the Šimečkova stráň Nature Monument; 17. 6. 2023; 530; V. Beranová
<i>Aplexa hypnorum</i> (Linnaeus, 1758); 8/0; Prague; 50.0187, 14.6110; forest park Prknovka, the little pool next to the brook Říčanský potok; 16. 5. 2023; 297; A. Kocurková (Říhová et al. 2024)
<i>Bithynia leachii</i> (Sheppard, 1823); 10/0; Hlohovec; 48.7808, 16.7598; wetlands on the W edge of the pond Hlohovecký rybník; 18. 3. 2023; 174; L. Beran
<i>Cepaea nemoralis</i> (Linnaeus, 1758); 15/0; Donovaly; 48.8749, 19.2337; back garden; 26. 6. 2023; 910; M. Linka leg.
<i>Clathrocasbia knipowitschii</i> (Makarov, 1938); 4/0; Gabčíkovo; 47.8614, 17.5338; the ripal zone of the original course of the Danube, on riprap stones; 22. 3. 2023; 113; M. Mláka
<i>Clathrocasbia knipowitschii</i> (Makarov, 1938); 40/0; Medveďov; 47.7881, 17.6658; on the riprap of the groyne; 22. 3. 2023; 110; M. Mláka
<i>Cernuella neglecta</i> (Draparnaud, 1805); higher tens of individuals; Prague; 50.1065, 14.4950; on the fence around car park, directly in the Prague City; 4. 5. 2023; 200; D. Říhová
<i>Corbicula fluminea</i> (O. F. Müller, 1774); 1/0; Ladmovce; 48.4002, 21.7730; eupotamal of the river Bodrog; 30. 5. 2023; 100; P. Ľuptáčik
<i>Corbicula fluminea</i> (O. F. Müller, 1774); 100/0; Beroun; 49.9668, 14.0755; the river Berounka by the bridge; 20. 5. 2023; 225; L. Beran
<i>Corbicula fluminea</i> (O. F. Müller, 1774); 30/0; Beroun; 49.9668, 14.0755; the millrace of the river Berounka by the bridge; 20. 5. 2023; 225; L. Beran

<i>Corbicula fluminea</i> (O. F. Müller, 1774); 1/0; Roztoky; 50.0275, 13.8624; the river Berounka between the weir and the bridge; 16. 7. 2023; 230; L. Beran
<i>Corbicula fluminea</i> (O. F. Müller, 1774); 300/0; Břeclav; 48.7651, 16.8873; the river Dyje downstream of the weir in Břeclav; 25. 11. 2023; 158; L. Beran
<i>Cornu aspersum</i> (O. F. Müller, 1774); 1/0; Cabaj–Čápor; 48.2479, 18.0194; Fraštacká St, on the low wall; 14. 8. 2023; 150; J. Kollár
<i>Cornu aspersum</i> (O. F. Müller, 1774); 1/0; Brno–Jundrov; 49.2055, 16.5548; Jasanová St, on the house 973/5a; 16. 5. 2023; 220; P. Dřevojan
<i>Cornu aspersum</i> (O. F. Müller, 1774); 35/0; Bratislava; 48.1426, 17.0857; Dvořákovo nábřeží St, a brownfield on the riverbank of the Danube; 12. 7. 2023; 100; A. Purkart
<i>Cornu aspersum</i> (O. F. Müller, 1774); 4/0; Bratislava; 48.1664, 17.1503; Tomášikova St, a small lawn with scrub (0.1 ha) in the middle of an asphalt desert; 14. 6. 2023; 100; H. Čejka
<i>Cornu aspersum</i> (O. F. Müller, 1774); 1/0; Křivenice; 50.4055, 14.4393; cycling trail along the river Labe (by the wood factory with the veneer production line); 31. 7. 2023; 155; L. Beran
<i>Cornu aspersum</i> (O. F. Müller, 1774); 1/0; Křivenice; 50.4055, 14.4393; cycling trail along the river Labe (by the wood factory with the veneer production line); 3. 8. 2023; 155; L. Beran
<i>Cornu aspersum</i> (O. F. Müller, 1774); 1/0; Dubá; 50.5407, 14.5440; the private garden; 10. 10. 2023; 262; Z. Martínková leg., L. Beran det.
<i>Cornu aspersum</i> (O. F. Müller, 1774); 3/0; Prague; 50.1186, 14.6293; overgrown pavement edge; 16. 6. 2023; 272; P. Dolejš
<i>Daudebardia brevipes</i> (Draparnaud, 1805); 1/0; Prague; 50.0241, 14.5734; alluvium of the brook Pitkovichý potok, near Pitkovichá strán Nature Monument; 21. 6. 2023; 263; M. Drvotová leg., L. Juřičková det. (Říhová et al. 2024)
<i>Daudebardia brevipes</i> (Draparnaud, 1805); 0/2; Prague; 50.0278, 14.5640; alluvium of the brook Pitkovichý potok, near the confluence with the brook Botič; 21. 6. 2023; 255; M. Drvotová (Říhová et al. 2024)
<i>Daudebardia brevipes</i> (Draparnaud, 1805); 0/1; Prague; 50.0068, 14.6104; alluvium of the brook Pitkovichý potok, floodplain between Lipany and Benice; 1. 5. 2023; 290; Š. Podroužková leg., L. Juřičková det. (Říhová et al. 2024)
<i>Daudebardia brevipes</i> (Draparnaud, 1805); 0/1; Říčany; 49.9739, 14.6392; alluvium of the brook Pitkovichý potok, alder carr south of Voděrádky; 15. 10. 2023; 336; D. Říhová leg., J. Oravec det. (Říhová et al. 2024)
<i>Daudebardia brevipes</i> (Draparnaud, 1805); 0/1; Strančice; 49.9542, 14.6621; alluvium of the brook Pitkovichý potok, near by swampy spring area; 15. 10. 2023; 385; D. Říhová leg., J. Oravec det. (Říhová et al. 2024)
<i>Deroceras invadens</i> Reise, Hutchinson, Schunack et Schlitt, 2011; 1/0; Prague; 50.0203, 14.6088; forest park Prknovka, the bank of the brook Říčanský potok; 25. 11. 2023; 293; D. Říhová leg., L. Juřičková det. (Říhová et al. 2024)
<i>Dryachloa daica</i> Thompson & Lee, 1981; 4/7; Brno; 49.2150, 16.6200; greenhouse in arboretum of Mendel University; 11. 2. 2004; 250; M. Horská leg., J. Nekola det.
<i>Euglesa pseudosphaerium</i> (J. Favre, 1927); 6/0; Lysá nad Labem; 50.2150, 14.8281; the bigger pool in the Hrabanovská černava National Nature Monument; 31. 5. 2023; 183; L. Beran
<i>Euglesa pseudosphaerium</i> (J. Favre, 1927), 1933; 35/0; Obora; 50.5526, 14.6681; the flooded alder-woods by the pond Poselský rybník; 28. 5. 2023; 288; L. Beran
<i>Gulella io</i> Verdcourt, 1974; 1/0; Bratislava; 48.1470, 17.0725; botanical garden, greenhouse, under the bamboo (<i>Lithachne pauciflora</i>); 14. 7. 2023; 151; L. Volnář leg., B. Rowson det.
<i>Guppya gundlachii</i> (L. Pfeiffer, 1840); 1/0; Brno; 49.2150, 16.6200; greenhouse in arboretum of Mendel University; 11. 2. 2004; 250; M. Horská
<i>Guppya gundlachii</i> (L. Pfeiffer, 1840); 3/0; Bratislava; 48.1470, 17.0725; botanical garden, greenhouse; 15. 12. 2023; 151; J. Čapka, L. Volnář leg., M. Horská det. (GenBank accession number PP896552)
<i>Gyraulus rossmaessleri</i> (Auerswald, 1852); 6/0; Lednice; 48.8112, 16.7978; sedge wetlands in the south part of the Pastvisko National Nature Reserve; 20. 3. 2021; 161; L. Beran
<i>Helix lucorum</i> Linnaeus, 1758; 1/0; Dušníky (Roudnice n. L.); -; garden (probably); 29. 4. 2023; 200; J. Farská leg., O. Korábek, R. Coufal det. (FARSKÁ 2023)
<i>Hygromia cinctella</i> (Draparnaud, 1801); 1/3; Tetín; 49.9501, 14.1077; Tetínské skály NR, ash tree stand in the alluvium of small brook; 29. 6. 2023; 225; Š. Podroužková
<i>Hygromia cinctella</i> (Draparnaud, 1801); 1/0; Prague; 50.0203, 14.6088; Prknovka forest park, the bank of the brook Říčanský potok; 25. 11. 2023; 293; D. Říhová (Říhová et al. 2024)
<i>Hygromia cinctella</i> (Draparnaud, 1801); 0/1; Prague; 50.0155, 14.6169; the bank of the brook Říčanský potok in Kolovraty; 25. 11. 2023; 294; D. Říhová (Říhová et al. 2024)
<i>Hygromia cinctella</i> (Draparnaud, 1801); 22/30; Prague; 50.1159, 14.4082; in the southern part of Prague Zoological Garden outside expositions; 26. 6. 2023; 180; D. Říhová, F. Lambert leg., D. Říhová det.
<i>Hygromia cinctella</i> (Draparnaud, 1801); 3/0; Prague; 50.1029, 14.5321; young forest near Polífkův Pond, Smetanka Forest Park; 21. 4. 2023; 210; Š. Podroužková (Říhová et al. 2024)
<i>Hygromia cinctella</i> (Draparnaud, 1801); 5/0; Prague; 50.0696, 14.4284; front garden of the building of the Faculty of Mathematics and Physics, Prague – Ke Karlovu; 1. 5. 2023; 230; D. Říhová
<i>Hygromia cinctella</i> (Draparnaud, 1801); 2/0; Prague; 50.0812, 14.3109; without description, data from iNaturalist application; 14. 6. 2023; 320; P. Kacl leg., D. Říhová det. (KACL 2023)

<i>Krynickillus melanocephalus</i> Kaleniczenko, 1851; tens of individuals; Prešov; 48.9882, 21.2320; edge of the trail lined with a hedge made of spruce trees, near the river Torysa; 13. 10. 2023; 241; J. Oboňa leg., T. Čejka det.
<i>Krynickillus melanocephalus</i> Kaleniczenko, 1851; 1/0; Prešov; 48.9735, 21.2404; Wilecova hôrka, a deciduous forest (dominated by beech), by the stairway towards the Petöfi Memorial; 17. 10. 2023; 280; P. Manko
<i>Krynickillus melanocephalus</i> Kaleniczenko, 1851; tens of individuals; Prešov; 48.9884, 21.2266; Calvary, hornbeam forest with hazel, around the stairs; 13. 10. 2023; 268; J. Oboňa leg., T. Čejka det.
<i>Krynickillus melanocephalus</i> Kaleniczenko, 1851; 1/0; Nižné Nemecké; 48.6542, 22.2424; back garden; 24. 8. 2023; 115; L. Želisková
<i>Ladislavella occulta</i> (Jackiewicz, 1959); 7/0; Lanžhot; 48.6617, 16.9522; small pools in a meadow; 14. 5. 2023; 152; L. Beran
<i>Ladislavella occulta</i> (Jackiewicz, 1959); 8/0; Svätý Jur; 48.2324, 17.2127; flooded alder-woods to the west of the canal in the Šúr National Nature Reserve; 3. 6. 2023; 152; L. Beran, J. Beran, V. Beran, V. Klobušická (BERAN 2023)
<i>Ladislavella occulta</i> (Jackiewicz, 1959); 2/0; Svätý Jur; 48.2315, 17.2158; flooded alder-woods by the canal in the Šúr National Nature Reserve; 5. 6. 2023; 152; L. Beran (BERAN 2023)
<i>Ladislavella occulta</i> (Jackiewicz, 1959); 2/0; Svätý Jur; 48.2315, 17.2189; the edge of the flooded alder-woods in the southern part of the Šúr National Nature Reserve; 5. 6. 2023; 152; L. Beran (BERAN 2023)
<i>Ladislavella occulta</i> (Jackiewicz, 1959); 2/0; Čierna Voda; 48.2299, 17.2396; flooded alder-woods in the southeastern part of the Šúr National Nature Reserve; 4. 6. 2023; 152; L. Beran (BERAN 2023)
<i>Ladislavella occulta</i> (Jackiewicz, 1959); 10/0; Svätý Jur; 48.2494, 17.2378; wetlands in northwestern part of the Šúr National Nature Reserve; 6. 6. 2023; 152; L. Beran (BERAN 2023)
<i>Limacus flavus</i> (Linnaeus, 1758); 1/0; Pezinok; 48.2863, 17.2632; in the centre of the town, right next to the newsstand, under which several individuals probably live, because there is water leaking from the roof.; 29. 4. 2023; 157; V. Marušic
<i>Limacus flavus</i> (Linnaeus, 1758); 1/0; Brno; 49.2026, 16.5857; outside Draken pub, on a shelf splashed with beer, at 11 pm; 21. 8. 2023; 290; V. Horskává
<i>Lucilla scintilla</i> (R. T. Lowe, 1852); 0/1; Prague; 50.0189, 14.6107; forest park Prknovka, alluvium of the brook Říčanský potok; 16. 5. 2023; 297; A. Kocurková leg., M. Horská det. (ŘÍHOVÁ et al. 2024)
<i>Melanoides tuberculata</i> (O. F. Müller, 1774); >100/0; Dukovany; 49.0949, 16.1535; the Skryjský potok, a small stream that flows out of the cooling water reservoir below the Dukovany nuclear power plant; 8. 5. 2023; 330; R. Coufal (COUFA& BERAN 2024)
<i>Menetus dilatatus</i> (Gould, 1841); 20/0; Veselí nad Lužnicí; 49.1669, 14.7156; the E edge of the sandpit Vlkovská pískovna; 6. 8. 2023; 405; V. Beranová leg., L. Beran det.
<i>Planorbella duryi</i> (Wetherby, 1879); 10/0; Sliač; 48.6126, 19.1549; a brook with thermal water flowing from the Sliač spa; 11. 10. 2023; 318; M. Čiliak leg., T. Čejka det.
<i>Potamopyrgus antipodarum</i> (Gray, 1843); 2/0; Jilemnice; 50.6313, 15.4701; littoral of the river Jizerka; 10. 5. 2023; 400; E. Slachtová
<i>Potamopyrgus antipodarum</i> (Gray, 1843); 4/0; Třeboň; 49.0202, 14.7636; the canal Zlatá stoka to the SE of the railway station Třeboň; 21. 5. 2023; 426; L. Beran
<i>Potamopyrgus antipodarum</i> (Gray, 1843); 150/0; Vlkov; 49.1566, 14.7092; the SE edge of the central sandpit Horusická pískovna; 5. 8. 2023; 405; V. Beranová leg., L. Beran det.
<i>Potamopyrgus antipodarum</i> (Gray, 1843); 13/0; Vlkov; 49.1531, 14.7108; the S edge of the central sandpit Horusická pískovna; 5. 8. 2023; 405; V. Beranová leg., L. Beran det.
<i>Pseudanodonta complanata</i> (Rossmässler, 1835); 2/0; Beroun; 49.9668, 14.0755; the river Berounka by the bridge; 20. 5. 2023; 225; L. Beran
<i>Pseudanodonta complanata</i> (Rossmässler, 1835); 0/1; Stráž nad Nežárkou; 49.0805, 14.8819; the river Nežárka in Šimanov downstream of the weir; 15. 7. 2023; 429; L. Beran
<i>Pseudanodonta complanata</i> (Rossmässler, 1835); 6/0; Žalhostice; 50.5187, 14.0966; the river Labe upstream to the weir; 4. 8. 2023, 12. 10. 2023; 148; L. Beran
<i>Pseudanodonta complanata</i> (Rossmässler, 1835); 0/7; Vlkov; 49.1575, 14.7092; the river Lužnice near Vlkov; 5. 8. 2023; 405; V. Beranová leg., L. Beran det.
<i>Pseudanodonta complanata</i> (Rossmässler, 1835); 0/3; Veselí nad Lužnicí; 49.1522, 14.7079; the river Lužnice downstream of the weir in Veselí nad Lužnicí; 5. 08. 2023; 410; V. Beranová leg., L. Beran det.
<i>Pseudanodonta complanata</i> (Rossmässler, 1835); 1/0; Vlkov; 49.1464, 14.7190; the river Lužnice by the bridge near Vlkov; 6. 8. 2023; 408; V. Beranová leg., L. Beran det.
<i>Pyramidula saxatilis</i> (Hartmann, 1842); 1/0; Stúrovo; 49.1889, 19.0526; Hromové sedlo beneath the Chlebem Hill, limestone outcrops; 27. 6. 2022; 1590; M. Horská
<i>Pyramidula saxatilis</i> (Hartmann, 1842); 1/0; Súľov – Hradná; 49.1869, 18.6062; Súľovské skaly NNR, limestone rock near the Skalné okno; 4. 7. 2023; 700; M. Horská, V. Bronišová
<i>Pyramidula saxatilis</i> (Hartmann, 1842); 10/0; Súľov – Hradná; 49.1868, 18.6043; Súľovské skaly NNR, limestone rock near „Výhľad pod bukom“; 4. 7. 2023; 706; M. Horská, V. Bronišová
<i>Pyramidula saxatilis</i> (Hartmann, 1842); 68/0; Súľov – Hradná; 49.1867, 18.6048; Súľovské skaly NNR, limestone rock near „Hraničný kameň, medzník“; 4. 7. 2023; 683; M. Horská, V. Bronišová

<i>Pyramidula saxatilis</i> (Hartmann, 1842); 118/0; Súľov – Hradná; 49.1873, 18.6022; Súľovské skaly NNR, limestone rock; 4. 7. 2023; 726; M. Horsák, V. Bronišová
<i>Pyramidula saxatilis</i> (Hartmann, 1842); 1/0; Súľov – Hradná; 49.1789, 18.5849; Súľovské skaly NNR, limestone rock near 330 m N of the Lúka pod hradom spring; 26. 8. 2023; 502; V. Bronišová
<i>Pyramidula saxatilis</i> (Hartmann, 1842); 75/0; Súľov – Hradná; 49.1819, 18.606; Súľovské skaly NNR, limestone rock near the Šarkania diera; 30. 9. 2023; 558; V. Bronišová
<i>Sinanodonta woodiana</i> (Lea, 1834); 80/30; Humpolec; 49.5499, 15.3308; the pond Humpolecký rybník; 28. 10. 2023; 535; L. Beran, V. Beran
<i>Sphaerium nucleus</i> (Studer, 1820); 20/0; Ráj; 50.4640, 14.6088; a pool by the stream Pšovka; 16. 5. 2023; 382; L. Beran
<i>Sphaerium nucleus</i> (Studer, 1820); 6/0; Stříbřec; 49.0297, 14.8619; the flooded alder-woods bellow the dam of the pond; 28. 5. 2023; 432; L. Beran
<i>Sphaerium nucleus</i> (Studer, 1820); 2/0; Stříbřec; 49.0016, 14.8449; the wetland to the E of the pond Dušákovský rybník; 28. 5. 2023; 432; L. Beran
<i>Sphaerium nucleus</i> (Studer, 1820); 25/0; Obora; 50.5526, 14.6681; the flooded alder-woods by the pond Poselský rybník; 28. 5. 2023; 288; L. Beran
<i>Sphaerium nucleus</i> (Studer, 1820); 10/0; Havlíčkova Borová; 49.6546, 15.8139; the small overgrown carry in the W part Ranská jezírka Nature Reserve; 10. 9. 2023; 635; K. Beran leg., L. Beran det. (BERAN & BERAN 2024)
<i>Sphaerium nucleus</i> (Studer, 1820); 3/0; Havlíčkova Borová; 49.6536, 15.8152; the small overgrown canal in the Ranská jezírka Nature Reserve; 10. 9. 2023; 635; K. Beran leg., L. Beran det. (BERAN & BERAN 2024)
<i>Sphaerium nucleus</i> (Studer, 1820); 30/0; Dubá; 50.5362, 14.5578; pool downstream of the pond Černý rybník; 12. 10. 2023; 252; L. Beran
<i>Sphaerium rivicola</i> (Lamarck, 1818); 30/0; Mělník; 50.3522, 14.4669; the river Labe (Elbe) by the bridge; 10. 10. 2023; 155; L. Beran
<i>Sphaerium rivicola</i> (Lamarck, 1818); 7/0; Vlíněves; 50.3756, 14.4504; the river Labe (Elbe) by the cemetery; 10. 10. 2023; 155; L. Beran
<i>Sphaerium rivicola</i> (Lamarck, 1818); 6/0; Dolní Beřkovice; 50.3953, 14.4553; the river Labe (Elbe) in Dolní Beřkovice; 10. 10. 2023; 155; L. Beran
<i>Striosubulina striatella</i> (Rang, 1831); 65/0; Bratislava; 48.1470, 17.0725; botanical garden, greenhouse; 15. 9. 2022; 151; J. Čapka leg., M. Horsák det.
<i>Tandonia kusceri</i> (H. Wagner, 1931); 25/0; Krásnohorské Podhradie; 48.6606, 20.5983; cemetery; 15. 5. 2023; 393; T. Čejka
<i>Tandonia kusceri</i> (H. Wagner, 1931); >100/0; Rožňava; 48.6651, 20.5305; cemetery; 30. 6. 2023; 318; M. Čiliak
<i>Tandonia kusceri</i> (H. Wagner, 1931); 1/0; Štúrovo; 47.7982, 18.7205; cemetery; 12. 8. 2023; 113; M. Čiliak leg., T. Čejka det.
<i>Tandonia kusceri</i> (H. Wagner, 1931); 1/0; Michalovce; 48.7492, 21.9210; cemetery; 19. 6. 2023; 109; M. Čiliak leg., T. Čejka det.
<i>Tandonia kusceri</i> (H. Wagner, 1931); 45/0; Zvolenská Slatina; 48.5634, 19.2544; cemetery; 12. 7. 2023; 350; M. Čiliak
<i>Tandonia kusceri</i> (H. Wagner, 1931); 30/0; Cabaj–Čápor; 48.2408, 18.0185; cemetery; 14. 9. 2023; 170; M. Čiliak
<i>Tandonia kusceri</i> (H. Wagner, 1931); 10/0; Banská Bystrica; 48.7406, 19.1419; cemetery; 15. 10. 2023; 357; E. Čiliaková leg., M. Čiliak det.
<i>Tandonia kusceri</i> (H. Wagner, 1931); 1/0; Praha; 50.0857, 14.4024; Malá Strana, Petřín, Seminářská zahrada; 20. 2. 2024; 215; O. Korábek
<i>Tandonia kusceri</i> (H. Wagner, 1931); 1/0; Kutná Hora; 49.9523 15.2751; Masarykova St., sidewalk opposite the theater; 27. 8. 2023; 230; O. Korábek
<i>Theodoxus danubialis</i> (C. Pfeiffer, 1828); 8/0; Břeclav; 48.7488, 16.8878; the river Dyje by the bridge in Břeclav; 25. 11. 2023; 158; L. Beran
<i>Theodoxus fluviatilis</i> (Linnaeus, 1758); 70/0; Ladmovce; 48.3966, 21.7635; confluence of the Somotorský kanál (ditch) and the river Bodrog; 30. 5. 2023; 100; A. Mock
<i>Trochulus hispidus</i> (Linnaeus, 1758) / <i>Trochulus sericeus</i> (Draparnaud, 1801); many living/many empty; Svojkovice; 49.7643, 13.6668; deciduous forest on the edge of spruce monoculture; 24. 5. 2023; 485; T. Adamcová leg., L. Juřičková det.
<i>Unio crassus</i> Philipsson, 1788 / <i>Unio nanus</i> Lamarck, 1819; 23/0; Horka nad Moravou; 49.6619, 17.2046; the river Morava; 9. 11. 2023; 230; L. Beran
<i>Unio crassus</i> Philipsson, 1788 / <i>Unio nanus</i> Lamarck, 1819; 2/0; Týn nad Bečvou; 49.5208, 17.6184; the river Bečva in Týn nad Bečvou; 2. 12. 2023; 230; L. Beran
<i>Unio crassus</i> Philipsson, 1788 / <i>Unio nanus</i> Lamarck, 1819; 24/0; Jezernice; 49.5293, 17.6418; the river Bečva to the S of Jezernice; 2. 12. 2023; 230; L. Beran
<i>Viviparus acerosus</i> (Bourguignat, 1862); 3/0; Humpolec; 49.5499, 15.3308; the pond Humpolecký rybník; 28. 10. 2023; 535; L. Beran, V. Beran
<i>Viviparus acerosus</i> (Bourguignat, 1862); 17/0; Krasoňov; 49.4903, 15.3882; the stream Hejnicky potok upstream of its inflow into the pond Sýkora; 1. 7. 2023; 545; L. Beran