




Malacological news from the Czech and Slovak Republics in 2022


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This paper presents important faunistic records obtained from the territory of the Czech and Slovak Republics in 2022. Two new non-native species, *Lauria cylindracea* and *Mieniplotia scabra*, were recorded indoors, and also two new non-native species *Cochlicella acuta* and *Testacella haliotidea* were found outdoors in the Czech Republic. New occurrences of the non-native species *Ambigolimax valentianus*, *Corbicula fluminea*, *Cornu aspersum*, *Ferrissia californica*, *Helix lucorum*, *Krynickyllus melanocephalus*, *Sinanodonta woodiana* and *Tandonia kusceri* were confirmed. New records of several endangered species, e.g. *Anisus septemgyratus*, *Gyraulus acronicus*, *Vertigo moulinsiana*, *Margaritifera margaritifera*, *Pisidium amnicum*, *P. hibernicum*, *P. globulare*, *P. pseudosphaerium*, *Pseudanodonta complanata*, *Sphaerium nucleus* and *Unio crassus*, are also presented. Location data are published with all details in a supplementary table.

Key words: mollusc fauna, faunistic survey, species list

Introduction

This paper is the fourth contribution, summarising the most important malacological news from the territory of the Czech and Slovak Republics since the last comprehensive monograph on molluscs published in 2013 (HORSÁK et al. 2013). The previous summary of new records covers the years 2015–2019 (ČEJKA et al. 2020), 2020 (ČEJKA et al. 2021) and 2021 (ČEJKA et al. 2022). In this paper, we present important faunistic records conducted in the Czech and Slovak Republics (former Czechoslovakia) in 2022. The rules for selecting records are: (i) the first record in Bohemia, Moravia, or Slovakia, (ii) a new regionally important record, (iii) new and important records of species

listed in NATURA 2000 and national Red Lists as Critically Endangered or Endangered species (usually excluding records of regularly monitored sites and populations), or (iv) non-native species currently expanding in new areas. Detailed information on the occurrence of each species follows in the text, and the records are provided (Tab. 1).

Comments on individual species

Ambigolimax valentianus (A. Férussac, 1821)

This slug was recorded in Slovakia outside greenhouses first in 2020 (ČEJKA et al. 2021). We found a rich population (25 individuals during a half hour search) in the open area of the garden centre; 90% of the individuals were

found in the bottoms of plastic pots, with the rest hiding under old boards. Further information on the biology and ecology of this species can be found in ČEJKA et al. (2021).

***Anisus septemgyratus* (Rossmässler, 1835)**

This rare planorbid inhabits preserved shallow pools and wetlands in lowlands. The record in Cerová vrchovina is the first one for the area and connects older records westward with its area of common occurrence in the east (HORSÁK et al. 2023).

***Arion intermedius* Normand, 1852**

This is the second record of the species in Slovakia and both records are from horticultural centres. In contrast to Slovakia, it is more widespread in the Czech Republic (ČEJKA et al. 2020, 2021) and the new findings from the Lužické hory Protected Landscape Area (PLA) confirm that it is a widespread species on suitable habitats (alluvial and humid forests and wetlands) in this area.

***Cecilioides cf. petitiana* (Benoit, 1862)**

In contrast to the 2007 finding (HORSÁK & ČEJKA 2008), two fresh empty shells were found in the garden centre in pots with woody plants imported from Italy. Because several similar species of this genus occur in the Mediterranean region, the identification is uncertain.

***Cochlicella acuta* (O. F. Müller, 1774)**

This is the first record of this non-native species in the Czech Republic. The species is typical of European coastal areas, especially the Mediterranean. In October 2022, five individuals were found in Nový Bydžov (NE Bohemia) outdoors on pallets of garden produce (Fig. 1). The pallets came from Hörstel (NW Germany). For now, it is not a finding of an established population and it is not certain whether the species will survive the winter here.

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

The new records of this non-native and invasive bivalve document its gradual spread. In Bohemia, the finding in the river Elbe in Vysoká nad Labem documents the spread upstream of this river. In Moravia, a massive expansion was confirmed in the river Svratka. The discovery in the



Fig. 1. Shells of *Cochlicella acuta* from a gardening centre in Nový Bydžov. Photo by J. Horáčková.

river Tisa on the border between Slovakia, Hungary and Ukraine is the first record in eastern Slovakia.

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

The new locality of this non-native species is one of the northernmost in Slovakia so far (it should be noted that it is a palm greenhouse open for ventilation in summer). The finding near Křivenice (Central Bohemia) confirmed the outdoor survival of the population of this species recorded in 2016 (ČEJKA et al. 2020).

***Eucobresia nivalis* (Dumont & Mortillet, 1854)**

The new record of three living individuals of a species with a restricted range comes from the Orlické hory Mts. It occurs in the Zemská brána Nature Reserve on the bank of the river Divoká Orlice, under *Alnus* sp. and *Acer pseudoplatanus*, in herbaceous undergrowth with *Filipendula ulmaria*, *Petasites hybridus*, *Cirsium* sp. and others.

***Ferrissia californica* (Rowell, 1863)**

New records of this non-native gastropod from southwestern Bohemia are outside its known range.

***Gyraulus acronicus* (A. Férussac, 1807)**

Rare gastropod with scattered distribution in the Czech Republic and Slovakia. Several new sites were found in the area of its known occurrence in southern Bohemia.

***Gyraulus parvus* (Say, 1817)**

The new record comes from the river Váh near Kotešová in northwestern Slovakia outside its known range (see HORSÁK et al. 2023). Previous records and more information on the species were published by LORENCOVÁ et al. (2021) and ČEJKA et al. (2021).

***Helicella itala* (Linnaeus, 1758)**

In Bohemia, it is probably a species introduced with Neolithic settlement. One of the strongest populations was observed in August 2022 below the hill Ostrý in the České středohoří. *Helicella itala* was found to climbing up the high vegetation at the forest edge, which is rather unusual behaviour for this species. There are also some undated fossil specimens from this locality (JUŘIČKOVÁ et al. 2013).

***Helix lucorum* (Linnaeus, 1758)**

A new finding of this non-native species comes from the city of Bratislava (Fig. 2), which is the second record from the city. Both records are 11 km apart as the crow flies. For more information on the species see ČEJKA et al. (2020).

***Krynickyllus melanocephalus* (Kaleniczenko, 1851)**

Another record of this non-native slug from eastern Slovakia; we have not yet recorded its westward spread. For more information on the species, see ČEJKA et al. (2020).

***Lauria cylindracea* (da Costa, 1778)**

The range of this ovoviviparous member of the Lauriidae family is in the British Isles, western and southern Europe, extending to Switzerland, the Balkan and Peloponnese peninsulas, and Asia Minor (WELTER-SCHULTES

2012). In December 2022, it was found in the non-public part of the humid, climate-controlled tropical greenhouse “A2” of Prague Botanical Garden. Numerous individuals (both adults and juveniles of different sizes) were attached on the surface of plastic pots with plants (Fig. 3).

***Limacus flavus* (Linnaeus, 1758)**

This synanthropic slug has recently been spreading in the Czech Republic and Slovakia, probably related to climate warming. In the last decade new records of this previously rare (but synanthropic) slug have been made. The records are mainly concentrated in warmer regions, with current record being the thirteenth in Slovakia.

***Margaritifera margaritifera* (Linnaeus, 1758)**

An action plan (ŠVANYGA et al. 2013) and several current monitoring projects (PITHART 2023, HORÁČKOVÁ 2022) provide updated information on some still viable populations of the critically endangered freshwater pearl mussel (FPM) in the Czech Republic. The FPM population of the river Teplá Vltava is concentrated in the river section from Soumarský Most to the confluence with the river Studená Vltava, no occurrence further upstream has been documented. Only dozens of FPM adults are scattered in the river Vltava from its confluence at Pěkná up to Lipno Reservoir. About 300 adults from three different age cohorts were found (Fig. 4), representing about ¼ of the total population, as only half of the 25 km river section was explored and findability of all living individuals could never reach 100% as they inhabit hyporheic zone and due to their low visibility among the stones and plants at the river bottom. This adult population has been strengthened and rejuvenated in the last three years by release of semi-natural bred FPM juveniles (7–10 years old) and strengthening will continue in upcoming years. The total population currently consists of more than 3,000 individuals of different cohorts. Living individuals and empty valves (88/63) were found only at one location within the monitored section of the stream Zlatý potok. They represent one of the recent oldest fraction of the original popu-



Fig. 2. Shell of *Helix lucorum* from Bratislava-Dúbravka. Photo by J. Čapka.

lation surviving here without reproductive options due to unsuitable conditions for their juveniles. In the surveyed section of the river Blanice, there were found only four very old empty shells of FPM. This is the river section where living FPMs have not been recorded for several decades. The most abundant population of about 10,000 FPM individuals still survives in the upper reaches of the Blanice. Unfortunately, no FPMs were found in the other investigated streams with historical FPM occurrence (i.e. Křemžský potok – a brook section from Dobročkov to Ktiš-Pila, Losenice – a brook section from Rejštejn to Buzošná by Karlina Pila, and Ostružná – a brook section from Sušice to Tajanov). For more detailed information about the other Czech populations, see ČEJKA et al. (2020).

***Macrogaster badia* (C. Pfeiffer, 1828)**

The species is rare and endangered in the Czech Republic. Findings from 2022 confirm the occurrence of this species in the Pod Vrchmezím Nature Reserve in the Orlické hory, where this species was firstly found in 1954 (BRABENEC 1958).

***Mieniplotia scabra* (O. F. Müller, 1774)**

This Indo-Pacific native freshwater snail is a successful invader that has spread to other parts of East Asia, the Middle East, the Pacific Islands, North America, and the West Indies (CIANFANELLI et al. 2016). A population of this species was found in the aquarium of the tropical pavilion in the Zoological and botanical garden Plzeň. The occurrence of this species in the wild is unlikely in the territory of the Czech Republic. The nearest site with an occurrence outside greenhouses is known from the island of Kos in Greece (CIANFANELLI et al. 2016).



Fig. 3. Shells of *Lauria cylindracea* from non-public part of the tropical greenhouse of Prague Botanical Garden. Photo by D. Říhová.

***Pisidium amnicum* (O. F. Müller, 1774)**

New records are reported from small streams in eastern Bohemia and western Slovakia. For more information on the species, see ČEJKA et al. (2020).

***Pisidium globulare* Clessin, 1873**

New records are reported from pools, ditches and wetlands in southern and central Bohemia, and western Slovakia. For more information on the species, see ČEJKA et al. (2020).

***Pisidium hibernicum* Westerlund, 1894**

This species was found in 2022 in a wetland in southern Bohemia. Recently, this species has become rare in the Czech Republic, especially in standing waters. For more information on the species, see ČEJKA et al. (2020).

***Pisidium pseudosphaerium* J. Favre, 1927**

This critically endangered species was found in 2022 in wetlands near České Budějovice (southern Bohemia) and Dubno (southern Slovakia). The occurrence was confirmed in wetlands in the surroundings of the extensive pond Novozámecký rybník in northern Bohemia. For more information on the species, see ČEJKA et al. (2020).

***Pseudanodonta complanata* (Rossmässler, 1835)**

The new record of this rare species is from the river Elbe downstream of Hradec Králové (Fig. 5). It usually inhabits larger rivers and sometimes also dam reservoirs. For more information on the species, see ČEJKA et al. (2020).

***Pseudosuccinea columella* (Say, 1824)**

This snail is native to North America, but due to its outstanding adaptability, it occurs in a number of countries worldwide (NGCAMPHALALA et al. 2022). The new locality was found in December 2022 in the non-public part of the humid, climate-controlled tropical greenhouse “A2” of the Prague Botanical Garden. Living specimens were crawling among pots of plants in rolling plastic benches in small remnants of water used for watering. This species was previously known from the public greenhouses of the Prague Botanical Garden, the Plzeň Botanical Garden, and the Na Slupi Botanical Garden of Charles University (BERAN 2022), several zoological gardens (Prague, Dvůr Králové nad Labem), the greenhouse of Masaryk University in Brno, and the “Studio Garden” greenhouse in Sušice (HORSÁK et al. 2004). It has also been reported from the outdoors in the Czech Republic (MÁCHA 1971). Two records were obtained from the Velká Podkrušnohorská spoil heap in the Sokolov coal basin (50.2198N, 12.6456E; NE



Fig. 4. A young adult freshwater pearl mussel from the river Teplá Vltava (South Bohemia). Photo by J. Horáčková.

of Lomnice) in 2013 and 2014 (BARTOŠOVÁ et al. 2019) and one from the nearby Vintířovská výsypka (50.2416N, 12.7069E; NW of Vintířov) in 2016 (M. Poláková, unpubl. data), but the occurrences were not confirmed during sampling in 2019 (M. Poláková, pers. comm.).

***Radix lagotis* (Schrank, 1803)**

The occurrence of this species in the Czech Republic and Slovakia is still poorly known, because the species was not distinguished in the past. The new locality was discovered in central Bohemia. For more information on the species, see ČEJKA et al. (2021).

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

A non-native species that has been spreading rapidly lately. The new finding in the river Elbe is the first record from eastern Bohemia and confirms the continuous spread of this invasive species (Fig. 6). For more information on the species, see ČEJKA et al. (2020).

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

This species inhabits mostly vegetated standing waters at lower latitudes and its distribution is poorly known. Occurrence at several new sites in different parts of the Czech Republic and Slovakia was confirmed in 2022. For more information on the species, see ČEJKA et al. (2020).

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

This non-native slug has recently spread to Slovakia. Most of the records so far come from south-western Slovakia, but numerous populations are also being found in more eastern parts of the country as part of an ongoing nationwide survey of urban habitats. However, it has not yet been confirmed in the Czech Republic.

***Testacella haliotide* Draparnaud, 1801**

An adult specimen was found under a wooden board in a private garden in Prague (Fig. 7). Vegetable seedlings were planted in the ground at this location shortly before the record was made. These seedlings came from a horticultural centre in Veltrusy, 20 km north of Prague, and are the probable source of the *Testacella* specimen (PODROUŽKOVÁ 2022). Another adult *Testacella* was recorded in autumn at the same place. These are the first records of this species in the Czech Republic. The ability to overwinter at this site and form a viable colony is questionable and needs to be verified next year.

***Unio crassus* Philipsson, 1788**

Some valuable records of this endangered species were documented in the Czech Republic in 2022. In the regularly monitored population in the artificial channel of the river Bečva in Vsetín, a density of 550 adult specimens/m²



Fig. 5. The river Labe (Elbe) downstream of the weir near Vysoká nad Labem. New site with the occurrence of *Pseudanodonta complanata*, *Sinanodonta woodiana* and *Corbicula fluminea*. Photo by L. Beran.



Fig. 6. *Sinanodonta woodiana* from the river Labe (Elbe) near Vysoká nad Labem. Photo by L. Beran.



Fig. 7. *Testacella haliotideia* from Prague. Photo by Š. Podroužková.

was recorded. This is the highest known density of this species in the Czech Republic. Some records from the river Morava confirmed the existence of a larger population of this species, which was discovered several years ago (ČEJKA et al. 2021, 2022). An extensive population was also found in the river Turiec in central Slovakia (BERAN et al. 2023, not mentioned in Table 1) and in the river Orava in northwestern Slovakia. For more information on the species, see ČEJKA et al. (2020, 2021).

***Vertigo antvertigo* (Draparnaud, 1801)**

This open-wetland species occurs in suitable habitats throughout the Czech Republic, but its populations have recently declined (HORSÁK et al. 2013). Until recent surveys in 2015–2016 (first records during the 15th and 16th annual meetings of Czech and Slovak malacologists – Malacodays, unpublished data), it was not known from the Lužické hory Protected Landscape Area in Northern Bohemia (according to FLASAR (1998)) and records of several authors in a National Museum collection in Prague. Recent surveys show that it still occurs there and is more widespread in the area than expected.

***Vertigo moulinsiana* (Dupuy, 1849)**

This endangered wetland species protected at the European level was recorded at several sites in Cerová vrchovina.

These records confirm a historical record from the area and indicate a more widespread occurrence.

***Zebrina detrita* (O. F. Müller, 1774)**

This rare species, originally known in Bohemia only from the vicinity of Slaný, was probably introduced into the Bohemian Karst, which is abundant near the Barrande cave by the river Berounka between Tetín and Srbsko. From there it seems to have spread recently. Two individuals were newly found in the revitalised steppe near Hostim.

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Fig. 8. Dense population of *Unio crassus* in the canal of the river Bečva in Vsetín. Individuals hidden in a river bed reveal always two visible holes – i.e. inhalant and exhalant siphons. Photo by L. Beran.

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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>Ambigolimax valentianus</i> (Férussac, 1821); 25/0; Bratislava, Vajnory; 48.2146, 17.1911; Rybníčná Street, Horticultural centre Evergreen garden, outdoors, under plastic flower pots; 2. 6. 2022; 135; J. Čapka & T. Čejka
<i>Anisus septemgyratus</i> (Rossmässler, 1835); 2/6; Dubno; 48.1889, 20.0052; wetlands at the eastern edge of the Dubno village; 29. 8. 2022; 240; M. Horsák
<i>Arion intermedius</i> Normand, 1852; 2/0; Bratislava; 48.1627, 17.1604; Tomášikova Street, gardening centre CUREL; 2. 6. 2022; 140; J. Čapka & T. Čejka
<i>Arion intermedius</i> Normand, 1852; 1/0; Dolní Světlá; 50.8487, 14.6633; an alluvial forest in the eastern part of the Brazilka Nature Reserve; 16. 4. 2022; 538; J. Horáčková
<i>Arion intermedius</i> Normand, 1852; 1/0; Kytlice; 50.8017, 14.5407; a riparian vegetation of the brook with alders in the Kytlice Nature Reserve; 17. 4. 2022; 512; J. Horáčková
<i>Arion intermedius</i> Normand, 1852; 4/0; Mařeničky; 50.7952, 14.6794; five sites in wetlands in the Rašeliniště Mařeničky Nature Reserve; 15. 4. 2022; 368; J. Horáčková
<i>Cecilioides cf. petitiiana</i> (Benoit, 1862); 0/2; Bratislava, Karlova Ves; 48.1513, 17.0315; Devínska cesta, Horticultural centre Agapé, under plastic flower pots; 2. 6. 2022; 145; J. Čapka & T. Čejka
<i>Cochlicella acuta</i> (O. F. Müller, 1774); 5/0; Nový Bydžov; 50.2485, 15.4883; Josefa Jungmanna Street, gardening centre OK Zahrady, under wooden pallets of gardening products; 7. 10. 2022; 232; D. Koutecký leg., J. Horáčková det.
<i>Corbicula fluminea</i> (O. F. Müller, 1774); 8/0; Malé Trakany; 48.3941, 22.1431; a pebble-sand beach; 15. 10. 2021; 95; V. Košíková & A. Mock
<i>Corbicula fluminea</i> (O. F. Müller, 1774); 8/0; Vysoká nad Labem; 50.1599, 15.8095; the river Elbe downstream of a weir; 25. 9. 2022; 222; L. Beran
<i>Cornu aspersum</i> (O. F. Müller, 1774); 0/>100; Dobruška; 50.3687, 14.9555; Václavská Street, gardens; 15. 3. 2022; 247; M. Souček leg., O. Korábek det.
<i>Cornu aspersum</i> (O. F. Müller, 1774); 1/0; Křivenice; 50.4055, 14.4393; cycling trail along the river Elbe (by the wood factory with the veneer production line); 6. 5. 2022; 155; L. Beran
<i>Cornu aspersum</i> (O. F. Müller, 1774); 1/0; Křivenice; 50.4055, 14.4393; cycling trail along the river Elbe (by the wood factory with the veneer production line); 2. 8. 2022; 155; L. Beran
<i>Cornu aspersum</i> (O. F. Müller, 1774); 1/0; Liptovský Michal; 49.0953, 19.4292; in a palmarium greenhouse (open in summer), heated to above zero temperatures in winter. The owner imports palm trees from Spain.; 14. 9. 2022; 508; F. Bednár
<i>Eucobresia nivalis</i> (Dumont & Mortillet, 1854); 3/0; Čihák; 50.1300, 16.5635; the vegetation on the bank of the river Divoká Orlice; 8. 9. 2022; 495; T. Adamcová & L. Juříčková
<i>Ferrissia californica</i> (Rowell, 1863); 40/0; Nýrsko; 49.2728, 13.1443; a small pond to the S of Nýrsko; 10. 9. 2022; 485; K. Beran leg., L. Beran det.
<i>Ferrissia californica</i> (Rowell, 1863); 7/0; Lesná; 49.7250, 12.5445; the pond (Honzův rybník) in the Na Kolmu Nature Monument; 1. 10. 2022; 608; V. Beranová leg., L. Beran det.
<i>Gyraulus acronicus</i> (A. Férussac, 1807); 1/0; Zlív; 49.0698, 14.3521; the small pond near the pond Zlivský rybník; 12. 2. 2022; 384; L. Beran
<i>Gyraulus acronicus</i> (A. Férussac, 1807); 2/0; Mnich; 49.1609, 14.8776; the northern edge of the pond Ostrov; 13. 2. 2022; 460; K. Beran leg., L. Beran det.
<i>Gyraulus acronicus</i> (A. Férussac, 1807); 2/0; Mnich; 49.1626, 14.8707; the pond Vulsík; 13. 2. 2022; 467; K. Beran leg., L. Beran det.
<i>Gyraulus acronicus</i> (A. Férussac, 1807); 22/0; Pechova Lhota; 49.4912, 14.2650; the southern part of the pond Mláčovský rybník; 13. 9. 2022; 500; E. Šlachtová
<i>Gyraulus acronicus</i> (A. Férussac, 1807); 8/0; Roseč; 49.1362, 14.9296; the pond Březina; 5. 9. 2022; 500; E. Šlachtová
<i>Gyraulus acronicus</i> (A. Férussac, 1807); 6/0; Mnich; 49.1667, 14.8707; the small pond to the W of Mnich; 6. 2. 2022; 465; K. Beran leg., L. Beran det.
<i>Gyraulus parvus</i> (Say, 1817); 20/0; Kotešová; 49.2338, 18.6055; the river Váh near Kotešová; 29. 6. 2022; 310; L. Beran
<i>Helicella itala</i> (Linnaeus, 1758); 20/0; Březno; 50.5266, 13.9591; a high vegetation in the Ostrý foothill; 20. 8. 2022; 400; L. Juříčková
<i>Helix lucorum</i> (Linnaeus, 1758); 1/0; Žirany; 48.3655, 18.0971; a semi-natural woodland; 17. 8. 2022; 308; V. Tabačková
<i>Helix lucorum</i> (Linnaeus, 1758); 0/1; Bratislava; 48.1850, 17.0299; Koprivnická Street, a garden at the family house; 23. 11. 2022; 245; M. Linka & J. Čapka
<i>Krynickyllus melanocephalus</i> (Kaleniczenko, 1851); 1/0; Nižné Nemecké; 48.6579, 22.2383; an old cemetery; 1. 11. 2022; 114; L. Želisková leg., T. Čejka det.

Table 1. Continued.

<i>Lauria cylindracea</i> (da Costa, 1778); many living; Praha 7 – Troja; 50.1217, 14.4124; ground greenhouse of the Botanical Garden of Prague, Mediterranean part, on pots with orchids and pitcher plants (<i>Nepenthes</i>); 4. 11. 2022; 230; D. Říhová & J. Ponert
<i>Limacus flavus</i> (Linnaeus, 1758); 1/0; Snina; 48.9922, 22.1700; on the edge of the allotment garden bordering the forest; 13. 9. 2022; 245; P. Zdravecký
<i>Limacus flavus</i> (Linnaeus, 1758); 1/0; Ivanka pri Dunaji; 48.1839, 17.2477; Štefánikova Street; 17. 9. 2022; 132; V. Hemala leg., T. Čejka det.
<i>Margaritifera margaritifera</i> (Linnaeus, 1758); 316/87; Soumarský Most – Nová Pec; 48.9084, 13.8252 – 48.7974, 13.9470; the river Teplá Vltava and upper stream of the river Vltava above Lipno water reservoir in the Šumava National Park; oligotrophic running water; 2018–2022; 725–750; J. Horáčková, J. Švanyga, O. Simon and others
<i>Margaritifera margaritifera</i> (Linnaeus, 1758); 0/4; Horní Záblatí-Podedvorský Mlýn; 49.0034, 13.9334 – 49.0341, 13.9513; the river Blanice, app. 5 km long stretch of the river with an earlier occurrence of pearl mussels; 28. 8. 2022; 540–590; J. Horáčková
<i>Margaritifera margaritifera</i> (Linnaeus, 1758); 88/63; Vítějovice, Pod Brdovou – Chroboly, Keplův Mlýn; 49.0371, 14.0757 – 48.9616, 14.0831; the small brook Zlatý potok, app. 12 km long stretch of the river; 22.–26. 8. 2022; 518 –650; J. Horáčková
<i>Macrogastera badia</i> (C. Pfeiffer, 1828); many living; Olešnice v Orlických horách; 50.3573, 16.3599; a mixed mountain forest, under beech on fallen tree bark; 9. 9. 2022; 960; T. Adamcová & L. Juříčková
<i>Mieniplotia scabra</i> (O. F. Müller, 1774); 70/0; Plzeň; 49.7587, 13.3608; the aquarium in the tropical pavilion in the Zoological and botanical garden Plzeň; 10. 12. 2022; 305; L. Beran
<i>Pisidium amnicum</i> (O. F. Müller, 1774); 6/15; Studienka; 48.5115, 17.1263; the stream Rudava with sandy bottom; 15. 3. 2022; 174; J. Čačaný & T. Čejka
<i>Pisidium amnicum</i> (O. F. Müller, 1774); 25/0; Trotina; 50.2824, 15.8332; the stream Trotina to the S of Trotina; 26. 11. 2022; 237; L. Beran
<i>Pisidium amnicum</i> (O. F. Müller, 1774); 20/0; Trotina; 50.2886, 15.8294; the stream Trotina by the bridge; 26. 11. 2022; 238; L. Beran
<i>Pisidium amnicum</i> (O. F. Müller, 1774); 12/0; Rodov; 50.2966, 15.8173; the stream Trotina to the SW of Rodov; 26. 11. 2022; 245; L. Beran
<i>Pisidium amnicum</i> (O. F. Müller, 1774); 35/0; Sovětice; 50.2998, 15.7093; the river Bystřice next to a bridge; 19. 6. 2022; 253; L. Beran
<i>Pisidium amnicum</i> (O. F. Müller, 1774); 3/0; Břehy; 50.0547, 15.6053; the small stream (Neratovský potok); 29. 10. 2022; 210; L. Beran
<i>Pisidium globulare</i> Clessin, 1873; 4/0; Malacky; 48.4679, 17.0572; the Orlovské vršky Nature Reserve, transition mire with mesotrophic waterbody; 15. 3. 2022; 175; J. Čačaný & T. Čejka
<i>Pisidium globulare</i> Clessin, 1873; 13/0; Zliv; 49.0707, 14.3492; the ditch near the pond Zlivský rybník; 12. 2. 2022; 384; L. Beran
<i>Pisidium globulare</i> Clessin, 1873; 25/0; Kardašova Řečice; 49.1586, 14.8441; a small ditch next to pond Popelov; 6. 3. 2022; 438; K. Beran leg., L. Beran det.
<i>Pisidium globulare</i> Clessin, 1873; 8/0; Libiš; 50.2886, 14.5089; a small pool by the river Elbe; 12. 2. 2022; 384; L. Beran
<i>Pisidium hibernicum</i> Westerlund, 1894; 8/0; České Budějovice; 48.9909, 14.4456; the wetland by the cycling route by the pond Velký Vávrovský rybník; 12. 3. 2022; 392; L. Beran
<i>Pisidium pseudosphaerium</i> J. Favre, 1927; 80/0; České Budějovice; 49.0064, 14.4354; the alderwood by the pond Starý vrbenský rybník; 5. 3. 2022; 385; L. Beran
<i>Pisidium pseudosphaerium</i> J. Favre, 1927; 30/0; České Budějovice; 49.0018, 14.4406; the southern edge of the pond Domin; 5. 3. 2022; 385; L. Beran
<i>Pisidium pseudosphaerium</i> J. Favre, 1927; 26/0; Jestřebí; 50.6211, 14.5603; reeds on the SE edge of the pond Novozámecký rybník; 1. 11. 2022; 255; L. Beran
<i>Pisidium pseudosphaerium</i> J. Favre; 1/1; Dubno; 48.1889, 20.0052; wetlands at the eastern edge of the Dubno village; 29. 8. 2022; 240; M. Horsák
<i>Pseudanodonta complanata</i> (Rossmässler, 1835); 4/0; Výsoká nad Labem; 50.1599, 15.8095; the river Elbe downstream of a weir; 25. 9. 2022; 222; L. Beran
<i>Pseudosuccinea columella</i> (Say, 1824); 10/0; Praha 7 – Troja; 50.1217, 14.4124; the ground greenhouse of the Botanical Garden of Prague, Mediterranean part, in grooves flooded with water on stands for plant pots; 4. 11. 2022; 230; D. Říhová & J. Ponert
<i>Pupilla sterrii</i> (Forster, 1840); 15/60; Vilémovice; 49.3728, 16.7257; Zobany, limestone outcrops near the Macocha Abyss; 4. 6. 2022; 435; M. Horsák
<i>Pupilla sterrii</i> (Forster, 1840); 5/10; Terchová; 49.1891, 19.0529; limestone outcrops under the Chleb peak (1646 m a.s.l.); 27. 6. 2022; 1600; M. Horsák
<i>Radix lagotis</i> (Schrank, 1803); 100/0; Veltruby; 50.0720, 15.1659; the western part of the oxbow of the Elbe in the Veltrubský luh Nature Reserve; 18. 5. 2022; 195; L. Beran

Table 1. Continued.

<i>Sinanodonta woodiana</i> (Lea, 1834); 6/0; Vysoká nad Labem; 50.1599, 15.8095; the river Elbe downstream of a weir; 25. 9. 2022; 222; L. Beran
<i>Sphaerium nucleus</i> (Studer, 1820); 0/1; Dubno; 48.1889, 20.0052; wetlands at the eastern edge of the Dubno village; 29. 8. 2022; 240; M. Horsák
<i>Sphaerium nucleus</i> (Studer, 1820); 3/0; Zliv; 49.0698, 14.3521; the small pond near the pond Zlivský rybník; 12. 2. 2022; 384; L. Beran
<i>Sphaerium nucleus</i> (Studer, 1820); 12/0; Choteč; 49.9895, 14.2887; the pond to the northeast of Choteč; 19. 2. 2022; 275; V. Beranová leg., L. Beran det.
<i>Sphaerium nucleus</i> (Studer, 1820); 6/0; Rad; 48.4565, 21.8593; a wetland on the site of the former stream; 15. 3. 2022; 97; J. Černecký
<i>Sphaerium nucleus</i> (Studer, 1820); 27/0; České Budějovice; 49.0064, 14.4354; the alderwood by the pond Starý vrbenský rybník; 5. 3. 2022; 385; L. Beran
<i>Sphaerium nucleus</i> (Studer, 1820); 2/0; Kardašova Řečice; 49.1715, 14.8543; the E edge of the pond Obecní nový rybník; 6. 3. 2022; 439; K. Beran leg., L. Beran det.
<i>Sphaerium nucleus</i> (Studer, 1820); 15/0; České Budějovice; 49.0018, 14.4406; the southern edge of the pond Domin; 5. 3. 2022; 385; L. Beran
<i>Sphaerium nucleus</i> (Studer, 1820); 30/0; Stvolínky; 50.6201, 14.4467; two small pools by the pond Dolanský rybník; 10. 6. 2022; 298; L. Beran
<i>Sphaerium nucleus</i> (Studer, 1820); 9/0; Třebeč; 48.8765, 14.6885; Brouskův mlýn, wetland to the S of Třebeč; 7. 9. 2022; 450; E. Šlachtová
<i>Tandonia kusceri</i> (Wagner, 1931); 1/0; Ivanka pri Dunaji; 48.1848, 17.2487; an old cemetery; 28. 10. 2022; 133; T. Čejka
<i>Testacella haliotidea</i> Draparnaud, 1801; 2/0; Praha 8 – Troja; 50.1235, 14.4401; a private garden; 20. 10. 2022; 280; Š. Podroužková
<i>Unio crassus</i> Philipsson, 1788; 8/13; Chomoutov; 49.6587, 17.2109; muddy sediments in the river Morava, near the Kurfürstovo rameno Nature Monument; 11. 8. 2022; 220; R. Coufal
<i>Unio crassus</i> Philipsson, 1788; 2/0; Kotešová; 49.2338, 18.6055; the river Váh near Kotešová; 29. 6. 2022; 310; L. Beran
<i>Unio crassus</i> Philipsson, 1788; 7/0; Horka nad Moravou; 49.6597, 17.2085; the river Morava; 5. 5. 2022; 220; L. Beran
<i>Unio crassus</i> Philipsson, 1788; 3/0; Horka nad Moravou; 49.6619, 17.2045; the river Morava downstream of the inflow of the stream Benkovský potok; 5. 5. 2022; 220; L. Beran
<i>Unio crassus</i> Philipsson, 1788; 1000/0; Vsetín; 49.3301, 17.9980; canal of the river Bečva under a bridge; 11. 12. 2022; 343; L. Beran
<i>Unio crassus</i> Philipsson, 1788; 200/0; Kral'ovany; 49.1755, 19.1331; the river Orava by the inflow of the stream Bystříčka; 30. 6. 2022; 440; L. Beran, E. Šlachtová, P. Ľuptáčik, J. Beran, V. Klobušická, D. Jurašková
<i>Unio crassus</i> Philipsson, 1788; 24/0; Oravská Poruba; 49.2003, 19.2488; the river Orava in Oravská Poruba; 30. 6. 2022; 460; L. Beran, E. Šlachtová, P. Ľuptáčik, J. Beran, V. Klobušická, D. Jurašková
<i>Unio crassus</i> Philipsson, 1788; 3/0; Mezibrodie nad Oravou; 49.2316, 19.3428; the river Orava by the bridge; 30. 6. 2022; 496; L. Beran, E. Šlachtová, P. Ľuptáčik, J. Beran, V. Klobušická, D. Jurašková
<i>Unio crassus</i> Philipsson, 1788; 35/0; Horní Lehota; 49.2555, 19.3939; the river Orava in Horná Lehota; 30. 6. 2022; 510; L. Beran, E. Šlachtová, P. Ľuptáčik, J. Beran, V. Klobušická, D. Jurašková
<i>Unio crassus</i> Philipsson, 1788; 5/0; Krivá; 49.2869, 19.4794; the river Orava in Krivá; 30. 6. 2022; 540; L. Beran, E. Šlachtová, P. Ľuptáčik, J. Beran, V. Klobušická, D. Jurašková
<i>Vertigo antvertigo</i> (Draparnaud, 1801); 3/0; Dolní Světlá; 50.8484, 14.6628; the edge of the small pool with sedges in the Brazilka Nature Reserve; 16. 4. 2022; 543; J. Horáčková
<i>Vertigo antvertigo</i> (Draparnaud, 1801); 7/0; Mařeničky; 50.7948, 14.6772; the sedge wetland in the Rašeliniště Mařeničky Nature Reserve; 15. 4. 2022; 363; J. Horáčková
<i>Vertigo antvertigo</i> (Draparnaud, 1801); 14/2; Dolní Chřibská; 50.8663, 14.4756; the wet orchid meadow with patches of sedges in the Louka U Brodských Nature Reserve; 17. 4. 2021; 332; K. Horáček leg., J. Horáčková det.
<i>Vertigo antvertigo</i> (Draparnaud, 1801); 32/0; Dolní Chřibská; 50.8755, 14.4745; the wet meadow with patches of sedges in the Marschnerova louka Nature Reserve; 23. 5. 2020; 367; J. Horáčková
<i>Vertigo moulinsiana</i> (Dupuy, 1849); 20/1; Tachty; 48.1516, 19.9267; the sedge marshland in a willow stand above the Tachty pond; 28. 8. 2022; 300; M. Horsák
<i>Vertigo moulinsiana</i> (Dupuy, 1849); 50/3; Dubno; 48.1889, 20.0052; wetlands at the eastern edge of the Dubno village; 29. 8. 2022; 240; M. Horsák
<i>Vertigo moulinsiana</i> (Dupuy, 1849); 20/1; Martinová; 48.3035, 20.1712; sedge littoral wetland of the Martinovská reservoir; 30. 8. 2022; 190; M. Horsák
<i>Vertigo moulinsiana</i> (Dupuy, 1849); 2/3; Bottovo; 48.3087, 20.1552; sedge littoral wetland of the reservoir on the brook Belínský; 30. 8. 2022; 190; M. Horsák
<i>Zebrina detrita</i> (O. F. Müller, 1774); 1/0; Srbsko; 49.9616, 14.1291; rocky slope; 3. 11. 2022; 250; L. Juříčková