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New floristic records from Central Europe 7 (reports 99-108)

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Abstract: The presented seventh part of the series includes ten new chorological records of vascular plants, two from Hungary, one from Poland and seven from Slovakia. In Hungary, locally introduced species *Catalpa ovata* spreading by seeds and the first occurrence of *Carex depressa* subsp. *transsilvanica* out of n the Zemplén Mts. was recorded. In Poland, the fifth record of *Salvinia natans* in the area of Kraków was found. In Slovakia, localities of four native species, *Pilosella densiflora*, *P. leptophyton*, *Taraxacum bavaricum* and *Trifolium sarosiense* were found as well as three alien species *Phytolacca esculenta*, *Sorbus intermedia* and the first record of garden escape of *Euphorbia myrsinites*. Distribution map of *Taraxacum bavaricum* in Slovakia is also presented.

Keywords: chorology, vascular plants, new findings, Hungary, Poland, Slovakia, native species, alien, red list species.

This is an ongoing report in the established series dealing with new chorological data on higher vascular plants in Central Europe (for details, see Thaiszia – J. Bot. 28 (1), pp. 79–80, 2018).

The nomenclature of taxa follows the Euro+Med PlantBase (Euro+Med 2006-) and/or Chromosome number survey of the ferns and flowering plants of Slovakia (Marhold et al. 2007), herbarium acronyms follow Thiers (2021+).

The publication includes contributions by M. Dudáš (99-102), A. Pliszko & A. Górecki (103), A. Schmotzer & G. Király (104-108) arranged alphabetically.

Matej Dudáš (reports 99-102)

SK

99. *Euphorbia myrsinites* L.: the Východoslovenská nížina Lowland, Zemplín, foot of the wall at path edge in the street, in front of the house nr. 46., two bunches with several flowering stems, ca. 100 m, 48°26'16.34"N 21°48'44.92"E, 7596d, June 2020 (observation), 30. 5. 2021, M. Dudáš, KO 36075.

Mediterranean species with the native range in south-eastern Europe, Asia Minor, Caucasus region and Ukraine (Euro+Med 2006+). In Slovakia it is occasionally cultivated in southern parts of the country as an ornamental rock plant. This is probably the first record of its garden escape in Slovakia (cf. Medvecká et al. 2012). Escapings from cultivation were reported also in the Czech Republic (Pyšek et al. 2012), Austria (Melzer & Barta 2014) and Hungary (Peregrym 2020). On the edge of the patch it grows together with *Lactuca saligna*, *Descurainia sophia* and *Stellaria media*.

100. *Pilosella densiflora* (Tausch) Soják: the Slanské vrchy Mts., Nižná Hutka, Holica hill, meadow on eastern slope, frequent, 225 m, 48°38'45.765"N, 21°22'12.619"E, 7394c, 18. 5. 2020, M. Dudáš, BRNU 676323, rev. O. Rotreklová.

The overall distribution in Slovakia is not exactly known. The first report from the Slanské vrchy Mts., where the population consists of hundreds of plants growing in dry part of the meadow together with *P. bauhinii* and *P. cymosa*.

101. *Pilosella leptophyton* (Nägeli et Peter) S. Bräut. et Greuter: the Slovenské rudohorie Mts., Vyšná Slaná, saddle south from the village, edge of field road, infrequent, 660 m, 48°46'23.2"N 20°18'51.3"E, 7287b, 28. 6. 2020, M. Dudáš, BRNU 676339, rev. O. Rotreklová.

The overall distribution in Slovakia is not exactly known.

102. *Taraxacum bavaricum* Soest. (sect. *Palustria*): the Liptovská kotlina Basin, Vyšný Sliač, Sliačske travertíny Nature reserve, travertine fen, frequent, 575 m, 49°3'19.6"N 19°24'56.7"E, 6982a, 30. 4. 2018, M. Dudáš, KO 35204, det. J. Štěpánek (no. 34835).

The overall range of *Taraxacum bavaricum* extends in the north from Denmark to Germany, in the south to Slovakia and in the east to Poland. Isolated localities are known in the Alps and France. In Slovakia (Fig. 1) it is common in the vicinity of slope springs on limestone or travertine fens, does not tolerate any higher vegetation (Kirschner & Štěpánek 1998). In the Sliačske travertíny it grows frequently in the central part of the fen together with *Primula farinosa* as dominant species.

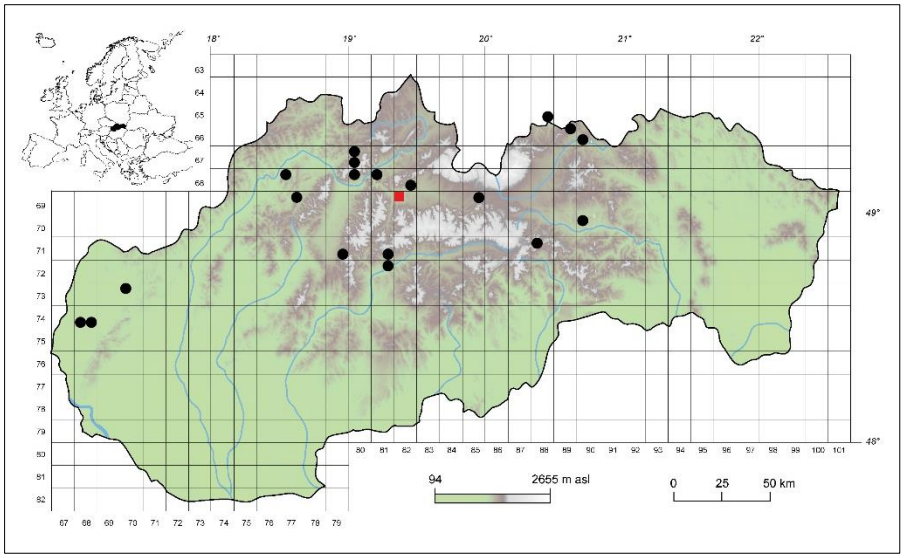

Fig. 1 Distribution of *Taraxacum bavaricum* in Slovakia. Black dots - data published by Kirschner & Štěpánek (1998), red square - new locality.

Artur Pliszko & Artur Górecki (report 103)

PL

103. *Salvinia natans* (L.) All.: southern Poland, Lesser Poland Province, Kraków, numerous specimens with sporocarps on the water surface of the pond (about 1682 m^2) in the Vistula River valley, 192 m, 50°02.831'N, 20°00.493'E, 27. 09. 2020, A. Pliszko and A. Górecki (Fig. 2).

Salvinia natans is native to Europe, Asia, and North Africa. It was introduced to North and Central America (Plants of the World online 2021). It is usually found in eutrophic waters, in shallow lakes, oxbow lakes, rivers, and ponds (Krechowski et al. 2010; Pietryka et al. 2018). In Europe, it has been listed as a strictly protected species in Annex I of the Bern Convention on the conservation of European wildlife and natural habitats (European Environment Agency 2019). In Poland, *S. natans* is a rare native species distributed mainly in the Vistula and the Oder River valleys (Zając & Zając 2001; Krechowski et al. 2010). Moreover, it is treated as a strictly protected plant (Rozporządzenie 2014). *Salvinia natans* is threatened by a pollution and drainage of freshwater habitats, a river regulation, the destruction of oxbow lakes, and the changes in light conditions due to overgrowing by reed bed plants and willows (Krawczyk & Majkut 2008; Krechowski et al. 2010; Pietryka et al. 2018 and references therein). According to the ATPOL cartogram method (Zając 1978), the new locality of *S. natans* is situated within the unit EF60 (10 km × 10 km square), from which it has not been reported so far (Zając & Zając 2001; Krawczyk & Majkut 2008; Łukaszek & Kołodziejczyk 2016). This is the fifth record of *S. natans* in the area of Kraków, following the data provided by Łukaszek & Kołodziejczyk (2016). However, the localities of *S. natans* in Kraków should be inventoried to confirm the

presence of the species, estimate its current abundance and propose appropriate conservation measures. It is worth mentioning that the populations of *S. natans* in Poland are expected to expand its range due to climate warming (Szmeja & Gałka 2013). Similar process has already been described from early Medieval Warm Period based on palaeobotanical studies from Northern Poland (Święta-Musznicka et al. 2011).

Fig. 2 *Salvinia natans* in the new locality in Kraków, southern Poland: A – habitat, B – specimens on the water surface of the pond. Photographed by Artur Pliszko.

András Schmotzer & Gergely Király (reports 104-108)

HU

104. *Catalpa ovata* G. Don: Hegyköz region, Pálháza, Dózsa György Str., naturalised on the roadside, 160 m, 48°28'26.7"N 21°30'22.8"E, 7595a, 24. 6. 2020, G. Király & A. Schmotzer, photodocumented.

An ornamental tree originating from China, which was first imported to Europe in 1848, but has often been confused later with *Catalpa bignonioides* (Knees 2000; Olsen & Kirkbride 2017). Reports on its introduction are scarce but increasing, amongst others it was recorded in Belgium and several cities of Germany (Bönsel et al. 2000; Schmid 2005; Verloove 2021), moreover, in south-western Hungary in Baranya County (Wirth et al. 2020). In Pálháza, 2-3 trees were planted few years ago in a small parking place close to the centre of the village, and we observed there several younger specimens in the cracks of the pavement and along a small ditch, therefore it can be classified as a locally introduced species.

105. *Carex depressa* subsp. *transsilvanica* (Schur) T. V. Egorova: Cserehát region, Szemere, Kánás, at the edge of a forest road in a juvenile stand of *Quercetum*

petraeae-cerris, SW exposition, 270 m, 48°28'54.00"N 21°05'53.88"E, 7595.2, G. Király & A. Schmotzer, EGR and photodocumented.

Carex depressa has a disjunct distribution from Spain to northern Iran, with two subspecies in south-western Europe, and with the subsp. *transsilvanica* that occurs from Italy eastwards (Egorova 1999). This taxon has often been overlooked, and it was discovered in several countries (e.g. Czech Republic, Hungary or Serbia) relatively late (see Stevanović et al. 1991; Felföldy 2002; Kaplan et al. 2020). In Hungary it was found in few localities in the northern Zemplén Mts. in the 1990s, and has not been recorded elsewhere later (Bartha et al. 2015). It occurs in open oak forests and forest fringes, mainly on acidic soils, and often suffers from competition with taller vegetation in shaded places. The occurrence above is the first one out of the Zemplén Mts. in Hungary.

SK

106. *Phytolacca esculenta* Van Houtte: the Košická kotlina Basin, Malá Ida, Gedeonský les, on a garden waste deposition in a *Carici pilosae-Carpinetum* forest close to the main road Nr. 548, two flowering plants, 350 m, 48°40'31.4"N 21°10'49.4"E, 7393a, 25. 6. 2020, A. Schmotzer & G. Király, photodocumented.

Phytolacca esculenta is a naturalised alien in Slovakia (Letz 2012; Medvecká et al. 2012). In the town of Košice it was recorded in Zbrojničná street (Letz 2011 SAV), its spread was also reported from the adjacent northern part of Hungary recently (Schmotzer 2019). The 'soft invasion' of the species has been taking place in the last two decades in Central Europe. It is an urbanophile plant with most occurrences are located in settlements, less frequently it appears in ruderal habitats far from villages. In the locality above the species occurred together with other adventive species, e.g. *Acer negundo*, *Impatiens parviflora*, *Parthenocissus inserta*, *Solidago canadensis*, *Aster* cf. *lanceolatus*, *Hibiscus syriacus*.

107. *Sorbus intermedia* (Ehrh.) Pers.: the Košická kotlina Basin, Košice III (Dargovských Hrdinov), Košická Hora (Lesopark Furča), in a park forest, along a path, a single juvenile individual, 350 m, 48°44'24.9"N 21°17'21.0"E, 7293d, 25. 6. 2020, A. Schmotzer & G. Király, EGR.

The Swedish whitebeam is a popular ornamental tree, increasingly often planted in settlements and along public roads (Šerá 2017). According to Gojdičová et al. (2002), it is a casual alien in Slovakia, however, it is not mentioned in the alien checklist of Medvecká et al. (2012). Its introduction in Košice is probably only occasional.

108. *Trifolium sarosiense* Hazsl.: the Košická kotlina Basin (all locations), Rozhanovce, Pod Ortášom, in mesophile shruby place at Road Nr. 3440, some individuals, 264 m, 48°46'18.8"N 21°22'21.3"E, 7294/1, 25. 6. 2020, A. Schmotzer & G. Király, EGR. – Košice, Košická hora (Lesopark Furča), forest edge, in an urban park, some individuals, 350 m, 48°44'24.8"N 21°17'20.9"E, 7293/4, 25. 6. 2020, A. Schmotzer &

G. Király, EGR. – Košice-Poľov, Pažiť, shrubby edge of *Carici pilosae-Carpinetum* forest, at a fenced area, some individuals, 340 m, 48°40'30.48"N 21°10'53.44"E, 7293/4, 25. 6. 2020, A. Schmotzer & G. Király, EGR.

Trifolium sarosiense is an endemic species of the Western Carpathians, distributed in colline-submontane woodlands and adjacent habitats, such as forest fringes and clearings (Kliment 1999; Kliment et al. 2016). The three new locations presented above are situated in the Košická kotlina Basin, where only scattered records are known. The first locality might be identical with that in the report of R. Hendrych ("*sub colle Osláš inter pagos Rozhanovce et Čižatice*"; Hendrych 1993).

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