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New floristic records from Central Europe 13 (reports 176-197)

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Abstract: The presented 13th part of the series includes 22 new records of vascular plants from the territory of Central Europe. In Hungary, 5 species, *Clerodendrum trichotomum*, *Morus indica*, *Oenanthe banatica*, *Rumex confertus* and *Torilis nodosa* are mentioned. Single findings of alien *Panicum virgatum* in Poland as well as *Euphorbia lathyris* in Romania were recorded. In Slovakia, twelve species, *Agrostemma githago*, *Carex hordeistichos*, *Camelina sativa* subsp. *zingeri*, *Consolida hispanica*, *Geranium lucidum*, *Lobularia maritima*, *Ranunculus pedatus*, *Reseda phyteuma*, *Rubus radula*, *Sagittaria latifolia*, *Sedum pallidum* and *Trifolium strictum* were recorded. From the Ukrainian Carpathians 3 new records of *Euphrasia minima* subsp. *tatrae*, *Neotinea ustulata* and *Salix herbacea* were reported.

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

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 (2023+). The map was processed in Corel Draw using the map grid described by Niklfeld (1971). Distribution data taken from public database iNaturalist.org was cited as follow: iNaturalist ID and number of observation, full citation is in References.

The publication includes contributions by M. Dudáš (176-178), P. Eliáš Jr. (179), P. Eliáš Jr. & M. Dudáš (180), P. Eliáš Jr., M. Dudáš & R. Hrivnák (181), G. Király (182-183), G. Király & A Schmotzer (184), Y. Kobiv (185-187), M. Majerová (188), J. Májeková (189-190), V. Mikoláš (191-193), A. Pliszko (194) and A. Takács (195-197) arranged alphabetically.

Matej Dudáš (reports 176-178)

Romania

176. *Euphorbia lathyris* L.: Transylvanian Basin, county Sibiu, Slimnic, Cetatea Slimnic, single plant on garden waste under western wall, 422 m, 45°55'11.6"N 24°9'30.3"E, 20. 7. 2023, M. Dudáš, observation.

Euphorbia lathyris is a species native in Transcaucasia and alien in many Mediterranean countries (POWO 2024a). In Romania it is considered alien, known from 11 to 50 sites (Săvulescu 1953; Urziceanu 2020) and there are sporadic published records (for example see www.inaturalist.org).

Slovakia

177. *Agrostemma githago* L.: the Východoslovenská nížina Lowland, Malý Kamenec, edge of corn field next to the road towards Streda nad Bodrogom, hundreds of plants, 100 m, 48°21'33.4"N 21°46'41.5"E, 7696b, 28. 5. 2023, M. Dudáš, KO 37429, relevé 1. – Kucany, field edge near Brehovský kanál, tens of plants, 98 m, 48°31'45.05"N 21°51'35.90"E, 7497c, 2. 6. 2024, M. Dudáš, KO 38056.

The species is native to southeastern Europe and Asia, as an archaeophyte and neophyte it reached a secondary cosmopolitan spread (Firbank 1988). In Slovakia it is considered a naturalized archaeophyte (Medvecká et al. 2012). In the Red list of Slovakia is categorized as critically endangered - CR (Eliáš et al. 2015). In the past, it was very abundant in grain fields almost throughout the territory. At present, it occurs very rarely and often transiently in the areas with preserved traditional methods of land management (Eliáš 2012). From southeastern Slovakia, only the records older than 40 years are known. In the newly found locality, *A. githago* grew frequently in the corn field and the vegetation documented following relevé 1. The probable origin of the seeds of *A. githago* is as an admixture with the seed of *Triticosecale rimpaui*.

Relevé 1: the Východoslovenská nížina Lowland, Malý Kamenec, edge of corn field, 100 m a.s.l., 48°21'33.4"N 21°46'41.5"E, exposition S, elevation 1°, relevé plot 16 m^2, E_1: 65%, 28. 5. 2023, M. Dudáš.
E_1: *Triticosecale rimpaui* 4, ***Agrostemma githago*** **2b**, *Capsella bursa-pastoris* 1, *Consolida regalis* 1, *Convolvulus arvensis* 1, *Cyanus segetum* 1, *Papaver rhoeas* 1, *Tripleurospermum perforatum* +, *Vicia villosa* +, *Ambrosia artemisiifolia* r, *Anchusa officinalis* r, *Descurainia sophia* r, *Elytrigia repens* r, *Falcaria vulgaris* r, *Poa annua* r, *Polygonum aviculare* r, *Rumex patientia* r, *Sclerochloa dura* r, *Viola arvensis* r.

178. *Lobularia maritima* (L.) Desv.: Laborecká vrchovina Mts, Medzilaborce, Mierová St., in front of the City office, garden escapee near the flowerpot, 3 plants, 326 m, 49°16'20.00"N 21°54'7.19"E, 6797a, 10. 9. 2022, M. Dudáš, observation. – the Spišské kotliny Basins, Levoča, Uhoľná St. no 1, naturalised by the fence post, single plant, 565 m, 49°1'41.39"N 20°35'17.41"E, 6989d, 6. 9. 2023, M. Dudáš, KO 37507.

Lobularia maritima is a Western Mediterranean species (Hegi 1975) which is widely cultivated in Europe (Marhold 2011+). In Slovakia it is a favourite cultivated summer plant, which is considered casual neophyte (Medvecká et al. 2012). Its escaped occurrence was recorded from several sites in Bratislava and a single site near Kráľovský Chlmec (Eliáš jun. 2002a).

Pavol Eliáš Jr. (report 179)

Slovakia

179. *Camelina sativa* subsp. *zingeri* (Mirek) Smejkal: southern Slovakia, the Ipeľ Basin, Dolné Semerovce, fallow on foothill of Nový Osláš hill, tens of individuals especially along edges, 145 m, 48°06'05.5"N 18°52'11.0"E, 7879c, 29. 6. 2023, P. Eliáš Jr., NI.

The subspecies is a typical annual or winter-annual weed, it is problematic to establish its native range. It is regarded native in broad Eurasian area with the presumed centre of occurrence in the south-eastern Europe (Smejkal 1971; Mirek 1981; Eliáš jun. 2002b). In central Europe, *C. sativa* subsp. *zingeri* has always been presented rare and it is considered neophyte (Danihelka et al. 2012; Medvecká et al. 2012), while the cultivated oil plant of *C. sativa* (taxonomically evaluated also as subsp. *sativa*), is archaeophyte (Danihelka et al. 2012; Medvecká et al. l. c.; Tokarska-Guzik et al. 2012; Csiky et al. 2023). In Slovakia, the subsp. *zingeri* is evaluated as regionally extinct (RE) in Red List (Eliáš et al. 2015), only five localities were reliably documented in total (most of them in southern Slovakia). The last occurrence was recorded in 1999 in a ruderal habitat in Chľaba village not very far from the new locality (ca 30 km, Fig. 1). The recent occurrence near Dolné Semerovce could be related to the import of contaminated seedcorn from the Balkans, where *C. sativa* s. l. is a relatively common weed (Eliáš Jr. ined.). We suggest to re-evaluate the

subspecies from the Red List category RE (regional extinct) to the category critically endangered (CR) with criteria A2ac; B2a(ii)b(iii,iv,v)c(iv).

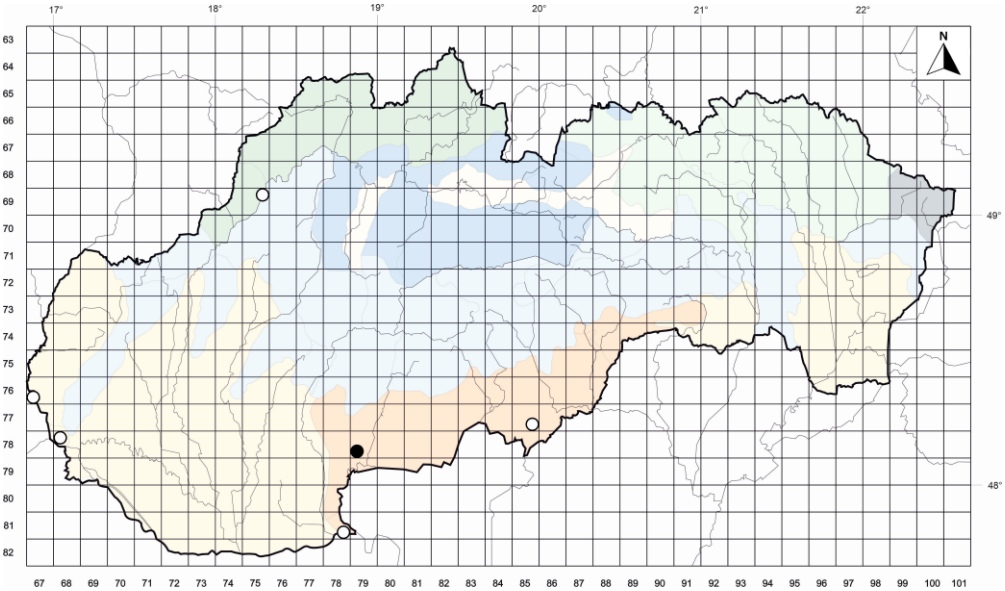

Fig. 1 Historical (○) and current (●) distribution of *Camelina sativa* subsp. *zingeri* (Mirek) Smejkal in Slovakia.

Pavol Eliáš Jr. & Matej Dudáš (report 180)

Slovakia

180. *Trifolium strictum* L.: the Východoslovenská nížina Lowland, Zemplínske Kopčany, the Kopčianske slanisko Nature Reserve, ca 2.5 km west from the village, hundreds of individuals at several places in saline pastures, 98 – 102 m, 48°35'26.9"N 21°53'24.9"E, 7497a, 1. 6. 2023, P. Eliáš Jr. & M. Dudáš, KO 37418, 37424, NI, relevé 2 - 4, Fig. 2.

Trifolium strictum is an Atlantic-Mediterranean species occurring from northwest Africa (Algeria, Morocco, Tunisia) through Portugal, Spain to the British Isles, France, Italy and Central Europe (Hungary, Slovakia), Romania, the Balkan Peninsula (Bulgaria, former Yugoslavia, Greece) and Asia Minor (Turkey) (Feráková & Kubát 1999; Eliáš et al. 2014). It was introduced to Germany and Belgium (Verloove & Heyneman 2012). The northern border of the range passes through Slovakia, where the species was found only very rarely in two localities in the southwestern part of the territory (Kamenný Most, Jatov); recently, only the occurrence near Jatov was confirmed (Eliáš et al. 2014, Fig. 2). Our new finding represents the first record for south-eastern Slovakia and the second recent one in Slovakia. At this new location, the species grew in communities of the alliances *Alopecurion* (relevé 2, 3) and *Festucion pseudovinae* (*Achilleo-Festucetum pseudovinae* association). Other rare

species of the genus *Trifolium* (*T. angulatum*, *T. striatum*, *T. retusum*, relevé 4) were also recorded here earlier (Eliáš et al. 2014) and confirmed during our research.

Relevé 2: the Východoslovenská nížina lowland, Zemplínske Kopčany, Kopčianske slanisko Nature Reserve ca 2.5 km west from the village, saline pastures, 98 m a.s.l., 48°35'26.9"N 21°53'24.9"E, exposition -, elevation 0°, relevé plot 16 m^2, E_1: 80%, 1. 6. 2023, P. Eliáš Jr. & M. Dudáš.
E_1: *Alopecurus pratensis* 3, *Cerastium pumilum* agg. 2a, *Elytrigia repens* 2a, *Vicia tetrasperma* 2a, *Poa pratensis* 2b, *Carex praecox* 1, *Cirsium arvense* 1, *Veronica arvensis* 1, *Atriplex patula* +, *Epilobium tetragonum* agg. +, *Lactuca saligna* +, *L. serriola* +, *Myosostis stricta* +, *Ornithogalum umbellatum* +, *Polygonum aviculare* +, *Rumex crispus* +, *Senecio erucifolius* +, *Trifolium campestre* +, ***T. strictum* +**.

Relevé 3: the Východoslovenská nížina lowland, Zemplínske Kopčany, Kopčianske slanisko Nature Reserve ca 2.5 km west from the village, saline pastures, 98 m a.s.l., 48°35'26.7"N 21°53'23.4"E, exposition -, elevation 0°, relevé plot 16 m^2, E_1: 90%, 1. 6. 2023, P. Eliáš Jr. & M. Dudáš.
E_1: ***Trifolium strictum* 3**, *Alopecurus pratensis* 2b, *Festuca pseudovina* 2b, *Cerastium pumilum* agg. 2a, *Arabidopsis thaliana* 1, *Bromus hordeaceus* 1, *B. racemosus* 1, *Carex praecox* 1, *Elytrigia repens* 1, *Poa pratensis* 1, *Vicia tetrasperma* 2a, *Dichodon viscidum* 1, *Veronica arvensis* 1, *Allium oleraceum* +, *A. vineale* +, *Daucus carota* +, *Epilobium tetragonum* agg. +, *Lactuca saligna* +, *L. serriola* +, *Polygonum aviculare* +, *Rumex crispus* +, *Picris hieracioides* +, *Podospermum canum* +, *Trifolium angulatum* +, *T. campestre* +, *T. retusum* +, *T. striatum* +, *Ventenata dubia* +, *Viola arvensis* +, *Matricaria chamomilla* r, *Tithymalus* cf. *strictus* r.

Relevé 4: the Východoslovenská nížina lowland, Zemplínske Kopčany, Kopčianske slanisko Nature Reserve ca 2.5 km west from the village, saline pastures, 102 m a.s.l., 48°35'27.3"N 21°53'21.7"E, exposition -, elevation 0°, relevé plot 16 m^2, E_1: 70%, 1. 6. 2023, P. Eliáš Jr. & M. Dudáš.
E_1: *Festuca pseudovina* 3, ***Trifolium strictum* 3**, *T. angulatum* 2b, *Cerastium pumilum* agg. 2a, *Allium oleraceum* +, *Arabidopsis thaliana* +, *Bromus hordeaceus* +, *B. racemosus* +, *Bupleurum tenuissimum* +, *Carex stenophylla* +, *Dichodon viscidum* +, *Elytrigia repens* +, *Juncus gerardii* +, *L. serriola* +, *Myosotis ramosissima* +, *Myosurus minimus* +, *Ornithogalum umbellatum* +, *Polygonum aviculare* +, *Rumex crispus* +, *Picris hieracioides* +, *Podospermum canum* +, *Trifolium campestre* +, *T. retusum* +, *T. striatum* +, *Veronica arvensis* +, *Viola arvensis* +, *Sonchus asper* r.

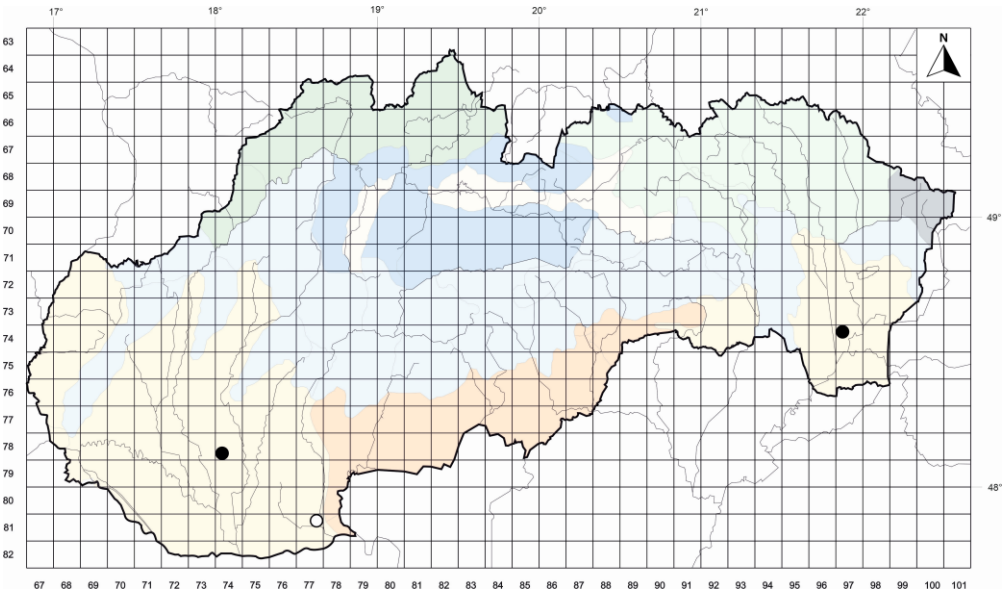

Fig. 2 Historical (○) and current (●) occurrence of *Trifolium strictum* L. in Slovakia.

Pavol Eliáš Jr., Matej Dudáš & Richard Hrivnák (report 181)

Slovakia

181. *Ranunculus pedatus* Waldst. & Kit.: the Ipeľ Basin, Veľká Čalomija, roadside ditch at the crossroads to Malá Čalomija, around 10 individuals, 135 m, 48°04'29.7"N 19°12'12.5"E, 7981a, 20. 4. 2023, P. Eliáš Jr., NI. – the Ipeľ basin, Kiarov, cemetery, lower part, thousands of individuals, 173 m, 48°6'38.35"N 19°24'25.65"E, 7882c, 27. 4. 2023, R. Hrivnák, SAV. – the Krupinská planina Mts, Príbelce, cemetery, lower part, dozens of individuals, 329 m, 48°11'53.71"N 19°14'55.22"E, 7881a, 19. 4. 2023, R. Hrivnák, SAV. – the Juhoslovenská kotlina Basin, Kováčovce-Peťov, roadside ditch at the cemetery, tens of plants, 160 m, 48°6'23.6"N 19°28'22.6"E, 7882d, 6. 5. 2023, M. Dudáš, KO 37469.

Ranunculus pedatus is a Eurasian perennial species; its distribution extends from central and south-eastern Europe (Slovakia, Hungary, Romania and Bulgaria, former Yugoslavia) to Ukraine, southern and central Russia, the Crimea, the Caucasus, Siberia and Turkey (Feráková 1999; Eliáš Jr. et al. 2021). In Slovakia, *R. pedatus* occurs currently north of Štúrovo (Kamenín, Kamenný Most), in the Štúrovo town, around Chľaba village and in the Ipeľ Basin (Pastovce, Tupá, Koláre, Kováčovce). Eliáš et al. (l. c.) mentioned that recently 30 % of all known sites were confirmed and reclassified the species in the Slovak Red List from the category critically endangered (CR) to the category endangered (EN). The legitimacy of this step is fully supported by our new data; the species was recorded at the other four locations in southern central Slovakia.

Gergely Király (reports 182-183)

Hungary

182. *Rumex confertus* Willd.: SE Hungary, Csongrád-Csanád County, Hódmezővásárhely, the dam of the Tisza River 2,5 km S of "Körtvélyesi Gátőrház", ca. 10 specimens, 71 m, 46°24'16.8"N 20°13'27.8"E, 9587c, 19. 8. 2021, G. Király, herb. Király, photodocumented. – Mártély, the dam of the Tisza River at the "Mártélyi Gátőrház", ca. 100 specimens, 79 m, 46°27'51.1"N 20°13'31.8"E, 9587a, 19. 8. 2021, G. Király, herb. Király, photodocumented.

East European and West Siberian species with several neophytic records in North and Central Europe (Snogerup 2000; Martinčič 2007; Fischer et al. 2008; Stace 2010), occurring in diverse meadow plant communities, sometimes also in semi-ruderal vegetation. In the Pannonian Basin it grows in river valleys from the planar to the submontane region, with a centre of the distribution in the north-eastern part of the Basin (Bartha et al. 2015; Miháliková & Goliašová 2016). Its recent spread in Eastern Hungary has repeatedly been observed (Korda et al. 2017), it is probably provided by the use of machines in the management of river dams. The above localities in regularly mown semi-dry to humid secondary grasslands of the dams are the southernmost and lowermost in the Tisza Valley.

183. *Clerodendrum trichotomum* Thunb.: NW Hungary, Győr-Moson-Sopron County, Sopron, Lővér körút Street, 50+ small specimens on the foot of stone walls and in front gardens, 270 m, 47°40'17.4"N 16°34'31.1"E, 8365a, 6. 9. 2023, G. Király, photodocumented, Fig. 3. – Vas County, Bük, Májusfa Street, spontaneously spreading (ca 20 specimens) on the foot of stone fences, 177 m, 47°23'06.5"N 16°44'53.4"E, 8666a, 4. 11. 2021, G. Király, photodocumented.

Polymorphic east-Asian shrub commonly planted in parks and gardens warm temperate Eurasia and North America (Gilbert 1994; Mizusawa et al. 2019). In Europe it was recognized as a rare casual alien, mainly in botanical gardens and their neighbourhood; its spread is mostly explained by the ability of forming root suckers (Clement & Foster 1994; Ronse 2011). In Hungary it is a long-known cultivated plant, the only records on its escape were presented by Wirth et al. (2020) from the city of Pécs (SW Hungary). The above localities are the first ones from NW Hungary. On both sites, seedlings were observed also far (100+ meters) from the old, fruiting planted specimens, confirming the species' ability to spread by seeds. Further escapes and subsequent introduction are expected in urban habitats all over the Pannonian Basin.

Fig. 3 Spontaneous young specimen of *Clerodendrum trichotomum* in a front garden in Sopron (NW Hungary) (photo G. Király).

Gergely Király & András Schmotzer (report 184)

Slovakia

184. *Sedum pallidum* M. Bieb.: the Vihorlat Mts, Vinné, ruderal site on the embankment near the road to "Vinianske jazero" Lake, several small mats, 184 m, 48°48'36.7"N 21°58'22.1"E, 7197d, 7. 7. 2023, G. Király & A. Schmotzer, photodocumented. – the Vihorlat Mts, Snina, parking lot 0,2 km N of the lake "Veľká Bystrá", well-grown mats on the tarmac, 277 m, 48°58'30.1"N 22°11'15.6"E, 7099a, 6. 7. 2023, G. Király & A. Schmotzer, photodocumented, Fig 4.

Annual or short-lived perennial species native to the regions south and east of the Black See. It is widely used as ornamental plant in Europe, however, it was probably overlooked for a long time due to the confusions with another similar native and non-native species (e.g. *Sedum hispanicum*). In several European countries, its spread has only been recognized with a delay, and it became an "unnoticed" invader (Gudžinskas 2000; Hohla 2018; Király & Takács 2020; Wirth et al. 2020; Gallo et al. 2021). The same applies to Slovakia, where it had not yet been mentioned by Medvecká et al. (2012) but was then reported soon by Feráková (2015) and Rendeková & Mičieta (2017) from several ruderal localities in Karlova Ves, Bratislava. The newly found sites on the foothills of the Vihorlat Mts (first records in eastern Slovakia) are certainly old-established. The further vegetative spread of the species in urban habitats (cemeteries, city gardens) is highly probable in the Pannonian Basin.

Fig. 4 Dense, flowering mat of *Sedum pallidum* in a parking lot in Snina (E Slovakia). Flowers with 5 petals help to distinguish easily this species from *S. hispanicum*.

Yuriy Kobiv (reports 185-187)

Ukrainian Carpathians

185. *Salix herbacea* L.: Ivano-Frankivska Oblast, Verkhovyna District, the Chornohora Mts, snowbed at the bottom of the glacial cirque of Gadzhyna between Mt. Shpytsi and Mt. Rebra, gentle NE slope, 1740 m, 48°07'00.5''N 24°33'34.4''E, 20. 6. 2023, Y. Kobiv, LW 215856.

Salix herbacea is an arctic-alpine species, which apart from the vast northern segment of its geographic range is also distributed in the alpine zone of the temperate European mountains from the Pyrenees to the Carpathians (Meusel et al. 1965). In the Ukrainian Carpathians, that chionophylous dwarf shrub is rare and occurs mostly in the snowbeds of the highest mountain massifs: the Chornohora, Svydovets and Marmarosh Mts (Chopyk 1976). The species is included in the Red Data Book of Ukraine (Didukh 2009) and lately has been subjected to gradual decline due to climate change (Kobiv 2018). In the Chornohora Mts, the species occurs at the uppermost elevations along the main ridge from Mt. Velykyi Kozel to Mt. Pip Ivan. Its altitudinal minimum was estimated at 1800 m a.s.l. (Wilczyński 1931; Chopyk 1976). The reported locality is significantly lower presenting the lowermost occurrence of *S. herbacea* in the Ukrainian Carpathians. Situated in the bottom of the northern glacial cirque of Gadzhyna and surrounded by steep slopes the locality accumulates much avalanche snow that persists until midsummer. Such snowbed conditions are favorable for *S. herbacea* that forms an outlying isolated patch ca. 15×10 m² in size.

186. *Euphrasia minima* Jacq. ex DC. subsp. *tatrae* (Wettst.) Hayek.: Zakarpattya Oblast, Rakhiv District, the Marmarosh (or Maramureş in Romanian transcription) Mts, Mt. Nenieska, disturbed site at the dirt road, gentle N slope, 1810 m, 48°57'43.6''N 24°27'52.2''E, 28. 6. 2017, Y. Kobiv, LW 215855.

Euphrasia minima subsp. *tatrae* is a West-East-Carpathian endemic (Kliment 2016). In the Ukrainian Carpathians, it occurs above 1450 m a.s.l. on the rocky outcrops in the Chornohora, Svydovets, Marmarosh and Borzhava Mts (Chopyk 1976). Most of the records come from the Chornohora and Svydovets where the taxon is not very rare (Domin 1930; Klášterský 1931), while in the Marmarosh Mts it has been reported only from Mt. Pietros (Klášterský 1931) and Mt. Pip Ivan (Deyl 1940). The above-mentioned locality on Mt. Nenieska lies on the Marmarosh ridge about 10 km eastwards, therefore this record expands the knowledge about the distribution of the taxon in the Eastern Carpathians and contributes to floristic composition of the site that is a remarkable biodiversity hotspot located on calcium-rich bedrock (Krist 1935; Kobiv et al. 2017). The population is low-numbered and includes ca. 100 individuals restricted to the patch of almost bare soil about 4 m² in size. As an annual herb, *E. minima* subsp. *tatrae* is an r-strategist and for the persistence in the region needs vacant microsites with loose vegetation. The area of such sites has dramatically decreased during the last few decades due to the massive abandonment of traditional land use in the mountains (Kobiv & Kobiv 2019).

187. *Neotinea ustulata* (L.) R. M. Bateman, Pridgeon & M. W. Chase: Ivano-Frankivska Oblast, Verkhovyna District, near the Village of Iltsi, piedmont of the Chornohora Mts, E spur of the Kostrych Ridge, S slope, springs of the travertine stream, 868 m, 48°09'04.2''N 24°44'5.8''E, 20. 6. 2021, Y. Kobiv, Fig. 5.

Neotinea ustulata is distributed mainly in the temperate zone of Europe. Its populations are often small-numbered and many of them have lately undergone regression throughout the species range (Kull & Hutchings 2006). The species is included in the Red Data Book of Ukraine (Didukh 2009). In the Ukrainian Carpathians, its infrequent localities are scattered across the grasslands at lower elevations (Zapałowicz 1889). The species is basiphilous (Zarzycki et al. 2002), which contributes to its rarity in the region where the acidic bedrock prevails (Kondracki 1989). In the reported locality, it grows at the springs of a travertine stream, and such habitats are hotspots of calciphilous flora harbouring many rare and endangered species (Kobiv 1999). The population is low-numbered and includes only 4 flowering individuals.

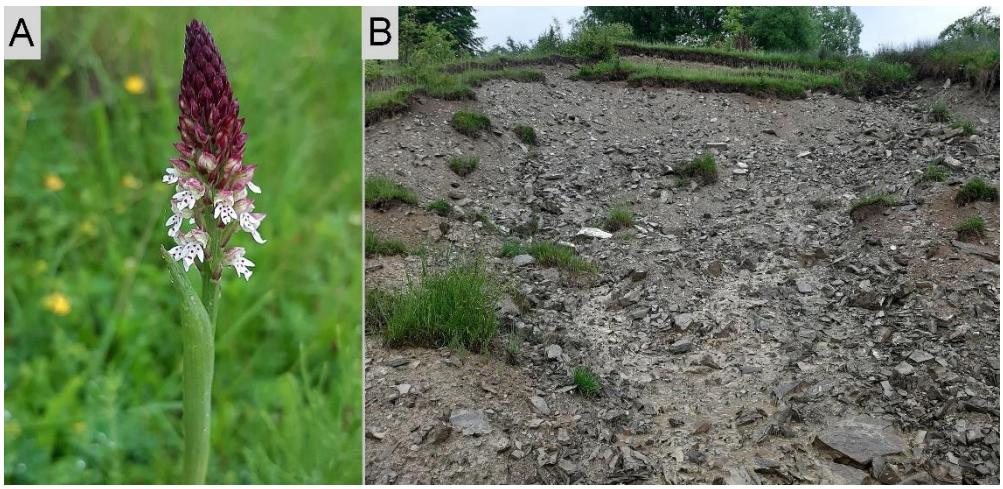

Fig. 5 *Neotinea ustulata* in the newly recorded locality at the piedmont of the Chornohora Mts, Ukrainian Carpathians: A – inflorescence, B – habitat, springs of a travertine stream. Photographed by Y. Kobiv.

Monika Majerová (report 188)

Slovakia

188. *Sagittaria latifolia* Willd.: the Podunajská nížina Lowland, Zálesie, left bank of the Malý Dunaj river near the Zálesie promenade, population size up to 4 m^2, 131 m, 48°09'39.02"N 17°16'49.18"E, 7869b, 19. 8. 2023, M. Majerová, photodocumented.

Sagittaria latifolia is a North American perennial aquatic species with a native range from south-eastern Canada to northern and western South America (Duenas 2010). The species was introduced to Europe as an ornamental pond plant in the 19th century (Duenas 2010), with the first record from Romania in 1931 (Ţopa 1966). Currently, *S. latifolia* is commonly found in Europe as an alien species and, in some countries, is considered potentially invasive (cf. EPPO Reporting Service) because of its intensive clonal growth (Weber & Gut 2004). The species occurs mainly in littoral shallow and eutrophic waters. The first record of its presence in Slovakia was in 2013 in the Krupinská planina Plain (Nobis et al. 2019). Over the following years, the

species was sporadically recognized in several other places, all localized in the central-south or south-eastern part of Slovakia: the Lučenská kotlina Basin (Nobis et al. 2019), the Slanské vrchy Mts (Dudáš et al. 2019), the Rimavská kotlina Basin and the Východoslovenská nížina Lowland (Dudáš et al. 2020). The newly discovered population represents the first record from the Danube River Basin and Western Slovakia overall. The population was observed in the slowly flowing part of the river, on the left bank near the wooden walkway in Zálesie village. This population appeared to be thriving and naturalized, covering an approximate area of 4 m². The origin of the population is unclear, however, in the proximity to the location, there is a gardening area. Hence, it is hypothesized that the presence of this species may be a result of planting activities or inappropriate disposal of garden waste.

Jana Májeková (reports 189-190)

Slovakia

189. *Geranium lucidum* L.: the Podunajská nížina Lowland, Bajč, 2 km NEE from the railway station, right side of the road to Dvory nad Žitavou, forest, dozens of flowering and fruiting individuals, 126 m, 47°55'47"N 18°14'21"E, 8075c, 24. 5. 2023, J. Májeková, SAV.

Geranium lucidum is an annual native plant growing in forests in wet rocky areas (Jasičová 1982). Jasičová (1982) reported its distribution only in the western part of Slovakia in six phytogeographical districts, concentrated especially in the Carpathian and rarely also in the Pannonian region. Lately, it was also recorded in eastern Slovakia (Sutorý 2013) and in Ipeľsko-rimavská brázda Region (Račko 2018). In recent decades, only three localities have been recorded in the Podunajská nížina Lowland (Eliáš 2018, 2021; iNaturalist ID: 208254129). The finding near Bajč represents a new locality of the species occurrence, the nearest historical locality dates back to 1970 and is located ca 10 km away from it (Chrtek et al. 1972).

190. *Consolida hispanica* (Costa) Greuter et Burdet: the Podunajská nížina Lowland, Sereď, ca 2,1 km W from the railway station, poppy field (*Papaver somniferum*), two flowering individuals, 125 m, 48°17'31"N 17°41'54"E, 7772a, 31. 5. 2023, J. Májeková, SAV, photodocumented, Fig. 6.

Consolida hispanica is an annual herb native to the area from south-western Europe to central Asia and northern Africa. It was introduced to Slovakia mainly with cereals from southern and eastern Europe. It has also been grown sporadically as an ornamental plant and occasionally escaped from cultivation (Jehlík 1998). The first record of a spontaneous occurrence in Slovakia dates back to 1918 (Holuby 1919). It grows in arable fields as a weed or in various ruderal habitats (railway stations, roadsides, garbage dumps). In the last 20 years, only a few locations have been recorded in the Podunajská nížina Lowland and Ipeľsko-rimavská brázda Region (e.g. Dítě 2007; Eliáš 2008; Májeková et al. 2024; iNaturalist ID: 208079461).

Fig. 6 *Consolida hispanica* in the poppy field growing together with *Papaver rhoeas* in the Podunajská nížina Lowland (Photo by J. Májeková).

Vlastimil Mikoláš (reports 191-193)

Slovakia

191. *Carex hordeistichos* Vill.: the Košická kotlina Basin, Košice, Juh, 0,5 km S from the railway station, 203 m, 48°43'3.55''N 21°16'16.17''E ± 30 m, 7293d, 13. 7. 1994, V. Mikoláš, KO 35757-35759.

Carex hordeistichos is a species with the European centre of range which extends south into northern Africa and eastward to southern Russia, the Caucasus, Asia Minor, Iraq and Iran (Meusel et al. 1965; Schulze-Motel 1980). In Slovakia, 35 sites were confirmed recently in the northern part of the territory (Dítě et al. 2011) and it is considered a facultative halophyte. According to the actual Red List it is evaluated in the category near threatened (NT, Eliáš et al. 2015). This is the first record in the Košická kotlina basin. After year 2000 it has not been confirmed and it is most likely extinct.

192. *Reseda phyteuma* L.: the Slovenské rudohorie Mts., Košice, Sever, the Botanical Garden of Pavol Jozef Šafárik University, ruderal site near garages, ephemeral occurrence, 240 m, 48°43'59.94"N 21°14'7.03"E, 7293c, 19. 9. 2000, V. Mikoláš, observation.

Mediterranean species, it is currently found throughout southern and central Europe. A part of the northern border of the distribution area passes through southern and southwestern Slovakia. From eastern Slovakia, there was only a single record from Zemné hradisko near Dvorníky-Včeláre (Mrázová 2002). This is the first ephemeral occurrence in Košice.

193. *Rubus radula* Weihe: the Košická kotlina Basin, Košice, Vyšné Opátske, ca. 0,5 km S from Hill 312,1 (S from Mt. Heringeš), edge of abandoned orchard, 270 m, 48°41'41.33''N 21°17'45.66''E, 7393b, 1994, V. Mikoláš & P. Hrbáč, rev. J. Holub, KO 20550, 28144, 28145.

Rubus radula, a member of the ser. *Radula*, is widely distributed from the British Isles and the Iberian Peninsula in the West to eastern Poland, Romania (Kurtto et al. 2010) and western Ukraine (Király 2022) in the east. This is probably the first published record for Košická kotlina Basin.

Artur Pliszko (report 194)

Poland

194. *Panicum virgatum* L.: southern Poland, Lesser Poland Province, Kraków, Piaski Wielkie, Nowosądecka Street, pavement, 10 clumps, 248 m, 50°00.938'N 19°58.383'E, 08. 10. 2023, Fig. 7. – Bronowice, near Armii Krajowej Street, pavement and ruderal ground, several clumps, 229 m, 50°05.195'N 19°53.462'E, 15. 10. 2023.

Panicum virgatum, a rhizomatous perennial plant species of the Poaceae family, is native to North America and Central America. It is distributed from southern Canada

through the United States and Mexico, to Cuba, Bermuda, Honduras and Costa Rica (Freckmann & Lelong 2003; POWO 2024b). It grows up to 3 m in height and occurs mostly in mesic to wet tallgrass prairies, as well as on shores, riverbanks, brackish marshes, dry slopes and open forests (Freckmann & Lelong 2003). Moreover, it was introduced to South America, Europe, Asia and Australia (Randall 2017; POWO 2024b). It is often cultivated as fodder, ornamental or biofuel plant (Freckmann & Lelong 2003; Randall 2017; Flint et al. 2021). According to Eliáš et al. (2023), it rarely becomes established. However, some authors suggest that its bioenergetic cultivars have a high invasive potential due to the production of large biomass (Buddenhagen et al. 2009; Flint et al. 2021).

In Poland, *P. virgatum* has not yet been listed as a spontaneously occurring anthropophyte (Tokarska-Guzik et al. 2012; Mirek et al. 2020). Nevertheless, it is planted as an ornamental and bioenergetic plant (Piłat et al. 2007; Romanowska-Duda et al. 2014; Adamski et al. 2018; Polish Nurserymen Association 2024). To the best of my knowledge, this is the first Polish record of *P. virgatum* escaped from cultivation, and currently, it should be treated as a casual alien plant. Field observations suggest that the plant can spread both generatively by seeds and vegetatively by rhizomes and its establishment in Poland is likely due to suitable climatic conditions (at least in some regions, following Romanowska-Duda et al. 2014). Considering that *P. virgatum* is planted in flowerbeds near roads in Kraków, this may facilitate its spread over long distances by vehicles. It is also relevant to mention that in Slovakia, it was found established in sandy grassland due to illegal dumping of garden waste (Eliáš et al. 2023). Therefore, it is important to cultivate this plant responsibly and not to throw the garden waste containing its rhizomes and seeds into the wild.

Fig. 7 *Panicum virgatum* as a casual alien species at Nowosądecka Street in Kraków, southern Poland: A – small clump of the plant growing between the kerb and the paving slabs, B – flowerbed from which the plant (red arrow) escaped. Photographed by A. Pliszko.

Attila Takács (reports 195-197)

Hungary

195. *Morus indica* L.: Eastern Hungary, Hajdú-Bihar County, Debrecen, Kishatár street, spontaneously in ornamental hedges of a supermarket car park, 112 m a.s.l., 47.54168° N, 21.58291° E, 8495.4, 18. 10. 2023, A. Takács, DE, Fig. 8.

Morus indica (syn. *M. australis* Poir.) is a species of Asian origin, native from India to Japan (Zhou & Gilbert 2003). Escaped specimens have been documented from several localities in Italy (Galasso et al. 2016, 2017; Galasso & Banfi 2017; Capuano & Caruso 2023) although cultivated (i.e. intentionally planted) individuals are not known in the country (Galasso G. *in litt*.). This species is often confused with *M*. *kagayamae* Koidz., a fashionable ornamental plant marketed under the trade name "*Morus platanifolia*". The two taxa (i.e. *M. indica* and *M. kagayamae*) are properly distinguished by Katsumata (1974) on the bases of leaf and flower characteristics.

About 30 young (0,5-2 m tall) individuals of *M*. *indica* were found in an urban habitat in Debrecen. The site is a parking lot with many ornamental shrubs and small trees. Although there is some possibility that *M*. *indica* is also planted in this site, certain circumstances contradict this. Firstly, the specimens appear in a completely irregular arrangement in the beds of the car park. Many specimens grow directly near the stem base of other, obviously cultivated shrubs (e.g. *Elaeagnus pungens* Thunb., *Hibiscus syriacus* L. etc.). Moreover, the shoots of *M*. *indica* specimens are sometimes cut back to their base, which means that the park managers are clearly trying to reduce them. Some smaller specimens grow in cracks in paved roads and along steel railings, where they are protected from mowing by steel posts.

It seems most likely *M*. *indica* could have been introduced as a contaminant of soil balls of ornamental plants. In any case, both garden escapees (cf. Wirth et al. 2020; Kovács et al. 2023) and stowaways of the ornamental plant trade (cf. Takács et al. 2020) are increasingly appearing in our environment.

196. *Torilis nodosa* (L.) Gaertn.: Eastern Hungary, Hajdú-Bihar County, Hajdúnánás, along hedges and on bare surfaces in the spa area, 94 m a.s.l., 47.83299°N, 21.41727°E, 8194.4, 13. 07. 2023 A. Takács, photodocumentation and fruit collection.

Torilis nodosa is an Atlantic-Mediterranean weed species. Its presence in Hungary has recently been confirmed after more than 100 years (Kun et al. 2023). Following recent documentation of the species in Budapest and around Lake Balaton, a new population has been found in the eastern part of the country. The habitat of the new locality is very similar to that described by Kun et al. (l.c.). A very dense population of *T*. *nodosa* was found in the area of Hajdúnánás Spa, on intensively mown and trampled, sparse urban lawn and on its bare surfaces. Consistent with the statements of Kun et al. (l.c.), the introduction of the species here is also most likely related to intensive tourist traffic.

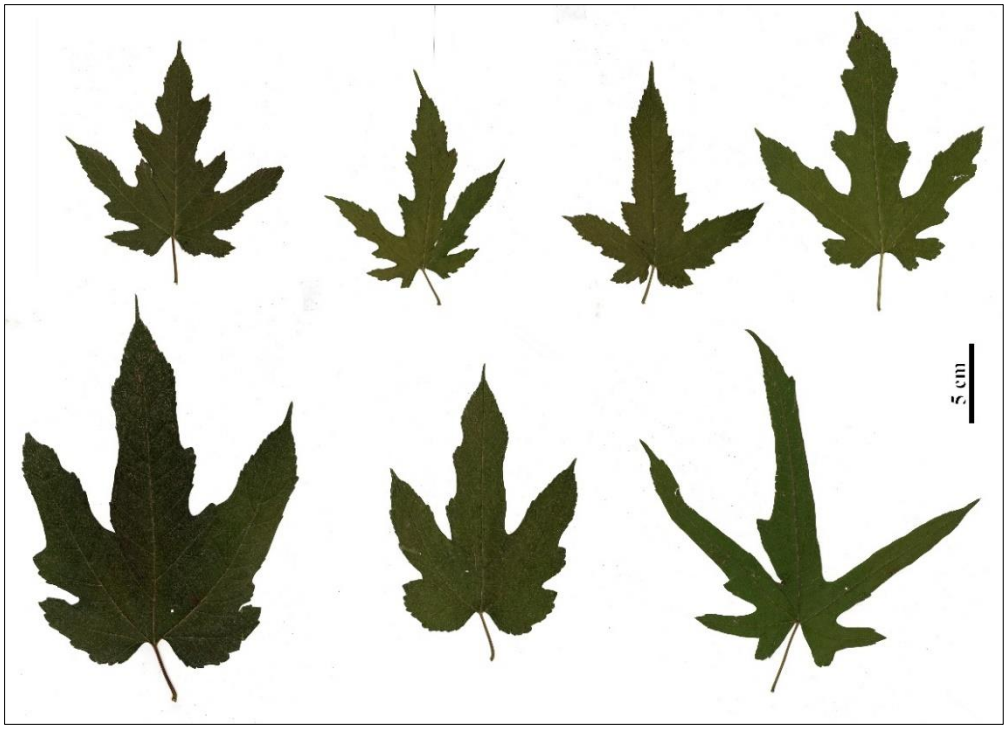

Fig. 8 Variability of *Morus indica* leaves.

197. *Oenanthe banatica* Heuff.: North-eastern Hungary, Borsod-Abaúj-Zemplén County, Erdőbénye, „Nagy-rétek" 120 m a.s.l., 7794.3., 14. 05. 2010, A. Takács, DE-Soo-24302.

Oenanthe banatica is a Balkan-Dacian species. It is widespread in the northeastern part of the Great Hungarian Plain (Fintha 1994), but occurs rather sporadically in the rest of the country (Bartha et al. 2021+). In the southern part of the Zemplén Mts, in the valley of the Bényei stream, several specimens were found in a mosaic of tall-sedge meadow and wet meadow. The nearest known populations are ~60 km away to the east (Beregi plain, Fintha 1994) and west (Szuha valley, Penksza & Somlyay 1999). The species has not been included in recent comprehensive floristic surveys of the Zemplén Mts (Türke et al. 2020; Vojtkó & Farkas 2023) nor in previous studies, it is therefore a new record to the flora of the region.

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