

New floristic records from Central Europe 16 (reports 232-251)

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Abstract: The presented 16th part of the series includes twenty new records of vascular plants from the territory of Central Europe. New record of *Baptisia australis* in Austria and *Mahonia bealei*, *Ruscus hypoglossum* and *Amaranthus emarginatus* subsp. *emarginatus* in Hungary. In Slovakia new localities of autochthonous species *Aegilops cylindrica*, *Aira elegans*, *Pholiurus pannonicus*, *Orchis palustris* and *Tribulus terrestris* were found as well as alien *Dysphania botrys*, *Euphorbia marginata*, *Ficus carica*, *Hylotelephium ×mottramianum*, *Panicum capillare* subsp. *barbipulvinatum*, *Puschkinia scilloides* and *Salvia sclarea*. Adventive species *Heuchera sanguinea* is recorded for the first time in the flora of Slovakia. *Crocasmia ×crocosmiiflora* and *Eleusine indica* are mentioned from Poland.

Keywords: adventive species, Austria, citizen science, chorology, Hungary, native species, new findings, Poland, red list species, 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 (2025+). The map was processed in Corel Draw using the map grid described by Niklfeld (1971). Distribution data taken from the public database iNaturalist.org were cited as follows: iNaturalist ID and number of observation(s), with subsequent citation in References.

The publication includes contributions by M. Dudáš (232-234), P. Eliáš Jr. (235-239), M. Hrivnák (240-242), R. Hrivnák (243-244), A. Kantor (245-246), A. Király & G. Király (247-249) and A. Pliszko (250-251) arranged alphabetically.

Matej Dudáš (reports 232-234)

Slovakia

232. *Puschkinia scilloides* Adams: the Košická kotlina Basin, Košice, Sever, edge of the streets Urbánkova and Dobšinského, tens of flowering plants, 220 m, 48°44'20.98"N 21°14'29.46"E, 7293c, 28. 3. 2025, M. Dudáš, KO 38568, iNaturalist ID 267398762.

Puschkinia scilloides is a species with the origin in southwestern Asia in the north Caucasus, Lebanon, northern Iran, Iraq and Syria (POWO 2025a). It is grown as an ornamental early spring-flowering plant in many European countries. As a garden escapee it was reported from Germany, Austria, the Czech Republic, Finland and Sweden (Raab-Straube 2022+). In Slovakia it is a rare garden escapee (Letz 2024). This is proved also by the report from Košice, where this small population escaped from cultivation and colonised mowed lawn, shady spots and cracks in the sidewalk and near the wall in the streets Urbánkova and Dobšinského. The species is not mentioned in the List of Alien Flora of Slovakia (Medvecká et al. 2012) and its status should be evaluated as casual neophyte in Slovakia.

233. *Salvia sclarea* L.: the Východoslovenská nížina Lowland, distr. Trebišov, Brehov, Hlavná street, in the front of the house no. 136 in SW part of the village, one spontaneous flowering plant on sidewalk, 108 m, 48°28'54.819"N 21°48'34.650"E, 7596b, 29. 6. 2025, M. Dudáš, KO 38652, iNaturalist ID 293837933.

The native range of *Slavia sclarea* is Mediterranean to Central Asia and the Western Himalaya and introduced in the British Isles, Belgium, Lithuania, the Czech Republic, Austria, Hungary and Romania (Kaplan et al. 2018; Király & Király 2018; POWO 2025b). According to Medvecká et al. (2012), *S. sclarea* was first documented in Slovakia at the end of the 19th century (1888) and belongs to the group of casual neophytes recorded at 1–4 localities up to now. Recently, the species was found to escape from cultivation in the western Slovakia in Topoľčianky (Eliáš st. 2018) and Nové Zámky (Eliáš & Kotlárová 2023). Based on the observations in citizen science databases (www.iNaturalist.org; www.fotonet.sk) only one relevant observation was

published near Pezinok (V. Marušic, iNaturalist ID 69202983). This observation is the first one from eastern Slovakia.

234. *Heuchera sanguinea* Engelm.: the Nízke Beskydy hill area, distr. Prešov, Záhradné, garden escapee on the road embankment on the eastern margin of village, 296 m, 49°5'28.188"N 21°16'33.067"E, 6993b, 15. 7. 2025, M. Dudáš, KO 38670, 38671, iNaturalist ID 298244602.

Heuchera sanguinea is a perennial or rhizomatous geophyte with the native range in southwestern part of the United States from Arizona to New Mexico and northern Mexico (POWO 2025c) and introduced to the United Kingdom (Stace 2019) and Germany (Hassler & Muer 2022). The species is not mentioned in the List of Alien Flora of Slovakia (Medvecká et al. 2012) and this is the first record of its garden escaping in Slovakia. One cluster grew on the road embankment with several flowering stems and its origin came from garden waste dumped on the edge of the road embankment.

Pavol Eliáš Jr. (reports 235-239)

Slovakia

235. *Aegilops cylindrica* Host: the Východoslovenská nížina Lowland, Ladmovce, gravel area on the edge of the quarry below the Kašvár Nature Reserve, 130 m, 48°24'36.0"N 21°45'44.5"E, 7596d, 1. 6. 2025, P. Eliáš Jr. & D. Galvánec, NI.

Relatively rare grass species in Slovakia evaluated in the category “vulnerable” (VU) in Slovak Red List (Eliáš et al. 2015). Its occurrence is concentrated in the southwestern and southeastern parts of Slovakia, however, since the end of the 1970s it has been spreading secondarily also to other areas in south and north-western Slovakia (Eliáš & Maglocký 1999; Dudáš et al. 2020; Hrivnák et al. 2021). The occurrence near the Ladmovce village could be connected to the locality in the Čierna nad Tisou settlement, where the species has been recorded continuously for more than 20 years (Jehlík & Dostálek 2008; Eliáš et al. 2013).

236. *Aira elegans* Willd. ex Roem. & Schult.: the Ipeľsko-rimavská brázda Region, Súdvovce, elevation point 294.3 m, dry sunny southwest slopes on andesitic rocks, 262 m, 48°13'54.4"N 18°49'25.7"E, 7778d, 3. 7. 2025, P. Eliáš Jr., NI.

The native range of this species is north-western Africa, southern, south-eastern and central Europe to northern Iran (POWO 2025d). In Slovakia, the centre of occurrence is probably in the Tribeč Mts and the Ipeľsko-rimavská brázda Region, where most of the data comes from (e. g. Hendrych & Chrtek 1946; Neuhäusl & Neuhäuslová-Novotná 1964; Eliáš 1972, 1985; Ambros 1996), currently, only the occurrence in the first mentioned area is confirmed (observation by J. Košťál 2022, 2023 ined.; Eliáš jun. 2023 NI). However, overall, the recent occurrence in Slovakia is not evaluated and therefore Eliáš et al. (2015) classified *A. elegans* in the DD category (data deficient) in the Slovak Red List. The discovery of the species near Súdvovce village confirms its recent occurrence in the Ipeľ area as well.

237. *Dysphania botrys* (L.) Mosyakin et Clemants: the Tribeč Mts, Veľké Uherce, very often on the edges of road No. 511 to Skýcov, 480 m, 48°33'22.7"N 18°26'43.7"E, 7476b, 27. 8. 2025, P. Eliáš Jr., NI.

An annual species, anemochorous and hydrochorous plant native to southern Europe and Asia east to western Mongolia, the secondary distribution range is cosmopolitan. In Slovakia, the species grows mainly in the SW part in the alluvium and deposits of watercourses. The occurrence in the Carpathian part of Slovakia is rare (Schwarzová & Meredža jun. 2016). The discovered occurrence in the Tribeč Mts is related to the reconstruction of the road No. 511, the species was introduced there with construction material.

238. *Panicum capillare* subsp. *barbipulvinatum* (Nash) Tzvel.: the Veľká Fatra Mts, Staré Hory, roadside and ornamental plantings near the Restaurant Pri piecke, 465 m, 48°49'57.9"N 19°06'22.0"E, 7180d, 2. 9. 2024, P. Eliáš jun., N. Kotlárová & L. Tomovičová, NI. – the Košická kotlina Basin, Moldava nad Bodvou, railway station, frequently in ruderal sites around railway tracks, 207 m, 48°36'07.7"N, 21°00'07.8"E, 7392c, 10. 9. 2025, P. Eliáš Jr., KO 38689, NI.

Panicum capillare subsp. *barbipulvinatum* (syn. *P. riparium* H. Scholz, *P. barbipulvinatum* Nash. et Rydb), is a North American taxon. It has a few-flowered inflorescence with short-pedunculated, narrower spikelets that are terminal at the apex. It differs only slightly from *Panicum capillare* subsp. *capillare* (Amarell 2014). The taxon has been found in several countries of Europe: Hungary, Germany, Switzerland, Italy, France, Great Britain and Belgium. The relative current abundance of this taxon is not yet known in individual countries (Király & Alegro 2015). In Slovakia, *P. capillare* subsp. *barbipulvinatum* was first collected in 1969 in the Čierna nad Tisou train station (Jehlík 1998). Recently, the species has been spreading especially in SW Slovakia (Kotlárová 2025). Our finding near the Staré Hory village represents first locality in the Carpathian phytogeographical region (Fig. 1).

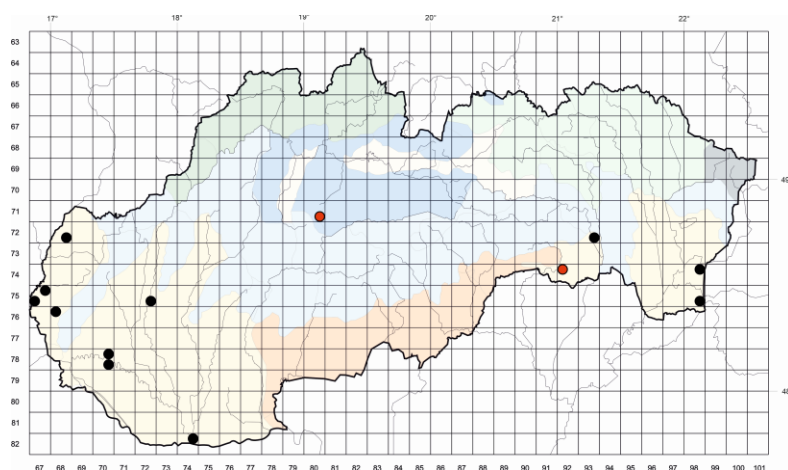


Fig. 1 Occurrence of *Panicum capillare* subsp. *barbipulvinatum* (Nash) Tzvel. in Slovakia, red circles represent new localities (modified after Kotlárová 2025).

239. *Pholiurus pannonicus* (Host.) Trin.: the Východoslovenská nížina Lowland, Zemplínske Kopčany, tilled salt meadows about 500 m west of the Kopčianske slanisko Nature Reserve, 100 m, 48°35'31.4"N 21°52'46.9"E, 7497a, 28. 5. 2025, P. Eliáš Jr., NI.

In central Europe, the occurrence of this species is concentrated in the inland salt marshes of the Pannonian region, but its distribution range is more extensive, extending from central and SE Europe to Siberia, former Soviet Middle Asia, the Caucasus and Western Asia (Řehořek & Maglocký 1999). In Slovakia, only 7 recent localities were confirmed, all in SW Slovakia (Eliáš et al. 2010). In the Východoslovenská nížina Lowland, the species was last recorded by J. Bogoly in the Kopčianske slanisko Nature Reserve near the Zemplínske Kopčany village in the mid-1990s (Bogoly 1996). Our finding confirms the occurrence of the species in SE Slovakia after 30 years.

Matúš Hrivnák (reports 240-242)

Slovakia

240. *Euphorbia marginata* Pursh: the Zvolenská kotlina Basin, Zvolen, Bakova Jama, soil dump 900 m north-northwest of Zlatý potok housing estate, 375 m, 48°35'28.5"N 19°09'08.0"E, 7480b, 16. 7. 2019, M. Hrivnák, photodocumented.

A North American plant frequently cultivated in gardens in Slovakia, and according to a recent alien plant checklist (Medvecká et al. 2012), it was known from fewer than 14 localities. In the last decade, additional new localities have been found, mainly in rural and urban areas (e.g. Eliáš jun. & Sádovský in Kochjarová 2010; Blanár & Kochjarová 2016; see also findings in Slovakia at iNaturalist 2025a).

241. *Ficus carica* L.: the Zvolenská kotlina Basin, Zvolen, growing from a vertical stone levee (Fig. 2), which encloses the Pomiaslo stream next to Pribinova street, 297 m, 48°33'54.9"N 19°09'00.1"E, 7480b, 17. 7. 2025, M. Hrivnák, photodocumented.

In recent years, the species has been relatively common in gardens in Slovakia, but it still occurs only rarely in the wild. Medvecká et al. (2012) classified the species as rare, with records from only 1–4 localities. Since then, it has been recorded, for example, in western Slovakia in several locations in Bratislava and its surroundings (e. g. observation by A. Kantor, iNaturalist ID 228603636 and others), as well as in the town of Myjava (Figura 2019).

242. *Tribulus terrestris* L.: the Zvolenská kotlina Basin, Zvolen, east end of the platform of the Zvolen cargo railway station, 297 m, 48°34'22.3"N 19°08'41.0"E, 7480b, 4. 7. 2025, M. Hrivnák, photodocumented.

In recent decades, localities have been known mainly from secondary habitats associated with railway traffic, such as rail yards and platforms (Májeková et al. 2014b). Several records have been published from southern Slovakia (e.g. Eliáš 2014; Májeková et al. 2014b; Dudáš et al. 2019), and the occurrence of the species is

concentrated mainly in western Slovakia, while records from the central (Duchon & Zajac 2020; Eliáš 2020; Dudáš et al. 2023b; Eliáš 2023; Hrivnák et al. 2025) and eastern parts (Májeková et al. 2014a, 2021; Dudáš et al. 2019; Dudáš 2021, 2023) are relatively less frequent, but new ones continue to appear.

Richard Hrivnák (reports 243-244)

Slovakia

243. *Orchis palustris* Jacq.: the Podunajská nížina lowland, Ohrady, S of the village, margin of a pond, 11 individuals, 110 m, 47°58'59.196"N 17°42'16.668"E, 8072a, 27. 5. 2025, R. Hrivnák, photodocumented.

Critically endangered species in Slovakia (Eliáš et al. 2015), with its distribution mainly in the south-western part of the country. The species was common in the past, but in recent years it has been confirmed at only four localities in the Podunajská nížina and Borská nížina lowlands (Dítě et al. 2003; Vlčko et al. 2003). The species was found at a new locality in remnants of fens of the *Caricion davallianae* alliance and in mown meadows on temporarily wet soils of the *Molinion caeruleae* alliance, located in the littoral zone of a pond created after peat extraction in the last century (Fig. 3). The vegetation is partially altered by secondary succession and overgrown by the strong competitor *Phragmites australis*.

244. *Tragus racemosus* (L.) All.: the Zvolenská kotlina basin, Zvolen, Bariny, in the central green belt of the crossroad, 281 m, 48°34'23.238"N 19°6'15.830"E, 7480b, 14. 10. 2025, R. Hrivnák, KO 38694. – Lučenec, Ľadovo settlement, road margin, tens of individuals, 207 m, 48°20'14.869"N 19°37'14.604"E, 7683d, 2. 9. 2025, R. Hrivnák, KO 38697. – Lučenec, southern margin of the town in the direction to Panické Dravce, road margin, tens of individuals, 194 m, 48°18'46.102"N 19°40'5.027"E, 7684c, 10. 9. 2025, R. Hrivnák, KO 38696. – Lučenec, Fabianka, margin of a road to a small settlement, tens of individuals, 177 m, 48°18'55.073"N 19°42'17.749"E, 7684c, 11. 9. 2025, R. Hrivnák, KO 38698. – Vidiná, road margin, tens of individuals, 202 m, 48°22'4.294"N 19°38'54.974"E, 7683b, 16. 9. 2025, R. Hrivnák, KO 38695. – the Slovenský kras Mts, southern from the Bohúňovo village, roadside, 199 m, 48°30'22.880"N, 20°22'43.673"E, 7488c, 9. 10. 2025, R. Hrivnák, KO 38693.

Tragus racemosus is a relatively scattered species in Slovakia (Medvecká et al. 2012), but much more common in nearby Hungary (Bartha et al. 2021+). It is relatively rare in the Czech Republic and Poland, where it has only recently been recorded (Urbisz & Węgrzynek 2007; Kaplan et al. 2015). The species grows in both natural and artificial habitats, mainly in sandy and skeletal soils (e.g. Kalivodová 2008; Kaplan et al. 2015). In recent decades, the number of records from strictly artificial habitats, such as road margins, footpaths in towns and villages, sand and gravel ditches or railways, has increased (e.g. Eliáš et al. 2017; Dudáš et al. 2018; Kocián et al. 2018; Kantor & Marhold 2024+). The plants in all new records were found along gravel road margins with sparse vegetation cover, consisting mainly of small grasses from the genera *Dichodon*, *Digitaria*, *Eragrostis*, *Puccinellia* or *Setaria*.



Fig. 2 *Ficus carica* in the canalised Pomiaslo stream, Zvolen (photo by Matúš Hrivnák, 17 June 2025).



Fig. 3 *Orchis palustris* in littoral vegetation near the village of Ohrady (photo by Richard Hrivnák, 27 May 2025).

Adam Kantor (reports 245-246)

Austria

245. *Baptisia australis* (L.) R. Br.: Upper Austria, Linz, small patch of ruderal vegetation between the wall and the parking space near the southern corner of the Linz Castle, several stems probably emerging from a single rhizome, ca 285 m, 48°18'16.81"N 14°16'56.54"E, 17. 8. 2025, A. Kantor, SAV, iNaturalist ID 314968297. – Upper Austria, Bad Ischl, cca 30 meters before the confluence of the Kaltenbach spring with the Traun river, 469 m, 47°42'28.80"N 13°36'51.84"E, 22. 8. 2025, A. Kantor, photodocumented (previously recorded by Hohla & Király 2024).

Baptisia australis is herbaceous perennial native to the central and eastern parts of North America. It has been grown as an ornamental plant for decades also in Europe, yet the published records documenting its occurrence outside cultivation in this continent had been missing until very recently. Hohla & Király (2024) reported the single plant found to be an escapee in Bad Ischl in Upper Austria, making it probably the first published record of *B. australis* occurring outside cultivation in Europe. Some sources confirm that the species indeed does not tend to escape regardless of its relative abundance in cultivation. For example, the study on British horticultural trade (Dehnen-Schmutz et al. 2007) shows that *B. australis* was sold in Britain already in 1860s, becoming one of the most frequently offered species in

British nurseries in 1987–2004, yet never escaping into the wild. Due to these and other qualities, Dehnen-Schmutz (2011) suggests that this species is a suitable candidate for inclusion in a green list (i.e., the list of non-native ornamental species with low risk of escaping).

Apart from the published record from Austria (Hohla & Király 2024), tens of observations of *B. australis* from Europe can be found in citizen science databases (iNaturalist 2025b; Observation.org 2025). However, they seem to mostly capture cultivated plants or cases in which the origin cannot be properly evaluated. Still, there are few records that might document real escapes from cultivation, for example from Leuven, Belgium (S. Horemans, Observation.org ID 248044519; W. Desmettre, Observation.org ID 254503456); Ostend, Belgium (J. Devos, iNaturalist ID 51501511) and in Kyiv, Ukraine (A. Levon, iNaturalist ID 56166676).

I report the second occurrence of *B. australis* from Upper Austria. The specimen was found in the ruderal grassland near the Linz Castle, in the presence of species such as *Medicago lupulina*, *Erigeron canadensis* and *Taraxacum* sect. *Taraxacum*. The origin is not clear – it can be a spontaneous occurrence from seeds, but it is also possible that the individual grows from rhizome residuals that have remained there from previous cultivation. Based on a ruderal and unmanaged character of the surroundings, it was assessed that the species was probably not intentionally planted in this site, at least in recent years. In wider surroundings of the castle I inspected multiple stands of ornamental plantings with diverse composition, but *B. australis* was not found in any of them. The specimen found in Linz was not flowering, but all vegetative traits fitted the morphological description of *B. australis*, which is also the most common cultivated member of the genus. Still, it is advisable that the occurrence should be reviewed in the flowering and/or fruiting stage in order to exclude that it belongs to one of the hybrid cultivars. The second observation reported here was made in Bad Ischl, on the locality of the first record reported by Hohla & Király (2024). It is included only as a verification that the plant was still present there in 2025.

Slovakia

246. *Hylotelephium xmottramianum* J.M.H.Shaw et R.Stephenson: the Turčianska kotlina Basin, Martin-Ľadoveň, maple alley next to the bus station “HPM Pharma”, single branched individual, 410 m, 49°03'24.21"N 18°56'02.39"E, 6979b, 8. 9. 2024, 6. 9. 2025, A. Kantor, photodocumented, iNaturalist ID 240781022. – Martin-Ľadoveň, edge of the meadow next to the road, several individuals, 410 m, 49°03'23.38"N 18°56'03.55"E, 6979b, 8. 9. 2024, 6. 9. 2025, A. Kantor, observation. – Martin-Záturečie, shrubs next to the cycle path, ca 390 m, 49°05'19.91"N 18°55'18.52"E, 6979b, 14. 9. 2024, A. Kantor, photodocumented, iNaturalist ID 243411819. – the Turčianska kotlina Basin, Blatnica, by the parking lot next to the entrance to the Gaderská dolina Valley, ca 505 m, 48°55'55.40"N 18°55'53.99"E, 7079d, 24. 9. 2024, A. Kantor, photodocumented.

Perennial hybrid of garden origin introduced to horticulture in 1950s, traditionally known under the names *Hylotelephium* 'Herbstfreude' or *H.* 'Autumn Joy'. According to Shaw & Stephenson (2022), who only recently provided taxonomic circumscription of the nothospecies, it likely arose from the hybridization of *H. maximum* and *H. spectabile*. However, this concept was later challenged by Uher (2024) who, based on flow-cytometric data and morphology, suggested *H. argutum* × *H. spectabile* to be the most probable parental combination.

H. ×mottramianum is widely grown in Europe as an ornamental perennial with high tolerance to drought and temperature fluctuations. Due to its absence of stamens and anthers, it is completely sterile, so its spread is limited to a vegetative propagation. As such, it poses no invasive threat, even though it can get outside cultivation with garden throw-outs and can persist in the localities for a long time due to its endurance. This was likely also the story behind four new records presented here, in which *H. ×mottramianum* was found in the localities where it was apparently not intentionally planted. First three records outside cultivation in Slovakia, made in 2016–2021, were reported by Eliáš et al. (2023) under the name *Hylotelephium* 'Herbstfreude'. One of those records (by K. Hegedúšová) was also made in the Turčianska kotlina Basin. Four new records in this region document its local popularity in gardening and suggest that other occurrences outside cultivation can be expected in future. As a casual neophyte, it has been recorded in several European countries, including Austria (Stöhr 2019; Sauberer et al. 2020), Czech Republic (Uher 2024), Germany (Bomble & Joußen 2022) and United Kingdom (Stace 2019).

Gergely Király & Angéla Király (reports 247-249)

Hungary

247. *Mahonia bealei* (Fortune) Carrière: Hungary, Győr-Moson-Sopron County, Sopron Mts, Sopron, 0.6 km E of the Ferenc Spring, beneath an open pine stand, several mature, flowering and fruiting individuals, 440 m, 47°39'04.5"N 16°32'50.9"E, 8365a, 28. 03. 2024, G. Király, LI, photodocumented, Fig. 4. – Sopron Mts, Sopron, 0.2 km E of the Sopron Sanatorium, in a shaded mixed pine-deciduous forest, one mature individual, 265 m, 47°40'05.5"N 16°34'51.5"E, 8365a, 21. 09. 2024, G. Király, observation.

Originally from eastern China, this species is native to mountainous and hilly regions in its home range. It is widely cultivated throughout the northern temperate zone and has become naturalized in the eastern United States (Allen et al. 2006; Junsheng et al. 2011). In Europe, occasional escapes from cultivation are known only sporadically, e.g. Belgium, Germany, Italy (Adolphi 2001; Galasso et al. 2024; Verloove 2025). In Hungary, small-scale spread has been reported from the botanical garden and urban areas of Pécs (Wirth et al. 2020), as well as from an arboretum of the Great Plain (Kovács et al. 2023). The above-mentioned records from Sopron represent the first occurrences of the species in western Transdanubia and also the

first observations from a forested environment, distant from settlements. The sources of the Sopron escapes are likely the university's botanical garden, where vigorous spontaneous spread has also been observed, and ornamental plantings in the Lővérek district of the city. The increasingly mild winters in the Pannonian Basin are favourable for its further spread and possible establishment.



Fig. 4 Flowering specimen of *Mahonia bealei* in the Sopron Mts (Hungary) (photo by G. Király).

248. *Ruscus hypoglossum* L.: Hungary, Sopron Mts, Győr-Moson-Sopron County, Sopron, 0,4 km N-NW of Deákkút Spring, a vigorous fruiting specimen in a mesic hornbeam-oak derivative forest stand, 290 m, 47°40'19.1"N 16°33'57.8"E, 8365a, 12. 04. 2024, A. Király & G. Király, photodocumented.

A sub-Mediterranean evergreen dwarf shrub occurring within its Central European range mainly in beech and hornbeam-oak forests. The species is occasionally cultivated as an ornamental plant, and in some regions, such as Great Britain (Clement & Foster 1994), it has become locally naturalized in the consequence of the horticultural use. *R. hypoglossum* is considered critically endangered in Austria; it is native to the Vienna Woods (Wienerwald), while a historical record exists from Central Burgenland (Janchen 1956–60; Fischer et al. 2008). In Slovakia, the species is also rare, occurring at few localities in the Malé Karpaty Mts (Halada & Erdelská 2005).

In Hungary, where it is a legally protected species and its trade is prohibited, the species has scattered distribution in southern Transdanubia, with isolated populations also in the Keszthely Mts and the Northern Bakony (Bartha et al. 2015).

From western Transdanubia, an earlier (1989) record near Kám (Kevey 2018) refers to a doubtful, possibly non-native occurrence adjacent to the Jeli Arboretum. At the newly discovered locality near Sopron, the species is most likely adventive and escaped from cultivation, though intentional introduction cannot be ruled out. The solitary but vigorous individual was first observed in 2018 and has persisted since then without evidence of further spread.

249. *Amaranthus emarginatus* Salzm. ex Uline & W.L.Bray. subsp. *emarginatus*: Hungary, Vas County, Szombathely, Széll Kálmán Str., several fruiting specimens, along pavements and in small „soil islands” around park trees, associated with *A. deflexus*, 217 m, 47°14'02.1"N 16°37'26.9"E, 8765d, 29. 09. 2025, G. Király, LI, photodocumented, Fig. 5.

This is the third confirmed occurrence of the subspecies in Hungary (previously recorded along the Danube section of the Little Hungarian Plain and near Fertőd (see Dřevojan & Letz 2016; Dudáš et al. 2023a). The species itself is spreading in the Carpathian Basin, but it is represented mainly by the subsp. *pseudogracilis* (Thell.) Hügin; moreover, a few recent Hungarian reports provide identification only at the species level.



Fig. 5 Fruiting specimen of *Amaranthus emarginatus* subsp. *emarginatus* in Szombathely (Hungary) (photo by G. Király).

Artur Pliszko (reports 250-251)

Poland

250. *Crocasmia ×crocosmiiflora* (Lemoine) N.E.Br.: southern Poland, Lesser Poland Province, Olkusz Upland, Biały Kościół, abandoned field, small clump consisting of one generative and seven vegetative shoots, 377 m, 50°10.058'N 19°49.277'E, 28. 08. 2025, A. Pliszko, Fig. 6.

Crocasmia ×crocosmiiflora is a horticultural hybrid between two African species of the Iridaceae family, *C. aurea* (Pappe ex Hook.) Planch. and *C. pottsii* (Baker) N.E.Br. originally created in 1880 in France by Victor Lemoine. It has been introduced as an ornamental plant to other European countries, as well as to Asia, Australia, North America and South America (Nelson 1993; POWO 2025e). It is typically found in gardens, although it can naturalize outside cultivation under mild climatic conditions. It spreads mainly vegetatively through corms and usually inhabits roadsides, hedgerows, coastal cliffs and slopes, sand dunes, riverbanks, lakeshores, grasslands, forests, quarries and waste areas (Stace et al. 2020; Cal-IPC 2025; NNSS 2025). Furthermore, in some countries, such as the United Kingdom, Ireland, the United States and New Zealand, it is considered an invasive species that can reduce the richness and abundance of native species by forming dense, monotypic patches (Howell 2008; Cal-IPC 2025; NNSS 2025).

In Poland, *C. ×crocosmiiflora* is a cultivated alien plant (Mirek et al. 2020). To the best of my knowledge, this is the first Polish record of this species outside cultivation. It was found growing on an abandoned field in the company of *Achillea millefolium*, *Agrimonia eupatoria*, *Arrhenatherum elatius*, *Artemisia vulgaris*, *Calamagrostis epigejos*, *Festuca rubra*, *Holcus lanatus*, *Hypericum perforatum*, *Origanum vulgare* and *Solidago canadensis* (Fig. 5). It was most likely introduced with garden waste or is a remnant of a former cut flower plantation. Currently, it should be classified as a casual alien species, and its establishment in Poland requires further study.

251. *Eleusine indica* (L.) Gaertn.: southeastern Poland, Świętokrzyskie Province, Kielce, plowed field after buckwheat cultivation, several dozen shoots, 265 m, 50°52.523'N 20°34.427'E, 18. 09. 2025, A. Pliszko, Fig. 7.

Eleusine indica, an annual or perennial herb of the Poaceae family, is native to the tropical and subtropical Old World. It was introduced to Western, Southern and Central Europe, North Africa, North America, South America and Australia (POWO 2025f). It is usually found in ruderal and segetal habitats, on roadsides, sidewalks, lawns, arable fields, gardens and waste areas (Nobis et al. 2011; Csontos et al. 2017; Dítě et al. 2019; Alcántara-de la Cruz et al. 2025). In many countries, it is considered an invasive weed that reduces the yield of crops such as soybean, corn and cotton. Moreover, it exhibits high ecological tolerance and resistance to mechanical damage and herbicides (Csontos et al. 2017; Alcántara-de la Cruz et al. 2025).



Fig. 6 *Crocosmia xrococsmiiflora* in Biały Kościół, Olkusz Upland, southern Poland: A – inflorescence, B – cluster of shoots on an abandoned field. Photographed by A. Pliszko.

Eleusine indica is a very rare ephemerophyte (casual alien plant) in the Polish flora, occurring in garbage dumps and roadsides (Urbisz 2011; Mirek et. al. 2020). It has not yet been reported from southeastern Poland. A new locality was found in Kielce, Świętokrzyskie Province, where it was growing in a plowed field after buckwheat cultivation (Fig. 7). In addition, it was accompanied by *Amaranthus hybridus*, *Digitaria sanguinalis*, *Echinochloa crus-galli*, *Elymus repens*, *Galinsoga parviflora*, *Polygonum aviculare* and *Sinapis alba*. It was most likely introduced with contaminated seed. Interestingly, Domaradzki (2024) suggested that *E. indica* may become a problematic weed in Poland in the future due to the ongoing climate change. Therefore, it is important to monitor new localities of this species.



Fig. 7 *Eleusine indica* in Kielce, southeastern Poland: A – upper parts of generative shoots, B – cluster of shoots on a plowed field. Photographed by A. Pliszko.

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