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Abstract: The present part of the series provides miscellaneous new records of 15 taxa of vascular plants from Hungary. New chorological records are provided here: *Androsace maxima*, *Helminthia echooides* and *Hypericum elegans* are new for the ‘Közép-Tisza-vidék’, *Helminthia echooides* is also new to the ‘Duna-sík’, *Aphanes arvensis* and *Medicago rigidula* are new in the ‘Hajdúság’, *Bolboschoenus maritimus* is new for the Putnok Hills and Sajó Valley, *Draba muralis* is new for the Mátra Mts, *Eriochloa villosa* is a new alien weed in Western Hungary, *Erucastrum nasturtiifolium* is new for the ‘Zagyva-völgy’ microregion, *Gagea minima* is new for the ‘Cserhát’, *Polycarpon tetraphyllum* is new to the flora of the Transdanubian Mountains, a new population of *Reseda inodora* has been found in the Kiskunság (Harta), *Sherardia arvensis* is new both for ‘Nyírség’ and ‘Hajdúság’, *Tordylium maximum* is new for the ‘Marosszög’ microregion, and the rare hybrid *Tragopogon ×crantzii* is new for the Jászság.

Key words: Apiaceae, Asteraceae, Brassicaceae, Caryophyllaceae, Cyperaceae, Fabaceae, Hungary, Hypericaceae, Liliaceae, Poaceae, Primulaceae, Resedaceae, Rosaceae, Rubiaceae, vascular plants

INTRODUCTION

This paper is the 14th part of the series launched in *Studia botanica hungarica* focusing on the new chorological records, nomenclature, and taxonomy of plant species from algae to vascular plants and fungi (BARINA *et al.* 2015, 2020, CSÍKY *et al.* 2017, DEME *et al.* 2019, KIRÁLY *et al.* 2019*a*, *b*, MATUS *et al.* 2018, MESTERHÁZY *et al.* 2017, PAPP *et al.* 2016, 2020, SCHMIDT 2020, SCHMIDT *et al.* 2018, TAKÁCS *et al.* 2016*a*).

MATERIAL AND METHODS

Nomenclature of vascular plants follows KIRÁLY (2009) and The Plant List (2013). Codes of the Central European Flora Mapping grid are in square brackets. Abbreviations of herbaria follow THIERS (2017).

NEW RECORDS WITH ANNOTATIONS

Flowering plants

(138) *Androsace maxima* L. (Primulaceae)

Hungary, Jász-Nagykun-Szolnok County, Szászberek: to the northwest of the settlement, on the embankment of the River Zagyva, on the left side, 47.3175° N, 20.0874° E, *ca* 84 m [8686.4], leg.: K. Süveges, 20.05.2020 (DE).

This species is widespread in Eurasia and North Africa, while it is rare or sporadic in Hungary (BARTHA *et al.* 2015). It is extremely rare in the Great Hungarian Plain, and no recent occurrence is known in the ‘Kisalföld’, but it has been reported from the southern part of the Great Hungarian Plain (SOÓ and MÁTHÉ 1938, JAKAB 2012), and ‘Mezőföld’ (e.g., VOIGHT and SOMAY 2013, SOMLYAI and CSÁBI 2019). The closest known presence of the species to the current occurrence is near Szelevény (FARKAS 1999). The new site is found in the ‘Jázság’ microregion of the ‘Közép-Tisza-vidék’, near Szászberek, on the left bank on the embankment of River Zagyva, where it can be found on small, pioneer surfaces of a dry grassland. The presence of the species on flood embankments is not unique, as the nearest recent known location near Gyomaendrőd is on the embankment of the River Körös (JAKAB 2012). The species is under legislative protection in Hungary, and the appearance of it in the microregion ‘Jázság’ is definitely an interesting incidence.

K. Süveges

(139) *Aphanes arvensis* L. (Rosaceae)

Hungary, Hajdú-Bihar County, Hajdúszoboszló, airport, 47.45547° N, 21.39025° E, 92 m [8594.1], 04.2020; Damjanich street, 47.45753° N, 21.40720° E, 96 m [8594.1], 04.2020; leisure park, along the jogging track, 47.45104° N, 21.40768° E, 95 m [8594.1], 10.05.2020; Debreceni street, along the bike path, 47.46135° N, 21.441467° E, 101 m [8594.2], 16.05.2020. In gaps of sparse, disturbed, trampled lawns, leg.: A. Takács (DE).

Mass populations of the annual weed *Aphanes arvensis* were found at several points of the town Hajdúszoboszló. The main distribution range of the species in Hungary is concentrated in the western part of the country (BARTHA *et al.* 2015). From Eastern Hungary, only a few historical data are known from the ‘Nyírség’

and ‘Észak-Alföld’ (BOROS 1932, SIMON 1954, GONDOLA 1969), with current confirmation of the presence in these regions (TAKÁCS and LÖKI 2015, GULYÁS *et al.* 2016, HASZONITS *et al.* 2021). GULYÁS *et al.* (2016) also presented this species from the ‘Bihari-sík’ microregion as a novelty for the flora of the ‘Tiszántúl’. Since no more data are known from other parts of the region, the occurrence of the species in Hajdúszoboszló is a new record in the flora of the ‘Hajdúság’. Since the plants were found in disturbed lawns of a town with remarkable tourist traffic, and previous occurrence data of *Aphanes arvensis* are not known from here, we suppose that the species has been introduced recently.

A. Takács

(140) *Bolboschoenus planiculmis* (F. Schmidt) T. V. Egorova (Cyperaceae)

Hungary, Borsod-Abaúj-Zemplén County, Bánréve–Serényfalva: on the wet field edge near Serényfalva–Újtelep, on an always wet dirt road, 48.30302° N, 20.37452° E, 164 m [7688.3], leg.: Cs. Molnár, 26.06.2021 (BP).

This *Bolboschoenus* has only recently been detected in Central Europe and the details of the distribution of the species in Hungary are not yet known. The first data from Hungary are provided by HROUDOVÁ *et al.* 2007, based on herbarium revision. The first data from the North Hungarian Mts. is also from them, Pelles G. collected it near Sátoraljaújhely in 1997 (BP). In Lájer’s identifical key, he writes only that it occurs in the North Hungarian Mountains (LÁJER 2009). Takács also found it in 2010 in Sátoraljaújhely (BARTHA *et al.* 2021). He later found it in the lot of number of places on the Taktaköz (TAKÁCS *et al.* 2014a). It was found along the Ipoly River at Kóvár (now Koláre, Slovakia) and several points in the Upper Bodrogköz (now Vychodoslovenská nizina, Slovakia) (HROUDOVÁ *et al.* 2007). So far, there have been no more known occurrence data from the North Hungarian Mts. and the wider area. New to the flora of the Putnok Hills and the Sajó Valley. Probably more common.

Cs. Molnár

(141) *Draba muralis* L. (Brassicaceae)

Hungary, Heves County, Verpelét: in slightly degraded open thermophilous oak woodlands, near a quarry, at several points e.g., 47.8671° N, 20.1640° E, ca 239 m [8186.2], leg.: K. Süveges, 27.04.2020 (DE).

Draba muralis can be found sporadically in the western part of Hungary, and rarely in the eastern part (BARTHA *et al.* 2015). In the North Hungarian Mountains it was detected in the Visegrád Mts, the Börzsöny Mts (BÁNKÚTI 1994), and in Mt Naszály (PINTÉR *et al.* 2010). The population found in the Mátra Mts can be observed mainly on open, grassy parts of an open thermophilous oak forest, in numbers of hundreds at multiple locations. The habitat is

found at the game preserve of Vérpelét, which is roughly 1,200 hectares, thus the habitat found at the Southern part of the Mátra Mts is degraded (because of grazing and trampling). The species apparently has started to spread in Hungary, as it has been detected at multiple locations recently (PAPP *et al.* 2016; Szentes, KORDA *et al.* 2017; Gyula, KIRÁLY and KIRÁLY 2018; Mátyus), far away from the traditionally known locations in the country. The presence of the species in a game preserve may be the consequence of human activity in the region, e.g., providing forage for the animals or visiting the area by rangers and hunters from other regions.

K. Süveges

(142) *Eriochloa villosa* (Thunb.) Kunth (Poaceae)

Hungary, Zala County, Zalabér: Hegybal, in a dirt road among abandoned vineyards, 46.95600° N, 17.03962° E, 195 m [9069.1], leg.: J. Vikár, 22.08.2019 (photo-documented).

Eriochloa villosa is an emerging weed in Central Europe. It has now become widespread in the western part of Romania (SZATMARI 2016), and has expanding populations in Hungary (SZILÁGYI *et al.* 2017, PINKE *et al.* 2016, VIRÓK *et al.* 2020). The westernmost remote population was found in the border of Czechia and Austria (PAULIČ and NĚMEC 2014, FOLLAK *et al.* 2020). A single but well-developed individual of the woolly cupgrass was found in Zalabér, in a dirt road. Most probably this weed is already present in soybean and/or corn plantations in the surroundings, but the closest population of the plant was reported from the Dráva plain (TAKÁCS *et al.* 2014b, PINKE *et al.* 2016) which is approximately 130 km far from here. *E. villosa* is a new alien weed in the flora of West Hungary.

J. Vikár

(143) *Erucastrum nasturtiifolium* (Poir.) O. E. Schulz (Brassicaceae)

Hungary, Nógrád County, Somoskőújfalu, above a retaining stone wall along the Somosi str., 48.15703° N, 19.81708° E, 340 m [7884.2], leg.: K. Süveges and A. Takács, 24.05.2020 (DE).

Erucastrum nasturtiifolium is native to Western Europe and it is an alien element of the Hungarian flora (cf. JALAS *et al.* 1995). The species has a sporadic distribution in the country, and the currently known occurrences are concentrated in the northern part of Transdanubia. A new, dense population of the species was found in the ‘Zagyva-völgy’ microregion, in Somoskőújfalu which is located 50 and 70 km from the closest occurrences (VIRÓK *et al.* 2004; Serényfalva; TAKÁCS *et al.* 2016b: Szödliget). The new location is only 1 km from the Slovakian–Hungarian border, however, occurrences of this taxon are not known in that region of Slovakia (cf. GOLIAŠOVÁ and ŠÍPOŠOVÁ 2002).

Considering the roadside situation of the new population and, that this road provides a direct connection to Slovakia, along with a railway running parallel to the road, we assume that the species is already present on the other side of the border, or will appear soon.

K. Süveges and A. Takács

(144) *Gagea minima* (L.) Ker Gawl. (Liliaceae)

Hungary, Nógrád County, Nagylóc: Dobogó, in a sessile oak-hornbeam forest (which was presumably forested with Turkey oak earlier), 48.0085° N, 19.6268° E, ca 329 m [7983.4], leg.: K. Süveges, 22.04.2020 (DE).

The native range of *Gagea minima* covers most of Eurasia, with the exception of Western Europe. The species is rarely present in Hungary, although it can be frequent locally (e.g., Gerecse Mts) (BARTHA *et al.* 2015). In the North Hungarian Mountains, the presence of the species is rather rare, the closest occurrence of it is reported from Mt Naszály (PINTÉR *et al.* 2010). We found no previous reports of it being present in the Cserhát Mts. The species is extremely rare to the east of the Cserhát Mts; the closest occurrence is found in the ‘Sajó–Hernád sík’ (TAKÁCS *et al.* 2013). The new site of the species is located in a *Quercus cerris*-*Quercus petraea* forest, in a shaded, slightly rocky, north-western faced habitat. The species composition of this site usually characterises sessile oak-hornbeam forests (e.g., *Cardamine bulbifera*), thus we suppose that this newly found site was originally inhabited by sessile oak and common hornbeam, which was later replaced by Turkey oak (*Quercus cerris*).

K. Süveges

(145) *Helminthia echiooides* (L.) Gaertn. (Asteraceae)

Hungary, Bács-Kiskun County, Harta, Kápolna-lapos, one flowering plant in aging alfalfa (the plot was plowed in 2021), 46.73658°N, 19.10462°E, 95 m [9280.4], leg.: Cs. Molnár, 09.06.2020 (DE); Jász-Nagykun-Szolnok County, Karcag, “lombkorona sétány”, in sparse, trampled weedy vegetation of the leisure park (in glade of oak-wood), 47.31673° N, 20.90238° E, 90 m [8691.3], leg.: K. Tóth 29.06.2019 (photo-documented), A. Takács, 27.06.2020 (DE); Borsod-Abaúj-Zemplén county, Tarcal, weedy arable field near the road in the direction of Prügy, 48.12202° N, 21.33815° E, 92 m [7894.3], leg.: K. Süveges, 08.09.2020 (DE).

Hungarian distribution of *Helminthia echiooides* is concentrated in two spots of the southern part of the country: in the surroundings of Bonyhád, and around Szeged and Makó. In addition to these stable populations, several sporadic occurrences are also known throughout the country (BARTHA *et al.* 2021). We found two new remote populations in the ‘Közép-Tisza-vidék’, and one new data in the ‘Duna-sík’, where the species has not been documented before. The populations are 60 km (Karcag) and 150 km (Tarcal) from the closest known

occurrence which was presented by Tóth T. (JAKAB and TÓTH 2003), from Békésszentandrás and 50 km (Harta) from the nearest occurrence, Jánoshalma (KIRÁLY and KIRÁLY 2018). Our findings support the probable northward spread of this Mediterranean weed as JAKAB (2005) also pointed out. However, its emerging and disappearing populations in Europe all the way to Scandinavia have been observed in the past (PRISZTER 1960, SELL 1976).

K. Tóth, K. Süveges, Cs. Molnár and A. Takács

(146) *Hypericum elegans* Stephan ex Willd. (Hypericaceae)

Hungary, Jász-Nagykun-Szolnok County, Tiszaflödvár: Zsiger-oldal, along the Jó-kúti-channel, in a narrow loess verge, 46.9322° N, 20.2888° E, ca 81 m [9087.4], leg.: K. Süveges, 04.06.2020 (DE).

Hypericum elegans is a species native to Central and Eastern Europe, as well as the steppe regions of Asia. In Hungary it can be found in the Transdanubian Mountains, the North Hungarian Mountains (where it is extremely rare), and the Great Hungarian Plain (mainly in 'Dél-Tiszántúl' and 'Mezőföld') (BARTHA et al. 2015). In Hungary the plant can be observed in rocky grasslands, steppes and loess verges. Considering the known occurrences of the species in the country, the new site presented in this article is geographically closest to the 'Dél-Tiszántúl' region (e.g., KERTÉSZ 2000, JAKAB 2005, 2012). The exact size of the new population is not known since the whole habitat has not been surveyed, but a few individuals have been found in a narrow loess verge along a canal during the field work of a biological impact and risk assessment project. The species is often present in 'Dél-Tiszántúl' in narrow loess fields (JAKAB 2012). This is the first registered appearance of this protected species in the 'Közép-Tisza-vidék'.

K. Süveges

(147) *Medicago rigidula* (L.) All. (Fabaceae)

Hungary, Hajdú-Bihar county, Hajdúszoboszló, leisure park, disturbed, weedy vegetation along the jogging track, 47.45207° N, 21.409663° E, 98 m [8594.1], leg.: A. Takács, 10.05.2020 (DE).

Medicago rigidula is a thermophilous annual weed of rocky and steppe grasslands' gaps, and other, typically grazed or trampled, opening dry habitats. According to MOLNÁR and CSIKY (2010), living Hungarian populations of the species are located at several points of the North Hungarian Mountains, the Transdanubian Mountains and Hills, while onetime occurrences in the Great Hungarian Plain are proved to be temporary, and none of them have been confirmed recently. A single, well-developed individual of *M. rigidula* in fruiting stage was found in Hajdúszoboszló town, in pioneer annual weedy vegetation along a jogging track of the leisure park. The species was not observed previously in the territory of the 'Hajdúság' region, and the closest occurrence was reported

by Soó *et al.* (1942) in Ecsegfalva. Appearance of the species in urban environment is not a novelty (cf. A. Lengyel in MOLNÁR and CSÍKY 2010), however, most probably these are only casual occurrences. In Hajdúszoboszló, the introduction could have happened during the creation of the leisure park (with construction materials or in ornamental plant containers), or possibly through tourist traffic. The co-occurrence of *M. rigidula* with other native weeds and archaeophytes was highlighted by MOLNÁR and CSÍKY (2010). This finding can be confirmed since *Ajuga chamaepitys*, *Aphanes arvensis* (see item ‘139’ above), *Scleranthus* cf. *polycarpos*, *Stachys annua*, *Vulpia myuros* are also present in the new site.

A. Takács

(148) *Polycarpon tetraphyllum* (L.) L. (Caryophyllaceae)

Hungary, Veszprém County, Nagyvázsony: inside the built-up area, near the castle of Kinizsi, at the base of a stonewall, on gravel, covering an area of a few m², 46.9848° N, 17.6948° E, ca 254 m [9072.1], leg.: K. Süveges, 13.09.2020 (DE).

The first detection of this cosmopolitan species in Hungary can be attributed to Béla Bodnár; Budapest 1956 (KOVÁCS and PRISZTER 1957). In the following years Hungarian botanists could not find the species, until 2000, when it has been registered at multiple locations inside Budapest (SOMLYAI and LŐKÖS 2000); furthermore, the presence of the species seems to be permanent in the capital (e.g., MATUS 2013, DE-Soo-38001). The species is newly present at three additional locations in the country: in Szombathely (SCHMIDT 2016), where the author found a few individuals on a wet, trampled surface in 2015, but could not observe it again at the same location in 2016; in Kaposvár (TAKÁCS *et al.* 2020), at a horticulture; and in Pécs (WIRTH *et al.* 2020), at several locations inside the city. The occurrence of the species in Nagyvázsony is far away from all the other locations where it has been detected previously, and this is a new record to the flora of the Transdanubian Mountains. The new site is next to a hiking trail frequently visited by tourists, at the base of a stone fence of a guesthouse, less than 100 metres to the castle of Kinizsi. Since they were renovating the castle at the time of detection, we suppose that the species could have arrived not only by the visiting tourists, but also with the heavy equipment and/or the construction materials used for renovation. At the same time, the appearance of the species in Nagyvázsony may be related to the commercial spreading of ornamental plants (cf. TAKÁCS *et al.* 2020).

K. Süveges

(149) *Reseda inodora* Reichenb. (Resedaceae)

Hungary, Kiskunság region, Harta: Állampuszta and Kápolna-lapos, in special arable land, 46.729300° N, 19.088028° E and 46.735295° N, 19.104386° E, and 46.740017° N, 19.092850° E, 9280.4 CEU, leg. et det.: Cs. Molnár, 10–11.06.2020 and 10.08.2020 (BP, DE).

Larger population on some plots where the previous intensive field cultivation is temporarily replaced by sowing an experimental pollinating-friendly flower mixture. The *Reseda* sprouted from the seed bank, not sown species. Within the large area of the OBVI of Állampuszta, it was found only on a few plots close to each other, not found elsewhere. In 2020, dozens of plants bloomed on 2 plots and hundreds on one plot (third coordinate). In 2021, it was significantly reduced due to the increase in cover of sown species, a total of 5–10 flowering plants could be observed on the 3 plots.

It is a rare species between the Danube and the Tisza. Its first data from 1868 is known from Szigetcsép (herbarium sheets of Gy. Tauscher, BP). B. Lányi collected between Szeged and Horgos in Kamarás in 1912 (BP), Á. Boros in 1926 in Szeged (BP), in 1953 in Vácrátót (as *R. luteola*, revised by L. Somlyay in 2017 – BP). Soó (1968) only mentions the Danube region (Csepel Island – Baja) as its place of occurrence, but this mainly means the loess bank of the Danube, while SIMON (2004) no longer data writes about between the Danube and the Tisza. Data of the 21st century, they thrive spectacularly again: A. I. Csathó found it in Vaskút (CsATHÓ 2009), in Kiskundorozsma and Madaras (CsATHÓ et al. 2015), A. Mesterházy in three flora square around Szabadszállás, Z. Barina in near Nemesnádudvar (BARTHA et al. 2021).

In addition, it is even rarer in the whole area of the Alföld (Great Hungarian Plain). In Mezőföld region collected by Gy. Tauscher in 1880 in Ercsi (BP), I. Kiss presumably in Sárszentlőrinc (“Com. Tolnensis. Collibus apricis ad Szt Lőrincz 1880” and “inter vineis ad Szt Lőrincz 1880” – the collector thought *R. phyteuma*, but revised by L. Somlyay in 2009 and 2017 – BP), Á. Degen in 1911 in near Rácalmás (BP, TAKÁCS et al. 2014c) and G. Lengyel also in 1911 (BP). It lives next to Adony, Ivánca, Dunaújváros (LENDVAI and HORVÁTH (2010) 2011) and Paks (VOIGT and SOMAY 2013). In Tiszántúl region collected B. Zólyomi and M. Kovács, it was decided Zs. Molnár in 1959 in between Cserkeszőlő and Kunszentmárton (BP). The species must have become extinct in Makó (HALÁSZ 1889, CSATHÓ et al. 2015), but it was found on the Hegyes-halom in Mindszent (CsATHÓ et al. 2015). It is known for some points in the Bánság (Banat) region (J. Heuffel “In Banatu 1857” as *R. phyteuma*, revised by L. Somlyay in 2017 – BP), J. B. Kümmeler and S. Javorka collected in Báziás (now Baziaș, Romania) in 1918 (as *R. phyteuma*, revised by L. Somlyay in 2017 – BP). In Bácska (Бачка) region Á. Boros collected in Mozsor (now Мошорин, Serbia) in 1943 (given only at the genus level, determined by Somlyay L. in 2017 – BP). Finally in Drávaszög (Baranjska lesna) region this *Reseda* occurs in Vörösmart (Zmajevac, Croatia) (CSIKY et al. 2008).

According to the Hungarian Red List (KIRÁLY 2007) it is an endangered species.

Cs. Molnár

(150) *Sherardia arvensis* L. (Rubiaceae)

Hungary, Hajdú-Bihar County, Ebés, cemetery, disturbed, mowed lawn around the mortuary, 47.46146° N, 21.49004° E, 98 m [8594.2], leg.: A. Takács, 04.05.2020 (DE); Debrecen, corner of the Pallagi street and Benczúr Gyula street, disturbed lawn fragment, along a fence, 47.56129° N, 21.63072° E, 128 m [8495.2], leg.: P. Török 27.05.2019; Debrecen, Füredi street, under a hedge, in a trampled weed community, 47.54175° N, 21.61276° E, 123 m [8495.4], leg. K. Süveges, 08.05.2019 (DE).

A dense population of the archaeophyte weed *Sherardia arvensis* was found in a regularly mowed lawn of the cemetery of Ebés. Two smaller populations were found in disturbed lawn fragments in Debrecen. The species' distribution is sporadic in Hungary (BARTHA *et al.* 2015), and only a few occurrences are known in the Great Hungarian Plain. From the 'Nyírség', we know only one unlocalised historical data published by BORBÁS (1866), thus the new location in Debrecen is a current confirmation of the species' presence in this region. With regard to the 'Tiszántúl', historical data are known from the southern part (SOÓ and MÁTHÉ 1938), and current data were also published from secondary grasslands and abandoned fields of the middle and northern part of the region (LUKÁCS *et al.* 2017, DEÁK *et al.* 2019, SÜVEGES *et al.* 2020). The occurrence in Ebés is a new record in the flora of the 'Hajdúság'. In view of the present-day climate change trends and the Mediterranean origin of the species, its spreading and further colonization is expected in the Great Hungarian Plain.

K. Süveges, P. Török and A. Takács

(151) *Tordylium maximum* L. (Apiaceae)

Hungary, Csongrád-Csanád County, Apátfalva: to the south of the settlement, at the edge of a riverine woodland, along the River Maros, 46.1615° N, 20.5788° E, ca 82 m [9889.1], leg.: K. Süveges, 25.06.2019 (DE).

Tordylium maximum is a species of Southern and Central Europe and the Middle East. In Hungary it can be found sporadically or frequently, however it is rare in the region of the Great Hungarian Plain (BARTHA *et al.* 2015). Only a few localities are known in the 'Tiszántúl' (e.g., Bélmegyer, Doboz, Zsadány – KERTÉSZ 2000) and 'Nyírség' (Bagamér – KORDA *et al.* 2017; Debrecen – HASZONITS *et al.* 2021). The closest known occurrence to this new site is the population found in Csongrád (JAKAB 2005). I did not find any data concerning the 'Marosszög' microregion, and PENKSZA and KAPOCSI (1998) do not mention the species in their summarisation work of floristical data of the Maros valley. The new site where we detected the species – which is usually present in dry habitats – can be found near the River Maros, between a ploughland and an alluvial forest, at the edge of the forest. The presence of the species in

lowlands is mainly considered to be adventive (KIRÁLY 2009), but in the case of this report, spontaneous arrival of the species from Romania is possible (cf. SIMONKAI 1893).

K. Süveges

(152) *Tragopogon ×crantzii* Dichtl (syn: *Tragopogon ×interjectus* Waisb., *T. dubius* Scop. × *T. orientalis* L.) (Asteraceae)

Hungary, Jászság region, Nagykáta: Hajtai-dűlő, in old field, between parent species, 47.45404°N, 19.78457° E, 8584.2 CEU, leg. et det. Cs. Molnár, 13.07.2019 (BP).

Tragopogon orientalis is an independent species according to some authors, others say *T. pratensis* L. subsp. *orientalis* (L.) Čelak. is a subspecies (NYÁRÁDY 1965, DANCZA 2009, [http1](#), [http2](#)). In the above interpretation of the hybrid name, *T. dubius* and *T. orientalis* are the parent species, while for *T. dubius* × *T. pratensis*, the hybrid is called *T. ×mischellus* Ownbey. *T. ×mischellus* is known in many places in North America and Europe (OWNBEY 1950, TATE et al. 2009), *T. ×crantzii* is much rarer, I found data from Austria (DICHTL 1883, WAISBECKER 1897), and Hungary (SOÓ and KÁRPÁTI 1968, SOÓ 1970). According to JÁVORKA (1925): "Jegyzet: Még megfigyelendő keverékfaj a *T. orientalis* × *dubius* (*interjectus* Waisb.)." (Note: *T. orientalis* × *dubius* (*interjectus* Waisb.) hybrid is waiting to be found later.) It was also collected in 2009 in Germany and in 1925 and 1972 in around Moscow in Russia ([http3](#)).

There is no material collected under this name in the Hungarian Natural History Museum, Botanical Department, Herbarium Carpato-Pannonicum (BP). However, I found a genus-only *Tragopogon* sheet, on which I determined this hybrid, in addition, next to the Jászfényszaru not far from Nagykáta. "Boros Á. Comit. Jász-Nagykun-Szolnok. In pratis ripae rivi Zagyva ad Jászfényszaru. 1938. jun. 1."

Cs. Molnár

Összefoglaló: Az immár rendszeresen megjelenő, regionális jelentőségű előfordulásokat és nevezéktani megjegyzésekkel tartalmazó sorozat jelenlegi, tizenegyedik részében 15 edényes növényfaj új hazai adatait közöljük. Három faj, az *Androsace maxima*, a *Helminthia echooides* és a *Hypericum elegans* újak a 'Közép-Tisza-vidék' területére, közülük a *Helminthia echooides* a 'Dunasík'-ra is, továbbá két faj, az *Aphanes arvensis* és a *Medicago rigidula* újak a 'Hajdúság' területére. A *Bolboschoenus maritimus* új a Putnoki-dombság és a Sajó-völgy, a *Draba muralis* új a Mátra, az *Eriochloa villosa* új Nyugat-Magyarország, az *Eructastrum nasturtiifolium* új a 'Zagyva-völgy' mikrorégió, a *Gagea minima* új a 'Cserhát', a *Polykarpon tetraphyllum* pedig új a Dunántúli-hegység területére, valamint a *Sherardia arvensis* új a 'Nyírség' és a 'Hajdúság', a *Tordylium maximum* pedig új a 'Marosszög' mikrorégió területére. A *Reseda inodora* új populációját a Kiskunságból,

Harta határából, ahol a korábbi intenzív szántófoldi művelést időlegesen kísérleti megporzó-bárát virágkeverék vetésével helyettesítik néhány parcellán. A szagtalan rezeda a magbankból hajtott ki 3 parcellán. 2020-ban nagyobb állománya jelent meg, de 2021-ben jelentősen visszaszorult a vetett fajok borításnövekedése miatt. Továbbá a *Tragopogon dubius* és *T. orientalis* rendkívül ritka hibridjének új előfordulásáról számolunk be egy nagykáta paragról.

REFERENCES

- BÁNKÚTI, K. (1994): Adatok Magyarország flórájához. – *Folia Hist.-Nat. Mus. Matraensis* **19**: 47–49.
- BARINA, Z., BENEDEK, L., BOROS, L., DIMA, B., FOLCZ, Á., KIRÁLY, G., KOSZKA, A., MALATINSZKY, Á., PAPP, D., PIFKÓ, D. and PAPP, V. (2015): Taxonomical and chorological notes 1 (1–19). – *Studia bot. hung.* **46**(2): 205–221. <https://doi.org/10.17110/studbot.2015.46.2.205>
- BARINA, Z., MOLNÁR, Cs., SOMOGYI, G., SZEDERJESI, T., PIFKÓ, D., RIGÓ, A., MÁRTONFFY, A., VIRÓK, V. and DUDÁŠ, M. (2020): Taxonomical and chorological notes 11 (112–125). – *Studia bot. hung.* **51**(1): 67–76. <https://doi.org/10.17110/StudBot.2020.51.1.67>
- BARTHA, D., KIRÁLY, G., SCHMIDT, D., TIBORCZ, V., BARINA, Z., CSIKY, J., JAKAB, G., LESKU, B., SCHMOTZER, A., VIDÉKI, R., VOJTKÓ, A. and ZÓLYOMI, Sz. (eds) (2015): *Magyarország edényes növényfajainak elterjedési atlasza*. – Nyugat-Magyarországi Egyetem Kiadó, Sopron, 329 pp.
- BARTHA, D., BÁN, M., SCHMIDT, D. and TIBORCZ, V. (2021): *Magyarország edényes növényfajainak online adatbázisa* (<http://floraatlasz.uni-sopron.hu>). – Soproni Egyetem, Erdőmérnöki Kar, Növénytani és Természettudományi Intézet.
- BORBÁS, V. (1886): *A magyar homokpuszták növényvilága (különösen a m. kir. kincstári Temesmegyeben) meg a homokkötés*. – Budapest, author's edition, 112 pp.
- BOROS, Á. (1932): *A Nyírség flórája és növényföldrajza [Die Flora und die Pflanzengeographischen Verhältnisse des Nyírség's]*. – Studium Könyvkiadó Rt., Budapest.
- CSATHÓ, A. I. (2009): *A vaskúti halmok növényvilága*. – In: VARGA, A. and BABAI, D. (eds): XIII. MÉTA-túra. “Táj és ember kapcsolata tájakon, korokon és a növényzetben keresztül a Duna mentén”. Vácrátót, pp. 206–212. (kézirat)
- CSATHÓ, A. I., BEDE, Á., SUDNIK-WÓJCIKOWSKA, B., MOYSIYENKO, I., DEMBICZ, I. and SALLAINÉ, K. (2015): A szagtalan rezeda (Reseda inodora Rchb.) előfordulása a Tiszántúlon. – *Kitaibelia* **20**(1): 48–54. <https://doi.org/10.17542/kit.20.48>
- CSIKY, J., PURGER, D. and NIKOLIĆ, T. (2008): Reseda inodora Rchb., a new species of the Croatian flora. – *Acta Bot. Croat.* **67**: 229–235.
- CSIKY, J., KOVÁTS, D., DEME, J., TAKÁCS, A., ÓVÁRI, M., MOLNÁR, V. A., MALATINSZKY, Á., NAGY, J. and BARINA, Z. (2017): Taxonomical and chorological notes 4 (38–58). – *Studia bot. hung.* **48**(1): 133–144. <https://doi.org/10.17110/studbot.2017.48.1.133>
- DANCZA, I. (2009): *Tragopogon L. – Bakszakáll*. – In: KIRÁLY, G. (ed.): *Új magyar fűvészkönyv I. ANPI*, Jósvafő, p. 448.
- DEÁK, B., TÖRÖK, P., TÓTHMÉRÉSZ, B., RADÓCZ, Sz., LUKÁCS, K. and VALKÓ, O. (2019): A középtisza-vidéki halmok flórakutatásának új eredményei. – *Kitaibelia* **24**(1): 94–105. <https://doi.org/10.17542/kit.24.94>
- DEME, J., PALLA, B., HASZONITS, Gy., CSIKY, J., BARÁTH, K., KOVÁCS, D., ZURDO JORDA, A., ERZBERGER, P., WOLF, M., PAPP, V. and SCHMIDT, D. (2019): Taxonomical and chorological notes 9 (94–98). – *Studia bot. hung.* **50**(2): 381–392. <https://doi.org/10.17110/StudBot.2019.50.2.381>
- DICHTL, P. A. (1883): Ergänzungen zu den “Nachträgen zur Flora von Nieder-Österreich”. – *Deutsche Bot. Monatsschrift* **1**: 171–172.

- FARKAS, S. (1999): *Androsace maxima* – In: FARKAS, S. (ed.): Magyarország védett növényei. Mezőgazda Kiadó, Budapest, p. 263.
- FOLLAK, S., SCHWARZ, M. and ESSL, F. (2020): First record of *Eriochloa villosa* (Thunb.) Kunth in Austria and notes on its distribution and agricultural impact in Central Europe. – *BioInvasions Records* 9(1): 8–16. <https://doi.org/10.3391/bir.2020.9.1.02>
- GOLIAŠOVÁ, K. and ŠÍPOŠOVÁ H. (eds) (2002): *Flóra Slovenska 5/4.* – Bratislava, VEDA, vydavatel'stvo Slovenskej akadémie vied, pp. 722–725.
- GONDOLA, I. (1969): Florisztikai adatok a Nyírség és környéke szántóföldjeiről. – *Bot. Közlem.* 56(3): 167–173.
- GULYÁS, G., MAGOS, G., MOLNÁR, A. and HORVÁTH, D. (2016): *Aphanes arvensis* L. a Crisicumban és más adatok Magyarország flórájának ismeretéhez. – *Kitaibelia* 21(2): 253–256. <https://doi.org/10.17542/kit.21.253>
- HALÁSZ, Á. (1889): Makó város és környéke növényzete. – *A Makói Államilag Segélyezett Községi Polg. Leányiskola Értesítője* 9: 3–31.
- HASZONITS, Gy., MOLNÁR, Cs., SONKOLY, J., TÓTHMÉRÉSZ, B., TÖRÖK, P., TÓTH, E., GNOTEK, P., NAGY, J., KORDA, M., ÁDÁM, Sz., MALATINSZKY, Á., RIEZING, N., JÓNA, Z. and SÉLLEI, D. (2021): Pótlások Magyarország edényes növényfajainak elterjedési atlaszához XIII. – *Kitaibelia* 26(1): 85–88. <https://doi.org/10.17542/kit.26.85>
- HROUDOVÁ, Z., ZÁKRAVSKÝ, P., DUCHÁČEK, M. and MARHOLD, K. (2007): Taxonomy, distribution and ecology of *Bolboschoenus* in Europe. – *Ann. Bot. Fennici* 44: 81–102.
- JAKAB, G. (2005): Adatok a Dél-Tiszántúl flórájának ismeretéhez II. – *Flora Pannonica* 3: 91–119.
- JAKAB, G. (2012) (ed.): *A Körös–Maros Nemzeti Park természeti értékei I. A Körös–Maros Nemzeti Park növényvilága.* – Körös–Maros Nemzeti Park Igazgatóság, Szarvas, 413 pp.
- JAKAB, G. and TÓTH, T. (2003): Adatok a Dél-Tiszántúl flórájának ismeretéhez. – *Kitaibelia* 8(1): 89–98.
- JALAS, J., SUOMINEN, J. and LAMPINEN, R. (eds) (1996): *Atlas Flora Europaeae. Distribution of vascular plants in Europe. 11. Cruciferae (Ricotia to Raphanus).* – The Committee for Mapping the Flora of Europe & Societas Biologica Fennica Vanamo, Helsinki, p. 263.
- JÁVORKA, S. (1925): *Magyar Flóra.* – Studium, Budapest, CII+1309 pp.
- KERTÉSZ, É. (2000): Adatok a Dél-Tiszántúl flórájához. – *A Békés Megyei Múzeumok Közleményei* 21: 5–48.
- KIRÁLY, G. (2009): *Új magyar füvészkönyv. Magyarország hajtásos növényei. Határozókulcsok.* – Aggteleki Nemzeti Park Igazgatóság, Jósvafő, 616 pp.
- KIRÁLY, G. (ed.) (2007): *Vörös Lista. A magyarországi edényes flóra veszélyeztetett fajai.* – saját kiadás, Sopron, 73 pp.
- KIRÁLY, G. and KIRÁLY, A. (2018): Adatok és kiegészítések a magyar flóra ismeretéhez III. – *Bot. Közlem.* 105(1): 27–96. <https://doi.org/10.17716/BotKozlem.2018.105.1.27>
- KIRÁLY, G., BARÁTH, K., BAUER, N., ERZBERGER, P., PAPP, B., SZÚCS, P., VERES, Sz. and BARINA, Z. (2019a): Taxonomical and chorological notes 8 (85–93). – *Studia bot. hung.* 50(1): 241–252. <https://doi.org/10.17110/StudBot.2019.50.1.241>
- KIRÁLY, G., HOHLA, M., SÜVEGES, K., HÁBENCZYUS, A. A., BARINA, Z., KIRÁLY, A., LUKÁCS, B. A., TÜRKE, I. J. and TAKÁCS, A. (2019b): Taxonomical and chorological notes 10 (98–110). – *Studia bot. hung.* 50(2): 391–407. <https://doi.org/10.17110/StudBot.2019.50.2.391>
- KORDA, M., SCHMIDT, D., VIDÉKI, R., HASZONITS, Gy., TIBORCZ, V., CSISZÁR, Á., ZAGYVAI, G. and BARTHA, D. (2017): *A Gagea minima* (L.) Ker Gawl. és a *Dictamnus albus* L. újrafelfedezése a Dél-Tiszántúlon, valamint további florisztikai adatok az Alföldről. – *Kitaibelia* 22(2): 304–316. <https://doi.org/10.17542/kit.22.304>

- KOVÁCS, M. and PRISZTER, S. (1957): Kiegészítések és adatok "A magyar növényvilág kézikönyv"-hez. – *Bot. Közlem.* 57(1–2): 87–93.
- LÁJER, K. (2009): *Cyperaceae – Palkafélék családja*. – In: KIRÁLY, G. (ed.) (2009): Új magyar fűvész-könyv. ANPI, Jósvafo, pp. 545–570.
- LENDVAI, G. and HORVÁTH, A. ((2010) 2011): Adatok a Mezőföld löszflórájához II. – *Kitaibelia* 15(1–2): 119–132.
- LUKÁCS, B., GULYÁS, G., HORVÁTH, D., HÖDÖR, I., SCHMOTZER, A., SRAMKÓ, G., TAKÁCS, A. and MOLNÁR, A. (2017): Florisztikai adatok a Tiszántúl középső részéről. – *Kitaibelia* 22(2): 317–357. <https://doi.org/10.17542/kit.22.317>
- MATUS, G., CSIKY, J., BAUER, N., BARÁTH, K., VASUTA, G., BARABÁS, A., HRICSOVINYI, D., TAKÁCS, A., ANTAL, K., BUDAI, J., ERZBERGER, P., MOLNÁR, P. and BARINA, Z. (2018): Taxonomical and chorological notes 7 (75–84). – *Studia bot. hung.* 49(2): 83–94. <https://doi.org/10.17110/studbot.2018.49.2.83>
- MESTERHÁZY, A., MATUS, G., KIRÁLY, G., SZÜCS, P., TÖRÖK, P., VALKÓ, O., PELLES, G., PAPP, V. G., VIRÓK, V., NEMCSOK, Z., RIGÓ, A., HOHLA, M. and BARINA, Z. (2017): Taxonomical and chorological notes 5 (59–70). – *Studia bot. hung.* 48(1): 263–275. <https://doi.org/10.17110/studbot.2017.48.2.263>
- MOLNÁR, Cs. and CSIKY, J. (2010): A *Medicago rigidula* (L.) All. elterjedése és élőhely-választása a Pannonicumban. – *Kitaibelia* 15(1–2): 35–51.
- NYÁRÁDY, E. I. (ed.) (1965): *Flora Republicii Populare Române. X.* – Editura Academiei Republicii Populare Române, 752 pp.
- OWNBEY, M. (1950): Natural hybridization and amphiploidy in the genus *Tragopogon*. – *Amer. J. Bot.* 37: 487–499. <https://doi.org/10.1002/j.1537-2197.1950.tb11033.x>
- PAPP, B., ERZBERGER, P., LŐKÖS, L., SZURDOKI, E., NÉMETH, Cs., BUCZKÓ, K., HÖHN, M., ASZALÓSNÉ BALOGH, R., BARÁTH, K., MATUS, G., PIKFÓ, D. and FARKAS, E. (2020): Taxonomical and chorological notes 12 (126–136). – *Studia bot. hung.* 51(1): 77–98. <https://doi.org/10.17110/StudBot.2020.51.1.77>
- PAPP, V., KIRÁLY, G., KOSCSÓ, J., MALATINSZKY, Á., NAGY, T., TAKÁCS, A. and DIMA, B. (2016): Taxonomical and chorological notes 2 (20–27). – *Studia bot. hung.* 47(1): 179–191. <https://doi.org/10.17110/studbot.2016.47.1.179>
- PAULIČ, R. and NĚMEC, R. (2014): Chlupatka srstnatá (*Eriochloa villosa*) nový druh flóry České republiky. – *Thayensia (Znojmo)* 11: 135–138.
- PENKSZA, K. and KAPOCSI, J. (1998): A Maros-völgy edényes növényei I. – *Crisicum* 1: 35–74.
- PINKE, Gy. and PÁL, R. (2005): *Gyomnövényeink eredete, termőhelye és védelme*. – Alexandra Kiadó, Pécs, 232 pp.
- PINKE, Gy., BLAZSEK, K., NAGY, K., KARÁCSONY, P. and MAGYAR, L. (2016): A magyarországi szójavetések gyomviszonyai. (Weed survey on soybean fields in Hungary). – *Növényvédelem* 77(52/2): 75–82.
- PINTÉR, B., VOJTKÓ, A. and TÍMÁR, G. (2010): *A Naszály edényes flórája*. – In: PINTÉR, B. and TÍMÁR, G. (eds): A Naszály természetrajza. Duna–Ipoly Nemzeti Park Igazgatóság, Budapest, pp. 217–444.
- PRISZTER, Sz. (1960): *Adventív gyomnövényeink terjedése*. – A Keszthelyi Mezőgazdasági Akadémia Kiadványai 7, Mezőgazdasági Kiadó, Budapest, 37 pp.
- SCHMIDT, D. (2016): *Euphorbia prostrata* Aiton és *Polycarpon tetraphyllum* L. felbukkanása a Nyugat-Dunántúlon. Apró közlemények. – *Kitaibelia* 21(1): 161. <https://doi.org/10.17542/21.159>
- SCHMIDT, D. (2020): Taxonomical and chorological notes 13 (137). – *Studia bot. hung.* 51(2): 87–90. <https://doi.org/10.17110/StudBot.2020.51.2.87>

- SCHMIDT, D., CSIKY, J., MATUS, G., BALOGH, R., SZURDOKI, E., HÖHN, M., ÁBRÁN, P., BUCZKÓ, K. and LÖKÖS, L. (2018): Taxonomical and chorological notes 6 (71–74). – *Studia bot. hung.* **49**(1): 121–130. <https://doi.org/10.17110/studbot.2018.49.1.121>
- SELL, P. D. (1976): *Picris L.* – In: TUTIN, T. G., HEYWOOD, V. H., BURGES, N. A., MOORE, D. M., VALENTINE, D. H., WALTERS, S. M. and WEBB, D. A. (eds): *Flora Europaea* 4. Cambridge University Press, Cambridge, pp. 315–317.
- SIMON, T. (1954): Montán elemek az Észak-Alföld flórájában és növénytakarójában III. – *Ann. Biol. Univ. Hung.* **2**: 279–286.
- SIMON, T. (2004): *A magyarországi edényes flóra határozója*. – Nemzeti Tankönyvkiadó, Budapest, 846 pp.
- SIMONKAI, L. (1893): *Aradvármegye és Arad szabad királyi város természettrajzi leírása*. – In: Aradvármegye és Arad szabad királyi város monographiája I. Monographia-Bizottság, Arad.
- SOMLYAY, L. and LÖKÖS, L. (2000): A Polycarpon tetraphyllum L. Magyarországon, és további adatok Budapest gyomflórájához. – *Kitaibelia* **5**: 305–306.
- SOÓ, R. (1968): *A magyar flóra és vegetáció rendszertani-növényföldrajzi kézikönyve* III. – Akadémiai Kiadó, Budapest, 506 pp.
- SOÓ, R. (1970): *A magyar flóra és vegetáció rendszertani-növényföldrajzi kézikönyve* IV. – Akadémiai Kiadó, Budapest, 614 pp.
- SOÓ, R. and KÁRPÁTI, Z. (1968): *Növényhatározó* II. – Tankönyvkiadó, Budapest, 846 pp.
- SOÓ, R. and MÁTHÉ, I. (1938). *A Tiszántúl flórája*. – Magyar flóraművek II. Editio Instituti Botanici Universitatis Debreceniensis, 192 pp.
- SOÓ, R., FELFÖLDY, L. and IGMÁNDY, J. (1942): Pótlékok nyírségi és tiszántúli flórakutatásunk eredményeihez III. – *Bot. Közlem.* **39**(1–2): 45–56.
- SÜVEGES, K., TAKÁCS, A., NAGY, T., SCHMOTZER, A. and KOSCOSÓ, J. (2020): Florisztikai adatok a Tiszántúl északi pereméről II.: Borsodi-ártér és Sajó-Hernád-sík. – *Kitaibelia* **25**(2): 169–186. <https://doi.org/10.17542/kit.25.169>
- SZATMARI, P.-M. (2016): Monitoring invasive woolly cupgrass *Eriochloa villosa* in the Pir village area, Satu Mare County, Romania, and its impact on segetal flora. – *Acta Horti Bot. Bucurest.* **43**: 41–55.
- SZILÁGYI, A., TÓTH, T. and RADÓCZ, L. (2017): New occurrence of woolly cupgrass (*Eriochloa villosa* [Thunb.] Kunth) in Hajdúság area, East-Hungary. – *Acta Agraria Debreceniensis* **71**: 51–54. <https://doi.org/10.34101/actaagrar/71/1572>
- TAKÁCS, A. and LÖKI, V. (2015): Néhány adat Debrecen urbán-flórájához. – *Kitaibelia* **20**: 168–170.
- TAKÁCS, A. and NAGY, T. (2016): *Draba muralis* L. (Brassicaceae). – In: PAPP, V., KIRÁLY, G., KOSCOSÓ, J., MALATINSZKY, Á. and NAGY, T.: Taxonomical and chorological notes 2 (20–27). – *Studia bot. hung.* **47**(1): 179–191. <https://doi.org/10.17110/studbot.2016.47.1.179>
- TAKÁCS, A., SCHMOTZER, A. and SULYOK, J. (2013): Florisztikai adatok a Sajó-Hernád-sík területéről. – *Kitaibelia* **18**(1–2): 73–88.
- TAKÁCS, A., ZÁKÁNY, A., GULYÁS, G., KOSCOSÓ, J. and SRAMKÓ, G. (2014a): Florisztikai adatok a Tiszántúl északi pereméről. (Floristic data from the northern edge of the floristic region ‘Crisicum’ (NE Hungary)). – *Kitaibelia* **19**(2): 275–294.
- TAKÁCS, A., NAGY, T. and MOLNÁR, V. A. (2014b): Három szórványos előfordulású, behurcolt pázsitfűfaj [*Dasyphyrum villosum* (L.) Borbás, *Eleusine indica* (L.) Gaertn. és *Eriochloa villosa* (Thunb.) Kunth] új adatai a Dél-Dunántúlról. Apró közlemények. – *Kitaibelia* **19**(1): 176.
- TAKÁCS, A., NAGY, T., FEKETE, R., LOVAS-KISS, Á., LJUBKA, T., LÖKI, V., LISZTES-SZABÓ, Zs. and MOLNÁR, V. A. (2014c): A Debreceni Egyetem Herbárium (DE) I.: A “Soó Rezső Herbárium”. – *Kitaibelia* **19**(1): 142–155.

- TAKÁCS, A., BARÁTH, K., CSIKY, J., CSIKYNÉ, R. É., KIRÁLY, G., NAGY, T., PAPP, V., SCHMIDT, D., TAMÁSI, B. and BARINA, Z. (2016a): Taxonomical and chorological notes 3 (28–37). – *Studia bot. hung.* **47**(2): 345–357. <https://doi.org/10.17110/studbot.2016.47.2.345>
- TAKÁCS, A., NAGY, T., SRAMKÓ, G., LOVAS-KISS, Á., SÜVEGES, K., LUKÁCS, B., FEKETE, R., LÖKI, V., MALATINSZKY, Á., VOJTKÓ, A., KOSCSÓ, J., PFLIEGLER, W., NÓTÁRI, K. and MOLNÁR, V. (2016b): Pótlások a Magyarország edényes növényfajainak elterjedési atlaszához I. – *Kitaibelia* **21**(1): 101–115. <https://doi.org/10.17542/kit.21.101>
- TAKÁCS, A., WIRTH, T., SCHMOTZER, A., GULYÁS, G., JORDÁN, S., SÜVEGES, K., VIRÓK, V. and SOMLYAY, L. (2020): Cardamine occulta Hornem. Magyarországon, és a dísznövénykereskedelem más potyautasai. – *Kitaibelia* **25**(2): 195–214. <https://doi.org/10.17542/kit.25.195>
- TATE, J. A., SYMONDS, V. V., DOUST, A. N., BUGGS, R. J. A., MAVRODIEV, E., MAJURE, L. C., SOLTIS, P. S. and SOLTIS, D. E. (2009): Synthetic polyploids of *Tragopogon miscellus* and *T. mirus* (Asteraceae): 60 years after Ownbey's discovery. – *Amer. J. Bot.* **96**(5): 979–988. <https://doi.org/10.3732/ajb.0800299>
- THIERS, B. M. (2017): *Index Herbariorum: A global directory of public herbaria and associated staff*. – New York Botanical Garden's Virtual Herbarium. <http://sweetgum.nybg.org/ih/> [accessed on 21 February 2021]
- VIRÓK, V., FARKAS, R., SZMORAD, F. and BOLDOGHNÉ, S. (2004): Florisztikai adatok Borsod-Abaúj-Zemplén-megye északi részéről. – *Kitaibelia* **9**(1): 143–149.
- VIRÓK, V., FARKAS, T. and KRAJNYÁK, C. (2020): Az ázsiai gyapjúfű (*Eriochloa villosa*) elterjedésének vizsgálata Borsod-Abaúj-Zemplén megye északi részén. – *Kitaibelia*: **25**(1): 27–32. <https://doi.org/10.17542/kit.25.27>
- VOIGT, W. and SOMAY, L. (2013): Florisztikai adatok Paks környékéről. – *Kitaibelia* **18**(1–2): 35–72.
- WAISBECKER, A. (1897): Beiträge zur Flora des Eisenburger Comitatus. – *Oesterr. Bot. Zeitschr.* **47**: 4–9.
- WIRTH, T., KOVÁCS, D. and CSIKY, J. (2020): Adatok és kiegészítések a magyarországi adventív flóra kivadult, meghonosodott és potenciális inváziós fajainak ismeretéhez. – *Kitaibelia* **25**(2): 111–156. <https://doi.org/10.17542/kit.25.111>

http1 – <http://www.theplantlist.org/>

http2 – http://cichorieae.e-taxonomy.net/portal/cdm_dataportal/taxon/9809487b-39e8-4ca2-af23-b3f430b19607/synonymy

http3 – <https://www.gbif.org/species/5386855>