CHECKLISTS AND NOMENCLATURE NOTES

Notes to vascular plants in Ukraine II

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ABSTRACT

Materials and methods: field observations and herbarium collections, microscope technique

Nomenclature: POWO 2023

Results: In this contribution, new data about vascular plants in Ukraine are presented. It includes new records and confirmations for the Ukrainian regions for 82 species: *Acer monspessulanum*, *Aconitum anthora*, *Amaranthus deflexus*, *Anthriscus cerefolium*, *Asplenium ruta–muraria*, *Arabis alpina*, *Artemisia argyi*, *A. sieversiana*, *A. verlotiorum*, *Berberis aquifolium*, *Bolboschoenus glaucus*, *Calepina irregularis*, *Centaurea borysthenica*, *Cephalanthera longifolia*, *Cirsium esculentum*, *Clematis vitalba*, *Coreopsis grandiflora*, *Corydalis caucasica*, *C. cava subsp. marschalliana Crithopsis delileana*, *Cucumis melo*, *Cydonia oblonga*, *Cyperus odoratus*, *Dasypyrum villosum*, *Dracocephalum ruyschiana*, *Eragrostis pilosa*, *Erechtites hieraciifolius*, *Eriochloa villosa*, *Euphorbia glyptosperma*, *E. lathyris*, *E. prostrata*, *Fallopia baldschuanica*, *Ficus carica*, *Galanthus nivalis*, *Galium humifusum*, *Goodyera repens*, *Gymnocladus dioicus*, *Hedera helix*, *Heliotropium stevenianum*, *Hesperis matronalis subsp. matronalis*, *Huperzia selago*, *Hypericum polyphyllum*, *Iris foetidissima*, *Lagurus ovatus*, *Laser trilobum*, *repens*, *Limonium alutaceum*, *Lipandra polysperma*, *Luzula luzuloides*, *Nymphoides peltata*, *Oenothera glazioviana*, *Opuntia humifusa*, *Ostericum palustre*, *Peganum harmala*, *Peucedanum latifolium*, *Phragmites australis* subsp. *isiacus*, *Phytolacca americana*, *Pilosella flagellaris*, *Pistia stratiotes*, *Platanthera chlorantha*, *Poa remota*, *Primula vulgaris*, *Reynoutria × bohemica*, *Rubus × idaeoides*, *Salix daphnoides*, *Saxifraga tridactylites*, *Schoenoplectus litoralis*, *Smyrnium perfoliatum*, *Sorghum halepense*, *Stellaria neglecta*, *Symphyotrichum ciliatum*, *Tragus racemosus*, *Trifolium incarnatum*, *T. lupinaster*, *Tripolium pannonicum*, *Typha domingensis*, *Veronica argute-serrata*, *V. cardiocarpa*, *Vincetoxicum fuscatum*, *Vitis riparia*, *Utricularia australis* and *U. minor*. Among them, species of vascular plants are newly reported for large areas including several regions of Ukraine. Most of the findings are new for administrative regions of Ukraine: 14 species are reported for the first time for Kirovohrad Region, 13 – for Zhytomyr Region, 11 – Odesa Region, 7 – Mykolaiv and Zakarpattia regions, 5 – Kherson Region, 4 – Dnipropetrovsk, Kyiv regions, 3 – Rivne, Vinnytsia, Chernihiv regions, two – Ivano-Frankivsk, Lviv, Ternopil, Khmelnytskyi regions and Authonomous Republic of Crimea, 1 – Volyn, Zaporizhzhia, Chernivtsi regions and Kyiv City. The localities of numerous not widely distributed species of vascular plants are provided. Among them, species which are

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included in the Red Data Book of Ukraine and regionally rare plants.

KEYWORDS
biodiversity, new finds, vascular plants, Ukraine

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INTRODUCTION

This paper presents further publications on noteworthy findings of vascular plants from various administrative regions of Ukraine (Moysiyenko *et al.* 2023). In this series of publications we report the results of the analysis of recent collections and the re-evaluation of herbarium specimens. The main aim of this series is providing a substantial contribution to the knowledge of the vascular plants diversity of Ukraine. Thus, the article is a significant addition to the distribution of many species in Ukraine. Including plant species that are protected, or rare, or invasive, etc.

MATERIAL AND METHODS

Plants were identified either in the field or during on desk studies in the laboratories. Some of the herbarium specimens are stored in collections of various institutions, including the M.G. Kholodny Institute of Botany of the National Academy of Science of Ukraine (KW), Kherson State University (KHER), M.M. Gryshko National Botanical Garden, Kyiv, Ukraine (KWHA), O.V. Fomin Botanical Garden of Taras Shevchenko National University of Kyiv (KWHU), Pavlo Tychyna Uman State Pedagogical University (UPU), Institute of Ecology of the Carpathians of the National Academy of Science of Ukraine (LWKS), University of Warsaw (WA), Herbarium of the Kaniv Nature Reserve and private collections of the authors. Non-collected materials were

marked as "non coll." in the paper. The names of vascular plant species are given according to the Plants of the World Online (POWO 2023). Additionally, the names listed in the "Vascular Plants of Ukraine. A nomenclature Checklist" (Mosyakin Fedoronchuk 1999, Fedoronchuk 2022a, 2022b, 2022c, 2022d, 2023a, 2023b, 2023c, 2023d) are provided, but only if they differ from those used in POWO. Nomenclature of syntax based on listed in the "Prodrome of the vegetation of Ukraine" (Dubyna *et al.* 2019).

RESULTS

The article contains information on new findings of 82 species belonging to 74 genera and 42 families. Among them, eighty species are angiosperms. There is also one species of fern (*Asplenium ruta-muraria*) and one species of lycophytes (*Huperzia selago*). Only two genera include three species each (*Artemisia* and *Euphorbia*), four genera contain two species each (*Trifolium*, *Corydalis*, *Utricularia*, *Veronica*), and 68 genera are represented by one species each. The following families are represented by more than one species: *Asteraceae* – 11 species, *Poaceae* – 9, *Apiaceae* – 5, *Amaryllidaceae*, *Brassicaceae*, *Cyperaceae*, *Euphorbiaceae*, *Orchidaceae* – 3, *Lentibulariaceae*, *Papaveraceae*, *Polygonaceae*, *Ranunculaceae*, *Rosaceae*, *Veronicaceae* – 2. Another 28 families are represented by only one species each.

In total, the article provides information on 148 new localities for 82 species of vascular plants. The new findings were made in 19 administrative regions of Ukraine, the Autonomous Republic of Crimea and the city of Kyiv. The distribution of the number of revealed species by regions is as follows: Kirovohrad – 15, Cherkasy – 14, Zhytomyr – 13, Odesa – 11, Zakarpattia and Mykolaiv – 7, Kherson – 5, Dnipropetrovsk, Kyiv – 4, Rivne, Vinnytsia, Chernihiv – 3, Ivano-Frankivsk, Lviv, Ternopil, Khmelnytsky and Crimea – 2, Volyn, Zaporizhzhia, Chernivtsi and Kyiv City – 1. The statistics on the number of identified locations in the regions is as follows: Odesa – 24, Kirovohrad – 22, Zhytomyr – 21, Cherkasy – 18, Zakarpattia – 9, Mykolaiv – 8, Dnipropetrovsk, Vinnytsia, Kyiv – 6, Kherson – 5, Rivne and Chernihiv – 4, Ivano-Frankivsk – 3, Lviv, Ternopil, Khmelnytsky and Crimea – 2, Volyn, Zaporizhzhia, Chernivtsi and Kyiv City – 1.

The article contains information about new findings of both native and alien plants, which are almost equal in number of species. Among the alien species, ergasiophytes predominate: *Acer monspessulanum*, *Berberis aquifolium*, *Clematis vitalba*, *Coreopsis grandiflora*, *Corydalis caucasica*, *Crithopsis delileana*, *Cucumis melo*, *Cydonia oblonga*, *Euphorbia lathyris*, *Fallopia baldschuanica*, *Ficus carica*, *Gymnocladus dioicus*, *Hedera helix*, *Hesperis matronalis* subsp. *matronalis*, *Hypericum polyphyllum*, *Iris foetidissima*, *Oenothera glazioviana*, *Opuntia humifusa*, *Phytolacca americana*, *Pistia stratiotes*, *Symphyotrichum ciliatum*, *Vitis riparia*. There are significantly fewer xenophytes: *Amaranthus deflexus*, *Artemisia argyi*, *A. sieversiana*, *A. verlotiorum*, *Dasypyrum villosum*, *Erechtites hieraciifolius*, *Eriochloa villosa*, *Euphorbia glyptosperma*, *Lagurus ovatus*, *Peganum harmala*, *Reynoutria* × *bohemica*, *Sorghum halepense*, *Tragus racemosus*, *Trifolium incarnatum*, *Veronica argute-serrata*, *V. cardiocarpa*. The native plants are dominated by regionally rare species, many of which are included in the regional protection lists of plants: *Aconitum anthora*, *Anthriscus cerefolium*, *Asplenium ruta-muraria*, *Arabis alpina*, *Bolboschoenus glaucus*, *Centaurea borysthenica*, *Cirsium esculentum*, *Corydalis cava subsp. marschalliana*, *Crithopsis delileana*, *Cyperus odoratus*, *Eragrostis pilosa*, *Galium humifusum*, *Laser trilobum*, *Limonium alutaceum*, *Lipandra polysperma*, *Luzula luzuloides*, *Peucedanum latifolium*, *Phragmites australis* subsp. *isiacus*, *Pilosella flagellaris*, *Poa remota*, *Primula vulgaris*, *Rubus* × *idaeoides*, *Salix daphnoides*, *Saxifraga tridactylites*, *Schoenoplectus litoralis*, *Stellaria neglecta*, *Tripolium pannonicum*, *Typha domingensis*, *Vincetoxicum fuscatum*. Some localities concern the internationally protected species (*Ostericum palustre* included in Bern Convention, Annex I of the Resolution 6) and nationally protected species (*Cephalanthera*

longifolia, Dracocephalum ruyschiana, Galanthus nivalis, Goodyera repens, Huperzia selago, Nymphoides peltata, Platanthera chlorantha, Trifolium lupinaster, Utricularia australis, U. minor are included in the Red Data Book of Ukraine).

SPECIES RECORDS

Acer monspessulanum L.

This ergasiophyte is of South European and Mediterranean origin (POWO 2023). It has been recorded from Dnipropetrovsk, Kirovohrad, Kyiv, Mykolaiv, Poltava and Odesa regions (GBIF 2024a, Raab-Straube & Raus 2024). The species is reported for the first time from Mykolaiv City.

Specimen examined. Ukraine. Mykolaiv Region, Mykolaiv District, old cemetery Mykolaivskyi Nekropol, among graves, alt. 45 m, 46.96804° N, 32.03421° E, 22 October 2023, leg. N. Skobel, det. I. Moysiyenko (WA).

Aconitum anthora L.

The species occurs in forests and shrubs in the western part of the Left-Bank and the eastern part of the Right-Bank Forest-Steppe. It has been reported in Vinnytsia and Kyiv Regions (Visyulina 1952) and in the vicinity of Pokotylove village in Kirovohrad Region (Finn 1924). The report of *Delphinium cuneatum* (Andriyenko 1999) in the natural monument "Birzulovski horby" in the Kirovohrad region is a misidentification. It belongs to *Aconitum anthora*. The species has been documented from the above locality and from one other site in the Kirovohrad Region.

Specimens examined. Ukraine. Kirovohrad Region, Novoukrainka District, in the vicinity of Zapovidne village, Birzulovski Horby complex natural monument, alt. 180 m, 48.70449º N, 31.62292º E, steppe slope, shaded by trees and shrubs, 31 July 2023, leg. K. Lavrinenko, det. D. Davydov; Novoukrainka District, in the vicinity of Voinivka village, Voinivka landscape reserve, alt. 132 m, 48.38191º N, 31.49309º E, lower northern slope shaded by trees, 23 June 2023, leg. K. Lavrinenko, det. O. Shynder.

Amaranthus deflexus L.

The species is of South American origin (Mosyakin & Robertson 2003). In Ukraine, isolated localities of the species are known from most regions (Mosyakin 1995, Bondarenko 2009, Baransky *et al.* 2016, Orlov *et al.* 2022). The colonophyte is reported for the first time from the Khmelnytsky Region.

Specimen examined. Ukraine. Khmelnytsky Region, Shepetivka, near railway station, between tracks, alt. 246 m, 50.19764º N, 27.06218º E, 3 September 2023, leg. & det. O. Shynder (KWHA).

Anthriscus cerefolium (L.) Hoffm.

It is eastern sub-Mediterranean species. The species has a natural range in the southern regions (mainly steppe) of Ukraine (Fedoronchuk 2022c). Probably all localities of Ukrainian Forest-Steppe and Forest zones are synanthropic: Chernihiv (Schmalhausen 1886), Khmelnytsk (Rogowich 1869, Kagalo *et al.* 2004), Kyiv (Bortnyak 1975, Shynder *et al.* 2021), Poltava (Schmalhausen 1886, Davydov & Homlya 2021), Ternopil (Besser 1809) and Zhytomyr (Rogowich 1869, Paczosky 1897) regions, and Kyiv City (Mosyakin & Yavorska 2002). There is also an old reference to the city of Uman in the Cherkasy Region (Paczosky 1887). The xenophyte is reported for the first time in the Vinnytsia Region and has been rediscovered in the Cherkasy Region.

Specimens examined. Ukraine. Cherkasy Region, surroundings of Kaniv, Kaniv Nature Reserve, forest stands, alt. 95 m, 49.72554º N, 31.53282º E, April 2021, leg. & det. V. Shevchyk (herbarium of the Kaniv Nature Reserve); **Vinnytsia Region,** Mohyliv-Podilskyi District, northern outskirts of the village Oksanivka, in an artificially forested ravine, alt. 78 m, 48.2395º N, 28.1869º E, 15 June 2020, leg. & det. O. Shynder (non coll.); northwest vicinity of the Velyka Kisnytsia village, in the forest on a high slope above the Dnister River, alt. 148 m, 48.1807º N, 28.4147º E, 17 June 2020, leg. & det. O. Shynder (non coll.).

Arabis alpina L.

The arcto-alpine species is commonly cultivated as an ornamental plant. In Ukraine, it is native in the Carpathian Mountains (Didukh *et al.* 2007). The species is reported for the first time from the Zhytomyr Region.

Specimen examined. Ukraine. Zhytomyr Region, Berdychiv District, Pryberezhne village, on the roadside, alt. 220 m, 49.7015º N, 29.17117º N, 27 April 2023, leg. O. Orlov, det. O. Shynder (KWHA 103196).

Artemisia argyi H.Lév. & Vaniot

This xenophyte species is native for Southern Asia (POWO 2023). It has been recorded in Kyiv City (Mosyakin 1990, Mosyakin & Yavorska 2002, Bagatska & Logvinenko 2012) and Zhytomyr Region (Boiko 2011, Orlov 2019). Specimens from the Lviv region, collected in Brody on 26 July 2018 by R. Yurechko and V. Batochenko, and on 18 June 2019 by V. Batochenko and R. Yurechko, were initially misidentified as *A. umbrosa*. Later it was correctly identified as *A. argyi* (KWHA103208) by O. Shynder and N. Sytschak. The species is reported for the first time from the Rivne Region.

Specimen examined. Ukraine. Rivne Region, Zdolbuniv, near an outbuilding, alt. 191 m, 50.51844º N, 26.27441º E, 11 September 2023, leg. & det. A. Levon.

Artemisia sieversiana Ehrh. Ex Willd.

The xenophyte is of Asian origin, typical of "railroad plants". In Ukraine, it was first time report for Bila Tserkva (Kyiv Region), Kyiv and Kharkiv (Tzvelev 1979, Mosyakin 1989, 1990, 1992), Donetsk (Boiko 2011), Odesa (Boiko 2011, Vasyliyeva *et al.* 2019) and Zakarpattia (Boiko 2011) regions. The species is reported for the first time in the Cherkasy Region.

Specimen examined. Ukraine. Cherkasy Region, Zhashkiv, at the railway, alt. 240 m, 49.2423º N, 30.10026º E, 4 September 2006, L. Svidan, det. 13 November 2023, O. Shynder (UPU).

Artemisia verlotiorum Lamotte

The xenophyte is of East Asian origin (Mosyakin 2006, Mosyakin *et al.* 2019). In Ukraine, it was first reported from Crimea, and later in Kyiv City, Lviv and Zakarpattia Regions (Mosyakin 2006, Boiko 2009, Mosyakin *et al.* 2019, Shynder *et al.* 2022a). The species is reported for the first time in the Ivano-Frankivsk and Odesa regions.

Specimens examined. Ukraine, Ivano-Frankivsk Region, Kosiv, on the edge of the marketplace, alt. 345 m, 48.31676º N, 25.11188º E, 28 October 2017, leg. & det. N. Pashkevych; **Odesa Region**, Odesa, park of the Chkalov sanatorium, on the side of the path, alt. 50 m, 46.44495º N, 30.76862º E, 17 September 2022, leg. & det. O. Shynder (KWHA102509).

Asplenium ruta-muraria L.

This species is distributed in various regions of Ukraine, including the Carpathians, Crimea, Steppe (Black Sea Lowland, Dnipro and Azov Highlands, Donetsk Ridge) and Forest-Steppe zones (Roztochchia, Volyn-Podillia Highland), Polissia (occasionally in Zhytomyr Polissia on granite outcrops) (Bezsmertna *et al.* 2012). The species is reported for the first time in the Mykolaiv Region.

Specimen examined. Ukraine. Mykolaiv Region, Mykolaiv District, in the vicinity of Antonivka village, alt. 34 m, 47.54762º N 32.1067º E, 9 June 2023, leg. & det. H. Drabyniuk, V. Scorobogatov, L. Buhai (non coll.).

Berberis aquifolium Pursh (= *Mahonia aquifolium* (Pursh) Nutt.)

This ergasiophyte originates from North America (Protopopova & Shevera 2014). The species has naturalized in several cities (Kharkiv, Kryviy Rih, Uzhhorod) and regions (Autonomous Republic of Crimea, Cherkasy, Ivano-Frankivsk, Kirovohrad and Sumy) of Ukraine (Mosyakin & Yavorska 2001, Arkushyna & Popova 2010, Spryahaylo & Spryahaylo 2015, Kulish *et al.* 2017, Shynder 2018, Burda & Koniakin 2019, Pryadko *et al.* 2019,

Glukhova *et al.* 2020, Koniakin & Gubar 2022, Miskova 2022, Mamchur 2023). For Odesa and the southern (Bessarabian) part of Odesa Region, it has been designated as a kenophyte (Vasylyeva & Kovalenko 2003, Vasylyeva *et al.* 2019). The species is registered for the first time an ergasiophygophyte from northern part of the Odesa Region.

Specimen examined. Ukraine. Odesa Region, Odesa District, Fontanka rural community, the landscape reserve of local importance "Luzanivskyi Forest", alt. 49 m, 46.55674º N, 30.83754º E, 17 November 2023, leg. & det. K. Kalashnik (non coll.).

Bolboschoenus glaucus (Lam.) S.G.Sm.

It is a rare species for the flora of Ukraine, known only from the Authonomous Republic of Crimea and Odesa Region (Tatanov 2003). The species is recorded for the first time from the Kherson Region.

Specimen examined. Ukraine. Kherson Region, Skadovsk District, the bank of the canal from rice checks to the Dzharylgach Bay, alt 1 m, 46.13394° N, 32.80548° E, 18 January 2022, det. O. Umanets (non coll.).

Calepina irregularis (Asso) Thell.

The ergasiophyte is of Europe, Mediterranean to Iran origin (POWO 2023). In Ukraine, the species has been documented from Crimea (Iljinska *et al.* 2007). Recently, it has been recorded outside Crimea for the first time in the Odesa Region.

Specimens examined. Ukraine. Odesa Region, Odesa District, between Peremozhne village and Kubanka village, steppe area, alt. 17 m, 46.69918º N, 30.75133º E, 04 May 2021, leg. K. Kalashnik, O. Koshelev, det. D. Davydov (non coll.); left bank slopes of the Kuyalnik estuary, alt. 0.08 m, 46.68462º N, 30.71694º E, 04 May 2021, leg. K. Kalashnik, O. Koshelev, det. D. Davydov (non coll.) 04 May 2021, K. Kalashnik, O. Koshelev, det. D. Davydov (non coll.); old cemetery in the village Nova Dofynivka, alt. 40 m, 46.57588° N, 30.91226° E, 27 April 2023, leg. & det. I. Moysiyenko, N. Skobel, N. Velychko, O. Shchepeleva (non coll.); Bilhorod–Dnistrovskyi District, old cemetery in the village Lymany, near the wall of cemetery, alt. 8 m, 45.66227° N, 29.75073° E, 30 April 2023, leg. & det. I. Moysiyenko, N. Skobel, N. Velychko, O. Shchepeleva (non coll.)

Centaurea borysthenica Gruner

The psamophytic species of Ukrainian flora distributed in the Dnipro and Southern Buh river basins (Novosad *et al.* 2013). It is a stable independent species of hybrid origin (Kostikov *et al.* 2022). Recently, the species has been recorded from the northern Chernihiv and western Vinnytsia Regions.

Specimens examined. Ukraine. Chernihiv Region, Chernihiv District, vicinity of Oster, floodplain of Oster River, forest fringe, alt. 104 m, 50.94532º N, 30.89477º E, 1 September 2021, leg. A. Baransky, det. D. Davydov; **Vinnytsia Region**, Haysyn District, SE vicinity of Berizky-Chechelnytskyi village, sandy terrace of Savranka River, alt. 138 m, 48.1273º N, 29.6575º E, 7 June 2018, leg. & det. O. Shynder (KWHA); SW vicinity of Chernyatka village, pine plantations on the sandy terrace of the Southern Buh River, alt. 141 m, 48.46799º N, 29.69657º E, 19 July 2020, leg. & det. O. Shynder (KW); SE vicinity of Dzhulynka village, the edge of pine plantation on the sands, alt. 172 m, 48.427867º N, 29.758278º E, 1 September 2019, leg. & det. O. Shynder (KWHA).

Cephalanthera longifolia (L.) Fritsch

This species is listed in the Red Data Book of Ukraine (Didukh *et al.* 2009). Currently, there are over 15 documented records of the species in the Zhytomyr Region, mainly in the northern part – Zhytomyr Polissia (Orlov 2005). It is a new locality from the Zhytomyr Region.

Specimen examined. Ukraine. Zhytomyr Region, Zhytomyr District, in hornbeam–oak forest near village Starochudnivska Huta, alt. 236 m, 50.216942 º N, 28.19324º E, 9 June 2021, leg. M. Kondratyuk, det. O. Orlov (non coll.).

Cirsium esculentum (Siev.) C.A. Mey.

This species is associated with halophite vegetaion in the Forest-Steppe. It is primarily found on the Left Bank (Vissiulina 1965). There are unconfirmed records in Cherkasy (Bashchenko *et al.* 2009) and Vinnytsya regions (Vasheniak 2014) from the right-bank of the Forest-Steppe. The specimen is reported for the first time from the right-bank part of the Kirovohrad Region.

Specimen examined. Ukraine. Kirovohrad Region, Novoukrainka District, in the vicinity of Korobchyne village, alt. 131 m, 48.76587 º N, 31.51739 º E, halophytic floodplain meadows, 1 August 2023, leg. K. Lavrinenko, det. D. Davydov.

Clematis vitalba L.

This is a West-European-Sub-Mediterranean species. It is native for the western region of Ukraine and the Authonomous Republic of Crimea (Didukh *et al.* 2004, Yena 2012). However, it is considered an alien plant in the plain part of Ukraine as an ergasiophygophyte (Didukh *et al.* 2004, Moysiyenko *et al.* 2023). Recently, the species has been recorded for the first time from the Kirovohrad and Odesa regions.

Specimens examined. Ukraine. Kirovohrad Region, Kropyvnytskyi district, Dolyna village, Dendrological Park "Veseli Bokovenky", alt. 117 m, 48.21001º N, 32.85597º E, 7 October 2022, leg. & det. H. Pidtykana, O. Shynder, V. Kolomiychuk (KW); **Odesa Region,** Odesa City, Marinesko descent, roadside near a tram line, alt. 19 m, 46.49472º N, 30.72634º E, 14 August 2015, leg. & det. K. Kalashnik, O. Koshelev (non coll.); Odesa City, in the vicinity of Cape Malyi Fontan, on seaside slopes, 46.44308º N, 30.77179º E, 24 June 2015, 15 June 2016, 01 January 2021, 11 December 2023, leg. & det. K. Kalashnik, O. Koshelev (non coll.); alt. 2 – 13 m, 46.44443º N, 30.77089º E, 19 June 2022 leg. & det. K. Kalashnik, O. Koshelev (non coll.).

Coreopsis grandiflora Hogg ex Sweet

This alien plant originates from North America. It is commonly cultivate as an ornamental plant (Mashkovska 2015). It has been considered as ergasiophygophyte in many regions (Levon 1997, Vasylyeva & Kovalenko 2003, Kucherevskyi & Shol 2009, Protopopova & Shevera 2015, Maltseva 2019, Arkushyna & Popova 2010). The species is reported for the first time from the Kirovohrad Region.

Specimen examined. Ukraine. Kirovohrad Region, Kropyvnytskyi, on the railway wildly on abandoned tracks, alt. 147 m, 48.52911º N, 32.25095º E, 22 July 2023, leg. & det. O. Shynder.

Corydalis caucasica DC.

This ergasiophyte originates from the Caucasus (POWO 2023). It has been classified as an ergasiophygophyte in Kyiv City (Shynder 2019). The species is revealed now for the first time in the Chernihiv Region

Specimen examined. Ukraine. Chernihiv Region, S of the outskirts of Pryluky, in the forest strip on both sides of the road, alt. 142 m, 50.56814º N**,** 32.4224º E, 15 April 2023, leg. & det. A. Levon.

Corydalis cava **subsp.** ***marschalliana*** (Willd.) Hayek

This plant is included in the official list of Regional rare plants of Kyiv Region of Ukraine (Andrienko & Peregrym 2012). In the Dnipro Upland, only seven localities of this species were previously known (Borodzilovskyi 1953, Melnyk *et al*. 2010). The finding near the village of Snizhky have been considered to be unconfirmed (Andriyenko *et al.* 1997). The species was revealed by S.O. Dziuba in "Vynarivka" tract at the bottom of the ravine.

Specimen examined. Ukraine. Kyiv Region, Bila Tserkva District, in the vicinity of Snizhky village, alt. 265 m, 49.36487 º N, 30.0704 º E, deciduous forest (*Carpinus betulus* + *Quercus robur*), 23 April 2023, leg. S. Dziuba, det. K. Lavrinenko.

Crithopsis delileana (Schult.) Roshev. (= *Hordeum geniculatum* Thell.)

It is a sub-Mediterranean species (POWO 2023). The species is native for Crimea and a xenophyte in the Northern Black Sea Region (Prychornomoria) (Prokudin *et al.* 1977). Previously, it was khown from salt marshes and roadsides in the Odesa, Mykolaiv, Kherson,

Zaporizhzhia Regions, and Crimea. Recently, it is found for the first time from the Dnipropetrovsk Region.

Specimen examined. Ukraine. Dnipropetrovsk Region, N of the Bulohivka village, Pavlograd District, the shore of the Bulohiv estuary, alt. 60 m, 48.37245º N, 35.39207º E, 2 July 2023, leg. & det. V. Kolomiychuk, M. Shevera, O. Shynder, B. Baranovsky, L. Karmyzova (non coll.).

Cucumis melo L.

It is an ergasiophyte of Paleotropical origin that widely cultivated in the southern regions of Ukraine (Nechytaylo *et al.* 2005). Generally, in Ukraine it is considered as escaped from cultivation (Protopopova & Shevera 2014). It has been reported from Dnipropetrovsk (Kucherevskyi 2004, Kucherevskyi & Shol 2009), Kherson (Maltseva 2019), Odesa (Vasylieva & Kovalenko 2003, Bondarenko 2009, Vasylieva *et al.* 2019) and Zaporizhzhia (Maltseva 2019) regions. The species is reported for the first time in the Cherkasy Region.

Specimen examined. Ukraine. Cherkasy Region, Cherkasy, Dakhnivka, Dnipro sand terrace, in partial shade near the trail, alt. 81 m, 49.48454º N**,** 31.99582º E, 20 August 2022, leg. & det. H. Chorna, O. Shynder (non coll.).

Cydonia oblonga Mill.

This fruit plant is of Caucasian and Central Asian origin (Zohary & Hopf 2000, Fedoronchuk 2022d). In Ukraine, it is cultivated mainly in the southern regions. It was reported as naturalized in Authonomous Republic of Crimea (Yena 2012), and it was listed for the Donetsk (Podpriatov & Kolomiychuk 2018) and Odesa Regions (Vasylyeva & Kovalenko 2003, Vasylyeva *et al.* 2019). The species has been recently reported for the first time from the Kirovohrad and Mykolaiv Regions.

Specimens examined. Ukraine. Kirovohrad Region, Holovanivsk District, the southern outskirts of Haivoron town, in the open floodplain of the right bank of the South Buh River, alt. 122 m, 48.32064º N, 29.87747º E, 29 April 2023, O. Shynder, T. Mamchur (KWHA104064); **Mykolaiv Region**, Berezanka District, village Kobleve, Tyligul estuary, tract "Plavni", alt. 1 m, 46.63367° N, 31.21778° E, 27 October 2023, leg. & det. I. Moysiyenko, K. Kalashnik, N. Skobel, N. Velychko (non coll.).

Cyperus odoratus L. (= *Torulinium ferax* (Rich.) Urb.)

This species is of Pantropical origin and is known from the Odesa Region as *Torulinium ferax* (Dubyna & Protopopova 1984) (= *Torulinium odoratum* (L.) S.S. Hooper (Mosykin & Fedoronchuk 1999, Danylyk 2012). The species has been recently reported for the first time in the Kherson Region.

Specimens examined. Ukraine. Kherson Region, Skadovsk District, the outskirts of Rybalche village, the bank of the canal from the Dnipro River to Rybalche`s fishponds, alt. 1 m, 46.47300° N, 32.27271° E, 16 September 2020, leg. & det. O. Umanets (non coll.); the outskirts of the city of Hola Prystan, in the canal from the Dnipro River to the grain storage facility, leg. & det. O. Umanets (non coll.).

Dasypyrum villosum (L.) Borbás

This sub-Mediterranean species is native to the Crimea in Ukraine and is a xenophyte in the Northern Black Sea Region (Prychornomoria) (Prokudin *et al.* 1977, Vasylyeva *et al.* 2019), Lviv Region (Prokudin *et al.* 1977), and Cherkasy Region (Shevchyk 2008). This species also was by mistake reported in the former Podillia province (Rogowicz 1869), based on an older work by E. Eichwald (1830), where it was noted: "...in Pod., am schwarzen Meere", reflecting the belief in the first half of the 19th century that the Podillia Region reached the Black Sea coast. It was previously recorded in Cherkasy Region (Shevchyk 2008). This species is considered as xenophyte and ephemerophyte.

Specimen examined. Ukraine. Cherkasy Region, outskirts of Kaniv, near the administrative building of the Kaniv Nature Reserve, trampled ground path alt. 111 m, 49.72645º N, 31.52954º E, 06.2005, leg. O. Abduloeva, det. O. Abduloeva, V. Shevchyk (Herbarium of the Kaniv Nature Reserve).

Dracocephalum ruyschiana L.

The species is included in the Red Data Book of Ukraine (Didukh *et al.* 2009). Currently, there are approximately 20 records of the species in Zhytomyr Region, mainly in Zhytomyr Polissia (Orlov 2005). The typical habitat for this species is light acidophilous oak forests of the association *Potentillo albae-Quercetum petraeae* (Dubyna *et al.* 2019).

Specimens examined. Ukraine. Zhytomyr Region, Korosten District, Drevliansky Nature Reserve, Narodychy department, quartier 59, vydil 11, alt. 129 m, 51.15231º N, 29.02405º E, 29 June 2023, leg. & det. O. Orlov (KW); Zhytomyr District, 3 km to south-west from Zhytomyr City, on the second sand terrace, common for the right bank of the Teteriv River and Huiva River, in light acidophilous oak forest, alt. 192 m, 50.22415º N, 28.59893º E, 01 June 2022, leg. & det. O. Orlov (KW).

Eragrostis pilosa (L.) P.Beauv.

The xenophyte is of sub-Mediterranean origin. It is known in most regions of Ukraine (Prokudin *et al.* 1977, Prokudin 1987). Recently, the species has been reported for the first time from the Zhytomyr Region.

Specimens examined. Ukraine. Zhytomyr Region, Korosten District, Narodychi village, on the stony roadside, alt. 140 m, 51.20271, 29.09135, 8 July 2019, leg. & det. N. Pashkevych; between Dibrova and Druzhba villages, on the roadside along the Dibriv quarry, alt. 203 m, 51.17225º N, 27.97572º E, 20 August 2022, leg. & det. A. Baransky; Zvyahel District, Zvyahel, grassland in the vicinity of the bus station, alt. 217 m, 50.58781º N, 27.60548º E, 28 July 2023, leg. & det. A. Baransky.

Erechtites hieraciifolius (L.) Raf. ex DC.

This is invasive xenophyte of North and South American origin (POWO 2023). It is expanding in the western and northern regions of Ukraine (Batochenko & Yurechko 2019, Kolomiychuk *et al.* 2019, Mosyakin & Mosyakin 2021, Orlov *et al.* 2011, 2022). The species was reported from Odesa Region (Derevinskaya *et al.* 1998). The species is revealed for the first time from the Right-Bank part of the Cherkasy Region.

Specimen examined. Ukraine. Cherkasy Region, outskirts of Kaniv, Kaniv Nature Reserve, on a forest path in a young broad-leaved forest without developed herb layer, alt. 126 m, 49.725132º N, 31.530236º E, 21 September 2023, leg. & det. V. Shevchyk, H. Chorna (UPU).

Eriochloa villosa (Thunb.) Kunth

This is a xenophyte of East Asian origin, previously was classified as a quarantine organism in Ukraine (Prokudin *et al.* 1977). Single localities have been reported in the Cherkasy, Kyiv, Ternopil, and Vinnytsia regions (Shynder & Shevchyk 2022, Shynder *et al.* 2022b). Recently, the species has been reported for the first time in the left-bank part of the Kyiv Region, and also in the Cherkasy and Zakarpattia regions.

Specimens examined. Ukraine. Cherkasy Region, western outskirts of Kaniv, on the edge of the field in sorghum crops, alt. 135 m, 49.75565º N, 31.38945º E, 14 July 2020, V. Shevchyk (Herbarium of the Kaniv Nature Reserve); **Kyiv Region**, Boryspil District, northern outskirts of the Khotsky village, near the estate of Biloozersky National Nature Park, on a fallow, alt. 124 m, 49.94772º N, 31.61383º E, 14 September 2023, V. Shevchyk; **Zakarpattia Region**, Mukachevo District, in the corn field, alt. 103 m, 48.40985º N, 22.43902º E, 25 July 2019, leg. & det. L. Borsukevych (LWKS).

Euphorbia glyptosperma Engelm.

It is a xenophyte of North American origin. The species known from the Cherkasy, Luhansk, Mykolaiv, Poltava, and Zaporizhzhia regions (Moysiyenko *et al.* 2023), as well as from Eastern Crimea (22 July 2020). Recently, the species has been reported for the first time in the Dnipropetrovsk and Zakarpattia regions.

Specimens examined. Ukraine. Dnipropetrovsk Region, Dnipro, Amur-Nizhnyodniprovsky District, a colony on the station territory, alt. 62 m, 48.49835º N, 35.06594º E, leg. & det. M. Shevera, L. Karmyzova, B. Baranovsky, O. Shynder (KWHA); **Zakarpattia Region,** Perechyn, a colony by the railway near the station, about 150 plants, alt. 152 m, 48.73247º N, 22.47728º E, 7 October 2023, leg. & det. O. Shynder (KWHA103205).

Euphorbia lathyris L.

This ergasiophyte is of North American, Central Asia and Pakistan origin (Smith & Tutin 1968, POWO 2023). It is cultivated as an ornamental plant and it is rarely distributed in Ukraine, mainly found in botanical gardens (Moysiyenko 2011, Ivanytskyi *et al.* 2015, Mashkovska 2015, Rakhmetov 2020). Previous attempts to introduce the plant in the Cherkasy Region, at the Uman National University of Horticulture (Mamchur *et al.* 2023), and in the Kharkiv Region, at the Research Station of the Ukrainian Institute of Agricultural (1938, Bratskov, Reztsova, herbarium KW), were unsuccessful. It has been reported as an ergasiophygophyte for the flora of the Northern Black Sea Region (Prychornomoria) (Moysiyenko 2011) and for Ukraine as a whole (Protopopova & Shevera 2014). The species has not become naturalized in Crimea (Yena 2012). Recently, it has been reported for the first time in the Zakarpattia Region.

Specimens examined. Ukraine. Zakarpattia Region, Berehove, on the street side under the fence, alt. 114 m, 48.20225º N, 22.63843º E, 28 August 2022, leg. & det. O. Shynder; Berehove, on the lawn, 27 September 2023, leg. & det. O. Orlov (KWHA 103197); Uzhhorod, on the territory of the Uzhhorod city children's hospital, on both sides of the path, alt. 116 m, 48.62557º N, 22.29284º E, August 2021; Uzhhorod District, Korytnyani village, on a private territory, near a flower garden, 24 August 2012, leg. & det. M. Shevera, Ye. Andryk (KW 145902, 145903); **Mykolaiv Region**, Mykolaiv District, old cemetery in the village Balovne, near grave, alt. 26 m, 47.053154° N, 31.890062° E, 21 October 2023, leg. & det. I. Moysiyenko, N. Skobel (non coll.); Bashtanka District, old cemetery in the village Inhulka, near grave, alt. 65 m, 47.20048° N, 32.21742° E, 21 October 2023, leg. & det. I. Moysiyenko, N. Skobel (non coll.).

Euphorbia prostrata Aiton

This alien species is of North and South American origin. It has been documented in Ukraine from the Kharkiv Region, Donetsk and Luhansk cities and Authonomous Republic of Crimea (Benhus & Neko 2023, Ryff 2019, *pers. com.* from Sova). Recently, the species has been recorded the first time in the Odesa Region.

Specimen examined. Ukraine. Odesa Region, Odesa City, Uspenska Str., in the cracks of sidewalk blocks, in the cracks in the pavement, in the flowerbeds, alt. 52 m, 46.47323º N, 30.75341º E, 10 September 2023, leg. K. Kalashnik, O. Koshelev, det. iNaturalist user with nickname “janeyair” (non coll.).

Fallopia baldschuanica (Regel) Holub

This ergasiophyte originates from South and Central Asia (POWO 2023). It has been listed as an ergasiophygophyte for Kyiv City (Koniakin *et al.* 2023), as well as for the cities of Mykolaiv (Melnik 2009) and Odesa (Vasylyeva *et al.* 2019), and for Ukraine in general (Protopopova & Shevera 2014). A new record of the species from the Odesa Region is reported.

Specimens examined. Ukraine. Odesa Region, Rozdilna District, outskirts of Burdivka village, in a ravine on the slope of the Khadzhibey estuary, alt. 47 m, 46.80985º N, 30.46692º E, 12 August 2008, Yu. Solonchenko (non coll.); Bilhorod-Dnistrovskyi District, city Bilhorod-Dnistrovsky, old Jewish cemetery, alt. 40 m, 46.18366° N, 30.32484° E, 29 April 2023, leg. & det. I. Moysiyenko, N. Skobel, N. Velychko, O. Shchepeleva (non coll.).

Ficus carica L.

This subtropical fruit crop is naturally distributed in the Eastern Sub-Mediterranean and Southwest Asia (POWO 2023). In Ukraine, it has been previously indicated as an ergasiophygophyte (Protopopova & Shevera 2014). Specifically, for Crimea, it is noted as an archaeophyte (Yena 2012), and as a kenophyte it is recorded for the cities of Kyiv (Burda & Koniakin 2019, Koniakin *et al.* 2023) and Odesa (Vasylyeva *et al.* 2019). Recently, the species has been reported for the first time in the Rivne Region.

Specimen examined. Ukraine. Rivne Region, Dubno, on the edge of the railway platform near the station, alt. 204 m, 50.38574º N, 25.74928º E, 2 September 2023, leg. & det. O. Shynder (KWHA).

Galanthus nivalis L.

The species is included in the Red Data Book of Ukraine (Didukh *et al.* 2009). It is quite common in the southern part of the Zhytomyr Region within the Forest-Steppe. However, in the Polissia part of the region, this species is rare, with only 10 records (Orlov 2005). A new locality of *G. nivalis* has recently been revealed. The population is dense and covers an area of about 1 ha. This is one of the most northern records of the species in Zhytomyr Polissia.

Specimen examined. Ukraine. Zhytomyr Region, Korosten District, 3,5 km to the west from the village Radovel, State company "Olevsk Forestry of APK", Kyshyn forest division, quartier 57, vydily 45, 46, 47, hornbeam-aspen-alder-birch forest, alt. 198 m, 51.14144º N, 27.76784º E, 18 March 2023, leg. & det. O. Orlov (non coll.).

Galium humifusum M.Bieb.

This Eastern sub-Mediterranean, Eastern European, Western and Central Asiaan species is naturally distributed in the Forest-Steppe and Steppe zones of Ukraine, and Crimean Mountains (Visiulina 1965). It has been noted as introduced on the railway in the Forest-Steppe part of the Zhytomyr Region (Orlov *et al.* 2022). Recently, the species has been reported for the first time from the Polissia.

Specimens examined. Ukraine. Volyn Region, Lutsk, on the railway, several plants between the tracks, alt. 189 m, 50.75946º N, 25.35073º E, 23 October 2022, leg. & det. O. Shynder; **Zhytomyr Region**, Korosten District, Malyn, railway station, between railway tracks, alt. 163 m, 50.77397º N, 29.29688º E, 12 August 2020, leg. & det. A. Baransky.

Goodyera repens (L.) R.Br.

The species is included in the Red Data Book of Ukraine (Didukh *et al.* 2009). This boreal species is very rare in the Zytomyr Region (Orlov 2005).

Specimen examined. Ukraine. Zhytomyr Region, Zviagel District, State Enterprise "Emilchyno Forestry of APK", Serby forest division, quartier 102, elementary forest stand 33, in 60-years old birch-pine forest with green mosses, alt. 224 m, 50.75905º N, 27.67027º E 12 September 2022, leg. O. Zhukovsky, det. O. Orlov (non coll.).

Gymnocladus dioicus (L.) K. Koch

This alien tree originates from North America (POWO 2023). In Ukraine, it is occasionally cultivated in parks and various plantations (Arkushyna & Popova 2010, Fedoronchuk 2022b). As an ergasiophygophyte, it has been reported in various regions: Kyiv City (Mosyakin & Yavorska 2001, Konaikova *et al.* 2015, Pryadko *et al.* 2019); Kyiv Region, particularly in the "Oleksandria" Dendrological Park (Galkin & Doiko 2015); Cherkasy Region, observed in the Kaniv Nature Reserve (Shevchyk & Prodchenko 2001) and "Sofiivka" Dendrological Park (Chorna *et al.* 2021); Chernihiv Region, noted in the Dendrological Park "Trostianets" (Iljenko & Medvedev 2012); Khmelnytsky Region, found in the Kamianets-Podilsky Botanical Garden (Kagalo *et al.* 2004); Lviv Region, recorded in the botanical garden of the National Forestry University (Ivchenko *et al.* 2007); Odesa Region (Vasylyeva *et al.* 2019); and Vinnytsia Region, observed in the Nemyriv Dendrological Park-monument of plant art (Lypa 1958). The species is reported for the first time from the Kirovohrad and Zakarpattia Regions.

Specimens examined. Ukraine. Kirovohrad Region, Kropyvnytskyi, City Park, young plants at different distances from mature trees, alt. 156 m, 48.49895º N, 32.23269º E, 27 July 2021, leg. & det. O. Shynder; **Zakarpattia Region**, Khust District, the outskirts of the village Rokosovo, quarry, near an abandoned house, self-sowing, 27 August 2016. leg. & det. M. Shevera (KW138506); Uzhgorod, Botanic embankment, between the botanical garden of the Uzhgorod University (where it is cultivated) and the tracks of the Uzhgorod Children's Railway, alt. 114 m, 48.61953º N, 22.30338º E, 5 September 2022, O. Shynder (non coll.); ibid., 9 September 2022, leg. & det. M. Shevera (non coll.).

Hedera helix L.

A European species, in Ukraine, it is widespread in the western forest regions and the Crimea (Klokov & Visiulina 1955, Yena 2012, Fedoronchuk 2022c). It has been previously

indicated for the northern (Forest-Steppe) parts of the Mykolaiv (Moysiyenko *et al.* 2023) and Odesa (Popova 2014) regions. The species is reported for the first time from the steppe part of the Odesa Region, as ergasiophygophyte.

Specimen examined. Ukraine. Odesa Region, Odesa, Seredniy Fontan, colony on the seaside slope, abandoned garden, 1 July 2021, Yu. Solonchenko (non coll.); Memorial to the heroic defense of Odesa, in an oak grove, alt. 41 m, 46.37209º N, 30.72143º E, 14 June 2017, leg. & det. Yu. Solonchenko (non coll.).

Heliotropium stevenianum Andrz.

This Pontic species is widespread in Middle Transnistria (Kotov & Barbarych 1957). Apparently as an alien species, it has also been noted in the Kyiv Region, specifically in Bila Tserkva, Dendrological Park "Olexandria" (Kotov & Barbarych 1957). The species is now reported for the first time from the Cherkasy Region as a xenophyte and colonophyte.

Specimen examined. Ukraine. Cherkasy Region, Uman, territory of the Uman National University of Horticulture, botanical nursery, as a weed on the paths, alt. 205 m, 48.76551º N, 30.23779º E, 9 May 2023, leg. T. Kostruba, det. O. Shynder (KWHA103194).

Hesperis matronalis L.

This plant is native to the Balkans, the forest-steppe of Eastern Europe, Crimea and the Caucasus (Iljinska *et al.* 2007, Ilyinska 2021, Euro+Med PlantBase 2023, GBIF 2023). It is often cultivated as an ornamental plant, which makes it difficult to define the original range of its distribution. This is the first time that the species has been reported from the Zakarpattia Region as a colonophyte and an ergasiophyte.

Specimen examined. Ukraine. Zakarpattia Region, Berehove District, Velyka Bakta village, on the roadside, alt. 112 m, 48.16567º N**,** 22.66842º E, 3 June 2023, leg. & det. O. Shynder, M. Shevera, V. Kolomiychuk (non coll.); Velyki Berehy village, J. Sikura Botanical Garden of the Zakarpattia Hungarian University, alt. 115 m, 48.23174º N, 22.74350º E, 3 June 2023, leg. & det. O. Shynder, M. Shevera, V. Kolomiychuk (non coll.).

Huperzia selago (L.) Bernh.

The species is included in the Red Data Book of Ukraine (Didukh *et al.* 2009). It is a rare boreal species in the Zhytomyr Region, with more than 10 records (Orlov 2005).

Specimen examined. Ukraine. Zhytomyr Region, Korocten District, 1,5 km to the north from village Luhyny, State Enterprise "Luhyny Forestry", Luhyny forest division, on overgrown quartier line between quartiers 94 and 102, in wet pine forest, alt. 195 m, 51.11704º N, 28.40512º E, 4 September 2019, leg. & det. O. Orlov (KW).

Hypericum polyphyllum Boiss. & Balansa

This ergasiophyte is of Asia Minor origin (POWO 2023). The species is reported for the first time from Ukraine. It is considered as an ergasiophyte.

Specimen examined. Ukraine. Autonomous Republic of Crimea, Yalta Municipality, on the retaining wall of the exit from the Yalta – Alushta highway to Nikita Botanical Garden, in a wild state, alt. 241 m, 44.51644º N, 34.24580º E, 6 June 1993, leg. & det. A. Levon.

Iris foetidissima L.

This ergasiophyte is of Western Mediterranean origin (POWO 2023). It is rarely cultivated in Ukraine (Mashkovska 2015), but at the same time is a fairly common spontaneous element in the park zone of the southern coast of Crimea in the territory of Yalta municipality, especially in the vicinity of Livadia and Oreanda. The species tends to grow on wetter woodland sites, often with *Hedera helix*. Its possible spread is facilitated by birds. The species is reported for the first time in Ukraine. It is considered as an ergasiophyte.

Specimens examined. Ukraine. Autonomous Republic of Crimea, Yalta Municipality, outskirts of Oreanda settlement, "Pivdenni Dubravy" botanical reserve, in the forest, alt. 44 m, 44.46412º N, 34.14664º E, 5 September 2003, leg. & det. A. Levon.

Lagurus ovatus L.

An annual grass, is native to northern Africa, the Azores, the Madeira Islands, the Canary Islands, Southern Europe. *L. ovatus* is quite common for coastal areas. In Ukraine it was not included in the list of grasses of Ukraine (Prokudin 1987), because the only mention of this species from the Crimea peninsula dated back to 1842 (Prokudin 1987). However, according to the Euro+Med PlantBase (Euro+Med PlantBase 2023), this species is indicated as native to the Crimea peninsula. In 2011, it was discovered in Kharkiv Region by Yu. Bengus as escaped from cultivation. This species was discovered in 2019 on the sandy beach of the newly created island Nova Zemlia, situated on the border between Ukraine and Romania. The herbarium specimen of *L. ovata* is stored in the Herbarium of the Institute of Ecology of the Carpathians (LWKS).

Specimen examined. Ukraine. Odesa Region, Nova Zemlia island, alt. 5 m, 45.19923º N, 29.76646º E, 27 May 2019, leg. & det. L. Borsukevych (LWKS).

Laser trilobum (L.) Borkh.

It is a European-Sub-Mediterranean species (Fedoronchuk 2022c, POWO 2023). Previous records indicate its presence in Dnipropetrovsk, Donetsk, Khmelnytsk, Odesa, Vinnytsia, and Zakarpattia Regions (Schmalhausen 1886, Klokov & Visiulina 1955). An unverified entry exists for the Rivne Region (I. Khomiak). The species is now reported for the first time from the Lviv Region.

Specimen examined. Ukraine. Lviv Region, Brody, in the grove between the city quarter and the adjacent synanthropic lands, alt. 220 m, 50.08376º N, 25.13283º E, 27 Jule 2023, leg. & det. A. Levon.

Limonium alutaceum (Steven) O.Kuntze.

The species occurs mainly in the left bank forest steppe and steppe regions (Klokov 1957). In the forest steppe on the right bank of the Dnipro River few findings have been reported (Pidoplichka 1926, Montrezor 1888). The species has been recently reported for the first time in the forest-steppe part of the Kirovohrad Region.

Specimens examined. Ukraine. Kirovohrad Region, Novoukrainka District, in the vicinity of Rubanyi Mist village, alt. 135 m, 48.7705º N, 31.52336º E, halophytic floodplain meadows with low grazing intensity, 02 August 2023, leg. K. Lavrinenko, det. D. Davydov; Novoukrainka District, in the vicinity of Troyanove village, alt. 132 m, 48.7707º N, 31.53888º E, halophytic floodplain meadows with low grazing intesity, 2 August 2023, leg. K. Lavrinenko, det. D. Davydov.

Lipandra polysperma (L.) S.Fuentes, Uotila & Borsch (= *Chenopodium polyspermum* L.)

It is a rather rare plant species in southern Ukraine (GBIF 2024b). The species was revealed for the first time for the territory of the Black Sea Biosphere Reserve in 2010. It was rediscovered in 2021 on the same site in the Black Sea Biosphere Reserve.

Specimen examined. Ukraine. Kherson Region, Skadovsk District, Ivano-Rybalchanska section of the Black Sea Biosphere Reserve, forestry quarter № 33, alt. 4 m, 46.45393º N, 32.17026º E, 23.07.2021, leg. & det. O. Umanets (non coll.).

Luzula luzuloides (Lam.) Dandy & Wilmott

It is a central European species. In Ukraine it is found in the Carpathian Mountains (Kotov & Barbarych 1950). The first record of the species is in the Ternopil Region, which is on the eastern edge of its range.

Specimen examined. Ukraine, Ternopil Region, Chortkiv District, between Skomorochy and Zhnyborody villages, in the Strypa River valley, on the edge of a beech forest, alt. 262 m, 48.90313º N, 25.40630º E, 18 July 2002, leg. & det. A. Baransky.

Nymphoides peltata (S.G.Gmel.) Kuntze

The species is included in the Red Data Book of Ukraine (Didukh *et al.* 2009). In the Olevsk and Ovruch regions there are two historical records of this species from the 19th century, documented by O. Rogovych (Rogowich 1869). Recently a new record of this

species was found. This is probably the only confirmed old occurrence in the Zhytomyr Region.

Specimen examined. Ukraine. Zhytomyr Region, Zviagel District, 1,3 km to north-west from village Berehove, in the river Sluch, near bank, in shallow water, large thickets, alt. 244 m, 50.73689º N, 27.52635º E, 13 August 2019, leg. & det. O. Oleksandr (KW).

Oenothera glazioviana Micheli

It is an ergasiophyte of cultigenic origin (Fedoronchuk 2022c, POWO 2023). It was listed as ergasiophygophyte for Kyiv City (Rostański *et al.* 2004), Donetsk (Rostański *et al.* 2004), Kherson (Rostański *et al.* 2004), Lugansk (Rostański *et al.* 2004), Lviv (Batochenko & Yurechko 2019, Kuzyarin & Zhyzhyn 2012, Shynder *et al.* 2022b), Sumy (Rostański *et al.* 2004), and Zhytomyr (Orlov 2019a) regions. The species is reported for the first time for the Kyiv Polissia and Vinnytsia Region.

Specimens examined. Ukraine. Kyiv Region, Bucha, on the ruderal roadside, alt. 152 m, 50.54787º N, 30.20549º E, 7 August 2023, A. Baransky; Fastiv District, Boyarka, sandy substrate in the phytocoenoses of *Calamagrostis epigejos* (L.) Roth, alt. 185 m, 50.30342º N, 30.33801º E, 4 August 2022, leg. & det. N. Pashkevych; **Vinnytsia Region**, Mohyliv-Podilskyi District, S outskirts of Murovani Kurylivtsi, on the road-side, not far from the cemetery, alt. 256 m, 48.69641º N, 27.52736º E, 24 July 2022, leg. & det. O. Shynder.

Opuntia humifusa (Raf.) Raf.

The ergasiophyte is of North and South American origin (POWO 2023). In Ukraine, the species has been previously recorded the in Crimea, Cherkasy, Dnipopetrovsk, Donetsk, Kyiv, Mykolaiv, Kherson, and Sumy (Didenko *et al.* 2021, Moysiyenko *et al.* 2021) regions. The species is reported for the first time from the Odesa Region.

Specimens examined. Ukraine. Odesa Region, Bilhorod-Dnistrovskyi District, old cemetery in the village Borysivka, near the wall of cemetery, alt. 98 m, 46.33626° N, 29.99789° E, 25 October 2023, leg. N. Skobel, N. Velychko, O. Shchepeleva, det. I. Moysiyenko (non coll.); old cemetery in the village Starokozachie, on the grave, alt. 104 m, 46.33639° N, 29.99886° E, 26 October 2023, leg. N. Skobel, K. Kalashnik, det. I. Moysiyenko (non coll.).

Ostericum palustre (Besser) Besser

This species is listed in Annex I of the Resolution 6 of the Bern Convention (Council 2011). It is occasionally found in wet floodplain meadows and among floodplain shrubs throughout Ukraine (Fedoronchuk 2022c). The one herbarium sample (KW 117929) of *O. palustre* from the vicinity of Monastyryshche city (Cherkasy Region) is a misidentification of *Angelica sylvestris* L. In Kirovohrad Region, there are several documented findings of this species, mainly in the eastern part (Paczoski 2008, Vynokurov 2016). It is reported for the first time in the western part of Kirovohrad region.

Specimens examined. Ukraine. Kirovohrad Region, Novoukrainka District, in the vicinity of Martonosha village, alt. 142 m, 48.75529º N, 31.81295º E, halophytic floodplain meadows, 22 July 2023, leg. & det. K. Lavrinenko; Novoukrainka District, in the vicinity of Pancheve village, alt. 147 m, 48.73572º N, 31.89416º E, wet floodplain meadows, 23 July 2023, leg. & det. K. Lavrinenko.

Peganum harmala L.

It is a widely distributed in the Central Asia, North Africa, and Middle East and Ukraine (POWO 2023). The species has been recorded in the Crimea, Kherson, Mykolaiv and Odesa regions (GBIF 2024c). It is the second record in the Odesa Region.

Specimen examined. Ukraine. Odesa Region, Bilhorod-Dnistrovskyi District, old cemetery in the village Trapivka, among graves, alt. 23 m, 45.79188° N, 29.70364° E, 25 October 2023, leg. N. Skobel, det. I. Moysiyenko (non coll.).

Peucedanum latifolium DC.

The species occurs occasionally in halophytic floodplain meadows in the southern part of the forest-steppe zone of Ukraine (Fedoronchuk 2022c). It has been reported from very few

localities in Kirovohrad (Paczoskyi 1927, Paczoski 2008) and Mykolaiv regions (Schmalhausen 1886, Montrezor 1890, Schmalhausen 1895). Recently another record from the north of the Kirovohrad Region was added.

Specimen examined. Ukraine. Kirovohrad Region, Novoukrainka District, in the vicinity of Rubanyi Mist village, alt. 135 m, 48.77054º N, 31.52336º E, halophytic floodplain meadows with low grazing intensity, 2 August 2023, leg. & det. K. Lavrinenko.

Phragmites australis* subsp. *isiacus (Arcang.) ined.

This is subspecies of European origin, which presumably occurs in the steppe zone of Ukraine (Tzvelev 1968, Bezsmertna *et al.* 2022). It was initially reported from the Oskil River valley in Kharkiv Region (Tzvelev 1968), but for a long time, this taxon was not accepted (Prokudin *et al.* 1977). In recent years, the subspecies has been recorded in many regions of Ukraine (Lyubinska 2012, Yena 2012, Karpova & Klepets 2013, Kuz & Starovoitova 2014, Dubyna *et al.* 2017, Zvyagintseva 2018, Bezsmertna *et al.* 2022, Orlov *et al.* 2022). In the current paper, the subspecies is reported for the first time in Dnipropetrovsk, Ivano-Frankivsk, Kirovohrad, and Ternopil regions.

Specimens examined. Ukraine. Dnipropetrovsk Region, Pavlograd District, southern outskirts of the Kocherezhky village, the bank of the Samara River, alt. 59 m, 48.65920º N , 35.65669º E, 2 July 2023, leg. & det. O. Shynder, B. Baranovsky, V. Kolomiychuk, M. Shevera, L. Karmyzova (non coll.); Vasylivka village, bank of the Samara River, alt. 58 m, 48.70509º N, 35.56019º E, 2 July 2023, leg. & det. O. Shynder, B. Baranovsky, V. Kolomiychuk, M. Shevera, L. Karmyzova; **Ivano-Frankivsk Region**, Ivano-Frankivsk District, western outskirts of the Zahirya village, the shore of the pond, alt. 243 m, 49.38202º N, 24.46942º E, 4 June 2023, leg. & det. O. Shynder, M. Shevera, V. Kolomiychuk (non coll.); eastern outskirts of the Zahirya village, along the highway, alt. 270 m, 49.384829º N, 24.50923º E, 4 June 2023, leg. & det. O. Shynder, M. Shevera, V. Kolomiychuk (non coll.); **Kirovohrad Region**, Holovanivsk District, eastern outskirts of Zavallia settlement, in a pond, alt. 117 m, 48.225037º N, 30.076232º E, 25 May 2018, leg. & det. O. Shynder (non coll.); Kropyvnytsky, shallow water along the Ingul River, alt. 104 m, 48.51406º N, 32.25099º E, 22 July 2023, leg. & det. O. Shynder (non coll.); Kropyvnytskyi district, Dolyna community, "Veseli Bokovenky" Dendrological Park, pond bank, alt. 115 m, 48.21057º N, 32.85478º E, 7 October 2022, leg. & det. O. Shynder, H. Pidtykana (non coll.); Novoukrainka District, southern outskirts of the Zlynka village, the banks of the pond, alt. 146 m, 48.43828º N, 31.49977º E, 24 June 2023, leg. & det. O. Shynder (non coll.); **Ternopil Region**, Ternopil District, Teofipilka village, thickets in the pond, alt. 369 m, 49.45588º N, 25.21059º E, 4 June 2023, leg. & det. O. Shynder, M. Shevera, V. Kolomiychuk (non coll.).

Phytolacca americana L.

It is a plant of North American origin (POWO 2023), which is occasionally cultivated in Ukraine. It was listed as an ergasiophygophyte for botanical gardens of Kyiv City (Mosyakin & Yavorska 2001, Shynder 2019, Shynder *et al.* 2022a), and its isolated colony was discovered in 2020 in the forest of Pushcha-Vodytsia in the northwestern part of Kyiv City (Mosyakin & Mosyakin 2021). Currently, according to the GBIF (2024d) the species occurs sporadically in the forests around Kyiv, Odesa and the southern part of the Odesa Region and Crimea. The species is reported for the first time from the Cherkasy and Zakarpattia regions.

Specimens examined. Ukraine. Cherkasy Region, Cherkasy District, near the Kaniv Nature Reserve fence, a spontaneous group of plants, alt. 90 m, 49.72542º N, 31.53368º E, 20 October 2021, leg. & det. O. Shynder & N. Pashkevych (non coll.); Kaniv Nature Reserve, near the administrative building, spontaneous colony, alt. 110 m, 49.72486º N, 31.53249º E, 24 August 2023, leg. & det. V. Shevchyk (non coll.); **Zakarpattia Region**, Uzhhorod, Botanical Embankment, between the rails of the Children's Railway, near the Botanical Garden, alt. 114 m, 48.61919º N, 22.30392º E, 5 September 2022, leg. & det. O. Shynder & M. Shevera (KWHA102503).

Pilosella flagellaris (Willd.) Arv.-Touv.

This is European species, widespread in the western and northern regions of Ukraine (Visiulina 1965). In the Middle Dnipro Bassin, the southernmost localities were noted for Kyiv (Visiulina 1965) The species is currently reported for the first time in the Right-Bank part of Cherkasy and Kirovohrad regions.

Specimens examined. Ukraine. Cherkasy Region, northern outskirts of Zvenyhorodka, Berizka tract, left bank of the Hnylyi Tikych River, alt. 141 m, 49.09574º N, 30.94392º E, 07 July 2019, leg. & det. O. Shynder, H. Chorna (KWHA102675); the valley of the Supii River in the left-bank part, art. 149 m, 49.62850º N, 31.77340º E, 18 August 1984, leg. V. Lyubchenko, O. Makhovych, det. A. Kyslyak, V. Podryadskyi (KWU 37190); **Kirovohrad Region**, eastern outskirts of Blahovishchenske, along the railway embankment, alt. 180 m, 48.3291º N, 30.2633º E, 15 May 2018, leg. & det. O. Shynder (KWHA).

Pistia stratiotes L.

The ergasiophyte is of tropical distribution (POWO 2023), widely used as an aquarium plant and in the landscaping of artificial ponds and, at the same time, one of the dangerous invasive aquatic plants. This species, as ephemerophyte, was reported for Kyiv City (Kotelevets *et al.* 1983, Krasnova 2001, Lushpa 2009, Prokopuk *et al.* 2023), Kharkiv (Chikov *et al.* 2013, Kazarinova *et al.* 2014), Kirovohrad (Arkushyna 2020, 2023), Kyiv (Afanasev & Savitskiy 2016), Odesa (Shyyan 2017, Vasylyeva *et al.* 2019), Vinnytsia (Sidorovskyi *et al.* 2023), and Zaporizhzhia (Afanasev & Savitskiy 2016) regions. Additionally, this species has been documented in the Dnipropetrovsk Region, specifically in Kryvyi Rih (Fedonenko & Pozdniy 2013), Authonomous Republic of Crimea (*pers. comm.* Bohdanovych, Dinasafina, Serhii), and Poltava regions (*pers. comm.* from Sotnik). The species is the second time reported for the Dnipropetrovsk Region.

Specimens examined. Ukraine, Dnipropetrovsk Region, Dnipro District, outskirts of Rakshivka village, Sur Bay in the Zaporizhzhia reservoir, alt. 58 m, 48.32166º N, 35.07299º E, 2005, L. Zamyatina (non coll.); Dnipro city, in the shallow coastal waters of the Monastyr Strait in the Dnipro River, alt. 54 m, 48.46033º N, 35.08094º E, 2022, leg. & det. B. Baranovsky, L. Karmyzova (non coll.); Kropyvnytskyi, 22 October 2019, leg. & det. M. Shevera (KW144063).

Platanthera chlorantha (Custer) Rchb.

The species is included in the Red Data Book of Ukraine (Didukh *et al.* 2009). There are less than 10 records of this species in the Zhytomyr region (Orlov 2005). It is rare species for the Zhytomyr region.

Specimens examined. Ukraine, Zhytomyr Region, Zhytomyr District, 2 km to the east from village Syniava, State Enterprise "Berdychiv Forestry", Hvozdiarnya forest division, quartier 18, vydil 15, in the oak-hornbeam forest, alt. 206 m, 50.74081º N, 28.59893º E,12 June 2021, leg. O. Zhukovsky, det. O. Orlov (non coll.); 3 km to the south-west from Zhytomyr City, on the second sand terrace, light acidophilous oak forest, alt. 259 m, 50.22129º N, 28.04551º E, 01 July 2022, leg. & det. O. Orlov (non coll.).

Poa remota Forselles

It is native species for the Northern, Central Europe and Asia (China and Caucasus). In Hungary, Romania and Kazahstan this species is on the southern border of its distribution. *Poa remota* is associated with the temperate wet broadleaved forests, mainly *Circaeo-Alnetum* (Dubyna *et al.* 2019). It is included in the Red Data Book of Ukraine (Didukh 2009). In Ukraine, it is included in the lists of regionally rare plants of Zakarpattia and Dnipropetrovsk regions (Andriienko & Peregrym 2012). In "Flora of URSR" (Zerov 1940) mentioned *Poa remota* in several regions of the Forest and Forest-Steppe zones of Ukraine. However, there is no recent information about its distribution in the country, except for a mention by V. Tarasov in Zaporizzya and Dnipropetrovsk regions (Tarasov 2012). During fieldwork in the Dnistro floodplain in 2019, a population of *Poa remota* was revealed in a wet oak forest. A herbarium specimen of *P. remota* is stored in the Herbarium of the Institute of Ecology of the Carpathians NAS of Ukraine (LWKS).

Specimen examined. Ukraine. Lviv Region, Mykolaiv District, floodplain of Dnister river near Rudnyky, alt. 264 m, 49.46352, 23.94226, 27 May 2019, leg. L. Borsukevych, N. Sytchak, O. Kagalo, det. O. Kagalo (LWKS).

Primula vulgaris Huds.

It is European-Mediterranean species (Hrytsak 2000, Fedoronchuk 2023d, POWO 2023). This is a common plant in the Ukrainian Carpathians and the Crimean Mountains, but rarely recorded from the plain regions of Ukraine, including Ivano-Frankivsk, Kyiv, Khmelnytsky, Lviv, and Zhytomyr regions (Hrytsak 2000, Melnyk *et al.* 2015). *Primula vulgaris* is widely cultivated as an ornamental plant. The species is reported for the first time in the Rivne Region as an ergasiophygophyte.

Specimen examined. Ukraine. Rivne Region, E outskirts of Zdolbuniv, in a forest on a quarry dump, alt. 198 m, 50.52028º N, 26.28140º E, 21 April 2022, leg. & det. A. Levon.

Reynoutria* × *bohemica Chrtek & Chrtková

Invasive notospecies of cultigenic origin, especially common in the western part of Ukraine (Protopopova & Shevera 2014, Shevera 2017, Shynder *et al.* 2021). The species is reported for the first time from the Odesa Region.

Specimens examined. Ukraine. Odesa Region, Odesa, botanical garden of Odesa I.I. Mechnykov National University, alt. 45 m, 46.44286º N, 30.76908º E, 17 September 2022, leg. & det. O. Shynder (non coll.); NE outskirts of Odesa, on the side of the Obyizna road, alt. 1 m, 46.56799º N, 30.76047º E, September 2021, Yu. Solonchenko (non coll.); Podilsk District, Podilsk, roadside, alt. 248 m, 47.76063º N, 29.53148º E, 28 October 2023, leg. & det. V. Kolomiychuk (non coll.).

Rhaponticum repens (L.) Hidalgo (= *Acroptilon repens* (L.) DC.)

An invasive xenophyte of West Asian origin (POWO 2023). It is widespread across the southern regions of Ukraine (Moysiyenko 2011, Protopopova *et al.* 2009, POWO 2023). The species is classified as a quarantine organism (On Amendments 2019). It has been observed near railways in several localities within Kyiv City (Mosyakin 1992). Although there is an unconfirmed reports from the Khmelnytsky Region (Novosad & Krytska 2010, Iljinska *et al.* 2016). There is a historical record of a finding of *Rh. repens* seeds in a sample of alfalfa seeds from the former district of Elizavetgrad (now the region of Kirovohrad) by I. Paczoski (1911). However, the exact origin of the seed sample couldn't be determined. This is the first time that *Rhaponticum repens* has been documented in the Kirovohrad region.

Specimen examined. Ukraine. Kirovohrad Region, Kropyvnytskyi, the territory of the railway station, a colony near the place of unloading of wagons, alt. 148 m, 48.52669º N, 32.25467º E, 22 July 2023, leg. & det. O. Shynder (KWHA).

Rubus* × *idaeoides Ruthe

A European notospecies, occasionally found in areas where parent species come into contact. Until recently it has been recorded from Ukraine (Zerov 1954, Fedoronchuk 2022d) and its isolated localities have been reported from the Lviv, Volyn and Zakarpattia Regions (Fodor 1974, Honcharenko 2003), Zhytomyr Region (Honcharenko 2011) and in the forests around Kyiv City (Onyshchenko *et al.* 2016). The species is reported for the first time in the Cherkasy and Chernihiv regions.

Specimens examined. Ukraine. Cherkasy Region, Cherkasy, Sosnovyi Bir forest park, roadside, alt. 128 m, 49.46407º N, 32.03009º E, 20 August 2022, leg. & det. O. Shynder, H. Chorna (non coll.); **Chernihiv Region**, Nizhyn District, in the NE vicinity of Hryshivka village, pine forest, near the biostationary of Nizhyn Mykola Gogol State University, alt. 174 m, 51.40920º N, 32.37978º E, 24 July 2017, leg. & det. A. Baransky (non coll.); Pryluky District, Trostyanets village, Trostyanets Dendrological Park, along the fence at the edge of the coniferous plantation, alt. 163 m, 50.786875º N, 32.808799º E, 1 October 2022, leg. & det. O. Shynder (non coll.).

Salix daphnoides Vill.

Salix daphnoides is distributed across central Europe, from the Baltic states to Northern Italy (POWO 2023). It is native to the Alps, Pyrenees, and the Carpathians. According to "Flora of USSR" (Kotov 1952) this species occurred in Ivano-Frankivsk, Lviv and Volyn regions. However, the Guide of Higher Plants of Ukraine (Prokudin 1987) listed it only in the

Ivano-Frankivsk Region (Kolomyia District). In 2018, this species was revealed from Chernivtsi Region, growing in a floodplain forest along the forest road. Road construction caused the tree to fall. Until recently it has been recorded from Ukraine (Zerov 1954, Fedoronchuk 2022d) and its isolated localities have been reported from the Lviv, Volyn and Zakarpattia regions. It may be extinct or critically endangered within Ukraine.

Specimen examined. Ukraine. Chernivtsi Region, Glyboka District, near Petrychanka village, bank of the Malyj Siret river, alt. 325 m, 48.05036º N, 25.86494º E, 27.07.2018, det. L. Borsukevych (non coll.).

Saxifraga tridactylites L.

It is a European-Mediterranean species, in Ukraine it occurs sporadically in the West Right-Bank Forest-Steppe, Steppe and Crimean Mountains (Klokov & Visiulina 1953, Prokudin 1987, Didukh *et al.* 2010, Fedoronchuk 2023b). The species is recorded for the first time from the Kirovohrad Region.

Specimens examined. Ukraine. Kirovohrad Region, Holovanivsk District, south the outskirts of Haivoron, a granite flat stone in the floodplain of the right bank of the South Buh River, alt. 120 m, 48.31530º N, 29.87917º E, 25 April 2023, leg. & det. T. Mamchur, O. Shynder (UM9786); **Mykolaiv Region,** Pervomaisk District, between Stanislavchik and Synyukhyn Brid, vertical granitic rock with NE aspect on the rigth bank of Synyukha river, alt. 78 m, 48.13396º N, 30.80763º E, 12 May 2021, leg. K. Lavrynenko, Ya. Didukh, N. Pashkevych, det. A. Kuzemko (non coll.); **Cherkasy Region**, Uman District, in the vicinity of Yurpil village, "Chornokamyanskyi prytykychskyi kanyon" reserve, horizontal granitic surfase in the floodplain of Girskyi Tikych river, alt. 148 m, 48.9959º N, 30.52726º E, 27 May 2023, leg. & det. K. Lavrinenko (non coll.); Uman District, in the vicinity of Buky village, granitic rock near the "Vyr" waterfall, alt. 148 m, 49.09525º N, 30.52726º E, 24 April 2021, leg. & det. A. Kuzemko, O. Bezsmertna (non. coll.).

Schoenoplectus litoralis (Schrad.) Palla

A rare species known from the Autonomous Republic of Crimea and Odesa Region (Egorova 2005). The species is reported for the first time in the Kherson Region.

Specimen examined. Ukraine. Kherson Region, Skadovsk District, the outskirts of Tendrivske village, the coast of Tendra Bay near the canal, alt. 0 m, 46.21438º N, 32.15984º E, 23 September 2020, leg. & det. O. Umanets (non coll.).

Smyrnium perfoliatum L.

It is a sub-Mediterranean species (POWO 2023). The species is a native plant in the Crimea (Yena 2012, Fedoronchuk 2022c). Earlier, this species was listed in the checklist of flora of the Kaniv Nature Reserve in the Cherkasy Region (Shevchyk *et al.* 1996). This is the first documented occurrence of this species in the continental part of Ukraine. It is considered a xenophyte and colonophyte.

Specimen examined. Ukraine. Cherkasy Region, outskirts of Kaniv, near the estate of the Kaniv nature reserve, forest plantation of *Populus higra* 'Italica', *Robinia pseudoacacia* and *Tilia cordata*, alt. 95 m, 49.72564º N, 31.532633º E, 25 May 1996, V. Shevchyk; ibid, 24 August 2023, leg. & det. V. Shevchyk (non coll.).

Sorghum halepense (L.) Pers.

It is a kenophyte of the Norhtern African, Western, Central, and Southern Asian origin (POWO 2023). The species is recorded from the Poltava, Sumy (Dvirna 2017), Dnipropetrovsk, Kyiv (Mosyakin 1991), Odesa (Mogilyuk 2013, Moysiyenko *et al.* 2023) regions and Authonomous Republic of Crimea (GBIF 2024e). The species was found in several new localities in the Odesa Region.

Specimens examined. Ukraine. Odesa Region, Odesa District, Myrne village, subway Odesa-Reni, near road, alt. 46 m, 46.45941° N, 30.38838° E, 26 October 2023, leg. & det. N. Skobel, K. Kalashnik, det. I. Moysiyenko (KHER); Bilhorod-Dnistrovskyi District, Kozatske village, alt. 20 m, 46.36405º N, 30.08189º E, 26 Octouber 2023, leg. & det. N. Skobel, K. Kalashnik, det. I. Moysiyenko (KHER); Starokozache village, alt. 108 m, 46.33428º N, 30.00335º E, 7 July 2023, leg. & det. N. Skobel, N. Velychko, O. Shchepeleva, det. I. Moysiyenko (non coll.); Semenivka village, alt. 98 m, 46.27924º N, 30.11513º E, 10 July 2023, leg. & det. N. Skobel, N. Velychko, O. Shchepeleva, det. I. Moysiyenko (non coll.); Moldova, Stefan Voda District,

Palanka village, alt. 3 m, 46.39474º N, 30.09331º E, 26 October 2023, leg. & det. N. Skobel, K. Kalashnik, det. I. Moysiyenko (non coll.).

Stellaria neglecta (Lej.) Weihe

The species is a xenophyte of South Palearctic native distribution. It is native for Crimea and the continental part of Ukraine (Fedoronchuk 2023a). It was initially reported from Mykolaiv and Odesa cities (Kotov 1952), and later from Dnipropetrovsk (Kucherevskyi & Shol 2009) and Kherson (Moysiyenko 2011) regions, as well as from Kyiv City (Shabarova 2007). In Cherkasy Region, it is reported from the Kaniv Nature Reserve (Shevchyk 2008). This is a second report for the Cherkasy Region.

Specimen examined. Ukraine. Cherkasy Region, outskirts of Kaniv, near the estate of the Kaniv nature reserve, forest plantation, alt. 94 m, 49.72561º N, 31.53274º E, April 1989, V. Shevchyk (on coll.); ibid., alt. 127 m, 49.72286º N, 31.53472º E, 1 May 2023, det. V. Shevchyk.

Symphyotrichum ciliatum (Ledeb.) G.L.Nesom

It is a xenophyte with a holarctic distribution (Kucherevskyi 2004, Novosad *et al.* 2013, Sîrbu *et al.* 2015). Some authors defined the origin of this species as East Asian (Sîrbu *et al.* 2015) or North American (Sytschak 2012, Tokaryuk *et al.* 2017). It was revealed for the first time in Eastern Europe from Moldova, where it was considered as native (Tzvelev 1979). The species was found from Kherson, Mykolaiv, and Odesa regions (Dubyna *et al.* 1986, Novosad *et al.* 2013), and later from Chernivtsi (Korzhan & Chornei 2008, Kuzyarin 2012, Tokaryuk *et al.* 2017), Dnipropetrovsk (Kucherevskyi 2004, Baranovsky *et al.* 2017), Ivano-Frankivsk (Kuzyarin 2012, Sytschak 2012), Khmelnytsk (Klets 1997), Lviv (Kuzyarin 2012), Zakarpattia and Zhytomyr (Tokaryuk *et al.* 2017) regions. The species is reported for the first time from the Kirovohrad, Zakarpattia and Zaporizhzhia regions.

Specimens examined. Ukraine. Kirovohrad Region, Novoukrainka, right bank of the Black Tashlyk River, cracks in the granite block above the water, alt. 129 m, 48.32264º N, 31.52247º E, 18 August 2019, leg. & det. O. Shynder (KWHA); **Zakarpattia Region**, Svalyava, on the tracks near the railway station, 30 October 2010, leg. & det. M. Shevera (KW 091503); **Zaporizhzhia Region,** Berdyansk District, outskirts of Stulneve village, Stulnyvsky quarry, on both sides of the road to the water, alt. 99 m, 47.2486º N, 35.99772º E, September 2005, leg. V. Kolomiychuk, det. S. Mosyakin (KW 114069).

Tragus racemosus (L.) All.

It is a Northern and Southern African, and Central Asian species (Prokudin *et al.* 1977, Moysiyenko 2011). As an alien plant, it has been reported in the Cherkasy (Shynder *et al.* 2022b), Dnipropetrovsk (Kucherevskyi & Shol 2009, Karmyzova & Baranovsky 2020), and the southern part of the Khmelnytskyi (Kagalo *et al.* 2004) regions. The species is reported for the first time for the Male Polissia, within the northern part of Khmelnytsky Region as a xenophyte and colonophyte.

Specimen examined. Ukraine. Khmelnytsk Region, Shepetivka, a colony near the railway, alt. 243 m, 50.19915º N, 27.05692º E, 3 September 2023, leg. & det. O. Shynder.

Trifolium incarnatum L.

It is ergasiophyte of sub-Mediterranean and Northern European origin (Fedoronchuk 2022b). It has been noted as an ergasiophygophyte in Kyiv City (Mosyakin & Yavorska 2002), Kyiv (Zerov 1954, Shynder & Shevchyk 2022) and Khmelnytskyi Regions (Zerov 1954, Novosad & Krytska 2010). The species have not been confirmed for the territory of the Northern Black Sea coast (Moysiyenko 2011). This species is reported for the first time in the Cherkasy Region.

Specimen examined. Ukraine. Cherkasy Region, Cherkasy District, Pekari village, on the hayfield, in the *T. pratense* plantation, alt. 88 m, 49.71201º N, 31.55031º E, 1 August 2016, leg. & det. V. Shevchyk (Herbarium of the Kaniv Nature Reserve).

Trifolium lupinaster L. s.l.

It is relict species in Ukraine, which will contribute to the further study by molecular genetic methods (Orlov & Kahalo 2016, Orlov & Kahalo 2016). Species is listed in the Red Data Book of Ukraine with the category "vulnerable" (On Approval 2021). The species is a rare for the Zhytomyr Region.

Specimen examined. Ukraine. Zhytomyr Region, Korosten District, 4 km to the west from village Rudnya-Zamyslovytska, State Enterprise "Bilokorovychy Forestry", Poiaskivske forest division, quartier 21, vydil 30, light acidophilous old oak forest, alt. 259 m, 50.22129º N, 28.04552º E, 1 September 2022, leg. & det. O. Orlov (KW).

Tripolium pannonicum (Jacq.) Dobrocz.

It is Eurasian species native in Ukraine, mainly distributed in the southern and eastern regions, where it is an inhabitant of saline habitats (Visiulina 1965, Prokudin 1987). Recently, isolated (presumably synanthropic) populations of the species were found from the lowland part of Lviv Region near areas with saline soils (Sytschak & Kagalo 2010). The species is reported for the first time from the mountainous part of the Lviv Region.

Specimen examined. Ukraine. Lviv Region, Stryi District, Urych village, on the side of the street next to a mountain stream, alt. 520 m, 49.18745º N, 23.39905º E, 29 September 2019, leg. & det. O. Shynder (KWHA, previously as *Aster amellus* in Shynder *et al.* 2022b).

Typha domingensis Pers. (= *Typha australis* Schumach.)

This is a rare species known only from the southern part of Ukraine (Egorova 2005). It is the first time reported for the Kherson Region.

Specimen examined. Ukraine. Kherson Region, Skadovsk District, the outskirts of Tendrivske village, the coast of Tendra Bay near the canal, alt. 0 m, 46.21438º N, 32.15984º E, 16 September 2020, 23 September 2020, leg. & det. O. Umanets (non coll.).

Veronica argute-serrata Regel & Schmalh.

It is xenophyte of Asian origin, was first discovered in Odesa in 2006 (Moysiyenko & Yena 2006), and has since spread to many areas of the city. Subsequently, the species was also reported in the cities of Dnipro and Luhansk (Lisovets & Kushnirova 2020). The species now is reported for the first time from the Kyiv Region.

Specimens examined. Ukraine. Kyiv Region, Bila Tserkva, in the square in front of Bila Tserkva National Agrarian University, alt. 156 m, 49.79206º N, 30.11200º E, 14 May 2023, leg. & det. O. Shynder (non coll.); on the side of Fastivska Street, 12 May 2023, leg. & det. S. Oksenenko (non coll.).

Veronica cardiocarpa Walp.

This is a rare alien plant species of the Central and Minor Asian origin. In Ukraine, it was known only from Fomin Botanical Garden in Kyiv as the center of its primary invasion. Subsequently, it was found in other districts of Kyiv and in Chernihiv (Konaikova & Peregrym 2022, Peregrym *et al.* 2016). Recently, another new locality of the species was recorded in Kyiv City.

Specimen examined. Ukraine. Kyiv, Holosiivskyi District, 126 Holosiivskyi Avenue, building 2, flower bed, alt. 178 m, 50.38429º N, 30.48141º E, 20 May 2023, leg. & det. I. Moysiyenko.

Vincetoxicum fuscatum (Hornem.) Endl. (= *Vincetoxicum maeoticum* (Kleopow) Barbar., *V. intermedium* Taliev)

It is a rare species in the Right Bank Steppe zone of Ukraine (Drabyniuk *et al.* 2022).

Specimen examined. Ukraine. Mykolaiv Region, Mykolaiv District, in the vicinity of Antonivka village, alt. 35 m, 47.54986º N 32.10883º E, 9 June 2023, leg. & det. H. Drabyniuk, V. Scorobogatov, L. Buhai (non coll.).

Vitis riparia Michx.

It is an ergasiophyte of North America origin (POWO 2023). The species was reported from different regions of Ukraine (Moysiyenko *et al.* 2023). This species is revealed for the first time from the Kirovohrad Region.

Specimens examined. Ukraine. Kirovohrad Region, Holovanivsk District, SE outskirts of the Blagovishchenske, thickets of bushes near abandoned farm buildings, alt. 147 m, 48.31706º N, 30.23749º E, 6 July 2017, leg. & det. O. Shynder (KWHA); Kropyvnytskyi District, Dolyna, Dendrological Park "Veseli Bokovenky", alt. 137 m, 48.21848º N, 32.85542º E, 7 October 2022, leg. & det. H. Pidtykana, O. Shynder, V. Kolomiychuk; Oleksandria District, Svitlovodsk, embankment, alt. 85 m, 49.05597º N, 33.19774º E, 4 July 2020, leg. & det. O. Shynder (KW).

Utricularia australis R.Br.

This species is often confused with *Utricularia vulgaris* L. (Orlov 2019b, Iakushenko & Orlov 2015, Orlov *et al.* 2021). The species is rare for the Zhytomyr Region.

Specimens examined. Ukraine. Zhytomyr Region, Zviagel District, State Enterprise Horodnytsia forestry, Kurchytsia forest division, quartier 15, vydil 13, in the water of river Mytskivka, in shallow water, near the bank, alt. 197 m, 50.79941º N, 27.39153º E, 27 September 2021, leg. & det. O. Orlov (KW); Korosten District, Drevliansky Nature Reserve, Rozsohivske department, village Liubarka, in the pond on river Loznytsia, alt. 147 m, 51.09047º N, 29.06212º E, 1 September 2021, leg. & det. O. Orlov (KW); Zhytomyr District, 6,3 km to south-east from village Levkiv, in the forest lake, near the bank, alt. 193 m, 50.20008º N, 28.93239º E, 23 August 2021, leg. & det. O. Orlov (non coll.); Korosten District, State Enterprise "Olevsk Forestry", Snovydovychi forest division, quartier 55, on the border of vydils 13 and 11, in a dry, watered ditch on the side of the road, alt. 187 m, 51.23433º N 27.46791º E, 8 September 2022, leg. O. Zhukovsky, det. O. Orlov (non coll.).

Utricularia minor L.

The species is included in the Red Data Book of Ukraine (Didukh *et al.* 2009). There is still a lack of knowledge about its distribution in the Zhytomyr Region.

Specimens examined. Ukraine. Zhytomyr Region, Korosten District, 2 km to the south from village Novoozerianka, State Enterprise "Bilokorovychy Forestry", Bilokorovychy forest division, quartier 13, vydil 4, hydrological reserve Hlozna, alt. 187 m, 51.19053º N, 28.00374º E, 05 September 2022, leg. & det. O. Orlov (KW); Korosten District, 2,3 km to the south from Narodychy, Drevliansky Nature Reserve, Narodychy department, quartier 12, vydil 8, in the water, alt. 137 m, 51.1835º N, 29.10825º E. 29 June 2023, leg. & det. O. Orlov (KW).

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РЕЗЮМЕ

Мойсієнко, І.І., Шиндер, О.І., Орлов, О.О., Шевера, М.В., Шевчик, В.Л., Калашнік, К.С., Коломійчук, В.П., Лавріненко, К.В., Баранський, А.Р., Борсукевич, Л.М., Барановський, Б.О., Левон, А.Ф., Кошелев, В.О., Кармизова, Л.А., Чорна, Г.А., Пашкевич, Н.А., Солонченко, Ю.В., Мамчур, Т.В., Драбинюк, Г.В., Підтикана, Н.О., Скобель, Н.О. (2024). Нотатки до знахідок судинних рослин в Україні II. *Чорноморський ботанічний журнал* 20 (2): 124–153. doi: 10.32999/ksu1990-553X/2024-20-2-2

У цьому повідомленні наведено нові дані щодо судинних рослин в Україні. У ньому наведені нові відомості щодо поширення в Україні 82 видів: *Acer monspessulanum, Aconitum anthora, Amaranthus deflexus, Anthriscus cerefolium, Asplenium ruta-muraria, Arabis alpina, Artemisia argyi, A. sieversiana, A. verlotiorum, Berberis aquifolium, Bolboschoenus glaucus, Calepina irregularis, Centaurea borysthenica, Cephalanthera longifolia, Cirsium esculentum, Clematis vitalba, Coreopsis grandiflora, Corydalis caucasica, C. cava subsp. marschalliana Crithopsis delileana, Cucumis melo, Cydonia oblonga, Cyperus odoratus, Dasypyrum villosum, Dracocephalum ruyschiana, Eragrostis pilosa, Erechtites hieraciifolius, Eriochloa villosa, Euphorbia glyptosperma, E. lathyris, E. prostrata, Fallopia baldschuanica, Ficus carica, Galanthus nivalis, Galium humifusum, Goodyera repens, Gymnocladus dioicus, Hedera helix, Heliotropium stevenianum, Hesperis matronalis subsp. matronalis, Huperzia selago, Hypericum polyphyllum, Iris foetidissima, Lagurus ovatus, Laser trilobum, Rhaponticum repens, Limonium alutaceum, Lipandra polysperma, Luzula luzuloides, Nymphoides peltata, Oenothera glazioviana, Opuntia humifusa, Ostericum palustre, Peganum harmala, Peucedanum latifolium, Phragmites australis subsp. isiacus Phytolacca americana, Pilosella flagellaris, Pistia stratiotes, Platanthera chlorantha, Poa remota, Primula vulgaris, Reynoutria × bohemica, Rubus × idaeoides, Salix daphnoides, Saxifraga tridactylites, Schoenoplectus litoralis, Smyrnium perfoliatum, Sorghum halepense, Stellaria neglecta, Symphyotrichum ciliatum, Tragus racemosus, Trifolium incarnatum, T. lupinaster, Tripolium pannonicum, Typha domingensis, Veronica argute-serrata, V. cardiocarpa, Vincetoxicum fuscatum, Vitis riparia, Utricularia australis* and *U. minor*. Деякі знахідки стосуються крупних регіонів, що включають декілька областей. Більшість нових знахідок наведено для адміністративних областей України: чотирнадцять видів наводяться вперше для Кіровоградської області, тринадцять – Житомирської, одинадцять – Одеської, сім – Миколаївської та Закарпатської, п’ять – Херсонської, чотири – Дніпропетровської та Київської, три – Рівненської, Вінницької та Житомирської, два – Івано-Франківської, Львівської, Тернопільської, Хмельницької та Автономної республіки Крим, один – Волинської, Запорізької, Чернівецької областей та міста Києва. Також вказуються локалітети ряду рідкісних видів судинних рослин, у тому числі видів, включених до Червоної книги України, та ряду регіонально рідкісних видів рослин.

Ключові слова: біорізноманіття, нові знахідки, судинні рослини, Україна.