RESEARCH ARTICLE

Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine): native and alien taxa, distribution of rare plants, new findings

Oleksandr Shynder *, Julia Negrash

M.M. Gryshko National Botanical Garden, National Academy of Sciences of Ukraine, Tymiryazevska str. 1, 01014 Kyiv, Ukraine; * shinderoleksandr@gmail.com

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Abstract

For the first time, information on the flora of the Siverskyi Donets basin in the vicinity of Balakliya town (Kharkiv region of Ukraine) was summarized based on the comprehensive analysis of published data, herbarium material, and own field examinations. Field surveys were conducted during September 2015 and March-July 2016. The surveyed areas were located mainly in the valleys of the Siverskyi Donets river and some of its tributaries within the former Balakliya district.

The conspectus of flora comprising 933 taxa of vascular plants (including 798 recorded during field surveys) has been prepared. In particular, 739 taxa of native and 194 taxa of alien plants were recorded. The habitats of 14 species from the Red Book of Ukraine were found. The locations of other protected, uncommon and new for the flora of the region plant species were also identified. Several taxa (i.e., some of the calciphytes like Astragalus albicaulis, Linum czernjajevii, Odontarrhena tortuosa subsp. cretacea, Scutellaria supina, and Silene supina) were found out of their previously known ranges. Newly established locations of some other species (e.g., Ephedra distachya, Onosma simplicissima, and Ornithogalum boucheanum) significantly complement previously known chorological data. Finally, information about new findings of such alien taxa actively expanding new areas as Cornus sanguinea subsp. australis, Fraxinus pennsylvanica, Sedum sexangulare, Ulmus pumila, and Vitis vulpina is provided.

It has been established that the flora of the Siverskyi Donets basin in the vicinity of Balakliya town is a rich natural center of phytodiversity being under active adventisation. Forest reclamation plantations play a significant role in spreading the alien plants. Railway and the pine terrace of the Siverskyi Donets also serve the migration corridors for many of such alien plants.

Keywords: flora, Siverskyi Donets, new localities, alien plant species, rare plant species

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Introduction

Balakliya is a town located in the southeastern part of the Kharkiv region of Ukraine, in the subzone of the Northern Steppe. The complex landscape system of the Siverskyi Donets basin leads to the formation of rich and diverse flora and allows its preservation in
conditions of significant anthropic pressure. Territorially, the vicinity of Balakliya is located between two national phytodiversity centers, Donetsk-Mzhanskyi and Izyumskyi (Dogadina & Bezrodnova, 2011). There are present all main floristic complexes of the Northern Steppe, including pine, petrophytic (cretaceous outcrops), and halophytic (salt meadows).

In the XIX century, this area left out of naturalists’ attention. At the beginning of the XX century, Taliev (1904) inspected the cretaceous outcrops west of the village Milova in the river Milova’s valley and noted the poverty of the species composition of its vegetation. Later, Kotov (1965) briefly described the forest vegetation of the Izium forestry on the left bank of Siverskyi Donets. Today, part of this complex combining various types of forests, floodplain meadows, and sandy areas belongs to the Landscape Park Izyumskaya Luka (Onyshchenko et al., 2016). Lavrenko (1973) inspected the western part of the Andriyivskyi Sukhyi Lyman within the former Balakliya district. Aquatic and coastal-water flora and vegetation of the Siverskyi Donets basin in the vicinity of Balakliya has been studied by several scientists (Chernaya, 1982; Dubyna, 2006; Kazarinova, 2015). There are also some publications about some locations, predominantly of rare species, in this region (Bezrodnova, 2015; Gorelova & Alekhin, 2002; Melnyk & Parubok, 2004; Shynder & Saidakhmedova, 2018; Vinichenko, 2007), including the fundamental work “Flora of the Ukrainian SSR” (Kotov et al., 1936–1965). Please also see the additional list of references in the Appendix.

Despite intensive investigations, the flora of the Siverskyi Donets basin within the Balakliya vicinity remained incompletely studied. Chorological data are crucial for protecting the rare plants and their habitats, particularly because, in the former Balakliya district’s territory, there are located five sites of the Emerald Network (2021).

**Material and methods**

Field surveys were conducted during September 2015 and March–July 2016. The surveyed areas are located mainly in the valleys of the Siverskyi Donets river and some of its tributaries within the former Balakliya district. According to the new scheme of administrative-territorial zoning of Ukraine, our research area covered the communities of Balakliya town and the Donets settlement.

Collected specimens (403 species on 579 herbarium sheets) were deposited at the Herbarium of the M.M. Gryshko National Botanical Garden of the NAS of Ukraine (KWhA). The plants’ photos from the studied area were also partly uploaded to the iNaturalist (2021) database.

The whole set of discovered taxa was divided into two main fractions – native and alien plants. Alien plants include those that penetrated the research area in the historical epoch (from ancient times to the present day). To clarify the primary distribution ranges and habitats of plants, we used several principal reference works (Prokudin et al., 1977; Protopopova, 1991; Scholz, 1996; Geltman, 2006; Iljinska et al., 2007; Protopopova et al., 2009; Zvyagintseva, 2013; Protopopova & Shevera, 2012, 2019). Many alien plants were first cultivated, and after that, they naturalized and spread spontaneously to the wild (escaped plants). Such escaped plants were included in the checklist only in case of confirmed reproduction by seeds outside of the primary cultivation area.

The nomenclature of taxa conforms to the Plant of the World Online (2021) and Euro+Med PlantBase (2021) databases.

Some locations of rare taxa listed in the Red Book of Ukraine (Didukh, 2009) were already known for the vicinity of Balakliya, so we present them here as confirmed.

It should be noted that the names of forests and forestry to which these forests belong do not coincide. For example, forest Kreydyanska Dacha belongs to the Balakliyske forestry, and forest Borysoglibskyi Bir belongs to the Vysokobirske forestry.

The text periodically indicates several locations (urochysches) (Figs. 1 & 2):

- Borschtchivka – SE 2.5 km, a large gully (49.47125°, 36.966361°);
- Bayrak – W, 4 km, gully (ravine) Khomyn (49.407044°, 36.776142°);
- Milova – cretaceous outcrops on the right slopes of the valley of the Milova river (49.430986°, 36.662644°);
- Balakliya – the valley of the oxbow Lyakhova, the branch of Siverskyi Donets (49.456931°, 36.821375°);
Balakiya – W, sandy steppe on the pine terrace of Siverskyi Donets (49.463975°, 36.784181°);
Protopopivka – NW, cretaceous outcrops on the slopes of a large gully (49.255167°, 36.902175°).

Following abbreviations were applied:
KWHA – herbarium voucher transferred to the KWHA herbarium;
BC – taxon listed in the revised Appendix I to the Berne Convention (2011);
Figure 2. Vegetation and landscapes of the Balakliya vicinity: A – the mouth of the Chepil river (locus classicus of the Inula sabuletorum) and the floodplain forest in the Landscape Park Izyumska Luka; B – pine forest on the sandy terrace of the Siverskyi Donets river; C – the fragment of an age-old oak forest in the quarter Nr 46 of Borysoglibskyi Bir; D – population of Iris arenaria in the quarter Nr 29 of Kreydyanska Dacha; E – Thelipteris palustris on the bank of the forest swamp in the quarter Nr 8 of Kreydyanska Dacha; F – the valley of the Siverskyi Donets river; G – Salvinia natans in aquatic vegetation; H – Balakliyska Hora in Balakliya.
Figure 2. Continued. I – tall-herb meadows near Petrivske village; J – Ephedra distachya among shrubs near Borschivka village; K – steppe vegetation with Stipa pennata; L – Stipa lessingiana on the slopes of the Khomyn ravine; M – sandy steppe near Balakliya; N – salted meadows in the Borschivka village; O – Kreydyana Hora near Protopopivka village; P – chalk outcrops near Milova village.
Results and discussion

During the field surveys, we have recorded 798 taxa of vascular plants, 14 of which are listed in the Red Book of Ukraine (Didukh, 2009), and 58 are regionally rare. The data from the herbaria of the V.N. Karazin Kharkiv National University (CWU – Kharkiv, Ukraine); M.G. Kholodny Institute of Botany of the National Academy of Sciences of Ukraine (KW – Kyiv, Ukraine); M.M. Gryshko National Botanical Garden of the National Academy of Sciences of Ukraine (KWHA – Kyiv, Ukraine); and V.L. Komarov Botanical Institute of the Russian Academy of Sciences (LE – St. Petersburg, Russia) were also taken into consideration and completed by information from the published sources. As a result, we have compiled a checklist comprising 933 taxa of vascular plants, including 739 native and 194 alien taxa (Appendix).

Many taxa in the studied area exist on the limit of their natural habitats. At the beginning of the 20th century, Lavrenko (Lavrenko, 1973; Kotov et al., 1936–1965) discovered many edge locations of boreal plant species that grow in the swamps of the Siverskyi Donets basin and on its sandy terraces in pine forests between Balakiya and Zmiiv. Most calciphytes in the studied area are on the verge of their geographical distribution. Our findings of some of them (e.g., Astragalus albicaulis, Cotinus coggyria, Linum czernjajevii, Pimpinellla tragium subsp. titanophila, Scutellaria supina, and Silene supina) expand existing vision about their natural habitats. Among the plants that grow in the steppe habitats along the edge of their geographical distribution in the studied area are Ephedra distachya, Erysimum aureum, Inula salicina subsp. sabuletorum, Onosma simplicissima, and Ornithogalum boucheanum.

Among the actual directions of floristic researches is the fixation and monitoring of alien plants, many of which pose a threat to aboriginal biodiversity. Many alien plants in the new habitat are becoming invasive – they reproduce en masse, interfere with the normal functioning of natural ecosystems, and often suppress and displace native plants (Protopopova et al., 2002, 2009; Geltman, 2006; Lambdon et al., 2008; Protopopova & Shevera, 2012).

In Ukraine, Protopopova and Shevera have long studied the questions of phytovinvasion, and recently published the list of highly invasive plants in the flora of Ukraine (Protopopova & Shevera, 2019). According to these authors, the eastern part of the Steppe zone (where Balakiya is located) is classified as a region with a fairly high saturation of species with high invasive potential – over 40 such taxa reported for this region. Zvyagintseva (2013) studied invasive plants directly in the Kharkiv region. She found that the urban flora of Kharkiv includes 312 alien plant taxa, 14 of which have a high invasive potential and are widespread in both artificial and natural phytocoenoses of the urban area.

During our study, we confirmed for the vicinity of Balakiya the presence of almost all highly active invasive plants that were reported (Protopopova & Shevera, 2019) for the eastern part of the Steppe (i.e., Acer negundo, Asclepias syriaca, Centaurea diffusa, Fraxinus pennsylvanica, Impatiens parviflora, Prunus serotina, Solidago canadensis, Ulmus pumila, etc.). Also, we found the locations of new and uncommon alien plants, some of which are in the expansion stage and may become invasive in the future (i.e., Centaurea × varnensis, Cornus sanguinea subsp. australis, Mirabilis nytaginea, Petrosedum rupestre, Populus × canadensis, Prunus tomentosa, Ptelea trifoliata, Rumex patientia, Sambucus racemosa, Sedum sexangulare, Vitis vulpina, etc.).

Below we represent detailed descriptions of the locations of native plants listed in the Red Book of Ukraine (Didukh, 2009) and which are rare or present on the edge of the range of their natural distribution. This list is supported by notes about newly discovered alien plants in the flora of the Balakiya district. The complete list of taxa of the flora of the vicinity of Balakiya, including the citations of taxa authors, is represented in the Appendix.

Although the generalized list of taxa looks large, it is probably still not complete since we have not been able to cover all ecological groups of plants in the vicinity of Balakiya.
during our field investigations, which lasted less than a full year. The taxonomic diversity of many plant groups (e.g., Carex, Centaurea, Galium, Polygonum, Pilosella, Rosa, and Veronica) has been studied only partly. Nevertheless, we hope that our study will contribute to the knowledge about the biodiversity of the Kharkiv region of Ukraine.

Native plants

Polypodiopsida

Salvinia natans (RBU) – In Balakliya, along the lower reaches of the rivers Voloska Balakliyka (KWHA) and Serednya Balakliyka, occasionally (f.r.), and also on the oxbow Lyakhova (Fig. 2). Several more locations were recorded in the south and south-eastern vicinity of Andriyivka – on Siverskyi Donets and its oxbows (f.r.).

Gnetopsida

Ephedra distachya (r.s.) – south-eastern vicinity of Borshchivka, a large gully in 2.5 km distance, on the slope of the southern exposure with a loess outcrop (KWHA). The population is represented by two adjacent plots, each of which has an area of approximately 30 m² (Fig. 2). Coordinates of both sections: 49.47183°, 36.96881°, and 49.47148°, 36.97059°. In one of them (22.05.2017, together with N.B. Saidakhmedova) at the stage of flowering, we noted only male strobiles on plants, in another – only female strobiles, so these are probably two old vegetative clones.

Angiosperms – Monocots

Allium decipiens (r.s.) – Western vicinity of Balakliya – sandy steppe, a few plants (KWHA). Bellevalia sarmatica (r.s.) – Vicinity of Bayrak – in the lower part of the Khomyn ravine, above the coast of Siverskyi Donets, several generative individuals (KWHA).

Epipactis helleborine (RBU) – Northern vicinity of Protopopivka – in the floodplain oak in the valley of the Siverskyi Donets near the Kreydyanska Mountain. In total, 55 generative individuals of the species were recorded in several locations (KWHA).

Fritillaria meleagroides (RBU) – Western vicinity of Balakliya, on the sandy steppe, several dozen individuals (KWHA); 0.6 km toward the northwest from the village Bayrak, one individual was found near a small roadside plantation in the Siverskyi Donets floodplain (49.426039°, 36.834686°) (KWHA).

Gladiolus imbricatus (RBU) – According to literature sources, this is a rather widespread species in the vicinity of Balakliya (Gorelova & Alekhin, 2002). We noted a large population of the species in the floodplain on the left-bank meadow of the Siverskyi Donets, toward the north from the village Bayrak (KWHA). More than 200 generative individuals of the species were recorded on a 100×200 m plot near the Balakliya-Izyum highway (49.426319°, 36.833014°). The locus of this population is noted in the east vicinity of Bayrak, on the edge of a deciduous grove, at the top of the slope (49.417950°, 36.842819°) (KWHA). Ten generative individuals were growing on the forest’s edge. Also, 14 generative and four virginal individuals grew nearby on fallow.

Iris arenaria (RBU, BC) – Western vicinity of Balakliya, sandy steppe, several dozen small clumps of plants (KWHA); south-western vicinity of Balakliya, Kreydyanska Dacha, the quarter Nr 30 of the Balakliyske forestry (49.433619°, 36.818361°), Landscape Reserve of Local Significance Kreydyanska Dacha (KWHA). In this population, on a total area of about 4 ha, we found near 100 individuals and their groups, mostly with 1–5-flowering shoots. In the most prominent clumps of this population were recorded 69 flowering shoots per 1 m². Besides RBU, this taxon is also included in the list of rare species of the Landscape Park Izyumska Luka (Onyshchenko et al., 2016).

Iris pumila (r.s.) – South-eastern vicinity of Borshchivka, at the top of a large gully, along the edge of the plateau (f.r.).

Liparis loeselii (RBU) – It is included in the list of rare species of the Landscape Park Izyumska Luka (Onyshchenko et al., 2016). Requires confirmation.

Muscari neglectum (r.s.) – north-western vicinity of Protopopivka, on the slope of the gully with limestone outcrops (f.r.).

Ornithogalum boucheanum (RBU) – South-western vicinity of Borshchivka, in a ravine on the northern slope of a large gully (49.471361°, 36.970133°) (KWHA). This young population has the form of a stripe up to 30 m long. About 80 generative and over 100 virginal individuals have been recorded here. This species is
occasionally cultivated in Balakliya. Toward the west from the city center along the Lyakhova river banks, cultivated plantations of the species occasionally occur near the dwelling. Besides, planted and self-seeding clumps of the plants occur in the forest park (KWAH). Here, a spontaneous population of introduction origin is establishing.

Stipa borysthenica (RBU) – Between Balakliya and Andriyivka – Borysoglibskyi Bir, several small loci on the lawn in the quarter Nr 46; on felled areas and along the glades in the quarters Nrs 57 and 65 of the Vysokobirske forestry (KWAH).

Stipa capillata (RBU) – The species is quite widespread and is listed for the Balakliya district from the outskirts of Dovgalivka (Bezrodnova, 2015) and other villages. We recorded the following locations: western vicinity of Balakliya – Borysoglibskyi Bir, the quarter Nr 128 of Vysokobirske forestry, a few individuals (KWAH); the eastern part of Balakliya, on the side of the highway, several young clumps of plants (KWAH); south-western vicinity of Borshchivka – in a large gully, on the slopes, abundantly (KWAH); north-western vicinity of Borshchivka – near the road on the right slope of the valley of the Voloska Balakliyka river (f.r.); between Milova and Glazunivka – on cretaceous outcrops and steppe areas (KWAH); north-western vicinity of Protopopivka – a large gully, on the tops of the slopes, abundantly (KWAH); Protopopivka, the bank of Siverskyi Donets, on steep slopes, in some places abundantly (f.r.).

Stipa lessingiana (RBU) – North-eastern vicinity of Glazunivka, slopes in the upper reaches of the Milova river (49.428053°, 36.653008°), occasionally (KWAH); south-eastern vicinity of Borshchivka – in a large gully, on the upper part of the southern slopes (discovered together with N.B. Saidakhmedova), two linear plots (20 × 5 m and 20 × 2 m) were found (KWAH); vicinity of Bayrak-Khomyn ravine (Fig. 2), three clumps of 100–200 generative individuals and several small clumps (KWAH).

Stipa pennata (RBU) – North-eastern vicinity of Glazunivka – a slope in the upper reaches of the valley of Milova river (KWAH); south-eastern vicinity of Borshchivka – in a large gully (discovered together with N.B. Saidakhmedova), locus 40×15 m above the edge of the abandoned quarry (Fig. 2), several clumps of plants on the edge of pine stands, above the slope (KWAH); north-western vicinity of Protopopivka – on the cretaceous outcrops of a large gully, abundantly (KWAH).

Tulipa sylvestris subsp. australis (RBU) – Balakliya – in the floodplain forest park along the oxbow Lyakhova, many small clones (KWAH); northern vicinity of Bayrak – floodplain grove on the left bank of Siverskyi Donets, near the highway (KWAH); south-eastern vicinity of Bayrak, in the forest on the slope, abundantly (f.r.).

Angiosperms – Eudicots

Adonis vernalis (RBU) – The species is provided from the vicinity of Milova and Pyatygirske (Melynyk & Parubok, 2004). The phrase “Balakliya district, Kirovo (Herbarium CWP, 1995)” (Melynyk & Parubok, 2004) probably refers to Kvitneve (former name – Kirove village) in the Blyznyukivskyi district of Kharkiv region. We confirmed the occurrence of A. vernalis in the south-western vicinity of Milova – on a small section of the meadow steppe, on the southern slope of the valley of the Milova river (slope 30° of north exposure), near the Shebelynskyi chalk quarry (49.433981°, 36.666033°) (KWAH). Over 50 generative individuals were found here in the plot of 30 × 30 m. Another locality was found in the north-western part of Protopopivka – on the cretaceous outcrops on the northern slope of a large gully (slope of south-eastern exposure with 5–30° inclination) (49.433981°, 36.666033°) (KWAH). Up to 500 generative individuals grow on a 200×100 m plot.

Astragalus albicaulis (r.s.) – Milova – south-western vicinity, cretaceous outcrops (KWAH).

Astragalus pallescens – Borshchivka – north-western vicinity, the northern slope of the valley of the Voloska Balakliyka river, on the roadside (KWAH); Borshchivka – south-eastern vicinity, on the slopes of a large gully, abundantly (f.r.).

Astragalus ucrainicus – Protopopivka – north-western vicinity, along the cretaceous outcrops in the great gully (KWAH).

Centaurium pulchellum (r.s.) – Protopopivka – northern vicinity, on the Siverskyi Donets banks (KWAH).
Clematis integrifolia (r.s.) – Milova – south-western vicinity, the southern slopes of the valley of the Milova river, occasionally (KWHA).

Dipsacus strigosus (r.s.) – Protopopivka – northern vicinity, meadows, and edge of the forest in the Siverskyi Donets valley (KWHA).

Eremogone longifolia (r.s.) – Balakliya – western vicinity, sandy steppe (KWHA); Balakliya – south-western vicinity, Kreydyanska Dacha, often throughout the massif (KWHA).

Erysimum aureum (r.s.) – Balakliya – south-western vicinity, Kreydyanska Dacha, occasionally (KWHA); Protopopivka – northern vicinity, urochysche Prystin-1, the quarter Nr 14 of the Berestyanfske forestry (KWHA).

Euphorbia microcarpa – Bayrak – western vicinity, Khomyn ravine (KWHA); vicinity of the Balakliya cement factory, the quarter Nr 34 of Vysokobirske forestry, on a glade in the pine forest (f.r.).

Gypsophila oligosperma – Milova – south-western vicinity, cretaceous outcrops (KWHA); Protopopivka – Kreydyana Hora (KWHA).

Impatiens noli-tangere – Between Balakliya and Andriyivivka, the quarter Nr 46 of the Vysokobirske forestry, occasionally along the clearing (KWHA).

Jurinea cyanoides – In the collection of N. Tzvelev: Balakliya – 4–5 km to the northeast, slope along the river Voloska Balakliyka (Vinichenko, 2007). We met this species mainly on the pine terrace of Siverskyi Donets: between Andriyivivka and Balakliya – in Borysoglisbyskiy Bir, occasionally (f.r.); Balakliya – south-western vicinity, Kreydyanska Dacha (KWHA); Balakliya – western vicinity, sandy steppe (f.r.); Petrovskoe – south-eastern vicinity, in the pine forest (f.r.).

Limonium bungei – Balakliya – Western vicinity, sandy steppe (KWHA).

Linum cernjajevii Klokov (r.s.) – Protopopivka – north-western vicinity, cretaceous outcrops in a large gully (KWHA).

Linum flavum (r.s.): Milova – South-western vicinity, cretaceous outcrops in the valley of the Milova river (KWHA).

Minuartia setacea (r.s.) – Protopopivka – north-western vicinity, cretaceous outcrops of the northern slope of the great gully (KWHA).

Odontarrhena tortuosa subsp. cretacea (RBU) – Milova – south-western vicinity, along the cretaceous outcrops along the Milova river, sporadically (KWHA).

Onosma simplicissima (RBU) – Milova – south-western vicinity, on the cretaceous outcrops of the southern slope of the valley of the Milova river (KWHA).

Orthilia secunda (r.s.) – Cited for Balakliya (Barbarych, 1957); we discovered this location together with N.B. Saidakhmedova in Kreydyanska Dacha, in the quarter Nr 29 of the Balakliyske forestry (KWHA).

Pimpinella tragium subsp. titanophila (r.s.) (Bezrodnova, 2015) – Milova – south-western vicinity, on the dumps of the Shebelynsky chalk quarry (KWHA), and on the cretaceous outcrops of the Milova river valley (KWHA).

Pulsatilla pratensis (RBU) – widespread on the pine terrace of Siverskyi Donets, recorded in many quarters of Balakliya (KWHA) and Vysokobirske (KWHA) forests. In some quarters, including felled areas, it has a high population density.

Salvia aethiopis (r.s.) – Milova – south-western vicinity, on the cretaceous outcrops (KWHA); Balakliya – eastern part, often along roadsides (f.r.); Bayrak – western vicinity of the ravine Khomyn (f.r.); Borshchivka – northern vicinity, the slopes of the valley of the Voloska Balakliyka river (f.r.); Protopopivka – northern and south-western vicinity, often (f.r.).

Salvia pratensis – Milova – south-western vicinity, the slopes of the Milova river valley (KWHA).

Sanguisorba officinalis – Bayrak – northern vicinity, floodplain meadow in the valley of Siverskyi Donets (KWHA); Balakliya – south-western vicinity, Kreydyanska Dacha, in wet combe (f.r.).

Scorzoneria ensifolia – Andriyivivka – southern vicinity, on the sands, a lot (KWHA); between Balakliya and Andriyivivka – Borysoglisbskiy Bir, occasionally (KWHA).

Scurtellaaria supina (RBU) – It is reported for the vicinity of Pyatygirske (Bezrodnova, 2015). We found probably the same locality in the south-western vicinity of Milova on cretaceous outcrops (KWHA).

Silene supina (r.s.): Protopopivka – north-western vicinity, cretaceous outcrops in a large gully (KWHA).

Spergula arvensis – Balakliya – south-western vicinity, Kreydyanska Dacha, the quarter Nr 29 of Kreydyanske forestry, on a large glade, on the sands, often (KWHA).

Symphytum tauricum – Balakliya – the northern edge, on homesteads in the military
base, as a weed (KWA); Bayrak – western vicinity, roadside thickets of shrubs (f.r.); Bayrak – western vicinity, ravine Khomyn (KWA).

**Thalictrum lucidum** (r.s.) – Balakliya – eastern vicinity, the valley of the river Voloska Balakliyka, abundantly (KWA).

**Thymus × dimorphus** – Borshchivka – south-eastern vicinity, on the slopes of a large gully (KWA); Borshchivka – northern vicinity, the northern slope of the valley of the Voloska Balakliyka river (KWA); Protopopivka – north-western vicinity, cretaceous outcrops of the northern slope of the great gully (KWA).

**Thymus calcareus** (r.s.) – Milova – south-western vicinity, cretaceous outcrops on the Milova river (KWA).

**Tragopogon podolicus** – It is provided for the city of Balakliya and neighboring districts (Klokov, 1965), but in the recent revision it is not indicated for the region (Gorelova & Alekhin, 2002). We recorded the following localities: Balakliya – the northern part, the territory of the military base (KWA), and near the railway station (f.r.); Balakliya – western vicinity, sandy steppe (f.r.), and along the pine terrace of Siverskyi Donets (f.r.).

### Alien plants

#### Angiosperms – Monocots

**Typha laxmannii** – Balakliya – western part, micro-district Druzhba, in a wet depression between homesteads (f.r.); Balakliya – western vicinity, near the lake Lyakhove (f.r.); Protopopivka – north-western vicinity, in a drying stream at the bottom of a large gully (KWA).

#### Angiosperms – Eudicots

**Alkekengi officinarum** – Protopopivka – north-western vicinity, in robinia planting, the quarter Nr 12 of the Berestyanske forestry, abundantly (KWA).

**Artemisia biennis** – Balakliya – near the railway station, in the culture near the estate and nearby, on the ruderal areas, several dozen individuals (KWA).

**Cornus sanguinea** subsp. australis – throughout the territory, often in forest plantations, from which it spreads to the adjacent territories, in particular, in the town of Balakliya – along the railway.

**Cotoneaster acutifolius** – Balakliya – south-western vicinity, Kreydyanska Dacha, occasionally (KWA); between Balakliya and Andriyivka – Borysoglibskyi Bir, sporadically in different quarters (f.r.).

**Crataegus cf. chrysocarpa** – Balakliya – north-western vicinity, in the valley of the river Serednya Balakliyka (KWA), several probably self-seeding young generative individuals.

**Fraxinus pennsylvanica** – sporadically in forest plantations, from which it spreads to the adjacent areas.

**Gypsophila perfoliata** – Milova – south-western vicinity, dumps of the Shebelinskyi chalk quarry, scattered (KWA).

**Mirabilis nyctaginea** – Balakliya – on the railway embankment, quite abundantly (f.r.).

**Parthenocissus vitacea** – Balakliya – south-western vicinity, in some quarters of Kreydyanskaya Dacha (f.r.).

**Phedimus hybridus** – Balakliya – south-western vicinity, Kreydyanska Dacha, the quarter Nr 22 of the Balaklıyske forestry, several plants’ clumps in the pine forest, on both sides of the trail (KWA).

**Prunus mahaleb** – Protopopivka – north-western vicinity, cretaceous outcrops of the northern slope of a huge gully (KWA); Balakliya – south-western vicinity, Kreydyanska Dacha, occasionally (KWA); between Balakliya and Andriyivka – Borysoglibskyi Bir, occasionally, mainly on felled areas and glades. It often occurs as a part of afforestation.

**Prunus serotina** – Protopopivka – north-western vicinity, in the forest crops, often (KWA); Borshchivka – northern vicinity, afforestation on the slopes of the valley of the river Voloska Balakliyka, produces self-seeding (f.r.); between Balaliya and Andriyivka – Borysoglibskyi Bir, sporadically throughout the massif, in some places abundantly (f.r.).

**Ptelea trifoliata** – Bayrak – western vicinity, in forest plantations near Khomyn ravine and on the slope of the valley of Siverskyi Donets (KWA).

**Ribes aureum** – It is occasionally cultivated and occurs in forest crops, where it produces self-seedings. The following spontaneous habitats were noted: Balakliya – surrounding, Kreidyanskyi Bir, the quarter Nr 8 of Balaklıyske forestry (KWA); ibid., the quarter Nrs 50 and 51 (f.r.); Bayrak – western vicinity, afforestation on the edge of the slopes of the valley of Siverskyi Donets (f.r.).
Ribes rubrum – Balakliya – south-western vicinity, Kreydyanska Dacha, the quarter Nr 8 of the Balakliyske forestry, several self-seeding individuals (KWhA).

Ribes uva-crispa – Balakliya – northern part, in the park on the territory of the military base, self-seeding (KWhA); Balakliya – south-western vicinity, Kreydyanska Dacha, the quarter Nr 5 of the Balakliyske forestry (KWhA).

Sedum sexangulare – Between Balakliya and Andriyivka – Borysoglibskyi Bir, the quarter Nr 44 of the Vysokobirske forestry, several clumps of plants on a clearing in the pine forest (KWhA); in the same forest, quarter Nr 11, on a sandy road, a small number. The finding of this Central European species in the Balakliya district's flora indicates that this species migrates to the east along the pine terraces of Siverskyi Donets, expanding its secondary range.

Ulmus pumila – Adult 30–50-year-old individuals occur in urban plantations in Balakliya and some plantations in the forestry. Invasive colonies were noted in certain places: Balakliya – center, around the park (KWhA); western vicinity of the Balakliya cement plant – on the edge of Borysoglibskyi Bir, planted trees and in some places self-seeding individuals are abundant (f.r.).

Vitis vulpina – Balakliya – western vicinity, Borysoglibskyi Bir, the quarter Nr 128 of the Vysokobirske forestry, a small invasive population on a slope in the pine forest (KWhA); Balakliya – south-western vicinity, Kreydyanska Dacha, the quarter Nr 8 of Balakliyske forestry, adult specimen (KWhA); Balakliya – sporadically on ruderal and clogged areas (f.r.).

New locations of aboriginal and alien plant species of the Siverskyi Donets basin in the Balakliya region supplement the existing information about the region's flora. The overall floristic richness of the Balakliya region is relatively high, although it is conceding to the well-known regional centers of phytodiversity. All the main floristic complexes of the Northern Steppe (nemoral, boreal, steppe, psammophytic, calciphytic, meadow, and swampy) are combined in the Balakliya natural center of biodiversity. The landscape basis of this center is formed by the valley of Siverskyi Donets with a system of tributaries, which is located between the Lyman group of lakes from the northwest and Izyumsko Luka from the east.

Some of the listed species were found within the Landscape Reserve of Local Significance Kreydyanska Dacha (quarters Nrs 18–21, 24–30, 32–38, and 45–67 of the Balakliyske forestry). In particular, large populations of Jurinea cyanoides and Pulsatilla pratensis and the local population of Iris arenaria are located there, which testifies the phytodiversity value of this reserve. During the study, other valuable areas with rare plants deserving protection, particularly the steppe gully in the vicinity of Borshchivka (Shynder & Saidakhmedova, 2018), were also found.

Many alien (mostly escaped) plant species, which are new to the flora of the region and are in the expansion process, were recorded. Here, the most invasively active are taxa that are widely used in forest reclamation plantations (i.e., Cornus sanguinea subsp. australis, Fraxinus pensylvanica, Prunus mahaleb, P. serotina, Ptelea trifoliata, Robinia pseudoacacia, and Ulmus pumila). The railway helps distribute the adventive plant species, among which are xenophytes (alien plants that spread spontaneously, e.g., Mirabilis nyctaginea) and escaped plants (primarily those used in the wind-breaking plantations). Many adventitious species were recorded on the pine terraces of Siverskyi Donets, indicating favorable conditions for them.

Conclusions

In general, 933 taxa of vascular plants were recorded in the flora of the Siverskyi Donets basin within the former Balakliya district of the Kharkiv region of Ukraine, including 798 taxa observed directly during the field surveys. Such high taxonomic diversity indicates that the studied area is a large regional center of floristic diversity, formed by all the Northern Steppe's major floristic complexes. Moreover, many new rare aboriginal plant taxa locations were discovered, which testifies the high zoological value of some areas. Simultaneously, the presence of new and invasive-active alien plants confirms the active processes of adventisation of the flora of the region. Forest reclamation plantations...
play a significant role in the spread of such alien plants. Similarly, the railway and pine terraces of Siverskyi Donets make the migration corridors for many of these species in the district.

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Appendix. Checklist of the flora of the outskirts of Balakliya within the former Balakliya district (Kharkiv region, Ukraine).

Besides the species observed directly on the studied flora territory, over 40 additional species that were found close to the administrative boundary of the former Balakliya district are represented in this checklist. Some of them may be detected within the study area in the future. Such species are listed without numbers. Also, to avoid mistakes in the future, several taxa that are clearly erroneous or were not confirmed in other sources are included in this checklist. The nomenclature of taxa is presented according to contemporary databases (Stevens, 2017; Euro+Med, 2021; Plant of the World Online, 2021). For some taxa, synonyms common for Eastern European botanical literature are additionally provided. At the first mention of the geographical objects, their toponymic category (village, urban-type settlement, river, etc.) is indicated. Acronyms of herbaria (KWHA, KW, LE, and CWU) are provided following Thiers (2021).

Following abbreviations and shortenings are applied in the Appendix: alien – alien (non-native) plant; native – native plant; cult. – cultivated plant; error – erroneous data; n.conf. – needs confirmation; nat.h. – natural hybrid; N, S, E, W, SW, etc. – indicate the direction from the specified settlement to the location of the plant; !! – the plant was observed during the investigation.

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
|    |       | LYCOPODIOPSIDA |              |
|    | Lycopodiaceae | | |
|    | Lycopodium clavatum L. | | grows near the study area: Zmiiv district, in the birch forest near the lake Lyman, leg. Lavrenko (Fomin, 1936) |
|    |        | PSILOTOPSIDA | |
|    | Botrychium virginianum (L.) Sw. | | error provided for Balakliya district by a secondary quote (Parnikoza & Celka, 2016). In the original report, this site was found in Pecheneg district of Kharkiv region in 1926 by K. Uhrynskyi (Fomin, 1936) |
|    | Equisetaceae | EQUISETOPSIDA | |
| 1  | Equisetum arvense L. | native | !! |

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### Appendix. Continued.

| Nr | Taxon                  | Category | Distribution                                                                                                                                                                                                 |
|----|------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2  | Equisetum fluviatile L.| native   | near Andriyivka urban-type settlement – Sukhyi Lyman swamp (Lavrenko, 1973); urban-type settlement Savyntsi – in Siverskyi Donets, 03.06.1980 (Dubyna, 2006)                          |
| 3  | Equisetum hyemale L.   | native   | Borschivka – S 2.5 km, in the gully, KWHA (sub E. hyemale) !! – non typical plants; det. 02.2021, R. Walkowiak & A. Baransky (sub E. × moorei Newman [= E. hyemale × E. ramosissimum Desf.]); available online from https://www.inaturalist.org/observations/69303142 and https://www.inaturalist.org/observations/69303141; comment on 02.2021 by D. Davydov – “ramosissimum (?)” |
| 4  | Equisetum palustre L.  | native   |                                                                                              POLYPODIOPSIDA                                                                                                                                   |

#### Aspleniaceae

| Nr | Taxon                               | Category | Distribution                                                                                                                                                                                                 |
|----|-------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5  | Athyrium filix-femina (L.) Roth     | native   | between Balakliya and Andriyivka – Vysokobirske forestry (urochysche Borysoglibskiy Bir), alder swamp, 2016, KWHA !!                                                                                           |
| 6  | Cystopteris fragilis (L.) Bernh.    | native   | Borschivka village – S, pine forest, leg. N.B. Saidakhmedova!                                                                                                                                          |
| 7  | Thelypteris palustris Schott        | native   | quarter Nr 8 of Kreydyan Dacha, in the forest swamp !! Borysoglibskiy Bir – in the alder forest !!                                                                                                         |

#### DENNSTAEDTIACEAE

| Nr | Taxon                                | Category | Distribution                                                                                                                                                                                                 |
|----|--------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8  | Pteridium aquilinum (L.) Kuhn        | native   | Vysokobirske forestry, quarter Nr 56, 2016, KWHA !!                                                                                                                                                       |

#### Polypodiaceae

| Nr | Taxon                                | Category | Distribution                                                                                                                                                                                                 |
|----|--------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9  | Dryopteris carthusiana (Vill.) H.P. Fuchs | native   | quarter Nr 5 of Kreydyan Dacha forest, 2016, KWHA !!                                                                                                                                                     |
| 10 | Dryopteris filix-mas (L.) Schott     | native   | Kreydyan Dacha, 2016, KWHA !!; Borschivka – S, pine forest !!                                                                                                                                         |

#### Salviniaiceae

| Nr | Taxon                          | Category | Distribution                                                                                                                                                                                                 |
|----|--------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11 | Salvinia natans (L.) All.      | native   | Petrivske village, 08.08.1980 (Dubyna, 2006); Savyntsi – in Siverskyi Donets, 03.11.1980 (Dubyna, 2006); Andriyivka – Fomin, 1936; Chepil village (Fomin, 1936); Balakliya – in Voloska Balakliyka, 2016, KWHA !! – in Serednya Balakliyka !!; in Lyakhova; Andriyivka – S, in Siverskyi Donets !!; Donets village – in Siverskyi Donets, 17.09.2011 (Kazarinova, 2015); Savyntsi – in Siverskyi Donets, 03.08.2011 (Kazarinova, 2015) |

#### PINOPSIDA

#### Cupressaceae

| Nr | Taxon                          | Category | Distribution                                                                                                                                                                                                 |
|----|--------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12 | Juniperus communis L.          | native   | Pryshyb station (now – Sezonna station), leg. Pidoplichko (Kondratyuk, 1960)                                                                                                                                |

#### Pinaceae

| Nr | Taxon                          | Category | Distribution                                                                                                                                                                                                 |
|----|--------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13 | Pinus sylvestris L.            | native   | sandy terrace of Siversky Donets and its tributaries. Most of the recent pine forests have an artificial origin, but in the XVI-XVII centuries, natural pine forests existed between Balakliya and Andriyivka (Dryuchenko, 1929) |
|    | Pinus sylvestris var. sylvestris f. fominii Kondr. | native   | Izyum State Forestry (Kotov, 1965)                                                                                                                                                                           |

#### GNETOPSIDA

#### Ephedraceae

| Nr | Taxon                          | Category | Distribution                                                                                                                                                                                                 |
|----|--------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14 | Ephedra distachya L.           | native   | Borschivka – S 2.5 km, in the gully; two small fragments of the population, 2016, KWHA !! (Shynder & Saidakhmedova, 2018)                                                                                   |
### Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

#### Appendix. Continued.

| Nr | Taxon                          | Category | Distribution                                                                 |
|----|--------------------------------|----------|-----------------------------------------------------------------------------|
| 15 | Aristolochia clematitis L.     | native   | Pyatyhirskie village – SE, gully grove !!; between Balakliya and Bayrak village – in the floodplain grove in the valley of Siverskyi Donets !!; Balakliya – valleys !! |
| 16 | Asarum europaeum L.            | native   | Protopopivka village – N, in the forest, 2016, KWHA !!                      |
| 17 | Nuphar lutea (L.) Smith        | native   | in Siverskyi Donets !!                                                     |
| 18 | Nymphaea alba L.               | native   | Vitrivka village – in Siverskyi Donets (Savenkov, 1910); large reservoirs !! |
| 19 | Nymphaea candida C. Presl      | native   | Donets urban-type settlement – in Zymnye lake, 09.06.2012 (Kazarinova, 2015) |
| 20 | Acorus calamus L.              | alien    | Petrivske – an arm of Siverskyi Donets, 07.08.1980 (Dubyna, 2006); Donets – in Zymnye lake, 09.06.2012 (Kazarinova, 2015); Savyntsi – in Siverskyi Donets, 03.08.2011 (Kazarinova, 2015); Balakliya – SW, in Lyakhova, 2016, KWHA !! |
| 21 | Alisma plantago-aquatica L.    | native   | !!                                                                           |
| 22 | Caldesia parnassifolia (Bassi) | native   | Balakliya: extinct (Didukh, 2009)                                           |
| 23 | Sagittaria sagittifolia L.     | native   | Vitrivka – in Siverskyi Donets (Savenkov, 1910); Petrivske – an arm of Siverskyi Donets, 08.1980 (Dubyna, 2006); Savyntsi – in Siverskyi Donets, 03.06.1980 (Dubyna, 2006); Protopopivka – in Siverskyi Donets !!; Andriyivka – S, in Siverskyi Donets!!; Andriyivka – W, Lyman lake, 23.06.2012 (Kazarinova, 2015); Savyntsi – in Siverskyi Donets, 03.08.2011 (Kazarinova, 2015) |
| 24 | Allium angulosum L.            | native   | near Balakliya, 30.06.1925, leg. Pryanishnikov (Omelchuk, 1962); Balakliya – S, along the roadside the valley of Siverskyi Donets, 2016, KWHA !!; quarter Nr 39 of Kreydynska Dacha !!; Sezonna station – S, Borysoglibskyi Bir !!; Kreydynska Dacha (quarters Nrs 8, 36, etc.) !!; Balakliya – W, sandy steppe near the micro-district Druzhba !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 25 | Allium decipiens Fisch. ex     | native   | Balakliya (Seregin, 2007); Balakliya – W, sandy steppe near the micro-district Druzhba, 2016, KWHA !! |
|    | Schult. & Schult. f.           |          |                                                                             |
| 26 | Allium flavescens Besser       | native   | Milova village – SW, 2016, KWHA !!                                         |
| 27 | Allium flavum (L.) subsp.      | native   | Petrivske – SE, pine terrace of Siverskyi Donets !!                        |
|    | tauricum (Besser ex Rchb.) K.  |          |                                                                             |
|    | Richt. (Allium paccoskianum Tuuz.) |          |                                                                             |
| 28 | Allium oleraceum L.            | native   | Balakliya – N, military base, 2016, KWHA !!; Andriyivka – S, the valley of Siverskyi Donets, 2016, KWHA !!; Balakliya !!; Borschchivka – NW, forest plantation !! |
### Appendix. Continued.

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 29 | Allium rotundum L. | native | Balakiya – W, 2016, KWHA !!; Balakiya – S, in the valley of Siverskyi Donets, 2016, KWHA !!; Bayrak village, 2016, KWHA !!; Milova – W, in the valley 2016, KWHA !!; Protopopivka – N !!; Balakiya – W, on the meadows !!; Balakiya – W, sandy steppe !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 30 | Allium sphaerocephalon L. | native | quarter Nr 8 of Kreydyanska Dacha !! |

#### Araceae

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 31 | Lemna gibba L. | native | Balakiya – mouth of Voloska Balakiyka (Chernaya, 1982); near Zalyman village – in Siverskyi Donets (Chernaya, 1982); Balakiya – in Balakiyka, 25.08.1979 (Dubyna, 2006) |
| 32 | Lemna minor L. | native | !! |
| 33 | Lemna trisulca L. | native | Andriyivka – S, Polovnyche lake, 2016, KWHA !!; Balakiya – in Balakiyka, 25.08.1979 (Dubyna, 2006); Andriyivka – W, Lyman lake, 23.06.2012 (Kazarinova, 2015); Donets – in Siverskyi Donets, 17.09.2011 (Kazarinova, 2015); Savyntsi – in Siverskyi Donets, 07.08.1980 (Dubyna, 2006); Savyntsi – in Siverskyi Donets, 03.08.2011 (Kazarinova, 2015); Petrivske – an arm of Siverskyi Donets, 08.07.1986 (Dubyna, 2006); Donets – Zymnye lake, 09.06.2012 (Kazarinova, 2015); Izum State Forestry, Dovge lake, [49.1877°, 36.9421°], 07.1907 (Savenkov, 1910) |

#### Asparagaceae

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 34 | Spirodea polyrhiza (L.) Schleid. | native | !! |
| 35 | Anthericum ramosum L. | native | Milova – SW, 2016, KWHA !!; Balakiya – SW, quarter Nr 5 of Kreydyanska Dacha, 2016, KWHA !!; Sezonna station – SW, in Borysoglibskiy Bir !! |
| 36 | Asparagus officinalis L. | native | Andriyivka – S, 2016, KWHA !!; Balakiya – N, military base, 2016, KWHA !!; W, 2016, KWHA !!; Borschchivka – S 2.5 km, in the gully, 2016, KWHA !!; Kreydyanska Dacha !!; Bayrak – W, Khomyn ravine !!; between Andriyivka and Balakiya – Borysoglibskiy Bir !!; Milova – SW, chalky slopes !!; Protopopivka – N, Kreydyana Hora !! |
| 37 | Bellevalia sarmatica (Pall. ex Georgi) Woronow | native | Bayrak – W 4 km, Khomyn ravine, 2016, KWHA !! |
| 38 | Convallaria majalis L. | native | Kreydyanska Dacha !!; Bayrak – E, in the oak forest !!; between Andriyivka and Balakiya – Borysoglibskiy Bir !!; Protopopivka – N, grove in the valley !! |
| 39 | Hyacinthella leucophaea (K. Koch) Schur | native | Borschchivka – S 2.5 km, in the gully, 2016, KWHA !!; Protopopivka – NW, 2016, KWHA !! |
| 40 | Muscari neglectum Guss. ex Ten. | native | Protopopivka – NW, chalk slopes in the gully !! |
| 41 | Ornithogalum boucheanum (Kunth) Asch. | native | Borschchivka – S 2.5 km, in the gully, 2016, KWHA !! (Shynder & Saidakhmedova, 2018); Balakiya – forest park in Lyakhova valley, planted and escaped plants, 2016, KWHA !! |
| 42 | Polygonatum multiflorum (L.) All. | native | !! |
| 43 | Polygonatum odoratum (Mill.) Druce | native | !! |
| 44 | Scilla siberica Andrews | native | near Bayrak, 2016, KWHA !!; Protopopivka !!; Balakiya !!; etc. |
## Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

### Appendix. Continued.

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| **Butomaceae** | | | |
| 45 | Butomus umbellatus L. | native | Petrivske – an arm of Siverskyi Donets, 08.1980 \(\text{(Dubyna, 2006)}\); Andriyivka – in Siverskyi Donets, 03.06.1980 \(\text{(Dubyna, 2006)}\); Savyntsi – in Siverskyi Donets, 07.08.1980 \(\text{(Dubyna, 2006)}\); Milova – E, valley of Siverskyi Donets !!; Balakliya – Siverskyi Donets, 03.06.1980 \(\text{(Dubyna, 2006)}\); Balakliya – in valleys !!; Borschchivka – NW, in valley of Voloska Balakliya !!; Protopopivka – on the Siverskyi Donets bank !!; Andriyivka – S, in Siverskyi Donets !!; Savyntsi – in Siverskyi Donets, 03.08.2011 \(\text{(Kazarinova, 2015)}\) |
| **Cyperaceae** | | | |
| 46 | Blysmus compressus (L.) Panz. ex Link | native | near Andriyivka – Sukhyi Lyman swamp \(\text{(Lavrenko, 1973)}\) |
| 47 | Bolboschoenus maritimus (L.) Palla | native | Petrivske – an arm of Siverskyi Donets, 07.08.1980 \(\text{(Dubyna, 2006)}\); Savyntsi – in Siverskyi Donets, 03.08.2011 \(\text{(Kazarinova, 2015)}\); Balakliya – valleys, 2016, KWHA !! |
| 48 | Carex acuta L. | native | in the valleys !! |
| | Carex acutiformis Ehrh. | | grows near the study area: Zmiiv district, near Lyman lake \(\text{(Lavrenko, 1973)}\) |
| | Carex canescens L. | | grows near the study area: Zmiiv district, near Lyman lake, leg. Lavrenko \(\text{(Bordzilovskyi & Lavrenko, 1940)}\) |
| | Carex cespitosa L. | | grows near the study area: Zmiiv district, near Lyman lake \(\text{(Lavrenko, 1973)}\) |
| | Carex chordorrhiza L. f. | | grows near the study area: Zmiiv district, near Lyman lake \(\text{(Lavrenko, 1973)}\) |
| 49 | Carex colchica J. Gay | native | Izyum State Forestry \(\text{(Kotov, 1965)}\) |
| 50 | Carex diandra Schrank | native | Andriyivka \(\text{(Bordzilovskyi & Lavrenko, 1940)}\); near Andriyivka – Sukhyi Lyman \(\text{(Lavrenko, 1973)}\) |
| | Carex diluta M. Bieb. | | grows near the study area: Zmiiv district, near Lyman lake \(\text{(Lavrenko, 1973)}\) |
| 51 | Carex disticha Huds. | native | Andriyivka – W, Sukhyi Lyman \(\text{(Lavrenko, 1927, 1973)}\); Andriyivka \(\text{(Bordzilovskyi & Lavrenko, 1940)}\) |
| 52 | Carex elata All. subsp. omskiana (Meinsch.) Jals | native | near Andriyivka – Sukhyi Lyman, sub Carex stricta \(\text{(Lavrenko, 1927, 1973)}\) |
| 53 | Carex elongata L. | native | Kreydyanska Dacha, 2016, KWHA !! |
| 54 | Carex ericetorum Pollich | native | Kreydyanska Dacha, 2016, KWHA !! |
| 55 | Carex hirta L. | native | !! |
| 56 | Carex lasiocarpa Ehrh. | native | near Andriyivka – Sukhyi Lyman \(\text{(Lavrenko, 1927, 1973)}\) |
| | Carex limosa L. | | grows near the study area: Zmiiv district, near Lyman lake, leg. Lavrenko \(\text{(Bordzilovskyi & Lavrenko, 1940)}\) |
| 57 | Carex melanostachya M. Bieb. ex Willd. | native | Balakliya – in the valleys, 2016, KWHA !!; Bayrak, KWHA !!; Petrivske – in the Siverskyi Donets valley !! |
| 58 | Carex michelii Host | native | between Milova and Pyatyhirskie, 2016, KWHA !! |
| 59 | Carex nigra (L.) Reichard | native | near Andriyivka – Sukhyi Lyman \(\text{(Lavrenko, 1973)}\) |
| 60 | Carex praecox Schreb. | native | !! |
| 61 | Carex pseudocyperus L. | native | Donets – in Zymnye lake, 09.06.2012 \(\text{(Kazarinova, 2015)}\) |
| 62 | Carex riparia Curtis | native | Balakliya – E, 2016, KWHA !! |
## Appendix. Continued.

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 63 | Carex rostrata Stokes | native | near Andriyivka – Sukhyi Lyman (Lavrenko, 1973) (sub C. inflata Huds) |
| 64 | Carex secalina Willd. ex Wahlenb. | native | valley of the river Middle Balakliyka, 1978, leg. Chorna (Vinichenko, 2007) |
|     | Carex stenophylla Wahlenb. subsp. stenophylla (Carex uralensis C.B. Clarke) | grows near the study area: Zmiiv district, near Lyman lake, leg. Lavrenko (Bordzilovskyi & Lavrenko, 1940) |
| 65 | Carex supina Willd. ex Wahlenb. | native | Kreydyanska Dacha, 2016, KWHA !! |
| 66 | Carex vesicaria L. | native | Kreydyanska Dacha, 2016, KWHA !! |
| 67 | Carex vulpina L. | native | !! |
| 68 | Cyperus fuscus L. | native | Savyntsi – in Siverskyi Donets, 03.08.2011 (Kazarinova, 2015) |
| 69 | Cyperus glomeratus L. | native | Chepil (Bordzilovskyi & Lavrenko, 1940); Savyntsi – in Siverskyi Donets, 03.08.2011 (Kazarinova, 2015) |
|     | Cyperus pannonicus Jacq. | grows near the study area: Zmiiv district, near Lyman lake, leg. Lavrenko (Bordzilovskyi & Lavrenko, 1940) |
| 70 | Eleocharis palustris (L.) Roem. & Schult. | native | Savyntsi – in Siverskyi Donets, 03.06.1980 (Dubyna, 2006); Petrivske – an arm of Siverskyi Donets, 07.08.1980 (Dubyna, 2006); Protopopivka – NW, 2016, KWHA !! |
|     | Eleocharis uniglumis (Link) Schult. (Eleocharis scythica Zinserl.) | grows near the study area: Zmiiv district, near Lyman lake, leg. Lavrenko (Bordzilovskyi & Lavrenko, 1940) |
| 71 | Eriophorum angustifolium Honck. | native | near Andriyivka – Sukhyi Lyman (Lavrenko, 1973) |
| 72 | Eriophorum gracile W.D.J. Koch | native | near Andriyivka – Sukhyi Lyman (Lavrenko, 1927, 1973) |
| 73 | Scirpoides holoschoenus (L.) Sojak | native | Balakliya – W, 2016, KWHA !!; Bayrak – N, KWHA !! |
| 74 | Scirpus lacustris (L.) Palla | native | Andriyivka – W, Sukhyi Lyman (Lavrenko, 1927); Savyntsi – in Siverskyi Donets, 03.11.1980 (Dubyna, 2006); Donets – in Zymnye lake, 09.06.2012 (Kazarinova, 2015); Balakliya, KWHA !! |
|     | Scirpus radicans Schkuhr | grows near the study area: Zmiiv district, near Lyman, leg. Lavrenko (Bordzilovskyi & Lavrenko, 1940) |
| 75 | Scirpus tabernaemontani (C.C. Gmel.) Palla | native | Petrivske – an arm of Siverskyi Donets, 07.08.1980 (Dubyna, 2006); Bayrak – in the Siverskyi Donets floodplain, 2016, KWHA !! |

### Hydrocharitaceae

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 76 | Elodea canadensis Michx. | alien | Balakliya – in Balakliyka, 25.08.1979 (Dubyna, 2006); Andriyivka – in Siverskyi Donets, 03.06.1980 (Dubyna, 2006) |
| 77 | Hydrocharis morsus-ranae L. | native | near Andriyivka – Sukhyi Lyman (Lavrenko, 1973); Petrivske – an arm of Siverskyi Donets, 07.08.1980 (Dubyna, 2006); Donets (settlement) – in Siverskyi Donets, 17.09.2011 (Kazarinova, 2015); Andriyivka – S, in Siverskyi Donets, 2016, KWHA !!; Donets – in Zymnye lake, 09.06.2012 (Kazarinova, 2015); Izum State Forestry, Dovge lake, [49.1877°, 36.9421°], 07.1907 (Savenkov, 1910) |
|     | Najas flexilis (Willd.) Rostk. & W.L.E. Schmidt (Caulinia flexilis Willd.) | n.conf. | it is included to the list of rare species of Siverskyi Donets basin (Marushchak et al., 2018) – probably wrongly reported |
### Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

#### Appendix. Continued.

| Nr | Taxon                          | Category     | Distribution                                                                                     |
|----|--------------------------------|--------------|--------------------------------------------------------------------------------------------------|
| 78 | *Najas marina* L.              | native       | Andriyivka – in Siverskyi Donets, 03.06.1980 ([Dubyna, 2006](#)); Andriyivka – W, Lyman lake, 23.06.2012 ([Kazarinova, 2015](#)); Donets (settlement) – in Siverskyi Donets, 17.09.2011 ([Kazarinova, 2015](#)) |
| 79 | *Najas minor* All.             | native       | Vitriivka – in Siverskyi Donets ([Savenkov, 1910](#)); Chepil – in Siverskyi Donets, 1910, leg. Savenkov, KW ([Chernaya, 1982](#)); Protopenpivka and Petrivske – in Siverskyi Donets ([Chernaya, 1982](#)); Izyum State Forestry, Ploske lake, [49.2862°, 36.9557°], 23.07.1907 ([Savenkov, 1910](#)) |
| 80 | *Stratiotes aloides* L.        | native       | Izyum State Forestry, Rudnivske lake ([Savenkov, 1910](#))                                           |
| 81 | *Vallisneria spiralis* L.      | native       | Andriyivka – W, Lyman, 23.06.2012 ([Kazarinova, 2015](#))                                           |
| 82 | *Gladiolus imbricatus* L.      | native       | between Balakliya and Bayrak – on the meadow in the Siverskyi Donets valley, numerous, 07.1978 ([Gorelova et al., 1981](#)); Bayrak – NW 0.5 km, on the meadow, 31.05.2016, KWHA !!; Bayrak – E, at the edge of the grove, 31.05.2016, KWHA !! |
| 83 | *Iris arenaria* Waldst. & Kit. (Iris pinetica L.) Klokov) | native       | Balakliya – W, sandy steppe, 2016, KWHA !!; Balakliya – SW, quarter Nr 29 of Kreydyanska Dacha, 2016, KWHA !!; Landscape Park Izyumska Luka ([Onyshchenko et al., 2016](#)) |
|    | *Iris halophila* Pall.         | cult.        | sometimes in flower beds !!; possibly in the study area occurs as indigenous                         |
| 84 | *Iris pseudacorus* L.          | native       | !!                                                                                                    |
| 85 | *Iris pumila* L.               | native       | Borshchivka – S 2.5 km, in the gully, 30.03.2016 !!                                                    |

#### Juncaceae

| Nr | Taxon                          | Category     | Distribution                                                                                     |
|----|--------------------------------|--------------|--------------------------------------------------------------------------------------------------|
| 86 | *Juncus articulatus* L.        | native       | Balakliya – E, in Voloska Balakliyka valley, 2016, KWHA !!; Andriyivka – S, pine terrace of Siverskyi Donets !! |
| 87 | *Juncus arutus* Krock.         | native       | Balakliya – E, in the Voloska Balakliyka valley, 2016, KWHA !!                                   |
| 88 | *Juncus bufonius* L.           | native       | Andriyivka – S, Borysoglibskyi Bir, 2016, KWHA !!                                               |
| 89 | *Juncus compressus* Jacq.      | native       | Balakliya, 2016, KWHA !!                                                                       |
| 90 | *Juncus conglomeratus* L.      | native       | !!                                                                                           |
| 91 | *Juncus effusus* L.            | native       | Balakliya – W, KWHA !!; Bayrak – in the Siverskyi Donets valley, 2016, KWHA !!                |
| 92 | *Juncus gerardi* Loisel.       | native       | Andriyivka – S, in the Siverskyi Donets valley !!                                               |
| 93 | *Juncus inflexus* L.           | native       | Balakliya – in the Voloska Balakliyka valley !!                                                 |
| 94 | *Luzula pallescens* Sw. (Luzula pallidula Kirschner) | native       | quarter Nr 29 of Kreydyanska Dacha, 2016, KWHA !!                                               |

#### Juncaginaceae

| Nr | Taxon                          | Category     | Distribution                                                                                     |
|----|--------------------------------|--------------|--------------------------------------------------------------------------------------------------|
| 95 | *Triglochin maritima* L.       | native       | grows near the study area: Zmiiv district, near Lyman lake ([Lavrenko, 1973](#))                  |

#### Liliaceae

| Nr | Taxon                          | Category     | Distribution                                                                                     |
|----|--------------------------------|--------------|--------------------------------------------------------------------------------------------------|
| 96 | *Fritillaria meleagroides* Patrin ex Schult. & Schult. f. | native       | Shebelynka village, 1926, KW ([Didenko, 2007](#)); Balakliya – W, sandy steppe, 2016, KWHA !!; between Balakliya and Bayrak – in the Siverskyi Donets valley, 07.1978 ([Gorelova et al., 1981](#)); Bayrak – NW 0.6 km, in the Siverskyi Donets floodplain, 2016, KWHA !! |
| 97 | *Fritillaria ruthenica* Wikstr. | native       | Shebelynka, 1940, leg. Osadcha, KW ([Didenko, 2007](#)); near Shchurivka village – N 49° 24.361’ E 36° 55.533’ ([Borsukevych, 2018](#)) |
## Appendix. Continued.

| Nr | Taxon                              | Category | Distribution                                                                 |
|----|------------------------------------|----------|-------------------------------------------------------------------------------|
| 98 | *Gagea bulbifera* (Pall.) Salisb.  | native   | Borshchivka – S 2.5 km, in the gully, 2016, KWHA !!                         |
| 99 | *Gagea fragifera* (Vill.) E. Bayer & G. López (*Gagea erubescens* (Besser) Schult. & Schult. f.) | native   | between Protopopivka and Chepil – bank of Siverskyi Donets, abundantly, KWHA !!; Kreydyanska Dacha !! |
| 100| *Gagea lutea* (L.) Ker Gawl.       | native   | !                                                                            |
| 101| *Gagea minima* (L.) Ker Gawl.      | native   | !                                                                            |
| 102| *Gagea pusilla* (F.W. Schmidt) Schult. & Schult. f. | native   | Borshchivka – S 2.5 km, in the gully, 2016, KWHA !!; Borshchivka – E, in the forest belt !! |
| 103| *Tulipa sylvestris* subsp. *australis* (Link) Pamp. (*Tulipa quercetorum* Klokov & Zoz) | native   | Bayrak – E, deciduous forests !!; Bayrak – N, groove in the Siverskyi Donets valley, KWHA !!; Balakliya – groove in the Lyakhova valley, numerous, 2016, KWHA !!; between Balakliya and Bayrak – groove in the Siverskyi Donets valley !! |
| 104| *Anacamptis palustris* (Jacq.) R.M. Bateman, Pridegon & M.W. Chase (*Orchis palustris* Jacq.) | native   | between Balakliya and Bayrak – groove in the Siverskyi Donets valley, numerous, 07.1978 (Gorelova et al., 1981); protected area Luhovyi near Balakliya (Alekhin, 2009) |
| 105| *Epipactis helleborine*           | native   | Protopopivka – N, groove near Kreydyana Hora, 2016, KWHA !!                 |
|    | *Liparis loeselii* (L.) Crantz     | n.conf.  | Landscape Park Iziumska Luka (Onyshchenko et al., 2016)                      |
| 106| *Aegilops cylindrica* Host         | alien    | Bayrak, KWHA !!                                                              |
| 107| *Agropyron cristatum* (L.) Gaertn. (Agropyron pectinatum (M. Bieb.) P. Beauv.) | native   | Borschchivka – S 2.5 km, in the gully, 2016, KWHA !!; Kreydyanska Dacha !!; Borysoglibskiy Bir !!; Milova – SW !!; Balakliya – SW, sandy meadow near Lyakhova !!; Balakliya – W, sandy steppe near the micro-district Druzha !!; Protopopivka – N, Kreydyana Hora !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 108| *Agrostis capillaris* L.          | native   | Andriyivka – S, valley of Siverskyi Donets !!                               |
| 109| *Agrostis gigantea* Roth.          | native   | !                                                                            |
| 110| *Agrostis stolonifera* L.         | native   | !                                                                            |
| 111| *Agrostis vinealis* Schreb.        | native   | shown on the map (Prokudin et al., 1977)                                    |
| 112| *Alopecurus aequalis* Sobol.       | native   | near Andriyivka – Sukhyi Lyman (Lavrenko, 1973)                              |
| 113| *Alopecurus geniculatus* L.        | native   | Savyntsi – in Siverskyi Donets, 03.08.2011 (Kazarinova, 2015)               |
| 114| *Alopecurus pratensis* L.         | native   | Kreydyanska Dacha, 2016, KWHA !!; Bayrak – a meadow in the Siverskyi Donets valley, KWHA !!; etc. |
| 115| *Arrhenatherum elatius* (L.)       | alien    | !                                                                            |
|    | J. Presl & C. Presl.              |          |                                                                               |
| 116| *Avena fatua* L.                  | alien    | !                                                                            |
| 117| *Beckmannia eruciformis* (L.)     | native   | shown on the map (Prokudin et al., 1977)                                    |
|    | Host                              |          |                                                                               |
| 118| *Bothriochloa ischaemum* (L.)     | native   | on the cretaceous-steppe slopes in Siverskyi Donets valley !!; protected area Protopopivskyi near Protopopivka (Filatova et al., 2016) |
|    | Keng                             |          |                                                                               |
| 119| *Brachypodium sylvaticum* (Huds.) P. Beauv. | native | !                                                                            |
|    |                                  |          |                                                                               |
| 120| *Bromopsis inermis* Leyss.        | native   | Balakliya – N, 2016, KWHA !!; Milova, 2016, KWHA !!; Bayrak – W, Khomyn ravine, 2016, KWHA !! |
| 121| *Bromus arvensis* L.              | alien    | !                                                                            |
## Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

**Appendix.** Continued.

| Nr | Taxon                                               | Category | Distribution                                                                 |
|----|-----------------------------------------------------|----------|-------------------------------------------------------------------------------|
| 122 | Bromus commutatus Schrad.                          | alien    | near the river Balakliyka (Bordzilovsky & Lavrenko, 1940); Balakliya – S, 2016, KWHA !! |
| 123 | Bromus japonicus Houtt.                            | alien    | shown on the map (Prokudin et al., 1977)                                     |
| 124 | Bromus riparius Rehmann                           | native   | Borschivka – S, in the gully, KWHA !!; Borschchivka – N, 2016, KWHA !!; Bayrak – W, Khomyn ravine, 2016, KWHA !! |
| 125 | Bromus squarrosus L.                               | alien    | Balakliya – N, KWHA !!; Bayrak – meadow in the Siverskyi Donets valley, 2016, KWHA !! |
| 126 | Bromus tectorum L. (Anisantha tectorum (L.) Nevski) | alien    | Milova, 2016, KWHA !!                                                        |
| 127 | Calamagrostis canescens (Weber) Roth               | native   | Balakliya – W, 2016, KWHA !!; Kreydyanska Dacha !!; Sezonna station – S, Borysoglibskyi Bir !!; Borschchivka – S 2.5 km, in the gully !! |
| 128 | Calamagrostis epigejos (L.) Roth                    | native   | Kreydyanska Dacha, 2016, KWHA !!                                             |
| 129 | Catabrosa aquatica (L.) P. Beauv                   | native   | !!                                                                           |
| 130 | Dactylis glomerata L.                              | native   | !!                                                                           |
| 131 | Digitaria ischaemum (Schreb.) Muhl.                | alien    | !!                                                                           |
| 132 | Digitaria sanguinalis (L.) Scop.                   | alien    | !!                                                                           |
| 133 | Echinocloa crusgalli (L.) P. Beauv                 | alien    | !!                                                                           |
| 134 | Elymus caninus (L.) L.                             | native   | Borysoglibskyi Bir, 2016, KWHA !!                                            |
| 135 | Elytrigia intermedia (Host) Nevski                | native   | Balakliya – W, 2016, KWHA !!; Milova – SW, 2016, KWHA !!; Borschchivka – S 2.5 km, in the gully !! |
| 136 | Elytrigia repens (L.) Nevski                       | native   | !!                                                                           |
| 137 | Elytrigia × tesquicola Prokudin                   | native   | Andriyivka (Bordzilovsky & Lavrenko, 1940)                                   |
| 138 | Eragrostis rivalis H. Scholz (Eragrostis aegyptiaca auct. fl. ucr. non (Willld.) Delile) | native | Vitrivka – on the Siverskyi Donets bank (Shiryaev, 1913; Bordzilovsky & Lavrenko, 1940); Chepil – on the Siverskyi Donets bank (Shiryaev, 1913; Bordzilovsky & Lavrenko, 1940) |
| 139 | Eragrostis minor Host                              | alien    | !!                                                                           |
| 140 | Festuca arundinacea Schreb. subsp. orientalis Tzvelev | native | !!                                                                           |
| 141 | Festuca beckeri (Hack.) Trautv.                    | native   | often on the pine terrace of Siverskyi Donets !!                            |
| 142 | Festuca gigantea (L.) Vill.                       | native   | shown on the map (Prokudin et al., 1977); !!                                |
| 143 | Festuca rubra L.                                   | native   | shown on the map (Prokudin et al., 1977)                                     |
| 144 | Festuca rupicola Heuff.                            | native   | !!                                                                           |
| 145 | Festuca valesiaca Schleich. ex Gaudin              | native   | Milova – SW, 2016, KWHA !!; Petrivske – S, pine forest, 2016, KWHA !!; Milova (Taliev, 1904); etc. !! |
| 146 | Glyceria maxima (C. Hartm.) Holmberg               | native   | along the banks of Siverskyi Donets and its tributaries                      |
| 147 | Hordeum murinum L. s.l.                            | alien    | !!                                                                           |
| 148 | Koeleria delavignei Czern. ex Domin                | native   | Andriyivka (Bordzilovsky & Lavrenko, 1940)                                   |
| 149 | Koeleria glauca (Spreng.) DC. (Koeleria sabuletorum (Domin) Klokov) | native | between Andriyivka and Balakliya – Borysoglibskyi Bir !!; Borschchivka – S 2.5 km, in the gully, 2016, KWHA !!; Petrivske – SE, pine plantation !!; Kreydyanska Dacha !! |
| Nr | Taxon                             | Category | Distribution                                                                 |
|----|----------------------------------|----------|------------------------------------------------------------------------------|
| 150| Koeleria pyramidata (Lam.) P. Beauv. (Koeleria cristata Pers.) | native   | Bayrak – W 4 km, Khomyn ravine !!; Milova – SW, chalky slopes !!; Protopopivka – N, Kreydynam Hora !! |
| 151| Leersia oryzoides (L.) Sw.       | native   | shown on the map (Prokudin et al., 1977)                                    |
| 152| Leymus racemosus (Lam.) Tzvelev (Elymus giganteus Vahl.) | native   | Andriiyivka – sandy terrace of Siverskyi Donets, 1855, leg. Messarozh in herb. Chernyaev (Lavrenko, 1931; Bordzilovskyi & Lavrenko, 1940) |
| 153| Lolium perenne L.                | native   | !!                                                                           |
| 154| Lolium pratense (Huds.) Darbysh. (Festuca pratensis Huds.) | native   | Bayrak – ZW, a meadow in the Siverskyi Donets valley, 2016, KWHA !!          |
| 155| Melica altissima L.              | native   | Balakliya – S., near the road, 2016, KWHA !!; Balakliya – SW, quarter Nr 5 of Kreydynam Dacha; Protopopivka – N, Kreydynam Hora !! |
| 156| Melica nutans L.                 | native   | Balakliya – S, pine forest, 2016, KWHA !!; Bayrak – E, in the oak forest !!; Pyatyhirsk – SE, gully grove !!; Protopopivka – N, grove in the valley !! |
| 157| Melica transsilvanica Schur      | native   | Kreydynam Dacha, 2016, KWHA !!; Milova – SW, 2016, KWHA !!; Bayrak – W, Khomyn ravine, 2016, KWHA !!; Borschchivka – NW, Voloska Balakliya valley !!; Verbivka village – E !!; Protopopivka – N and NW, chalky slopes !! |
| 158| Milium effusum L.                | native   | Balakliya – in the Lyakhovaly valley !!                                     |
|    | Molinia caerulea (L.) Moench     |          | grows near the study area: Zmiiv district, near Lyman, leg. Chernyaev & leg. Lavrenko (Bordzilovskyi & Lavrenko, 1940) |
| 159| Panicum miliaceum L.             | alien    | !!                                                                           |
| 160| Phalaris arundinacea L.          | native   | Petrivske – an arm of Siverskyi Donets, 08.08.1980 (Dubyna, 2006)           |
| 161| Phleum phleoides (L.) H. Karst.  | native   | Milova – SW, 2016, KWHA !!; Borysoglibskyi Bir – near Lebyazhe lakes !!; Borschchivka – NW, in the Voloska Balakliya valley !! |
| 162| Phleum pratense L.               | native   | Andriiyivka, 2016, KWHA !!; Balakliya – in the Serednya Balakliya valley; 2016, KWHA !!; Borysoglibskyi Bir – valley of Siverskyi Donets !! |
| 163| Phragmites australis (Cav.) Trin. ex Steud. | native   | !!                                                                           |
| 164| Poa angustifolia L.              | native   | !!                                                                           |
| 165| Poa annua L.                     | native   | !!                                                                           |
| 166| Poa bulbosa L.                   | native   | Chepil – in Siverskyi Donets valley (Shiryaev, 1913; Bordzilovskyi & Lavrenko, 1940) |
| 167| Poa compressa L.                 | native   | Balakliya – W, sandy steppe, KWHA !!; Balakliya !!; Milova – SW, dumps of the chalk quarry, KWHA !! |
| 168| Poa nemoralis L.                 | native   | !!                                                                           |
| 169| Poa palustris L.                 | native   | Borysoglibskyi Bir, 2016, KWHA !!; Protopopivka !!                           |
| 170| Poa pratensis L.                 | native   | !!                                                                           |
| 171| Poa trivialis L.                 | native   | !!                                                                           |
| 172| Pseudoroegneria stipifolia (Trautv.) Á. Löve (Elytrigia stipifolia (Trautv.) Nevski) | native   | Andriiyivka township, 19.06.1858, leg. Messarozh (Bordzilovskyi & Lavrenko, 1940; Dubovik, 1977) |
| 173| Puccinellia convoluta (Hornem.) Fourn. (Puccinellia bilykiana Klokov) | native   | shown on the map (Prokudin et al., 1977)                                    |
| 174| Puccinellia distans (Jacq.) Parl. | native   | shown on the map (Prokudin et al., 1977)                                    |
### Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

| Nr | Taxon                                           | Category | Distribution                                                                 |
|----|------------------------------------------------|----------|------------------------------------------------------------------------------|
| 175| Puccinellia gigantea (Grossh.) Grossh. (P. palustris auct. non (Seneus) Grossh.) | grows near the study area: Zmiiv district, near Lyman lake, leg. Lavrenko (Bordzilovskyi & Lavrenko, 1940) |
| 176| Sclerochloa dura (L.) P. Beauv.                | alien    | Andriyivka, 26.06.1920, leg. Lavrenko (Chorna, 2006)                        |
| 177| Secale sylvestre Host                         | native   | Kreydyanska Dacha, 2016, KWHA !!; Petrivske – SE, pine forest !!            |
| 178| Setaria glauca (L.) P. Beauv.                 | alien    | !!                                                                            |
| 179| Setaria verticillata (L.) P. Beauv            | alien    | !!                                                                            |
| 180| Setaria viridis (L.) P. Beauv                 | alien    | !!                                                                            |
| 181| Sporobolus alopecuroides (Pil & Mü.: Peterson) | native   | Vitrivka (Bordzilovskyi & Lavrenko, 1940); Chepil (Bordzilovskyi & Lavrenko, 1940) |
| 182| Stipa boryschenica Klok ex Prokudin           | native   | between Balakliya and Andriyivka – quarters Nrs 46, 57 and 65 of Borysoblinskyi Bir, 2016, KWHA !! |
| 183| Stipa capillata L.                            | native   | Doivgalivka village, CWU (Bezrodnova, 2015); Balakliya – W, quarter Nr 128 of Borysoblinskyi Bir, 2016, KWHA !!; Balakliya – E, 2016, KWHA !!; Borschivs’ka – S 2.5 km, in the gully, 2016, KWHA !!; between Milova and Hazunivka – chalky slopes, 2016, KWHA !!; Protopopolivka – NW, in the gully, 2016, KWHA !!; Protopopolivka – high bank of Siverskiy Donets !!; protected area Protopopolivsky near Protopopolivka (Filato et al., 2016); Borschivs’ka – NW, high bank of Voloska Balakliya !! |
| 184| Stipa lessingiana Trin. & Rupr.              | native   | Hazunivka – NE, on slopes, 2016, KWHA !!; Borschivs’ka – S, in the gully, 2016, KWHA !!; Bayrak – W 4 km, Khomyn ravine, 2016, KWHA !!; Milova – SW, chalky slopes !!; protected area Protopopolivsky near Protopopolivka (Filato et al., 2016) |
| 185| Stipa pennata L.                              | native   | Hazunivka – NE, 2016, KWHA !!; Borschivs’ka – S, in the gully, 2016, KWHA !!; Protopopolivka – NW, chalky slopes, 2016, KWHA !! |

### Potamogetonaceae

| Nr | Taxon                                           | Category | Distribution                                                                 |
|----|------------------------------------------------|----------|------------------------------------------------------------------------------|
| 186| Potamogeton berchtoldii Fieber.                | native   | Izium State Forestry, Ploske lake, [49.2862°, 36.9557°], sub P. pusillus non L., 23.07.1907 (Savenkov, 1910); Andriyivka – in Siverskiy Donets, 03.06.1980 (Dubyna, 2006); Balakliya – Siverskiy Donets, 03.06.1980 (Dubyna, 2006); Petrivske – an arm of Siverskiy Donets, 08.07.1986 (Dubyna, 2006); near Shchaslyve of Izium district – in Siverskiy Donets (Dubyna & Chorna, 1984) |
| 187| Potamogeton compressus L.                     | native   | near Shchaslyve of the Izium district – in Siverskiy Donets (Dubyna & Chorna, 1984) |
| 188| Potamogeton crispus L.                        | native   | !!                                                                            |
| 189| Potamogeton friesii Rupr.                    | native   | near Shchaslyve of the Izium district – in Siverskiy Donets (Dubyna & Chorna, 1984) |
| 190| Potamogeton lucens L.                         | native   | Vitrivka – in Siverskiy Donets (Savenkov, 1910); Petrivske – an arm of Siverskiy Donets, 08.07.1986 (Dubyna, 2006); Balakliya – W, in Siverskiy Donets !!; near Shchaslyve village of the Izium district – in Siverskiy Donets (Dubyna & Chorna, 1984) |
| 191| Potamogeton natans L.                        | native   | Andriyivka – in Siverskiy Donets, 03.06.1980 (Dubyna, 2006); Savydtsi – in Siverskiy Donets, 07.08.1980 (Dubyna, 2006); Balakliya – W, in Siverskiy Donets !! |

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**Appendix. Continued.**
### Appendix. Continued.

| Nr  | Taxon                              | Category | Distribution                                                                 |
|-----|------------------------------------|----------|-----------------------------------------------------------------------------|
| 192 | *Potamogeton nodosus* Poir.        | native   | near Shchaslyve of Izium district – in Siverskyi Donets ([Dubyna & Chorna, 1984](#)) |
| 193 | *Potamogeton obtusifolius* Mert. & W.D.J. Koch | native   | near Shchaslyve of Izium district – in Siverskyi Donets ([Dubyna & Chorna, 1984](#)) |
| 194 | *Potamogeton pectinatus* L.        | native   | Petrivske – an arm of Siverskyi Donets, 07.08.1980 ([Dubyna, 2006](#)); Andriyivka – W, Lyman lake, 23.06.2012 ([Kazarinova, 2015](#)); Donets – in Zymnye lake, 09.06.2012 ([Kazarinova, 2015](#)); Savyntsi – in Siverskyi Donets, 03.08.2011 ([Kazarinova, 2015](#)) |
| 195 | *Potamogeton perfoliatus* L.       | native   | Balakliya – Siverskyi Donets, 03.06.1980 ([Dubyna, 2006](#)); Petrivske – an arm of Siverskyi Donets, 08.07.1986 ([Dubyna, 2006](#)); Andriyivka – W, Lyman lake, 23.06.2012 ([Kazarinova, 2015](#)) |
| 196 | *Potamogeton trichoides* Cham. & Schldtl. | native   | Andriyivka – W, Lyman lake, 23.06.2012 ([Kazarinova, 2015](#)) |
| 197 | *Zannichellia palustris* L.        | native   | Izyum State Forestry, Ploske and Rogozuvate lakes ([Savenkov, 1910](#)) |

**Sparganiaceae**

| Nr  | Taxon                              | Category | Distribution                                                                 |
|-----|------------------------------------|----------|-----------------------------------------------------------------------------|
| 198 | *Sparganium erectum* L. subsp. erectum | native   | ⬇️ |
| 199 | *Sparganium erectum* subsp. neglectum (Beeby) K. Richt | native   | Balakliya – Siverskyi Donets, 03.06.1980 ([Dubyna, 2006](#)) |

**Typhaceae**

| Nr  | Taxon                              | Category | Distribution                                                                 |
|-----|------------------------------------|----------|-----------------------------------------------------------------------------|
| 200 | *Typha angustifolia* L.            | native   | ⬇️ |
| 201 | *Typha latifolia* L.              | native   | ⬇️ |
| 202 | *Typha laxmannii* Lepech.         | alien    | near Balakliya – 4–5 km, salt marsh on the left bank of Voloska Balakliyka, 14.10.1974, leg. Tzvelev ([Krasnova, 2011](#)); Protopopivka – NW, in the gully, 2016, KWHA !!; Balakliya – W, in the micro-district Druzhba !!; near Lyakhove lake !! |

**Aceraceae**

| Nr  | Taxon                              | Category | Distribution                                                                 |
|-----|------------------------------------|----------|-----------------------------------------------------------------------------|
| 203 | *Acer campestre* L.               | native   | ⬇️ |
| 204 | *Acer negundo* L.                 | alien    | ⬇️ |
| 205 | *Acer platanoides* L.             | native   | ⬇️ |
| 206 | *Acer saccharinum* L.             | alien    | Balakliya – propagated by seeds near the park !! |
| 207 | *Acer tataricum* L.               | native   | Kreedyansa Dacha !!; Bayрак – W, on the banks of Siverskyi Donets !!; Bayрак – E, in the oak forest !!; Borschchivka – NW, plantations in the Voloska Balakliyka valley !!; Protopopivka – N, in Siverskyi Donets valley !!; Balakliya – W, groves on the sandy area !! |

**Amaranthaceae**

| Nr  | Taxon                              | Category | Distribution                                                                 |
|-----|------------------------------------|----------|-----------------------------------------------------------------------------|
| 208 | *Amaranthus albus* L.              | alien    | Balakliya – N part, along the roads and railways, 2016, KWHA !! |
| 209 | *Amaranthus blitoides* S. Watson   | alien    | ⬇️ |
| 210 | *Amaranthus caudatus* L.           | alien    | occasionally in the wild outside the plantations |
| 211 | *Amaranthus powelli* S. Watson     | alien    | ⬇️ |
| 212 | *Amaranthus retroflexus* L.        | alien    | ⬇️ |
| 213 | *Atriplex micrantha* Ledeb.        | alien    | Zavgorodnye – N, on the banks of Siverskyi Donets, 2016, KWHA !! |
| 214 | *Atriplex oblongifolia* Waldst. & Kit. | native   | ⬇️ |
## Appendix. Continued.

| Nr | Taxon                                                      | Category | Distribution                                                                 |
|----|------------------------------------------------------------|----------|-------------------------------------------------------------------------------|
| 215| *Atriplex patula* L.                                        | native   |‼                                                                                     |
| 216| *Atriplex prostrata* Boucher ex DC. subsp. *latifolia* (Wahlenb.) *Rauschert* | native   |‼                                                                                     |
| 217| *Atriplex sagittata* Borkh.                                | alien    |‼                                                                                     |
| 218| *Atriplex tatarica* L.                                      | alien    |‼                                                                                     |
| 219| *Camphorosma songorica* Bunge                              | grows near the study area: Zmiiv district, near Lyman lake (Lavrenko, 1973) |
| 220| *Chenopodium album* L.                                     | native   |‼                                                                                     |
| 221| *Chenopodium hybridum* (L.) S. Fuentes, Uotila & Borsch Schrad. ex W.D.J. Koch & Ziz | native   |‼                                                                                     |
| 222| *Chenopodium strictum* Roth                                | alien    |‼                                                                                     |
| 223| *Chenopodium suecicum* J. Murr                             | alien    |‼                                                                                     |
| 224| *Corispermum × czernjaevii* Klokov                         | native   |Chepil – on the sandy banks of Siverskyi Donets, 15–16.09.1867, leg. Chernyaev (Klokov, 1960) |
| 225| *Corispermum hyssopifolium* L.                             | native   |Andriyivka – SE, on the sandy hill in the pine grove, 11.08.1956, leg. Tzvelev (Klokov, 1960) |
| 226| *Corispermum marschallii* Steven                           | native   |Chepil, 15–20.09.1867, leg. Chernyaev (Klokov, 1960)                               |
| 227| *Grubovia sedoides* (Pall.) G.L. Chu (Bassia sedoides (Pall.) Asch.) | native   |Petrivske – S, on the sands‼                                                                 |
| 228| *Kochia laniflora* (S.G. Gmel.) A.J. Scott                 | native   |Balakliya – W, sandy terrace of Siverskyi Donets, 2016, KWHA‼; Andriyivka – S, 2016, KWHA‼ |
| 229| *Kochia scoparia* (L.) Schrad. subsp. *scoparia*           | alien    |home gardens, as a weed‼                                                               |
| 230| *Kochia scoparia* subsp. *densiflora* (Turcz. ex Moq.) Aellen | alien    |Balakliya – W, sandy steppe, 2016, KWHA‼; Balakliya – along the railways‼                |
| 231| *Oxybasis glauca* (L.) S. Fuentes, Uotila & Borsch (Chenopodium glaucum L.) | native   |‼                                                                                     |
| 232| *Oxybasis rubra* (L.) S. Fuentes, Uotila & Borsch (Chenopodium rubrum L.) | alien    |Protopopivka – N, at the bank of Siverskyi Donets‼                                       |
| 233| *Polycnemum majus* A. Braun ex Bogenh.                     | native   |Milova – SW, 2016, KWHA‼                                                                 |
| 234| *Salsola tragus* L.                                         | native   |Kreydyanska Dacha‼; Balakliya – E part, along the roads and railways‼                  |
| 235| *Suaeda prostrata* Pall.                                   | native   |grows near the study area: Zmiiv district, near Lyman lake (Lavrenko, 1973)         |
### Appendix. Continued.

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| **Anacardiaceae** | | native and alien | native: Protopopivka and Petrivske – on chalky outcrops; protected area Protopopivskyi near Protopopivka (Filatova et al., 2016). The location of *C. coggygria* from the Balakliya district is a continuation of a large linear population on the cretaceous slopes in Siverskyi Donets valley, which was first delineated “between Izyum (Kharkiv region) and Kryva Luka (Donetsk region)” (Taliev, 1915). Some researchers (Litvinov, 1902) believe that this geographical population has a relic origin. However, there was an assumption that *C. coggygria* could be artificially planted near Svyatogorsky monastery (Donetsk region), from where this species spread in the valley of Siverskyi Donets (Taliev, 1902). alien: Borysoglibskyi Bir – in the plantations and spontaneously !!; Bayrak – W, near Khomyn ravine, 2016, KWHA !!; Balakliya – NE, near the dachas in the plantations – became wild !!; Borshchivka – NW, in the plantations and wildly !! |

| **Apiaceae** | | native | |
| 236 | *Aegopodium podagraria* L. | native | !! |
| 237 | *Aethusa cynapium* L. | alien | Izyum State Forestry (Kotov, 1965) |
| 238 | *Angelica archangelica* L. | native | !! |
| 239 | *Angelica sylvestris* L. | native | Balakliya – E, in the Voloska Balakliyka valley, 2016, KWHA !!; Sezonna station – S, Borysoglibskyi Bir !! |
| 240 | *Anthriscus sylvestris* (L.) Hoffm. | native | !! |
| 241 | *Berula erecta* (Huds.) Cov. | native | !! |
| 242 | *Bupleurum falcatum* L. | native | Milova – SW, 2016, KWHA !!; Protopopivka – Kreydyana Hora, 2016, KWHA !!; Kreydyanska Dacha !! |
| 243 | *Chaerophyllum bulbosum* L. | native | between Balakliya and Andriyivka – Borysoglibskyi Bir, 2016, KWHA !!; Kreydyanska Dacha !!; Pyatyrhirske – SE, gully grove !!; Protopopivka !!; Balakliya – W, deciduous grove on the sandy area !! |
| 244 | *Chaerophyllum temulum* L. | native | Petrivske – S, on the banks of Siverskyi Donets, 2016, KWHA !!; etc. |
| 245 | *Cicuta virosa* L. | native | near Andriyivka – Sukhyi Lyman (Lavrenko, 1973) |
| 246 | *Conium maculatum* L. | alien | !! |
| 247 | *Coriandrum sativum* L. | alien | Balakliya !! |
| 248 | *Daucus carota* L. | native | !! |
| 249 | *Eryngium campestre* L. | native | quite often |
| 250 | *Eryngium planum* L. | native | Balakliya – SW, on the banks of Lyakhova !!; Balakliya – W, sandy steppe !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 251 | *Falcaria vulgaris* Bernh. | native | !! |
| 252 | *Heracleum sibiricum* L. | native | !! |
| 253 | *Oenanthe aquatica* (L.) Poir. | native | Savyntsi – in Siverskyi Donets, 03.06.1980 (Dubyna, 2006); near Andriyivka – Sukhyi Lyman (Lavrenko, 1973); Borshchivka – in Voloska Balakliyka, 2016, KWHA !!; Balakliya – SE, in the Voloska Balakliyka valley !! |
| 254 | *Ostericum palustre* (Besser) Besser (Angelica palustris (Besser) Hoffm.) | native | Andriyivka – W, Sukhyi Lyman (Kazarinova, 2015) |
| 255 | *Pastinaca sativa* L. (*Pastinaca sylvestris* Mill.) | native | Milova !! |
### Appendix. Continued.

| Nr  | Taxon                                         | Category | Distribution                                                                 |
|-----|-----------------------------------------------|----------|------------------------------------------------------------------------------|
| 256 | *Peucedanum alsaticum* L.                    | native   | Balakliya – W, KWHA !!; Pyatyhirske – SE, 2016, KWHA !!                     |
| 257 | *Peucedanum oreoselinum* (L.) Moench         | native   | between Balakliya and Andriyivka – Borysoglibskyi Bir, 2016, KWHA !!; Milova – SW, 2016, KWHA !!; Kreydyanska Dacha !!; Borschchivka – S, pine plantation !! |
| 258 | *Pimpinella saxifraga* L. subsp. saxifraga   | native   | Zavgorodnye – on the banks of Siverskyi Donets, 2016, KWHA !! (requires further confirmation) |
| 259 | *Pimpinella saxifraga* subsp. nigra (Mill.) Gaudin (Pimpinella nigra Mill.) | native   | !!                                                                            |
| 260 | *Pimpinella tragium* Vill. subsp. titanophila (Woronow) Tutin (Pimpinella titanophila Woronow) | native   | Milova – W, chalky outcrops, 2016, KWHA !!                                  |
| 261 | *Seseli annuum* L.                           | native   | Balakliya – W, KWHA !!; Milova – SW, 2016, KWHA !!                        |
| 262 | *Seseli campestre* Besser                   | native   | Balakliya, 2016, KWHA !!; etc.                                             |
| 263 | *Seseli libanotis* (L.) W.D.J. Koch          | native   | between Andriyivka and Balakliya – Borysoglibskyi Bir, 2016, KWHA !!; Balakliya – slope of Balaklyiska Hora !!; Kreydyanska Dacha !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 264 | *Silaum silaus* (L.) Schinz & Thell.         | native   | Balakliya – Balaklyiska Hora, 2016, KWHA !! on the banks of Serednya Balakliyka, 2016, KWHA !!; Protopopivka – N !!; Petrivske – SE !! |
| 265 | *Sium latifolium* L.                         | native   | Petrivske – an arm of Siverskyi Donets, 08.08.1980 (Dubyna, 2006); Donets – in Zymnye lake, 09.06.2012 (Kazarinova, 2015); Savyntsi – in Siverskyi Donets, 03.08.2011 (Kazarinova, 2015); Balakliya – W part, in the Serednya Balakliyka valley, 2016, KWHA !! |
| 266 | *Sium sisarum* L.                            | native   | !!                                                                            |
| 267 | *Taeniopetalum arenarium* (Waldst. & Kit.) VN.Tikhom. subsp. horystenicum (Klokov ex Schischk.) Pimenov & Ostr. (Peucedanum horystenicum Klokov ex Schischk.) | native   | Izyum State Forestry (Kotov, 1965)                                          |
| 268 | *Trinia japonica* (Houtt.) DC.               | native   | 2016, KWHA !!                                                                |
| 269 | *Trinia multicaulis* (Poir.) Schischk.       | native   | Pryshyb village (Bordzilovskyi & Lavrenko, 1940), – controversial citation that may refer to the Donetsk region |

**Apocynaceae**

| Nr  | Taxon                                         | Category | Distribution                                                                 |
|-----|-----------------------------------------------|----------|------------------------------------------------------------------------------|
| 270 | *Asclepias syriaca* L.                        | alien    | between Balakliya and Andriyivka, a dry meadow near Lebyazhe lakes, 2016, KWHA !!; near Bayrak – on the fallow !! |
| 271 | *Vinca herbacea* Waldst. & Kit.               | native   | Milova – SW, 2016, KWHA !!                                                  |
| 272 | *Vincetoxicum hirundinaria* Medik. subsp. hirundinaria | native   | Kreydyanska Dacha !!; Bayrak – W 4 km, Khomyn ravine !!                     |
| 273 | *Vincetoxicum hirundinaria* subsp. cretaceum (Probed.) Markgr. (Vincetoxicum cretaceum (Probed.) Wissjul.) | native   | Balakliya (Kotov & Barbarych, 1957)                                          |

**Asteraceae**

| Nr  | Taxon                                         | Category | Distribution                                                                 |
|-----|-----------------------------------------------|----------|------------------------------------------------------------------------------|
| 274 | *Achillea inundata* Kondr.                   | native   | Borschchivka, 2016, KWHA !!; Balakliya !!; Kreydyanska Dacha; Savyntsi (Visjulina, 1965) |
## Appendix. Continued.

| Nr | Taxon                                           | Category | Distribution                                                                 |
|----|-------------------------------------------------|----------|------------------------------------------------------------------------------|
| 275| *Achillea millefolium* L. subsp. collina (Wirtg.) Oborny (*Achillea millefolium* auct. non L.) | native   | Milova (Taliev, 1904); often in dry habitats !!                             |
| 276| *Achillea nobilis* L.                          | native   | Milova – W, chalky slopes, 2016, KWHA !!; Kreydyanska Dacha !!; Balakliya – N part !! |
| 277| *Achillea pannonica* Scheele                   | native   | Borshchivka – N, 2016, KWHA !!; etc.                                        |
| 278| *Achillea salicifolia* Besser (*Ptarmica salicifolia* (Besser) Serge) | native   | Andriyivka – S, meadow in the Siverskyi Donets valley, 2016, KWHA !!        |
| 279| *Achillea setacea* Waldst. & Kit.              | native   | Milova – SW, 2016, KWHA !!; Balakliya !!                                    |
| 280| *Ambrosia artemisifolia* L.                    | alien    | !!                                                                           |
| 281| *Anthemis cotula* L.                           | alien    | !!                                                                           |
| 282| *Anthemis ruthenica* M. Bieb.                  | native   | Bayrak – Khomyn ravine, 2016, KWHA !!                                       |
|     | *Arctium × ambiguum* Nyman                     | nat.h.   | !!                                                                           |
| 283| *Arctium lappa* L.                             | native   | !!                                                                           |
| 284| *Arctium minus* (Hill) Bernh.                  | native   | Balakliya, 2016, KWHA !!                                                    |
| 285| *Arctium tomentosum* Mill.                    | native   | !!                                                                           |
| 286| *Artemisia abrotanum* L. (Artemisia elatior Klokov) | native   | Pryshyb (*Visjulina, 1962*); Balakliya – in the valleys, 2016, KWHA !!; Protopenivka – valley of Siverskyi Donets !! |
| 287| *Artemisia absinthium* L.                     | alien    | !!                                                                           |
| 288| *Artemisia annua* L.                           | alien    | !!                                                                           |
| 289| *Artemisia austriaca* Jacq.                    | native   | !!                                                                           |
| 290| *Artemisia biennis* Willd. (Artemisia tournefortiana Rchb.) | alien    | Balakliya – near the estates, became wild, 2016, KWHA !!                    |
| 291| *Artemisia marschalliana* Spreng. (*Artemisia campestris* L.) | native   | Milova – SW, 2016, KWHA !!; Kreydyanska Dacha !!; Sezonna station – S, Vysokobirske forestry !!; Protopenivka !!; Balakliya – W, sandy steppe !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 292| *Artemisia pontica* L.                         | native   | Uspenske village (*Visjulina, 1962*)                                       |
|     | *Artemisia santonicum* L. subsp. santonicum (*Artemisia pratolina Klokov*) | grows near the study area: Zmiiv district, near Lyman, leg. Lavrenko (*Visjulina, 1962*) |
| 293| *Artemisia scoparia* Waldst. & Kit.            | native   | Zavgorodnye – on the banks of Siverskyi Donets, 2016, KWHA !!               |
| 294| *Artemisia vulgaris* L.                        | native   | !!                                                                           |
| 295| *Aster amellus* L. subsp. bessarabicus (Bernh. ex Rchb.) Soó | native   | near Shebelynka, 08.08.1976 (*Zoz, 1978*); Milova – SW, on the slopes, 2016, KWHA !!; Borshchivka – S 2.5 km, in the gully !! |
| 296| *Bidens cernua* L.                             | native   | !!                                                                           |
| 297| *Bidens frondosa* L.                           | alien    | !!                                                                           |
| 298| *Bidens tripartita* L.                         | native   | !!                                                                           |
| 299| *Calendula officinalis* L.                     | alien    | !!                                                                           |
| 300| *Callistephus chinensis* (L.) Nees              | alien    | !!                                                                           |
### Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

**Appendix.** Continued.

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 301 | Carduus acanthoides L. | alien | Protopopivka – N, valley of Siverskyi Donets !! |
| 302 | Carduus crispus L. | native | Milova – SW, chalk slopes !!; Borshchivka – S 2.5 km, in the gully !! |
| 303 | Carlina biebersteinii Bernh. ex Hornem. | native | Milova – SW, 2016, KWA !! |
| 304 | Centaurea cyanus L. | alien | Milova – 2016, KWHA !! |
| 305 | Centaurea diffusa Lam. | alien | Borshchivka – S 2.5 km, in the gully !; Kreydyanska Dacha !; Bayrak – meadows in the Siverskyi Donets valley !; |
| 306 | Centaurea jacea L. subsp. jacea | native | Balakliya – W, 2016, KWHA !!; Borshchivka – S 2.5 km, in the gully !!; Kreydyanska Dacha !!; Bayrak – meadows in the Siverskyi Donets valley !; |
| 307 | Centaurea jacea subsp. substituta (Czerep.) Mikheev (Centaurea substituta Czerep.) | native | Balakliya, 1925, leg. Pryanyshnykov, KW (Ilyinska et al., 2016) |
| 308 | Centaurea majorovii Dumbadze | native | Krynych village (Visjulina, 1965); Savyntsi (Visjulina, 1965); Balakliya, 2016, KWHA !!; etc. |
| 309 | Centaurea orientalis L. | native | Milova – SW, 2016, KWHA !! |
| 310 | Centaurea pannonica (Heuff.) Hayek | native | near Shebelynya – on the chalky slopes in the ravine, 08.08.1976 (Zoz, 1978) |
| 311 | Centaurea phrygia L. subsp. salicifolia (M. Bieb. ex Willd.) Mikheev | native | without specified location (Gorelova & Alekhin, 2002) – doubtful indication; in Ukraine, this species is distributed exclusively on the Donetsk Ridge (Visjulina, 1965) |
| 312 | Centaurea scabiosa L. subsp. adpressa (Ledebr.) Gugler | native | Balakliya, 2016, KWHA !!; Kreydyanska Dacha !!; Bayrak – W 4 km, Khomyn ravine !! |
| 313 | Centaurea scabiosa subsp. apiculata (Ledebr.) Mikheev | native | Borshchivka – N, valley of Siverskyi Donets !! |
| 314 | Centaurea stoebae L. subsp. stoebae (incl. Centaurea pseudomaculosa Dobrocz.) | native | near Protopopivka – Kreydyana Hora, 2016, KWHA !! – and NW, in the gully !! |
| 315 | Centaurea trichocephala M. Bieb. | native | Andriyivka (Visjulina, 1965) |
| 316 | Centaurea × varnensis Velen. | alien | Borshchivka – N, valley of Siverskyi Donets !! |
| 317 | Chondrilla juncea L. s. str. | native | Milova – SW, chalk slopes !!; Protopopivka – N, on the slopes above Siverskyi Donets !! |
| 318 | Chondrilla latifolia M. Bieb. | native | Balakliya, 2016, KWHA !!; etc. |
| 319 | Cichorium intybus L. | alien | grows near the study area: Zmiiv district, near Lyman lake, leg. Lavrenko (Visjulina, 1962) |
| 320 | Cirsium arvense (L.) Scop. | native | Milova – SW, 2016, KWHA !! |
| 321 | Cirsium arvense var. vestitum Wimm. & Grab. (Cirsium incanum (S.G. Gmel.) Fisch. ex M. Bieb) | native | Shevelivka village (Visjulina, 1962) |
| 322 | Cirsium vulgare (Savi) Ten. | native | Borshchivka – SE, in the gully !! |
| 323 | Cota tinctoria (L.) J. Gay | native | Balakliya, 2016, KWHA !!; Protopopivka – N, Kreydyana Hora !!; Borshchivka – SE, in the gully !! |
## Appendix. Continued.

| Nr  | Taxon                                      | Category | Distribution                                                                 |
|-----|--------------------------------------------|----------|-----------------------------------------------------------------------------|
| 324 | *Crepis biennis* L.                        | native   | Kreydyanska Dacha, 2016, KWHA !!; Balakliya – N part, on the roadside !!    |
| 325 | *Crepis foetida* L. subsp. rhoeadifolia    | native   | !                                                                           |
|     | (M. Bieb.) Celak.                          |          |                                                                             |
| 326 | *Crepis paludosa* (L.) Moench             | native   | Shevelivka *(Visjulina, 1965)*                                             |
| 327 | *Crepis pannonica* (Jacq.) K. Koch         | native   | Krynyczne *(Visjulina, 1965)*                                              |
| 328 | *Crepis tectorum* L.                      | native   | !                                                                           |
| 329 | *Echinacea purpurea* (L.) Moench          | alien    | Balakliya !!                                                                |
| 330 | *Echinops ritro* L.                       | native   | Protopopivka – N part !!; Petrivske – SE, valley of Siverskyi Donets !!    |
| 331 | *Erigeron acris* L. subsp. *acris*         | native   | Balakliya – N part, 2016, KWHA !!                                          |
| 332 | *Erigeron acris* subsp. *podolicus* (Besser) Nyman | native   | Balakliya – W, quarter Nr 128 of the Vysokobirske forestry, 2016, KWHA !! |
| 333 | *Erigeron annuus* (L.) Pers. (Stenactis annua Cass.) | alien    | !                                                                           |
| 334 | *Erigeron canadensis* L. (Conyza canadensis (L.) Cronquist) | alien    | !                                                                           |
| 335 | *Eupatorium cannabinum* L.                 | native   | in the valley from Hlazunivka to Milova !!                                 |
| 336 | *Filago arvensis* L.                      | native   | Balakliya – N, military base, 2016, KWHA !!                               |
| 337 | *Gaillardia pulchella* Foug.               | alien    | Balakliya – along railways !!                                               |
| 338 | *Galatella sedifolia* (L.) Greuter subsp. *dracunculoides* (Lam.) Greuter (Galatella dracunculoides Nees) | native   | Balakliya – N, military base, 2016, KWHA !!; Milova – W, on the slope, 2016, KWHA !!; Pyatyhirsk – SE, on the slopes !!; Protopopivka – N, the slope above Kreydyana Hora, abundantly !! |
| 339 | *Galatella tatarica* (Less.) Novopokr.     | native   | near Prishib, on Siverskyi Donets *(Tzvelev, 1994)*, – controversial citation that may refer to the Donetsk region |
| 340 | *Galatella villosa* (L.) Rchb. f.          | native   | Borschivka – S 2.5 km, in the gully, 2016, KWHA !!                         |
|     | *Gnaphalium rossicum* Kirp.                |          | grows near the study area: Zmiiv district, near Lyman, leg. Lavrenko *(Visjulina, 1962)* |
| 341 | *Grindelia squarrosa* (Pursh) *Dunal*      | alien    | Balakliya – N part, along the roads !!                                      |
| 342 | *Helianthus annuus* L.                     | alien    | !                                                                           |
| 343 | *Helichrysum arenarium* (L.) Moench       | native   | near Protopopivka – chalky slopes, 2016, KWHA !!; Bayrak – W, Khomyn ravine !!; between Andriyivka and Balakliya – Borysogilbskii Bir !!; Kreydyanska Dacha !!; Balakliya – W, sandy steppe !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
|     | *Helichrysum luteolum* (L.) Rchb. (Gnaphalium luteolum L.) |          | grows near the study area: Zmiiv district, near Lyman, leg. Kotov & Lavrenko *(Visjulina, 1962)* |
| 344 | *Heliospis helianthoides* (L.) Sweet var. *scabru* (Dunal) Fernald | alien    | !                                                                           |
| 345 | *Hieracium umbellatum* L.                 | native   | Borschivka – S 2.5 km, in the gully, 2016, KWHA !!; Kreydyanska Dacha !!   |
| 346 | *Hieracium virosum* Pall.                 | native   | Kreydyanska Dacha !!; Milova – SW, meadow-steppe on the slope !!            |
### Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

**Appendix. Continued.**

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 347 | *Inula britannica* L. | native | Balakliya – W, 2016, KWHA !!; Petrivske – S, 2016, KWHA !!; etc. |
| 348 | *Inula germanica* L. | native | Petrivske – S, 2016, KWHA !! |
| 349 | *Inula helenium* L. | native | Borschchivka – S 2.5 km, in the gully !!; Balakliya – in the Serednya Balakliyka valley !! |
| 350 | *Inula hirta* L. | native | Milova – SW, meadow steppe on the northern slope, 2016, KWHA !! |
| 351 | *Inula salicina* L. subsp. *salicina* | native | Milova – SW, 2016, KWHA !! |
| 352 | *Inula salicina* subsp. *aspera* (Poir.) Hayek | native | Balakliya – slope of Balakliyka Hora, 2016, KWHA !!; Andriyivka – S, 2016, KWHA !!; Milova – SW, 2016, KWHA !!; Protopopivka – N, on the steppe slopes above Kreydyana Hora, 2016, KWHA !! |
| 353 | *Inula salicina* subsp. *sabuletorum* (Czern. ex Lavrenko) Sojak | native | locus classicus: pr. Tshepelj, in arenosis, where Salix rosmarinifolia, 15 et 21.II.1867, leg. Czernjaev, Herb. Hort. bot. Charjkov (Botschantzev, 1959); the same designation (“urochysche Chepil”), leg. Chernyayev (Visjulina, 1962); Chepil – S, at the foot of a high slope and Kreydyana Hora near the mouth of the river Chepil, abundantly, with intermediate signs of subsp. *aspera* !! |
| 354 | *Iva xanthifolia* Nutt. | alien | !! |
| 355 | *Jacobaea borystenica* (DC.) B. Nord. & Greuter | native | Izyum State Forestry (Kotov, 1965); grows near the study area: Zmiiv district, near Lyman lake, leg. Kotov & Lavrenko (Visjulina, 1962) |
| 356 | *Jacobaea vulgaris* Gaertn. (Senecio jacobaea L.) | native | !! |
| 357 | *Jurinea arachnoidea* Bunge | native | Borschchivka – S, in the gully, 2016, KWHA !!; Bayrak – W 4 km, Khomyn ravine, 2016, KWHA !!; Milova – SW, chalk slopes !! |
| 358 | *Jurinea cyanoides* (L.) Rchb. | native | Balakliya – NE 4–5 km, steppe slope on the right bank of Voloska Balakliyka, 1972, leg. Tzvelev, LE (Vinichenko, 2007); between Andriyivka and Balakliya – Borysoglibskyi Bir !!; Kreydyanska Dacha, 2016, KWHA !!; Balakliya – W, sandy steppe !!; Petrivske – SE, in the pine forest !! |
| 359 | *Klasea lycopifolia* (Vill.) Á. Löve & D. Löve (Serratula lycopifolia (Vill.) A. Kern.) | native | Milova – SW, meadow steppe on the northern slope, 2016, KWHA !! |
| 360 | *Lactuca muralis* (L.) E. Mey. (Mycelis muralis (L.) Dumort.) | native | Balakliya – W part, in the Serednya Balakliyka valley !!; Balakliya – N part, in the park !! |
| 361 | *Lactuca quercina* L. | native | Pryshyb (Visjulina, 1965); Balakliya – E part, 2016, KWHA !!; near Bayrak – in the deciduous forest, 2016, KWHA !!; Pyatyhirske – SE, gully grove !!; Verbivka – E !!; Protopopivka – N, grove in the valley !! |
| 362 | *Lactuca saligna* L. | native | Balakliya – N, military base, 2016, KWHA !!; Petrivske – SE !! |
| 363 | *Lactuca serriola* L. | alien | !! |
| 364 | *Lactuca tatarica* (L.) C.A. Mey. | alien | !! |
| 365 | *Lapsana communis* L. | native | Kreydyanska Dacha !!; Pyatyhirske – SE, gully grove !! |
| 366 | *Leontodon autumnalis* L. | native | !! |
| 367 | *Leucanthemum vulgare* Lam. | native | !! |
| 368 | *Leuzea altaica* Link (Rhaponticum serratuloides (Georgi) Bobrov) | native | Chepil (Visjulina, 1965); Balakliya – S, meadow in the Siverskyi Donets valley, near Tyshkove lake, 19.08.1959, I. Zoz (Zoz & Kultenko, 1977) |
### Appendix. Continued.

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 369 | Matricaria chamomilla L. (Matricaria recutita L.) | alien | !! |
| 370 | Matricaria discoidea DC. (Lepidotheca suaveolens (Pursh) Nutt.) | alien | Milova !!; Protopopivka !! |
| 371 | Onopordum acanthium L. | alien | !! |
| 372 | Petasites spurius (Retz.) Rchb. | native | Zavgorodnye – N, on the banks of Siverskyi Donets, 2016, KWHA !! |
| 373 | Picris hieracioides L. | native | Balakliya, 2016, KWHA !! |
| 374 | Pilosella cymosa (L.) F. Schultz & Sch. Bip. | native | Haunzunivka (Visjulina, 1965); Balakliya – western slope of Balakliyska Hora !!; Borschivka – S, 2016, KWHA !!; Kreydyanska Dacha !!; Petrivske – SE; in the pine forest !! |
| 375 | Pilosella echoides (Lumn.) F. Schultz & Sch. Bip. | native | Balakliya – W, Borysoglibskyi Bir, 2016, KWHA !!; SW – Kreydyanska Dacha, 2016, KWHA !!; Borschivka – S 2.5 km, in the gully !!; Balakliya – SW part, sandy meadow near Lyakhova !!; Petrivske – SE; in the pine forest !! |
| 376 | Pilosella floribunda (Wimmer & Grab.) Fr. | native | !! |
| 377 | Pilosella officinarum F. Schultz & Sch. Bip. | native | !! |
| Pilosella onegensis Norrl. grows near the study area: Zmiiv district, near Lyman, leg. Lavrenko (Visjulina, 1965) |
| 378 | Psephellus dealbatus (Willd.) K. Koch | alien | Balakliya – occasionally in the dumps and abandoned flower beds !! |
| 379 | Psephellus sumensis (Kalen.) Greuter (Centaurea sumensis Kalen.) | native | Kreydyanska Dacha and Borysoglibskyi Bir, 2016, KWHA !!; Milova – SW; chalky slopes, 2016, KWHA !! |
| 380 | Pulicaria vulgaris Gaertn. | native | !! |
| 381 | Pyrethrum corymbosum (L.) Scop. | native | Pyatyhirsk – S, 2016, KWHA !! |
| 382 | Scorzonera ensifolia M. Bieb. | native | Andriyivka, 2016, KWHA !!; between Balakliya and Andriyivka – Borysoglibskyi Bir, 2016, KWHA !! |
| 383 | Scorzonera laciniata L. | native | Vitrivka (Visjulina, 1965); Kopanka village (Visjulina, 1965) |
| Scorzonera parviflora Jacq. grows near the study area: Zmiiv district, near Lyman, leg. Lavrenko (Visjulina, 1965) |
| 384 | Scorzonera purpurea L. | native | between Balakliya and Andriyivka – quarter Nr 46 of Borysoglibskyi Bir, 2016, KWHA !! |
| 385 | Senecio vernalis Waldst. & Kit. | native | between Balakliya and Bayrak – along the highway !!; in the fields !! |
| 386 | Senecio vulgaris L. | alien | !! |
| 387 | Solidago canadensis L. | alien | !! |
| 388 | Solidago virgaurea L. | native | Petrivske – SE, pine plantation !!; between Balakliya and Andriyivka – Borysoglibskyi Bir !! |
| 389 | Sonchus arvensis L. subsp. uliginosus (M. Bieb.) Nyman | native | !! |
| 390 | Sonchus asper (L.) Hill | alien | Petrivske (Visjulina, 1965) |
| 391 | Sonchus oleraceus L. | alien | !! |
| 392 | Sonchus palustris L. | native | in valleys |
## Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

### Appendix. Continued.

| Nr  | Taxon                                           | Category | Distribution                                                                                      |
|-----|------------------------------------------------|----------|--------------------------------------------------------------------------------------------------|
| 393 | Tanacetum parthenium (L.) Sch. Bip. (Pyrethrum parthenium (L.) Sm.) | alien    | Balakliya – became wild                                                                          |
| 394 | Tanacetum vulgare L.                            | native   | ![](lab_1.png)                                                                                  |
|     | Taraxacum besarabicum (Hornem.) Hand.-Mazz.     |          | grows near the study area: Zmiiv district, near Lyman, leg. Lavrenko & Tzvelev (Lavrenko, 1973; Visjulina, 1965) |
|     | Taraxacum klokovii Litvin.                     |          | grows near the study area: Zmiiv district, near Lyman, leg. Lavrenko (Visjulina, 1965)            |
| 395 | Taraxacum officinale Wigg. s. l.                | native   | ![](lab_2.png)                                                                                  |
| 396 | Taraxacum proximum (Dahlst.) Dahlst.            | native   | ![](lab_2.png)                                                                                  |
| 397 | Taraxacum serotinum (Waldst. & Kit.) Poir.      | native   | ![](lab_2.png)                                                                                  |
|     | Tephroseris palustris (L.) Schrenk ex Rchb. (Senecio arcticus Rupr.) |          | Grows near the study area: Zmiiv district, near Lyman, leg. Lavrenko (Visjulina, 1962)           |
| 398 | Tragopogon dubius Scop., subsp. major (Jacq.) Vollm. | native   | Kreydyanska Dacha, 2016, KWHA !                                                                |
| 399 | Tragopogon podolicus (DC.) Nikitina             | native   | Balakliya, sub T. leiorynchnus Klokov (Visjulina, 1965); Balakliya – N, military base, 2016, KWHA !!; S Balakliya; Bayrak, along the highway, 2016, KWHA !!; between Balakliya and Bayrak !!; Balakliya – W, sandy steppe !! |
| 400 | Tripleurospermum inodorum (L.) Sch. Bip. (Matricaria perforata Mérat) | alien    | ![](lab_2.png)                                                                                  |
| 401 | Tussilago farfara L.                            | native   | ![](lab_2.png)                                                                                  |
| 402 | Xanthium strumarium L. subsp. strumarium (Xanthium albinum (Widder) Scholz & Sukopp) | alien    | ![](lab_2.png)                                                                                  |
| 403 | Xeranthemum annum L.                            | native   | near Protopopivka and Petrivske – steppe slopes above Siverskyi Donets !!                       |

### Balsaminaceae

| Nr  | Taxon                                           | Category | Distribution                                                                 |
|-----|------------------------------------------------|----------|-------------------------------------------------------------------------------|
| 404 | Impatiens noli-tangere L.                       | native   | between Balakliya and Andriyivka – quarter Nr 46 of Borysoglibskyi Bir, 2016, KWHA !! |
| 405 | Impatiens parviflora DC.                        | alien    | Pyatyhirsk – S, 2016, KWHA !!                                                |

### Berberidaceae

| Nr  | Taxon                                           | Category | Distribution                                                                 |
|-----|------------------------------------------------|----------|-------------------------------------------------------------------------------|
| 406 | Berberis vulgaris L.                            | native   | between Andriyivka and Balakliya – Borysoglibskyi Bir !!; Balakliya – W, quarter Nr 128 of Borysoglibskyi Bir !!; Kreydyanska Dacha !!; Borschchivka – S 2.5 km, in the gully !! |

### Betulaceae

| Nr  | Taxon                                           | Category | Distribution                                                                 |
|-----|------------------------------------------------|----------|-------------------------------------------------------------------------------|
| 407 | Alnus glutinoso (L.) Gaertn.                    | native   | valley of Siverskyi Donets and its tributaries (Tkach, 1999); between Balakliya and Andriyivka – along the Siverskyi Donets riverbed !!; Balakliya – E, in the Voloska Balakliyka valley; Petrivske – SE, valley of Siverskyi Donets !! |
| 408 | Betula pendula Roth                            | native   | between Balakliya and Andriyivka – Borysoglibskyi Bir, 2016, KWHA !!; Kreydyanska Dacha !!; Petrivske – SE, in the pine forest !! |

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**Appendix.** Continued.

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 409 | Corylus avellana L. | native | Protopopivka – N, in the oak forest on the banks of Siverskyi Donets, 2016, KWHA !!; between Andriyivka and Balakliya – Borysohlibskyi Bir, 2016, KWHA !!; Pyatyhirske – SE, gully grove !!; Balakliya – W, groves on the sandy area !! |
| 410 | Aegonychon purpurocaeruleum (L.) Holub | native | Andriyivka – S, Borysohlibskyi Bir, near Polovynche lake, 2016, KWHA !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 411 | Anchusa arvensis (L.) M. Bieber. (Lycopsis arvensis L.) | alien | !! |
| 412 | Anchusa gmelinii Ledeb. | native | Pryshyb (Kotov & Barbarych, 1957); Milova, 2016, KWHA !!; Petrivske – S, in the pine forest, 2016, KWHA !!; Sezonna station – S, Borysohlibskyi Bir !!; Izium State Forestry (Kotov, 1965) |
| 413 | Anchusa popovi (Gusul.) Dobrocz. | native | !! |
| 414 | Anchusa procera Besser | native | !! |
| | Anchusa gmelinii × A. popovi | nat. h. | grows near the study area: Izium district, on the left bank of Siverskyi Donets (Kotov & Barbarych, 1957) |
| 415 | Asperugo procumbens L. | native | !! |
| 416 | Buglossoides arvensis (L.) I.M. Johnst | alien | Balakliya – W, Borysohlibskyi Bir, 2016, KWHA !! |
| 417 | Cerinthe minor L. | native | Protopopivka – N, Kreydyana Hora !! |
| 418 | Cynoglossum officinale L. | alien | Kreydyanska Dacha !!; Balakliya !! |
| 419 | Echium vulgare L. | native | !! |
| 420 | Lappula squarrosa (Retz.) Dumort | alien | Balakliya – N part, 2016, KWHA !! |
| 421 | Lithospermum officinale L. | native | Protopopivka – N, in the oak forest, 2016, KWHA !! |
| 422 | Myosotis arvensis (L.) Hill | alien | !! |
| 423 | Myosotis cespitosa Schultz | native | near Andriyivka – Sukhy Lyman (Lavrenko, 1973); Borysohlibskyi Bir, in the alder forest !! |
| 424 | Myosotis scorpioides L. | native | Protopopivka – on the banks of Siverskyi Donets, 2016, KWHA !!; Balakliya – NW, on the banks of Lyakhova !! |
| 425 | Myosotis sparsiflora J.C. Mikan ex Pohl | native | Balakliya – on the banks of Lyakhova !!; between Andriyivka and Balakliya – Borysohlibskyi Bir !!; Bayrak – W, in the Siverskyi Donets valley !! |
| 426 | Myosotis ucrainica Czem. | native | Balakliya – N, military base, 2016, KWHA !! |
| 427 | Nonea rossica Steven | native | Balakliya – N part, 2016, KWHA !! |
| 428 | Onosma simplicissima L. (Onosma tanaitica Klokov) | native | near Shebelynka – in the ravine on the chalky slopes, 08.08.1976, I.G. Zoz (Zoz, 1978); Milova – SW, 2016, KWHA !! |
| 429 | Pulmonaria obscura Dumort | native | Bayrak – E, in the oak forest !!; Borysohlibskyi Bir !!; Protopopivka – N, grove in the valley !! |
| 430 | Symphytum officinale L. | native | !! |
| 431 | Symphytum tauricum Willd. | native | Pryshyb (Kotov & Barbarych, 1957); Balakliya – N, military base, 2016, KWHA !!; Bayrak – E !!; Bayrak – S, in the deciduous forest !!; Bayrak – W, Khomyn ravine, 2016, KWHA !! |
### Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

**Appendix.** Continued.

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| **Brassicaceae** | | | |
| 432 | Alliaria petiolata (M. Bieb.) Cavara & Grande | native | !! |
| 433 | Alyssum alyssoides (L.) L. (Alyssum calycinum L.) | native | Borschchivka – N, 2016, KWHA !!; Borschchivka – SE, in the gully !! |
| 434 | Alyssum desertorum Stapf | native | Borschivka – S, in the gully, 2016, KWHA !! |
| 435 | Arabidopsis thaliana (L.) Heynh. | alien | Balakliya, 2016, KWHA !!; Kreydyanska Dacha, 2016, KWHA !! |
| 436 | Armoracia rusticana P. Gaertn., B. Mey. & Scherb. | alien | !! |
| 437 | Barbarea stricta Andr. ex Besser | native | Bayrak – W, 2016, KWHA !! |
| 438 | Berteroa incana (L.) DC. | native | !! |
| 439 | Brassica elongata subsp. integrifolia (Boiss.) Breistr. (Brassica armoracioides Czern. ex Turcz.) | native | Kreydyanska Dacha, 2016, KWHA !!; Balakliya – N part, along the roads, KWHA !!; Milova – SW, on chalky outcrops, 2016, KWHA !!; Protopopivka – NW, in the gully !! |
| 440 | Brassica napus L. | alien | spontaneously !! |
| 441 | Brassica nigra (L.) W.D.J. Koch | alien | Kopanka (Klokov & Visjulina, 1953) |
| 442 | Bunias orientalis L. | alien | !! |
| | Camellina linicola K.F. Schimp. & Spenn. (Camellina alyssum (Mill.) Thell.) | | grows near the study area: Zmiiv district, near Lyman, leg. Lavrenko (Klokov & Visjulina, 1953) |
| 443 | Camellina microcarpa Andr. ex DC. | alien | Protopopivka – N, in the field, 2016, KWHA !!; Bayrak, 2016, KWHA !! |
| 444 | Capsella bursa-pastoris (L.) Medik. | alien | !! |
| 445 | Cardamine impatiens L. | native | Kreydyanska Dacha, 2016, KWHA !!; Andriyivka – S, pine forest on the banks of Siverskyi Donets, 2016, KWHA !! |
| 446 | Cardamine parviﬂora L. | native | Andriyivka – S, quarter Nr 90 of Borysoglibskyi Bir, 2016, KWHA !! |
| 447 | Cardamine pratensis L. | native | near Andriyivka – Sukhyi Lyman (Lavrenko, 1973) |
| 448 | Descurainia sophia (L.) Webb ex Prantl | alien | !! |
| 449 | Diplotaxis muralis (L.) DC. | alien | Milova – W, on chalky outcrops, 2016, KWHA !! |
| 450 | Draba verna L. (Erophila verna (L.) DC.) | native | !! |
| 451 | Eruca vesicaria (L.) Cav. | alien | Verbivka (Klokov & Visjulina, 1953) |
| 452 | Erysimum aureum M. Bieb. (E. sylvaticum M. Bieb.) | native | Kreydyanska Dacha, 2016, KWHA !!; Protopopivka – N, in the forest, 2016, KWHA !! |
| 453 | Erysimum canum (Piller & Mitterp.) Polatschek (Syrenia cana (Piller & Mitterp.) Neitr.) | native | !! |
| 454 | Erysimum cheiranthoides L. | native | Izyum State Forestry (Kotov, 1965) |
| 455 | Erysimum diffusum Ehrh. (Erysimum canescens Roth) | native | Balakliya, 2016, KWHA !!; Milova – SW, 2016, KWHA !!; Borschchivka – S 2.5 km, in the gully, 2016, KWHA !!; Protopopivka – N, Kreydyana Hora, 2016, KWHA !!; Kreydyanska Dacha !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| Nr  | Taxon                                | Category | Distribution                                                                 |
|-----|--------------------------------------|----------|-------------------------------------------------------------------------------|
| 456 | Euclidium syriacum (L.) R. Br.        | alien    | Balakliya – N, military base, 2016, KWHA !!; Milova !!                      |
| 457 | Lepidium campestrum (L.) W.T. Aiton   | alien    | Milova – SW, 2016, KWHA !!                                                   |
| 458 | Lepidium densiflorum Schrad.          | alien    |                                                                               |
| 459 | Lepidium draba L. (Cardaria draba (L.) Desv.) | alien | !                                                                               |
| 460 | Lepidium latifolium L.                | native   | Balakliya – on the railway track, 2016, KWHA !!                            |
| 461 | Lepidium ruderale L.                  | alien    |                                                                               |
| 462 | Meniocus linifolius (Stephan ex Willd.) DC. | native | Borshchivka – SE, leg. N.B. Saidakhmedova!                                    |
| 463 | Noccaea perfoliata (L.) Al-Shehbaz (Thlaspi perfoliatum L) | alien | !                                                                               |
| 464 | Noccaea praecox (Wulfen) F.K. Mey. (Thlaspi praecox Wulfen) | native | Kopanka (Klokov & Visjulina, 1953)                                           |
| 465 | Odontarrhena alpestris (L.) Ledeb. (Alyssum tortuosum Waldst. & Kit.) | native | Protopopivka – NW, on chalky outcrops                                         |
| 466 | Odontarrhena tortuosa (Willd.) C.A. Mey. subsp. cretacea (Kotov Španiel, Al-Shehbaz & Marhold (Alyssum gymnoplodum P.A. Smirn.) | native | Milova – SW, on chalky outcrops, 2016, KWHA !!                               |
| 467 | Raphanus raphanistrum (L.) subsp. sativus (L.) Domin (Raphanus sativus L.) | alien | !                                                                               |
| 468 | Rorippa amphibia (L.) Besser          | native   | Izyum State Forestry, Rogozuvate lakes (Savenkov, 1910); Petrivske – an arm of Siverskyi Donets, 07.08.1980 (Dubyna, 2006); Savyntsi – in Siverskyi Donets, 03.06.1980 (Dubyna, 2006); Balakliya – on the banks of Lyakhova !! |
| 469 | Rorippa austriaca (Cranzt) Besser     | native   | !                                                                               |
| 470 | Rorippa palustris (L.) Besser         | native   | !                                                                               |
| 471 | Sinapis arvensis L.                   | alien    | Milova, 2016, KWHA !!                                                        |
| 472 | Sisymbrium altissimum L.              | native   | Balakliya – N, 2016, KWHA !!; Borshchivka – S 2.5 km, in the gully, 2016, KWHA !! |
| 473 | Sisymbrium loeselii L.                 | alien    | Milova, 2016, KWHA !!                                                        |
| 474 | Sisymbrium officinale (L.) Scop.      | alien    | !                                                                               |
| 475 | Sisymbrium polymorphum (Murray) Roth   | native   | Kreydyanska Dacha, 2016, KWHA !!; Balakliya – N part, along the roads, 2016, KWHA !! |
| 476 | Sisymbrium volgense M. Bib. ex E. Fourn. | native | Balakliya – N part, 2016, KWHA !!; Kreydyanska Dacha !!                        |
| 477 | Thlaspi arvense L.                    | alien    | !                                                                               |
| 478 | Turritis glabra L.                    | native   | Kreydyanska Dacha, 2016, KWHA !!                                             |

**Campanulaceae**

| Nr  | Taxon                                | Category | Distribution                                           |
|-----|--------------------------------------|----------|--------------------------------------------------------|
| 479 | Adenophora lilijofia (L.) Ledeb. ex A. DC. | native | Chepil (Kotov, 1961); Vitrivka (Kotov, 1961)           |
### Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

| Nr  | Taxon                                | Category  | Distribution                                                                 |
|-----|--------------------------------------|-----------|-------------------------------------------------------------------------------|
| 480 | Asyneuma canescens (Waldst. & Kit.) Griseb. & Schenk | native    | Balakliya !; between Andriyivka and Balakliya – Borysoglibskyi Bir, 2016, KWHA !; Milova – SW, 2016, KWHA ! |
| 481 | Campanula bononiensis L.             | native    | Balakliya – W, Borysoglibskyi Bir, 2016, KWHA !; Petrivske – S, 2016, KWHA !; Kreydyanska Dacha ! |
| 482 | Campanula glomerata L.               | native    | in the valleys of Siverskyi Donets and its tributaries ! |
| 483 | Campanula patula L.                  | native    | between Balakliya and Andriyivka – quarter Nr 47 of Borysoglibskyi Bir, 2016, KWHA !; Kreydyanska Dacha, in the quarter Nr 37; etc. ! |
| 484 | Campanula persicifolia L.            | native    | Balakliya – W, Borysoglibskyi Bir, 2016, KWHA !; Milova – SW, 2016, KWHA !; Protopopivka – N, in the oak forest ! |
| 485 | Campanula rapunculoides L.           | native    | Kreydyanska Dacha ! |
| 486 | Campanula sibirica L.                | native    | in the valleys of Siverskyi Donets and its tributaries ! |
| 487 | Jasione montana L.                   | native    | between Balakliya and Andriyivka – Borysoglibskyi Bir, 2016, KWHA !; Petrivske – S, in the pine forest, 2016, KWHA ! |

**Cannabaceae**

| Nr  | Taxon                                | Category  | Distribution                                                                 |
|-----|--------------------------------------|-----------|-------------------------------------------------------------------------------|
| 488 | Cannabis sativa (Cannabis ruderalis Janisch.) | alien   | Kreydyanska Dacha ! |
| 489 | Humulus lupulus L.                   | native    | Kreydyanska Dacha ! |

**Caprifoliaceae**

| Nr  | Taxon                                | Category  | Distribution                                                                 |
|-----|--------------------------------------|-----------|-------------------------------------------------------------------------------|
| 490 | Cephalaria uralensis (Murray) Schrad. ex Roem. & Schult | native    | Balakliya !; between Andriyivka and Balakliya – Borysoglibskyi Bir, 2016, KWHA !; Milova – SW, 2016, KWHA ! |
| 491 | Dipsacus strigosus Willd. ex Roem. & Schult | native    | Balakliya – W, Borysoglibskyi Bir, 2016, KWHA !; Petrivske – S, 2016, KWHA !; Kreydyanska Dacha ! |
| 492 | Knautia arvensis (L.) Coult.          | native    | Balakliya – W, Borysoglibskyi Bir, 2016, KWHA !; Petrivske – S, 2016, KWHA !; Kreydyanska Dacha ! |
| 493 | Lomelosia argentea (L.) Greuter & Burdet (Scabiosa ucranica L.) | native    | in the valleys of Siverskyi Donets and its tributaries ! |
| 494 | Lonicera tatarica L.                 | alien    | between Balakliya and Andriyivka – quarter Nr 47 of Borysoglibskyi Bir, 2016, KWHA !; Kreydyanska Dacha, in the quarter Nr 37; etc. ! |
| 495 | Scabiosa ochroleuca L.               | native    | Kreydyanska Dacha ! |
| 496 | Valeriana officinalis L.             | native    | Kreydyanska Dacha ! |
| 497 | Valeriana pratensis Dierb. (Valeriana collina Wallr.) | native    | in the valleys of Siverskyi Donets and its tributaries ! |
| 498 | Valeriana volgensis Kazak. (Valeriana nitida Kreyer) | native    | between Balakliya and Andriyivka – quarter Nr 47 of Borysoglibskyi Bir, 2016, KWHA !; Kreydyanska Dacha, in the quarter Nr 37; etc. ! |
| 499 | Valerianella carinata Loisel         | native    | between Balakliya and Andriyivka – quarter Nr 47 of Borysoglibskyi Bir, 2016, KWHA !; Kreydyanska Dacha, in the quarter Nr 37; etc. ! |

**Caryophyllaceae**

| Nr  | Taxon                                | Category  | Distribution                                                                 |
|-----|--------------------------------------|-----------|-------------------------------------------------------------------------------|
| 500 | Arenaria serpyllifolia L.            | native    | Balakliya – W, Borysoglibskyi Bir, 2016, KWHA !; Petrivske – S, in the pine forest, 2016, KWHA ! |
| 501 | Cerastium holosteoides Fr.           | native    | near Andriyivka – Sukhyi Lyman (Lavrenko, 1973); Andriyivka, S, Borysoglibskyi Bir, 2016, KWHA ! |
| 502 | Dianthus campestris M. Bieb.         | native    | near Andriyivka – Sukhyi Lyman (Lavrenko, 1973); Andriyivka, S, Borysoglibskyi Bir, 2016, KWHA ! |

**Appendix. Continued.**
### Appendix. Continued.

| Nr  | Taxon                                                                 | Category | Distribution                                                                 |
|-----|-----------------------------------------------------------------------|----------|-------------------------------------------------------------------------------|
| 503 | *Dianthus capitatus* DC. subsp. *andrzeyouskianus* Zapal.             | native   | Zavgorodnye – N, on the banks of Siverskyi Donets, 2016, KWHA !!              |
| 504 | *Dianthus polymorphus* M. Bieb *(Dianthus platyodon* Klokov)         | native   | Kreydyanska Dacha 2016, 2016, KWHA !!                                       |
| 505 | *Eremogone biebersteinii* (Schlecht.) Holub                           | native   | Borschchivka – S 2.5 km, in the gully, 2016, KWHA !!                       |
| 506 | *Eremogone longifolia* (M. Bieb.) Fenzl                                | native   | Balakliya *(Kotov, 1952)*; Balakliya – W, sands, 2016, KWHA !!; Kreydyanska Dacha, 2016, KWHA !! |
| 507 | *Gypsophila oligosperma* Krasnova                                      | native   | Milova – SW, 2016, KWHA !!; Protopopivka – Kreydyana Hora, 2016, KWHA !!   |
| 508 | *Gypsophila paniculata* L.                                            | native   | Balakliya – along the railways and roadsides, 2016, KWHA !!; Balakliya – SW, in the Lyakhova valley !!; Balakliya – W, sandy steppe !!; Petrivske – SE, pine terrace of Siverskyi Donets !!; Borysoglibskyi Bir !! |
| 509 | *Gypsophila perfoliata* L.                                            | alien    | Milova – SW, on chalky outcrops, 2016, KWHA !!                             |
| 510 | *Herniaria incana* Lam. *(Herniaria besseri* Fisch. ex Hornem.)      | native   | near Volokhiv Yar village, Chuhuiv district *(Kotov, 1952)*, – in the Serednya Balakliyka valley |
| 511 | *Herniaria polygama* J. Gay                                           | native   | Kreydyanska Dacha, 2016, KWHA !!                                           |
| 512 | *Holosteum umbellatum* L.                                             | native   | !!                                                                           |
| 513 | *Minuartia setacea* (Thuill.) Hayek *(Minuartia leiosperma* Klokov)  | native   | Protopopivka – NW, chalky slopes, 2016, KWHA !!                            |
| 514 | *Psammophiliella muriatilis* (L.) Ikon.                               | native   | Kreydyanska Dacha, 2016, KWHA !!; Andriyivka – S, Borysoglibskyi Bir !!; Petrivske – SE ! |
| 515 | *Saponaria officinalis* L.                                            | alien    | !!                                                                           |
| 516 | *Scleranthus annuus* L.                                               | alien    | !!                                                                           |
| 517 | *Silene baccifera* (L.) Durande *(Cucubalus buccifer* L.)             | native   | Balakliya – W !!                                                            |
| 518 | *Silene borysthenica* (Gruner) Walters *(Otites borysthenicus* Klokov) | native   | Balakliya – W, 2016, KWHA !!; Borschchivka – NW, on the slopes in the Voloska Balakliyka valley !!; Petrivske – SE, pine plantation !! |
| 519 | *Silene chersonensis* (Zapal.) Klepov *(Otites chersonensis* (Zapal.) Klokov) | native   | Shebelynka *(Klepov, 1936)*; Balakliya – N part !!                        |
| 520 | *Silene chlorantha* (Willd.) Ehrh.                                     | native   | !!                                                                           |
| 521 | *Silene dichotoma* Ehrh.                                              | native   | Milova – SW, 2016, KWHA !!                                                |
| 522 | *Silene latifolia* (Poir.) subsp. *alba* (Mill.) Greuter & Burdet *(Melandrium album* (Mill.) Garcke) | native   | !!                                                                           |
| 523 | *Silene multiflora* (Ehrh.) Pers. *(Silene steppicola* Klepov)       | native   | Balakliya *(Kotov, 1952)*; Andriyivka *(Kotov, 1952)*; Balakliya – E and N, 2016, KWHA !!; Kreydyanska Dacha, 2016, KWHA !!; Borschchivka – S 2.5 km, in the gully, 2016, KWHA !!; Bayrak – meadow in the valley of Siverskyi Donets, 2016, KWHA !!; Milova – W !! |
| 524 | *Silene nutans* L.                                                    | native   | Kreydyanska Dacha !!; Bayrak – W !!; Borysoglibskyi Bir !!                  |
| 525 | *Silene supina* M. Bieb.                                              | native   | Protopopivka – NW, chalky outcrops, 2016, KWHA !!                          |
### Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

**Appendix. Continued.**

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 526 | *Silene viscosa* (L.) Pers. (*Elisanthe viscosa* (L.) Rupr.) | native | Balakliya – N, near the military base, 2016, KWHA !! |
| 527 | *Silene vulgaris* (Moench) Garcke (*Oberna behen* (L.) Ikonn.) | native | !! |
| 528 | *Silene wulgensis* (Hornem.) Otth (*Ottites wulgensis* (Hornem.) Grossh.) | native | Balakliya – N part, 2016, KWHA !! |
| 529 | *Spergula arvensis* L. | native | Balakliya – SW, quarter Nr 29 of Kreydyana Hora, 2016, KWHA !! |
| 530 | *Spergularia marina* (L.) Besser | grows near the study area: Zmiiv district, near Lyman lake (Lavrenko, 1973) |
| 531 | *Stellaria aquatica* (L.) Scop. (*Myosoton aquaticum* (L.) Moench) | native | !! |
| 532 | *Stellaria crassifolia* Ehrh. | native | near Andriyivka – Sukhyi Lyman (Lavrenko, 1927, 1973) |
| 533 | *Stellaria graminea* L. | native | Balakliya – N, 2016, KWHA !!; Bayrak – W, Khomyn ravine !! |
| 534 | *Stellaria holostea* L. | native | !! |
| 535 | *Stellaria palustris* Ehrh. ex Hoffm. | native | near Andriyivka – Sukhyi Lyman (Lavrenko, 1973) |

**Celastraceae**

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 536 | *Euonymus europaeus* L. | native | !! |
| 537 | *Euonymus verrucosus* Scop. | native | !! |
| 538 | *Parnassia palustris* L. | grows near the study area: Zmiiv district, near Lyman lake (Lavrenko, 1973) |

**Ceratophyllaceae**

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 539 | *Ceratophyllum demersum* L. | native | !! |
| 540 | *Ceratophyllum platicanthum* Cham. | native | Petrivske – an arm of Siverskyi Donets, 08.07.1986 (Dubyna, 2006) |
| 541 | *Ceratophyllum submersum* L. | native | between Andriyivka and Balakliya – Lebyazhe lakes (Kazarinova, 2015); Donets – in Zymnye lake, 09.06.2012 (Kazarinova, 2015) |
| 542 | *Ceratophyllum tanaiticum* Sapjeg | native | without exact location (Dubyna et al., 1985); grows near the study area: Zmiiv district, near Lyman (Klokov & Visjulina, 1953) |

**Convolvulaceae**

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 543 | *Calystegia sepium* (L.) R. Br. | native | !! |
| 544 | *Convolvulus arvensis* L. | native | !! |
| 545 | *Cuscuta campestris* Yunck. | alien | Protopopivka – N, 2016, KWHA !! |
| 546 | *Cuscuta epithymum* (L.) L. | native | Milova – SW, 2016, KWHA !! |

**Cornaceae**

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 547 | *Cornus sanguinea* L. subsp. *sanguinea* (*Swida sanguinea* (L.) Opiz) | native | !! |
| 548 | *Cornus sanguinea* subsp. *australis* (C.A. Mey.) Jáv. (*Swida australis* (C.A. Mey.) Pojark. ex Grossh.) | alien | !! |
### Appendix. Continued.

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 548 | **Crassulaceae**<br>Hylotelephium maximum (L.) Holub subsp. maximum | native | Borysoglibskyi Bir, 2016, KWHA !!; Balakliya – in the valleys !!; between Balakliya and Bayrak – in the Siverskyi Donets valley !!; Kreydyanska Dacha – rarely and mainly on the forest edges; Andriyivka – S, at the Siverskyi Donets bank !!; Protopopivka – N, in the forest near Kreydyana Hora !!; Bayrak – S, in the deciduous forest !! |
| 549 | Hylotelephium maximum subsp. ruprechtii (Jalas) Dostál (incl. Hylotelephium stepposum (Boriss.) Tzvelev)<br>Hylotelephium maximum subsp. maximum × H. maximum subsp. ruprechtii | nat.h. | Balakliya – SW, quarter Nr 51 of Kreydyanska Dacha, 2016, KWHA !! |
| 550 | Petroserum rupestre (L.) P.V. Heath | alien | cultivated and occasionally spread to the dry habitats. Balakliya – near the cemetery in Kreydyanska Dacha; Balakliya – N, military base |
| 551 | Phedimus hybridus (L.) ’t Hart (Sedum hybridum L.) | alien | Balakliya – SW, quarter Nr 13 of Kreydyanska Dacha, became wild, several curtains, 2016, KWHA !! |
| 552 | Sedum acre L. | native | Balakliya – on the roadsides !!; Kreydyanska Dacha !!; Sezonna station – S, Borysoglibskyi Bir !!; Andriyivka !!; Protopopivka !!; Andriyivka – S, pine terrace of Siverskyi Donets !!; Balakliya – W, sandy steppe and quarter Nr 128 of Borysoglibskyi Bir !!; Petrivske – SE, pine terrace of Siverskyi Donets !!; between Balakliya and Bayrak – on the highway side !! |
| 553 | Sedum sexangulare L. | alien | between Balakliya and Andriyivka – quarter Nr 44 of Borysoglibskyi Bir, 2016, KWHA !!; ibid., quarter Nr 11 !! |
| 554 | Sempervivum ruthenicum Schnittsp. & C.B. Lehm. | native | Petrovsky forestry, on the banks of Siverskyi Donets, 17.07.1950, leg. Kotov (KW) !!; between Andriyivka and Balakliya – Borysoglibskyi Bir (quarters Nrs 46, 128, etc.); Kreydyanska Dacha (quarters Nrs 5, 8, 21–23, 38, 47–51, etc.) !!; quarter Nr 51 of Kreydyanska Dacha, KWHA !! |
| 555 | Echinocystis lobata (Mincx.) Torr. & A. Gray | alien | Protopopivka !! |
| 556 | **Cucurbitaceae**<br>Elaeagnus angustifolia L. | alien | between Pyatyhirske and Milova – on chalky outcrops and steppe slopes !! |
| 557 | Chimaphila umbellata (L.) W.P.C. Barton | native | Balakliya (Kotov & Barbarych, 1957) |
| 558 | Monotropa hypopitys L. | native | Balakliya (Kotov & Barbarych, 1957); Pryshyb (Kotov & Barbarych, 1957) |
| 559 | Orthilia secunda (L.) House | native | Balakliya (Kotov & Barbarych, 1957); quarter Nr 29 of Kreydyanska Dacha, 2016, KWHA !!; ibid., quarter Nr 38 !! |
# Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

## Appendix. Continued.

| Nr | Taxon                              | Category | Distribution                                                                                   |
|----|------------------------------------|----------|-----------------------------------------------------------------------------------------------|
|    | **Euphorbiaceae**                  |          |                                                                                               |
| 560| *Euphorbia agraria* M. Bieb.       | native   | !!                                                                                             |
| 561| *Euphorbia helioscopia* L.         | alien    | Milova !!                                                                                      |
| 562| *Euphorbia kaleniczenkoi* Czern.   | native   | !!                                                                                             |
| 563| *Euphorbia microcarpa* (Prokh.) Krylov (*Euphorbia subtilis* Prokh.) | native | Bayrak – W, Khomyn ravine, 2016, KWHA !!; Sezonna station – S, Borysoglibskyi Bir !! |
| 564| *Euphorbia palustris* L.           | native   | !!                                                                                             |
| 565| *Euphorbia seguieriana* Neck.      | native   | Borshchivka – S, pine plantation, 2016, KWHA !! Borshchivka – SE, in the gully !!; Kreydyanska Dacha !!; Sezonna station – S, Borysoglibskyi Bir !!; Milova – SW, chalky slopes !!; Balakliya – SW part, in Lyakhova valley !!; Balakliya – W, sandy steppe !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 566| *Euphorbia semivillosa* Prokh.     | native   | Milova – SW, 2016, KWHA !!; Andriyivka – S, pine terrace of Siverskyi Donets !!; Balakliya – W, in the grove !! |
| 567| *Euphorbia stepposa* Zoz ex Prokh. | native | Borschivka – S, in the gully, 2016, KWHA !!; Protopopivka – N, Kreydyana Hora, 2016, KWHA !!; Milova – SW !! *(Taliev, 1904)*; Borschchivka – NW !! |
| 568| *Euphorbia virgata* Waldst. & Kit. | native   | Balakliya, 2016, KWHA !!; etc. !!                                                               |
|    | **Fabaceae**                       |          |                                                                                               |
| 569| *Amorpha fruticosa* L.             | alien    | Kreydyanska Dacha, 2016, KWHA !!                                                               |
| 570| *Astragalus albicaulis* DC.        | native   | near Shebelynka, 08.07.1976 *(Zoz, 1978)*; Milova – SW, on chalky outcrops, 2016, KWHA !! |
| 571| *Astragalus austriacus* Jacq.      | native   | !!                                                                                             |
| 572| *Astragalus cicer* L.              | native   | !!                                                                                             |
| 573| *Astragalus glycyphyllos* L.       | native   | Milova – SW !!; Balakliya – W !!                                                               |
| 574| *Astragalus onobrychis* L.         | native   | Milova – W !!; Borshchivka – NW and S !!                                                        |
| 575| *Astragalus pallescens* M. Bieb.   | native   | Borshchivka – NW, slope over the right bank of Voloska Balakliyka, 2016, KWHA !!; Borshchivka – S 2.5 km, in the gully !! |
| 576| *Astragalus ucrainicus* M. Pop. & Klokov | native | Protopopivka – NW, on chalky outcrops, 2016, KWHA !!                                           |
| 577| *Astragalus varius* S.G. Gmel.     | native   | between Balakliya and Andriyivka – Borysoglibskyi Bir, 2016, KWHA !!; quarter Nr 8 of Kreydyanska Dacha !!; Balakliya – W, sandy steppe !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 578| *Caragana arborescens* Lam.        | alien    | !!                                                                                             |
| 579| *Caragana frutex* (L.) K. Koch     | native   | Balakliya – slope of Balalikyska Hora, 2016, KWHA !!; Bayrak – Khomyn ravine, 2016, KWHA !!; Borshchivka – S 2.5 km, in the gully, 2016, KWHA !!; Protopopivka – N part and near Kreydyana Hora !!; Borshchivka – NW !!; Milova – W !! |
| 580| *Chamaecytisus austriacus* (L.) Link | native | Milova – SW, chalky slopes, 2016, KWHA !!                                                   |
| 581| *Chamaecytisus ruthenicus* (Fisch. ex Wol.) Klásk. | native | Kreydyanska Dacha, 2016, KWHA !!; Borschivka – S, in the gully, 2016, KWHA !!; between Balakliya and Andriyivka – Borysoglibskyi Bir !!; Petrivske – SE, in the pine forest !! |
| Nr | Taxon                                      | Category | Distribution                                                                                                                                 |
|----|--------------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 582| *Genista tinctoria* L.                     | native   | Pryshyb (Zerov, 1954); Milova – SW, on chalky outcrops, 2016, KWHA !!; Protopopivka – N part, chalky slopes, 2016, KWHA !!; Kreydyanska Dacha !!; Bayrak – W 3 km, near the country estates !!; between Andriyivka and Balakiya – Borysoglibskyi Bir !!; Balakiya – W, sandy steppe and quarter Nr 128 of Borysoglibskyi Bir !!; Petrivske – SE, in the pine forest !! |
| 583| *Gleditsia triacanthos* L.                 | alien    | in the forest plantations, from where it spreads by seeds !!                                                                                   |
| 584| *Lathyrus pratensis* L.                    | native   | Milova – W, 2016, KWHA !!; Balakiya – E, in the Voloska Balakiyka valley !!; Pyatyhirskoe – SE, gully groove !!                                |
| 585| *Lathyrus sylvaestris* L.                  | native   |                                                                                                                                             |
| 586| *Lathyrus tuberosus* L.                    | alien    |                                                                                                                                             |
| 587| *Lathyrus vernus* (L.) Bernh.              | native   | Protopopivka – N, in the oak forest, 2016, KWHA !!                                                                                         |
| 588| *Lotus corniculatus* L.                    | native   |                                                                                                                                             |
| 589| *Lotus stepposus Kramina*                  | native   |                                                                                                                                             |
| 590| *Medicago falcata* L. (incl. *Medicago romanica* Prodan) | native   |                                                                                                                                             |
| 591| *Medicago lupulina* L.                     | native   |                                                                                                                                             |
| 592| *Medicago sativa* L.                      | alien    |                                                                                                                                             |
| 593| *Medicago × varia* Martyn                 | alien    |                                                                                                                                             |
| 594| *Melilotus albus* Medik.                   | native   |                                                                                                                                             |
| 595| *Melilotus officinalis* (L.) Pall.         | native   |                                                                                                                                             |
| 596| *Onobrychis arenaria* (Kit.) DC.           | native   |                                                                                                                                             |
| 597| *Onobrychis vicifolia* Scop.               | alien    | Bayrak – W, 2016, KWHA !!                                                                                                                  |
| 598| *Ononis arvensis* L.                      | native   | Balakiya – S, in the valleys, 2016, KWHA !!; Verbivka !!                                                                                   |
| 599| *Oxytropis pilosa* (L.) DC.                | native   | Balakiya – W, 2016, KWHA !!; Milova – SW, 2016, KWHA !!; Bayrak – W, Khomyn ravine !!                                                       |
| 600| *Robinia pseudoacacia* L.                  | alien    |                                                                                                                                             |
| 601| *Securigera varia* (L.) Lassen             | native   |                                                                                                                                             |
| 602| *Trifolium alpestre* L.                    | native   | Borschivka – S, in the gully, 2016, KWHA !!; Kreydyanska Dacha !!; Bayrak – W 4 km, Khomyn ravine !!; Milova – SW, on the slopes !!          |
| 603| *Trifolium arvense* L.                     | native   | Borschivka – S, in the gully !!; Balakiya – W, sandy steppe !!; Petrivske – SE, pine terrace of Siverskyi Donets !!                         |
| 604| *Trifolium fragiferum* L.                  | native   |                                                                                                                                             |
| 605| *Trifolium hybridum* L.                    | native   |                                                                                                                                             |
| 606| *Trifolium medium* L.                      | native   |                                                                                                                                             |
| 607| *Trifolium montanum* L.                    | native   | Kreydyanska Dacha !!; Bayrak – W 4 km, Khomyn ravine !!; Milova – SW, chalky slopes !!; Balakiya – W, sandy steppe !!; Borschivka – SE, in the gully !!; Milova – SW, meadow steppe on the northern slope !! |
| 608| *Trifolium pratense* L.                    | native   |                                                                                                                                             |
| 609| *Trifolium repens* L.                      | native   |                                                                                                                                             |
| 610| *Vicia cracca* L.                         | native   |                                                                                                                                             |
| 611| *Vicia hirsuta* (L.) S.F. Gray             | alien    | between Balakiya and Andriyivka – Borysoglibskyi Bir, 2016, KWHA !!; Petrivske – S, 2016, KWHA !!                                           |
| Nr  | Taxon                                      | Category  | Distribution                                                                 |
|-----|--------------------------------------------|-----------|-------------------------------------------------------------------------------|
| 612 | *Vicia pisiformis* L.                      | native    | Pyatyhirske – S, 2016, KWHA !!; Protopopivka – N, grove in the valley !!      |
| 613 | *Vicia sativa* (L.) subsp. *nigra* Ehrh. (Vicia angustifolia Reichard) | alien     | Milova – SW, 2016, KWHA !!; between Balakliya and Bayrak – on the roadside, 2016, KWHA !!      |
| 614 | *Vicia sepium* L.                          | native    | Balakliya – W, 2016, KWHA !!; etc. !!                                      |
| 615 | *Vicia tenuifolia* Roth.                   | native    | Balakliya – N part, 2016, KWHA !!                                        |
| 616 | *Vicia villosa* Roth.                      | alien     | !!                                                                          |

**Fagaceae**

| Nr  | Taxon                                      | Category  | Distribution                                                                 |
|-----|--------------------------------------------|-----------|-------------------------------------------------------------------------------|
| 617 | *Quercus robur* L.                         | native    | !!                                                                          |

**Gentianaceae**

| Nr  | Taxon                                      | Category  | Distribution                                                                 |
|-----|--------------------------------------------|-----------|-------------------------------------------------------------------------------|
| 618 | *Centaurium pulchellum* (Sw.) *Druce*      | native    | Protopopivka – N, on the banks of Siverskyi Donets, 2016, KWHA !!            |

**Geraniaceae**

| Nr  | Taxon                                      | Category  | Distribution                                                                 |
|-----|--------------------------------------------|-----------|-------------------------------------------------------------------------------|
| 619 | *Erodium cicutarium* (L.) *L'Hér.*         | native    | Balakliya – northern part, 2016, KWHA !!                                    |
| 620 | *Geranium collinum* Stephan ex Willd.      | native    | Balakliya – at Serednya Balakliyka, 2016, KWHA !!                          |
| 621 | *Geranium divorcatum* Ehrh.                | native    | between Balakliya and Andriyivka, Borysoglibskyi Bir, 2016, KWHA !!; Milova, 2016, KWHA !! |
| 622 | *Geranium palustre* L.                    | native    | Izyum State Forestry *(Kotov, 1965)*                                        |
| 623 | *Geranium pratense* L.                    | native    | Borysoglibskyi Bir !!                                                       |
| 624 | *Geranium pusillum* L.                    | alien     | Borysoglibskyi Bir !!; Protopopivka !!                                    |
| 625 | *Geranium robertianum* L.                 | native    | !!                                                                          |
| 626 | *Geranium sanguineum* L.                  | native    | Kreydyanska Dacha, 2016, KWHA !!; Pyatyhirske – SE, gully grove !!; between Balakliya and Andriyivka – Borysoglibskyi Bir !! |

**Grossulariaceae**

| Nr  | Taxon                                      | Category  | Distribution                                                                 |
|-----|--------------------------------------------|-----------|-------------------------------------------------------------------------------|
| 627 | *Ribes aureum* Pursh                      | alien     | cultivated in the forest plantations, sometimes there occur individuals of generative origin: quarter Nr 8 of Kreydyanska Dacha, 2016, KWHA !!; ibid, quarters Nrs 50, 51, etc. !!; Bayrak – W, pine plantation !! |
| 628 | *Ribes rubrum* L.                         | alien     | quarter Nr 8 of Kreydyanska Dacha, became wild, 2016, KWHA !!               |
| 629 | *Ribes uva-crispa* L.                     | alien     | Balakliya – N part, became wild; Balakliya – N, military base, in the park, 2016, KWHA !!; quarter Nr 5 of Kreydyanska Dacha, 2016, KWHA !! |

**Haloragaceae**

| Nr  | Taxon                                      | Category  | Distribution                                                                 |
|-----|--------------------------------------------|-----------|-------------------------------------------------------------------------------|
| 630 | *Myriophyllum spicatum* L.                 | native    | Balakliya – in the valleys, 07.1977, leg. Gorelova, 2016, KWHA !!; Donets (settlement) – in Siverskyi Donets, 17.09.2011 *(Kazarinova, 2015)*; Savyntsi – in Siverskyi Donets, 03.08.2011 *(Kazarinova, 2015)*; Donets – in Zymnye lake, 09.06.2012 *(Kazarinova, 2015)*; Andriyivka – W, Lyman lake, 23.06.2012 *(Kazarinova, 2015)*; Izyum State Forestry, Ploske lake, [49.2862 °, 36.9557 °], 23.07.1907 *(Savenkov, 1910)* |
| 631 | *Myriophyllum verticillatum* L.            | native    | Donets (settlement) – in Siverskyi Donets, 17.09.2011 *(Kazarinova, 2015)*; Donets – Zymnye lake, 09.06.2012 *(Kazarinova, 2015)*; Balakliya – Siverskyi Donets, 03.06.1980 *(Dubyna, 2006)*; Andriyivka – W, Lyman lake, 23.06.2012 *(Kazarinova, 2015)* |
### Appendix. Continued.

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| **Hypericaceae** | | | |
| 632 | Hypericum elegans Stephan ex Willd. | native | Milova – W, chalky slopes, 2016, KWHA !!; Protopopivka – Kreydyana Hora, 2016, KWHA !!; Protopopivka – NW, in the gully, 2016, KWHA !! |
| 633 | Hypericum perforatum L. | native | Milova – SW, 2016, KWHA !!; etc. !! |
| **Juglandaceae** | | | |
| 634 | Juglans regia L. | alien | !! |
| **Lamiaceae** | | | |
| 635 | Ajuga chamaepitys (L.) Schreb. subsp. chia (Schreb.) Arcang. (Ajuga chia Schreb.) | native | Milova (Taliev, 1904); Bayrak – W 4 km, Khomyn ravine !!; Borschchivka – NW, in the Voloska Balakliyka valley !!; Borschchivka – S, in the gully !! |
| 636 | Ajuga genevensis L. | native | !! |
| 637 | Ballota nigra L. | alien | !! |
| 638 | Betonica officinalis L. | native | Kreydyanska Dacha, 2016, KWHA !!; Milova – SW, 2016, KWHA !!; Balakliya – E, in the Voloska Balakliyka valley !!; between Balakliya and Andriyivka – in the Siverskyi Donets valley !!; Balakliya – W, on the sandy area !!; Petrivske – in the valley of Siverskyi Donets !! |
| 639 | Chaiturus marrubiastrum (L.) Rchb. | native | Balakliya – in the Lyakhova valley, 2016, KWHA !!; Borschchivka – N, 2016, KWHA !!; Protopopivka – N, 2016, KWHA !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 640 | Clinopodium acinos (L.) Kuntze (Acinos arcensis (Lam.) Dandy) | native | between Balakliya and Andriyivka – Borysoglibskyi Bir, 2016, KWHA !!; Borschchivka – SW 2 km, pine plantation, 2016, KWHA !!; Kreydyanska Dacha !! |
| 641 | Dracocephalum thymiflorum L. | alien | Borysoglibskyi Bir !!; Borschchivka – N part !!; Borysoglibskyi Bir, 2016, KWHA !! |
| 642 | Galeopsis bifida Boenn. | native | between Balakliya and Andriyivka – Borysoglibskyi Bir, 2016, KWHA !!; Borschchivka – SW 2 km, pine plantation, 2016, KWHA !!; Kreydyanska Dacha !! |
| 643 | Galeopsis tetrahit L. | native | Borysoglibskyi Bir !!; Kreydyanska Dacha !! Petrivske – SE, in the pine forest |
| 644 | Glechoma hederacea L. | native | !! |
| 645 | Lamium amplexicaule var. orientale (Pacz.) Mennema (Lamium paczoskianum Woroch.) | native | Kreydyanska Dacha, 2016, KWHA !!; Borschchivka – S, 2016, KWHA !! |
| 646 | Lamium maculatum (L.) L. | native | !! |
| 647 | Lamium purpureum L. | alien | !! |
| 648 | Leonurus quinquelobatus Gilib. | native | !! |
| 649 | Lycopus europaeus L. | native | !! |
| 650 | Lycopus exaltatus L. f. | native | Donets – in Zymnye lake, 09.06.2012 (Kazarinova, 2015); Petrivske – SE, valley of Siverskyi Donets !! |
| 651 | Marrubium peregrinum L. (Marrubium praecox Janka) | native | Milova – SW, 2016, KWHA !!; Bayrak – Khomyn ravine, 2016, KWHA !!; Protopopivka !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 652 | Mentha aquatica L. | native | Petrivske – an arm of Siverskyi Donets, 08.1980 (Dubyna, 2006); Savyntsi – in Siverskyi Donets, 03.11.1980 (Dubyna, 2006); Savyntsi – in Siverskyi Donets, 03.08.2011 (Kazarinova, 2015); Balakliya – in the Voloska Balakliyka valley, 2016, KWHA !!; Protopopivka, Petrivske – on the banks of Siverskyi Donets, 2016, KWHA !! |
### Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

#### Appendix. Continued.

| Nr | Taxon                          | Category | Distribution                                                                 |
|----|--------------------------------|----------|------------------------------------------------------------------------------|
| 653| *Mentha arvensis* L.          | alien    | near Andriyivka – Sukhyi Lyman (Lavrenko, 1973)                             |
| 654| *Mentha × verticillata* L.    | native   | Balakliya – E, 2016, KWHA !!                                               |
| 655| *Nepeta cataria* L.           | alien    | Balakliya !!; Protopolivka !!; Petrivske – valley of Siverskyi Donets !!   |
| 656| *Origanum vulgare* L.         | native   | quite often                                                                  |
| 657| *Phlomis herba-venti* (L.) subsp. *pungens* (Wild.) Maire ex DeFilipps (Phlomis pungens Willd.) | native | Milova – SW, 2016, KWHA !!; Balakliya – W, sandy steppe !!; Borschchivka – S 2.5 km, in the gully !! |
| 658| *Phlomis tuberosa* L.         | native   | Bayrak – W, Khomyn ravine, 2016, KWHA !!; Bayrak – E, meadow in the forest !!; Protopolivka – N !!; Balakliya – W, sandy steppe !!; Petrivske – SE, pine terrace of Siverskyi Donets !!; Milova – SW, meadow steppe on the northern slope !! |
| 659| *Prunella vulgaris* L.        | native   | !!                                                                           |
| 660| *Salvia aethiopis* L.         | native   | Milova – W, chalky slopes, 2016, KWHA !!; Balakliya – S !!; Bayrak – W, Khomyn ravine !!; Borschchivka – NW, in the Vološka Balakliyka valley !!; Protopolivka – N and NW !!; protected area Protopolivskyi near Protopolivka (Filatova et al., 2016) |
| 661| *Salvia nemorosa* L. subsp. *nemorosa* | native | !!                                                                           |
| 662| *Salvia nemorosa* subsp. *pseudosylvestris* (Stapf) Bornm. (Salvia tesquicola Klokov & Pobed.) | native | !!                                                                           |
| 663| *Salvia nutans* L.            | native   | Borschchivka – S 2.5 km, in the gully, 2016, KWHA !!; Bayrak – W, Khomyn ravine, 2016, KWHA !!; Milova – SW, steppic and chalky slopes !!; Pyatyhirks – E, steppic slopes !!; Borschchivka – NW, on the slope !!; Protopolivka – N, Kreydyana Hora !! |
| 664| *Salvia pratensis* L.         | native   | Milova – W, chalky slopes, 2016, KWHA !!                                    |
| 665| *Salvia verticillata* L.      | native   | !!                                                                           |
| 666| *Scutellaria altissima* L.    | native   | Bayrak – E, !!, 2016, KWHA !!; Protopolivka – N, grove in the valley !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 667| *Scutellaria galericulata* L. | native   | Petrivske – an arm of Siverskyi Donets, 08.08.1980 (Dubyna, 2006); Balakliya – W, 2016, KWHA !! |
| 668| *Scutellaria hastifolia* L. (Scutellaria dubia Taliev & Sirj.) | native | Protopolivka (Kotov, 1960) |
| 669| *Scutellaria supina* L. (Scutellaria cretica Juz.) | native | near Pyatyhirks, CWU in (Bezrodnova, 2015); near Shebelynka – on chalky outcrops, 08.07.1976 (Zoz, 1978); Milova – W, chalky slopes, KWHA !! |
| 670| *Sideritis montana* L.        | native   | Protopolivka – NW, on chalky outcrops, sub S. comosa non (Rochel ex Benth.) Stank, 2016, KWHA !! |
| 671| *Stachys annua* (L.) L.       | alien    | !!                                                                           |
| 672| *Stachys germanica* L.        | native   | Protopolivka – N, Kreydyana Hora, 2016, KWHA !!; Protopolivka – NW, in the gully !! |
| 673| *Stachys palustris* L.        | native   | Petrivske – an arm of Siverskyi Donets, 08.08.1980 (Dubyna, 2006); Balakliya – E, in the Vološka Balakliyka valley, KWHA !!; Balakliya – in the Serednya Balakliyka valley !!; between Andriyivka and Balakliya – Borysoglibskyi Bir !!; Andriyivka – S, pine terrace of Siverskyi Donets !!; Protopolivka and Petrivske – on the banks of Siverskyi Donets !! |
| 674| *Stachys recta* L.            | native   | !!                                                                           |
### Appendix. Continued.

| Nr  | Taxon                                | Category | Distribution                                                                                                                                 |
|-----|--------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 675 | Stachys sylvatica L.                 | native   | Kreydyanska Dacha !!                                                                                                                                 |
| 676 | Teucrium chamaedrys L.               | native   |                                                                                                                                               |
| 677 | Teucrium polium L.                   | native   | Milova – SW, 2016, KWA !; Bayrak – Khomyn ravine, 2016, KWA !; Protopopivka – NW, chalky outcrops, 2016, KWA !; Protopopivka – N, on the slopes !; protected area Protopopivskyi near Protopopivka (Filatova et al., 2016); Dovgalivka, CWU (Bezrodnova, 2015); near Pyatyhirske, CWU (Bezrodnova, 2015); near Nova Husarivka village, CWU (Bezrodnova, 2015) |
| 678 | Thymus calcareus Klokov & Des.-Shost. | native   | Milova – W, chalky slopes, 2016, KWA !                                                                                                      |
| 679 | Thymus × dimorphus Klokov & Des.-Shost. | native   | Borschivka – S, in the gully, 2016, KWA !; Borschivka, N, 2016, KWA !; Protopopivka – NW, chalky outcrops, 2016, KWA !                        |
| 680 | Thymus pallasianus Heinr. Braun      | native   | between Andriyivka and Balakiya – Borysoglibskyi Bir, 2016, KWA !; Kreydyanska Dacha, 2016, KWA !; Petrivske – SE, pine terrace of Siverskyi Donets ! |
| 681 | Thymus pannonicus All.               | native   | Balakiya – N part, 2016, KWA !; Milova – SW, 2016, KWA ! (Taliev, 1904); Borschivka – S, in the gully, 2016, KWA !; Bayrak – Khomyn ravine, 2016, KWA !; Borschivcha – NW, on the slope !; Protopopivka ! |

#### Lentibulariaceae

| Nr  | Taxon                                | Category | Distribution                                                                                                                                 |
|-----|--------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 682 | Utricularia intermedia Hayne         | native   | near Andriyivka – Sukhy Lyman (Kazarinova, 2015)                                                                                                                                                  |
| 683 | Utricularia minor L.                 | native   | near Andriyivka – Sukhy Lyman, 25.05.1920, Lavrenko, KW (Lavrenko, 1927, 1973; Kotov, 1960; Chorna, 2006)                                                                                   |
| 684 | Utricularia vulgaris L.              | native   | Izyum State Forestry, Dovge lake, [49.1877°, 36.9421°], 07.1907 (Savenkov, 1910); Izyum State Forestry, Ploske lake, [49.2862°, 36.9557°], 23.07.1907 (Savenkov, 1910); Petrivske – an arm of Siverskyi Donets, 07.08.1980; 08.07.1986 (Dubyna, 2006); Chepil (Kotov, 1960) |

#### Linaceae

| Nr  | Taxon                                | Category | Distribution                                                                                                                                 |
|-----|--------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 685 | Linum austriacum L.                  | native   | Balakiya – N part, 2016, KWA !; Milova – SW, 2016, KWA !; Protopopivka – NW, chalky outcrops, KWA !                                                                                          |
|     | Linum catharticum L.                 |          | Grows near the study area: Zmiiv district, near Lyman, leg. Lavrenko (Klokov & Visjulina, 1955)                                                                                                      |
| 686 | Linum czernjajevii Klokov             | native   | Protopopivka – NW, chalky outcrops in the gully, 2016, KWA !                                                                                                                                   |
| 687 | Linum flavum L.                      | native   | Milova – SW, chalky outcrops, 2016, KWA !                                                                                                                                                    |
| 688 | Linum hirsutum L.                    | native   |                                                                                                                                             |

#### Lythraceae

| Nr  | Taxon                                | Category | Distribution                                                                                                                                 |
|-----|--------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 689 | Lythrum salicaria L.                 | native   |                                                                                                                                             |
| 690 | Lythrum virgatum L.                  | native   | Andriyivka – S, 2016, KWA !; etc. !                                                                                                           |

#### Malvaceae

| Nr  | Taxon                                | Category | Distribution                                                                                                                                 |
|-----|--------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 691 | Alcea rosea L.                       | alien    |                                                                                                                                             |
| 692 | Althaea officinalis L.               | alien    | in the valleys of Siverskyi Donets and its tributaries; Petrivske, Kotov, Karnauk (Olyanitskaya, 1967); Balakiya, 2016, KWA !; Borysoglibskyi Bir !; Borschivcha – NW, in the Voloska Balakiya valley !; Balakiya – W ! |
| 693 | Malva thuringiaca (L.) Vis.          | native   |                                                                                                                                             |
| 694 | Malva pusilla Sm.                    | alien    | Protopopivka !                                                                                                                                  |
### Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

#### Menyanthaceae

| Nr | Taxon                  | Category | Distribution                                                                 |
|----|------------------------|----------|------------------------------------------------------------------------------|
| 695 | Menyanthes trifoliata L. | native   | near Andriyivka – Sukhyi Lyman ([Lavrenko, 1973](#))                        |

#### Moraceae

| Nr | Taxon                  | Category | Distribution |
|----|------------------------|----------|--------------|
| 696 | Morus alba L.          | alien    | quite often  |

#### Nyctaginaceae

| Nr | Taxon                                       | Category | Distribution                              |
|----|---------------------------------------------|----------|-------------------------------------------|
| 697 | Mirabilis nyctaginea (Michx.) MacMill. (Oxybaphus nyctagineus (Michx.) Sweet) | alien    | Balakliya – on the railway track !!       |

#### Oleaceae

| Nr | Taxon                  | Category | Distribution                                                                 |
|----|------------------------|----------|------------------------------------------------------------------------------|
| 698 | Fraxinus excelsior L.   | native   | !!                                                                          |
| 699 | Fraxinus pennsylvanica Marshall | alien    | !!                                                                          |
| 700 | Ligustrum vulgare L.    | alien    | !!                                                                          |
| 701 | Syringa vulgaris L.     | alien    | widely cultivated; sometimes occurs wildly: Kreydyanska Dacha !!; Balakliya – W, quarter Nr 128 of Borysoglibskyi Bir !! |

#### Onagraceae

| Nr | Taxon                  | Category | Distribution                                                                 |
|----|------------------------|----------|------------------------------------------------------------------------------|
| 702 | Chamerion angustifolium (L.) Holub | native   | Kreydyanska Dacha !!; Petrivske – SE, in the pine forest !!                  |
| 703 | Epilobium collinum C.C. Gmel. | native   | Verbviva – E, 2016, KWHA !!                                                  |
| 704 | Epilobium hirsutum L.    | native   | Balakliya – E, in the Voloska Balakliyka valley, 2016, KWHA !!              |
| 705 | Epilobium parviflorum Schreb. | native   |                                                                           |
| 706 | Oenothera biennis L.     | alien    | Kreydyanska Dacha; Balakliya – along the roads and railways                 |

#### Orobancheaceae

| Nr | Taxon                  | Category | Distribution                                                                 |
|----|------------------------|----------|------------------------------------------------------------------------------|
| 707 | Euphrasia pectinata Ten. | native   | Protopopivka – near Kreydyana Hora, 2016, KWHA !!                           |
| 708 | Melampyrum cristatum L. | native   | Milova – W, chalky slopes, 2016, KWHA !!; Protopopivka – N, on the bank of Siverskyi Donets, 2016, KWHA !! |
| 709 | Melampyrum nemorosum L. | native   | between Balakliya and Andriyivka – Borysoglibskyi Bir, 2016, KWHA !!        |
| 710 | Odontites vulgaris Moench | native   | Verbviva – E, 2016, KWHA !!; Borschchivka – S 2.5 km, in the gully !!; Prshyba – S, near the cement factory !! |
| 711 | Pedicularis dasystachys Schrenk | native   | Shebelynska ([Kotov, 1960](#))                                            |
| 712 | Pedicularis palustris L. | native   | near Andriyivka – Sukhyi Lyman ([Lavrenko, 1973](#))                       |
| 713 | Rhinanthus minor L.     | native   | Borysoglibskyi Bir, near Lebyazhe lake, 2016, KWHA !!; Protopopivka – N !! |

#### Oxalidaceae

| Nr | Taxon                  | Category | Distribution |
|----|------------------------|----------|--------------|
| 714 | Oxalis corniculata L.  | alien    | Balakliya !! |

#### Papaveraceae

| Nr | Taxon                  | Category | Distribution                                                                 |
|----|------------------------|----------|------------------------------------------------------------------------------|
| 715 | Chelidonium majus L.   | native   | !!                                                                          |
| 716 | Corydalis solida (L.) Clairv. | native   | Balakliya – in the Lyakhova valley !!                                       |
| 717 | Fumaria schleicheri Soy.-Will. | alien    | !!                                                                          |
| 718 | Fumaria vaillantii Loisel | alien    | !!                                                                          |
### Appendix. Continued.

| Nr | Taxon                                                                 | Category | Distribution                                                                 |
|----|----------------------------------------------------------------------|----------|-----------------------------------------------------------------------------|
| 719| Glaucium corniculatum (L.) J. Rudolph                                | alien    | Milova !!                                                                   |
| 720| Papaver orientale L.                                                 | alien    | Bayrak – W, near the dachas, became wild !!                                |
| 721| Papaver rhoes L.                                                     | alien    | !! Balakliya – ruderal habitats, 2016, KWHA !!                             |
| 722| Papaver somniferum L.                                                | alien    | !!                                                                         |

**Plantaginaceae**

| Nr | Taxon                                                                 | Category | Distribution                                                                 |
|----|----------------------------------------------------------------------|----------|-----------------------------------------------------------------------------|
| 723| Callitriche palustris L.                                             | native   | in Siverskyi Donets (Kazarinova, 2015)                                      |
| 724| Callitriche stagnalis Scop.                                          | native   | Balakliya – in Balakliyka river, 25.08.1979 (Dubyna, 2006)                   |
| 725| Chaenorhinum minus (L.) Lange                                        | native   | Balakliya – on the railway track, 2016, KWHA !!                             |
| 726| Gratiola officinalis L.                                              | native   | Balakliya – W, 2016, KWHA !!; Zavgorodnye – N, on the banks of Siverskyi Donets, 2016, KWHA !!; Andriyivka – S, Borysoglibskiy Bir !! |
| 727| Linaria genistifolia (L.) Mill.                                      | native   | Protopopivka – N, Kreydyana Hora, 2016, KWHA !!; Kreydyanska Dacha !!; Milova – SW, chalky slopes !! |
| 728| Linaria odora (M. Bib.) Fisch.                                       | native   | Izyum State Forestry (Kotov, 1965)                                          |
| 729| Linaria vulgaris Mill.                                               | native   | !!                                                                          |
| 730| Plantago indica L. (Plantago arenaria Waldst. & Kit.)                 | native   | Balakliya – along the railways and roadsides !!; Balakliya – W, sandy steppe !! |
| 731| Plantago lanceolata L.                                               | native   | !!                                                                          |
| 732| Plantago major L.                                                    | native   | !!                                                                          |
| 733| Plantago media L.                                                    | native   | !!                                                                          |
| 734| Plantago salsa Pall.                                                 | native   | Balakliya, leg. Karzov (Kotov, 1961)                                        |
|    | Plantago tenuiflora Waldst. & Kit.                                    |          | grows near the study area: Zmiiv district, near Lyman, leg. Lavrenko (Kotov, 1961) |
| 735| Plantago urvillei Opiz                                               | native   | Borschchivka – S 2.5 km, in the gully, 2016, KWHA !!; Bayrak – W, Khomyn ravine, 2016, KWHA !! |
| 736| Veronica anagallis-aquatica L.                                       | native   | Balakliya, 2016, KWHA !!; etc.                                               |
| 737| Veronica anagalloides Guss.                                          | native   | between Balakliya and Andriyivka – Borysoglibskiy Bir, 2016, KWHA !!      |
| 738| Veronica arvensis L.                                                 | alien    | Balakliya – W, 2016, KWHA !!                                               |
| 739| Veronica austriaca L. subsp. dentata (F.W. Schmidt) Watzl             | native   | Borschivka – S, in the gully, 2016, KWHA !!; Milova – SW, chalky slopes, 2016, KWHA !!; Bayrak – W 4 km, Khomyn ravine !! |
| 740| Veronica austriaca subsp. jacquinii (Baumg.) Watzl                   | native   | !!                                                                          |
| 741| Veronica barrelieri H. Schott ex Roem. & Schult.                     | native   | Milova – SW, 2016, KWHA !!                                                 |
| 742| Veronica beccabunga L.                                               | native   | Balakliya – in Balakliyka, 25.08.1979 (Dubyna, 2006)                        |
| 743| Veronica chamaedrys L.                                               | native   | !!                                                                          |
| 744| Veronica dillenii Crantz                                             | native   | !!                                                                          |
| 745| Veronica incana L.                                                   | native   | Kreydyanska Dacha, 2016, KWHA !!; between Andriyivka and Balakliya – Borysoglibskiy Bir !! |
| 746| Veronica longifolia L.                                               | native   | Protopopivka – N, on the banks of Siverskyi Donets, 2016, KWHA !!; Balakliya – W, on the sandy area !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
### Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

**Appendix. Continued.**

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 747 | Veronica officinalis L. | native | Kreydyanska Dacha !!; between Andriyivka and Balakliya – Borysoglibskiy Bir !! |
| 748 | Veronica persica Poir. | alien | !! |
| 749 | Veronica praecox All. | native | !! |
| 750 | Veronica prostrata L. | native | Balakliya – E part, along the roads !!; Kreydyanska Dacha !!; Bayrak – W 4 km, Khomyn ravine !! |
| 751 | Veronica scutellata L. | native | near Andriyivka – Sukhiy Lyman (Lavrenko, 1973); Balakliya – E, in the Voloska Balakliyka valley, 2016, KWHA !! |
| 752 | Veronica spicata L. | native | Kreydyanska Dacha, 2016, KWHA !!; Milova – SW, 2016, KWHA !!; Bayrak – E !! |
| 753 | Veronica spuria L. | native | !! |
| 754 | Veronica teucrium L. | native | Milova – SW, 2016, KWHA !! |

**Plumbaginaceae**

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 755 | Limonium bungei (Claus) Gamajun. (Limonium membranaceum Klokov) | native | Balakliya – W, sandy steppe, 2016, KWHA !!; near Volokhiv Yar, Chuhuiv district (Kotov, 1952) |

**Polygalaceae**

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 756 | Polygala comosa Schkuhr (incl. Polygala podolica DC.) | native | Milova – W, chalky slopes, 2016, KWHA !! |
| 757 | Polygala sibirica L. | native | Milova – SW, 2016, KWHA !!; Protopopivka – NW, chalky outcrops, 2016, KWHA !! |

**Polygonaceae**

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 758 | Bistorta officinalis Delarbre (Persicaria bistorta (L.) Samp.) | native | Savyntsi – in Siverskyi Donets, 03.08.2011 (Kazarinova, 2015) |
| 759 | Fagopyrum esculentum Moench | alien | !! |
| 760 | Fallopia convolvulus (L.) A. Löve | alien | !! |
| 761 | Fallopia dumetorum (L.) Holub | native | !! |
| 762 | Persicaria amphibia (L.) Delarbre | native | Petrivske – an arm of Siverskyi Donets, 08.1980 (Dubyna, 2006); Savyntsi – in Siverskyi Donets, 03.06.1980 (Dubyna, 2006) |
| 763 | Persicaria hydropiper (L.) Delarbre | native | !! |
| 764 | Persicaria lapathifolia (L.) Delarbre | native | !! |
| 765 | Persicaria maculosa S.F. Gray | native | !! |
| 766 | Polygonum arenarium Waldst. & Kit. | native | Kreydyanska Dacha, 2016, KWHA !!; Andriyivka – S, Borysoglibskiy Bir !!; Balakliya – W, quarter Nr 128 of Borysoglibskiy Bir !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 767 | Polygonum aviculare L. | native | !! |
| 768 | Polygonum calcatum Lindm. | alien | Balakliya – near the train station and on the sidewalks !! |
| 769 | Polygonum neglectum Besser | native | !! |
| 770 | Rumex acetosella L. | native | Kreydyanska Dacha, 2016, KWHA !!; Balakliya – W, Borysoglibskiy Bir !! |
| 771 | Rumex confertus Willd. | native | !! |
| 772 | Rumex crispus L. | native | !! |
| 773 | Rumex hydrobatopathum Huds. | native | !! |
| Nr | Taxon                                      | Category | Distribution                                                                 |
|----|--------------------------------------------|----------|------------------------------------------------------------------------------|
| 774| Rumex maritimus L.                         | native   | Balakliya, 2016, KWHA !!                                                    |
| 775| Rumex obtusifolius L. subsp. sylvestris (Lam.) Čelak. | native   | !!                                                                            |
| 776| Rumex patientia L.                         | alien    | !!                                                                            |
| 777| Rumex thyrsiflorus Fingerh.                | native   | Kreydyanska Dacha, 2016, KWHA !!; Borysoglibskyi Bir !!; Balakliya – W, sandy steppe !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |

**Portulacaceae**

| Nr | Taxon                                      | Category | Distribution                                                                 |
|----|--------------------------------------------|----------|------------------------------------------------------------------------------|
| 778| Portulaca oleracea L.                      | alien    | !!                                                                            |

**Primulaceae**

| Nr | Taxon                                      | Category | Distribution                                                                 |
|----|--------------------------------------------|----------|------------------------------------------------------------------------------|
| 779| Anagallis arvensis L.                      | alien    | !!                                                                            |
| 780| Androsace elongata L.                      | native   | 2016, KWHA !!                                                                 |
|    | Androsace villosa L. subsp. koso-poljanskii (Ovcz.) Fed. | n.conf. | it is included to the list of rare species for Landscape Park Izyumskaya Luka (Onyshchenko et al., 2016) – obviously, this is a mistake |
| 781| Hottonia palustris L.                      | native   | !!                                                                            |
|    | Lysimachia minima (L.) U. Manns & Anderb.  |          | grows near the study area: Zmiiv district, near Lyman lake, leg. Lavrenko (Kotov & Barbarych, 1957) |
| 782| Lysimachia nummularia L.                   | native   | !!                                                                            |
| 783| Lysimachia thyrsiflora L.                  | native   | near Andriyivka – Sukhyi Lyman (Lavrenko, 1973)                              |
| 784| Lysimachia vulgaris L.                     | native   | Petrivske – an arm of Siverskyi Donets, 07.08.1980 (Dubyna, 2006); on the banks of Siverskyi Donets !!; Kreydyanska Dacha !! |
| 785| Naumburgia thyrsiflora (L.) Rchb.          | native   | in the Siverskyi Donets valley (Kazarinova, 2015)                            |

**Ranunculaceae**

| Nr | Taxon                                      | Category | Distribution                                                                 |
|----|--------------------------------------------|----------|------------------------------------------------------------------------------|
| 786| Adonis vernalis L.                         | native   | Milova – SW, 1948, Tzvelev, LE (Melnik & Parubok, 2004); Milova, meadow steppe on the northern slope, 2016, KWHA !!; Pyatyrhirske – in the gully Velyka Shebelynka, 1939, CWU (Melnik & Parubok, 2004); Protopopivka – NW, on the chalky outcrops, 2016, KWHA !! |
| 787| Adonis volgensis Steven ex DC.             | native   | breeding farm Pyatigorsk, CWU (Melnik et al., 2007)                           |
| 788| Anemone ranunculoides L.                   | native   | Bayrak – E, in the oak forest !!; between Balakliya and Bayrak – in the grove on the banks of Siverskyi Donets !! |
| 789| Anemone sylvestris L.                      | native   | Milova – SW, 2016, KWHA !!                                                  |
| 790| Batrachium circinatum Sibth.               | native   | Balakliya – in Balakliyka, 25.08.1979 (Dubyna, 2006); Balakliya (Kazarinova, 2015); Balakliya – E, in Voloska Balakliyka !!; Balakliya – SW, in the Lyakhova valley !! |
| 791| Callhia palustris L.                       | native   | near Andriyivka – Sukhyi Lyman (Lavrenko, 1973); Kreydyanska Dacha – in the forest swamp !!; Balakliya – E, in the valley !!; between Balakliya and Andriyivka, the valley of Siverskyi Donets (Kazarinova, 2015) |
| 792| Ceratocephala testiculata (Crantz) Bess.   | native   | !!                                                                            |
| 793| Clematis integrifolia L.                   | native   | Milova – W, meadow steppe on the northern slope, 2016, KWHA !!               |
| 794| Delphinium ajacis L. (Consolida orientalis (L. Gay ex Gren. & Godr.) Schroedinger) | alien | !!                                                                            |
## Appendix. Continued.

| Nr  | Taxon                                      | Category | Distribution                                                                 |
|-----|--------------------------------------------|----------|-------------------------------------------------------------------------------|
| 795 | Delphinium consolida L. (Consolida regalis S.F. Gray subsp. paniculata (Host) Soó) | native   | !! Balakliya, 2016, KWHA !!; Borschivka – S, in the gully, 2016, KWHA !!; Milova – SW !!; Borschivka – NW !! |
| 796 | Delphinium cuneatum Steven ex DC.         | native   | without specified location (Gorelova & Alekhin, 2002)                        |
| 797 | Ficaria verna Huds.                       | native   | Balakliya – in Lyakhova valley, 2016, KWHA !!; etc. !!                      |
| 798 | Pulsatilla pratensis (L.) Mill.           | native   | between Andriyivka and Balakliya – Borysoglibskyi Bir !! Kreydyanska Dacha, 2016, KWHA !! |
| 799 | Ranunculus acris L.                      | native   | floodplain of Siverskyi Donets !!                                            |
| 800 | Ranunculus illyricus L.                   | native   | Bayrak – W, Khomyn ravine, 2016, KWHA !!; Borschivka – S 2.5 km, in the gully !! |
| 801 | Ranunculus lingua L.                      | native   | Izyum State Forestry, Rogozuvate lakes (Savenkov, 1910); in Siverskyi Donets (Kazarinova, 2015) |
| 802 | Ranunculus pedatus Waldst. & Kit.         | native   | in the valleys of Siverskyi Donets and its tributaries !!; Balakliya, 2016, KWHA !! |
| 803 | Ranunculus polyanthemos L.                | native   | !!                                                                            |
| 804 | Ranunculus repens L.                      | native   | !!                                                                            |
| 805 | Ranunculus sceleratus L.                  | native   | near Andriyivka – Sukhiy Lyman (Lavrenko, 1973); Bayrak – W, in the swampy depression !!; Balakliya – in Lyakhova near Balakliyska Hora (leg. O. Shynder, det. G.A. Chorna) !! |
| 806 | Thalictrum flavum L.                      | native   | Balakliya – W, 2016, KWHA !!; Milova – SW, 2016, KWHA !!; Zavgorodnye – N, in the Siverskyi Donets valley, 2016, KWHA !!; Bayrak – W, Khomyn ravine, 2016, KWHA !!; Balakliya – in the valley !! |
| 807 | Thalictrum lucidum L.                     | native   | Balakliya – E, in the Voloska Balakliyka valley, 2016, KWHA !!               |
| 808 | Thalictrum minus L.                       | native   | Milova – W, chalky slopes, 2016, KWHA !!; Kreydyanska Dacha !!; etc. !!      |
| 809 | Thalictrum simplex L.                     | native   | Milova – SW, 2016, KWHA !!                                                  |

### Resedaceae

| Nr  | Taxon                          | Category | Distribution                                                                 |
|-----|--------------------------------|----------|-------------------------------------------------------------------------------|
| 810 | Reseda lutea L.                | alien    | Milova – on a dump of the chalk quarry, 2016, KWHA !!; etc. !!              |

### Rhamnaceae

| Nr  | Taxon                          | Category | Distribution                                                                 |
|-----|--------------------------------|----------|-------------------------------------------------------------------------------|
| 811 | Frangula alnus Mill.           | native   | Andriyivka – S, in the valley of Siverskyi Donets, 2016, KWHA !!; Petrivske – SE, in the pine forest !!; Protropopivka – N, grove in the valley near Kreydyana Hora, 2016, KWHA !! |
| 812 | Rhamnus cathartica L.          | native   | !!                                                                          |

### Rosaceae

| Nr  | Taxon                                      | Category | Distribution                                                                 |
|-----|--------------------------------------------|----------|-------------------------------------------------------------------------------|
| 813 | Agrimonia eupatoria L. subsp. eupatoria    | native   | !!                                                                          |
| 814 | Agrimonia eupatoria subsp. grandis (C.A. Mey.) Bormm. | native | !!                                                                          |
| 815 | Amelanchier spicata (Lam.) K. Koch         | alien    | Balakliya – W, Borysoglibskyi Bir, 2016, KWHA !!                             |
| 816 | Comarum palustre L.                      | native   | near Andriyivka – Sukhiy Lyman, 2–3 individuals (Lavrenko, 1973)            |
| 817 | Cotoneaster acutifolius Turcz. (Cotoneaster lucidus Schidtdl.) | alien | Kreydyanska Dacha, 2016, KWHA !!; Sezonna station – S, Vysokobirsko forestry !! |
| 818 | Crataegus cf. chrysocarpa Ashe (Crataegus coccinea group) | alien | Balakliya – in the Serednya Balakliyka valley, 2016, KWHA !!               |
| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 819 | Crataegus × kyrstostyla Fingerh. ex Schltdl. | native | Kreydyanska Dacha, 2016, KWHA !; Protopopivka – N, on the bank of Siversky Donets, 2016, KWHA !! |
| 820 | Crataegus monogyna Jacq. | native | Balakliya – in the Serednya Balakiyka valley, 2016, KWHA !; Borschchivka – S 2.5 km, in the gully, 2016, KWHA !! |
| 821 | Crataegus rhipidophylla Gand. | native | Kreydyanska Dacha, 2016, KWHA !! |
| 822 | Crataegus ucrainica Pojark. | native | Kreydyanska Dacha, leg. N.B. Saidakhmedova !! |
| 823 | Filipendula vulgaris Moench | native | Kreydyanska Dacha !!; Bayrak – W, Khomyn ravine !!; Borysoglibskyi Bir – in the Siverskyi Donets valley !! |
| 824 | Fragaria vesca L. | native | Kreydyanska Dacha !!; Borysoglibskyi Bir !! |
| 825 | Fragaria viridis Duchesne subsp. viridis | native | !! |
| 826 | Fragaria viridis subsp. campestris (Steven) Pawl. | native | !! |
| 827 | Geum rivale L. | native | Borysoglibskyi Bir !! |
| 828 | Geum urbanum L. | native | !! |
| 829 | Malus domestica Borkh. | alien | !! |
| 830 | Malus sylvestris Mill. | native | !! |
| 831 | Potentilla anserina L. | native | !! |
| 832 | Potentilla argentea L. | native | !! |
| 833 | Potentilla incana P. Gaertn., B. Mey. & Scherb. (Potentilla arenaria Borkh.) | native | Kreydyanska Dacha, 2016, KWHA !!; Petrivske – SE, pine terrace of Siverskyi Donets !!; Borysoglibskyi Bir !! |
| 834 | Potentilla neglecta Baumg. (Potentilla impolita Wahlenb.) | native | !! |
| 835 | Potentilla patula Waldst. & Kit. (Potentilla schurii Fuss ex Zimmeter) | native | Milova – SW, 2016, KWHA !! |
| 836 | Potentilla recta L. subsp. recta | native | Borschchivka – N, on the steppe slope !! |
| 837 | Potentilla recta subsp. obscura (Willd.) Arcangeli | native | Bayrak, 2016, KWHA !!; Protopopivka – N, Kreydyana Hora !!; Milova, sub P. recta (Taliev, 1904) |
| 838 | Potentilla recta subsp. pilosa (Willd.) Rchb. f. ex Rothm. (Potentilla pilosa Willd.) | native | Milova – SW, 2016, KWHA !! |
| 839 | Potentilla reptans L. | native | !! |
| 840 | Potentilla supina L. | native | !! |
| 841 | Prunus armeniaca L. (Armeniaca vulgaris Lam.) | alien | !! |
| 842 | Prunus cerasifera Ehrh. | alien | !! |
| 843 | Prunus cerasus L. (Cerasus vulgaris Mill.) | alien | Kreydyanska Dacha – became wild !!; Bayrak – W, in the forest plantations, became wild !! |
| 844 | Prunus domestica L. | alien | !! |
| 845 | Prunus fruticosa Pall. (Cerasus fruticosa (Pall.) Woronow) | native | Pyatyhirskе – SE, grove in the gully, 2016, KWHA !!; Protopopivka – N, Kreydyana Hora, 2016, KWHA !! |
| 846 | Prunus insititia L. | alien | Borschchivka – SW 2 km, pine plantation, 2016, KWHA !!; Kreydyanska Dacha !!; Milova – SW, chalky slopes !! |
Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

### Appendix. Continued.

| Nr  | Taxon                                      | Category   | Distribution                                                                 |
|-----|--------------------------------------------|------------|-------------------------------------------------------------------------------|
| 847 | Prunus mahaleb L. (Cerasus mahaleb (L.) Mill.) | alien      | Protopopivka – NW, on the cretaceous outcrops in the gully, became wild, 2016, KWHA !!; Kreydyanska Dacha, 2016, KWHA !!; Borysoglibskyi Bir !! |
| 848 | Prunus padus L. (Padus avium Mill.)         | native     | Kreydyanska Dacha, 2016, KWHA !!; Borysoglibskyi Bir !!                      |
| 849 | Prunus serotina Ehrh. (Padus serotina (Ehrh.) Ag.) | alien | in the forest plantations, and became wild: Protopopivka – NW, 2016, KWHA !!; Borschchivka – NW !!; Sezonna station – S, Borysoglibskyi Bir !!; Balakliya – W, quarter Nr 128 of Borysoglibskyi Bir !! |
| 850 | Prunus spinosa L. subsp. dasypylla (Schur) Domin | native     | !!                                                                            |
| 851 | Prunus tenella Batsch (Amygdalus nana L.)   | native     | !!                                                                            |
| 852 | Prunus tomentosa Thunb. (Cerasus tomentosa (Thunb.) Masam. & S. Suzuki) | alien | Kreydyanska Dacha – became wild !!                                            |
| 853 | Pyrus communis L.                           | alien      | !!                                                                            |
| 854 | Pyrus pyraster (L.) Burgsd.                 | native     | !!                                                                            |
| 855 | Rosa × andegavensis Bastard                | native     | !!                                                                            |
| 856 | Rosa canina L.                             | native     | !!                                                                            |
| 857 | Rosa corymbifera Borkh.                    | native     | Balakliya – N, military base, 2016, KWHA !!; E, 2016, KWHA !!; etc. !!       |
| 858 | Rosa majalis Herrm.                        | native     | Kreydyanska Dacha, 2016, KWHA !!                                             |
| 859 | Rosa rubiginosa L.                         | native     | Balakliya – W, in the pine forest, 2016, KWHA !!; Milova – SW, 2016, KWHA !! |
| 860 | Rosa tomentosa Sm.                         | native     | Balakliya – on the roadside, 2016, KWHA !!; Milova – SW, 2016, KWHA !!; Protopopivka – on the slope above Kreydyana Hora, 2016, KWHA !!; Bayrak – W 4 km, Khomyn ravine, 2016, KWHA !! |
| 861 | Rosa villosa L.                            | native     | Milova – SW, 2016, KWHA !!; Petrivske !!                                    |
| 862 | Rubus caesius L.                           | native     | !!                                                                            |
| 863 | Rubus idaeus L.                            | alien      | Kreydyanska Dacha, 2016, KWHA !!                                            |
| 864 | Sanguisorba minor Scop. subsp. minor (Poterium sanguisorba L.) | alien | Protopopivka – N, Kreydyana Hora !!                                          |
| 865 | Sanguisorba minor subsp. balearica (Bourg. ex Nyman) Muñoz Garm. & C. Navarro (Poterium polygamum Waldst. & Kit.) | native | Balakliya – SW, on the edge of the pine forest near the swamp !! |
| 866 | Sanguisorba officinalis L.                 | native     | Bayrak – N, meadow in the Siverskyi Donets valley, 2016, KWHA !!; Kreydyanska Dacha !!; Petrivske – SE, in the Siverskyi Donets valley !! |
| 867 | Sorbus aucuparia L.                        | native     | Kreydyanska Dacha; Borysoglibskyi Bir                                       |
| 868 | Spiraea crenata L.                         | native     | Balakliya – W, on the sandy area, 2016, KWHA !!; Borschchivka – S, in the gully, 2016, KWHA !!; Bayrak – W, on the right bank of Siverskyi Donets !! |

**Rubiaceae**

| Nr  | Taxon                                 | Category | Distribution                                      |
|-----|---------------------------------------|----------|---------------------------------------------------|
| 869 | Asperula cynanchica L.                 | native   | !!                                                |
### Appendix. Continued.

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 870 | *Asperula graveolens* M. Bieb. ex Schult. & Schult. f. | native | between Balakliya and Andriyivka – Borysoglibskyi Bir, 2016, KWHA !! |
| 871 | *Galium aparine* L. | native | !! |
| 872 | *Galium humifusum* M. Bieb. | native | Milova – SW, 2016, KWHA !!; etc. !! |
| 873 | *Galium mollugo* L. | native | Protopopivka – N, on the bank of Siverskyi Donets, 2016, KWHA !! |
| 874 | *Galium octonarium* (Klokov) Pobed. | native | Milova – W, chalky slopes, 2016, KWHA !!; Borshchivka – N, 2016, KWHA !! |
| 875 | *Galium palustre* L. | native | near Andriyivka – Sukhyi Lyman (*Lavrenko, 1973*); Petrivske – an arm of Siverskyi Donets, 08.1980 (*Dubyna, 2006*); Balakliya – in the Serednya Balakiyka valley, 2016, KWHA !!; Kreydyanska Dacha, 2016, KWHA !!; Borshchivka – the valley of Voloska Balakiyka, 2016, KWHA !! |
| 876 | *Galium rivale* (Sibth. & Smith) Griseb. | native | Pyatyhirske – S, in the grove, 2016, KWHA !! |
| 877 | *Galium rubioides* L. s.l. (*Galium physocarpum* Ledeb.) | native | Balakliya, 2016, KWHA !!; Milova – SW, 2016, KWHA !!; Bayrak – the valley of Siverskyi Donets, 2016, KWHA !!; Kreydyanska Dacha !! |
| 878 | *Galium ruthenicum* Willd. | native | Protopopivka !!; Balakliya !! |
| 879 | *Galium tinctorium* (L.) Scop. | native | Borschchivka – NW, 2016, KWHA !!; Bayrak – W, Khomyn ravine, 2016, KWHA !!; Milova – SW, chalky slopes !! |
| 880 | *Galium verum* L. | native | !! |
| 876 | *Galium rivale* (Sibth. & Smith) Griseb. | native | Pyatyhirske – S, in the grove, 2016, KWHA !! |
| 877 | *Galium rubioides* L. s.l. (*Galium physocarpum* Ledeb.) | native | Balakliya, 2016, KWHA !!; Milova – SW, 2016, KWHA !!; Bayrak – the valley of Siverskyi Donets, 2016, KWHA !!; Kreydyanska Dacha !! |
| 878 | *Galium ruthenicum* Willd. | native | Protopopivka !!; Balakliya !! |
| 879 | *Galium tinctorium* (L.) Scop. | native | Borschchivka – NW, 2016, KWHA !!; Bayrak – W, Khomyn ravine, 2016, KWHA !!; Milova – SW, chalky slopes !! |
| 880 | *Galium verum* L. | native | !! |
| 876 | *Galium rivale* (Sibth. & Smith) Griseb. | native | Pyatyhirske – S, in the grove, 2016, KWHA !! |

### Rutaceae

| Nr | Taxon | Distribution |
|----|-------|--------------|
| 881 | *Ptelea trifoliata* L. | alien | Bayrak – W, near Khomyn ravine, became wild, 2016, KWHA !! |

### Salicaceae

| Nr | Taxon | Category | Distribution |
|----|-------|----------|--------------|
| 882 | *Populus alba* L. | native | !! |
| 883 | *Populus × canadensis* Moench | alien | in the forest plantations and became wild: Borschchivka – S, in the gully, 2016, KWHA !!; forest plantation in the Siverskyi Donets valley (*Tkach, 1999*) |
| 884 | *Populus nigra* L. | native | in the floodplain of Siverskyi Donets (*Tkach, 1999*); valleys !! |
| 885 | *Populus tremula* L. | native | !! |
| 886 | *Salix acutifolia* Willd. | native | Balakliya – W, near Lyakhove lake, 2016, KWHA !!; Balakliya – W, quarter Nr 128 of Borysoglibskyi Bir !!; Petrivske – SE, pine terrace of Siverskyi Donets !! |
| 887 | *Salix alba* L. | native | !! |
| 888 | *Salix aurita* L. | native | Andriyivka – S, on the bank of Siverskyi Donets !! |
| 889 | *Salix caprea* L. | native | !! |
| 890 | *Salix cinerea* L. | native | Balakliya, 2016, KWHA !! |
| 891 | *Salix fragilis* L. | alien | !! |
| 892 | *Salix pentandra* L. | native | Andriyivka – S, on the banks of Siverskyi Donets, 2016, KWHA !!; etc. !! |
| 893 | *Salix rosmarinifolia* L. | native | between Balakliya and Andriyivka – on the bank of Siverskyi Donets, 2016, KWHA !! |
| 894 | *Salix triandra* L. | native | Balakliya – E, in the Voloska Balakiyka valley, 2016, KWHA !!; etc. !! |
### Checklist of the flora of the vicinity of Balakliya (Kharkiv region, Ukraine)

| Nr  | Taxon                                      | Category | Distribution                                                                 |
|-----|--------------------------------------------|----------|-------------------------------------------------------------------------------|
| 895 | Thesium linophyllum L.                     | native   | Milova – SW, 2016, KWHA !!; Borshchivka – N, 2016, KWHA !!; Bayrak – Khomyn ravine, 2016, KWHA !! |
| 896 | Thesium arvense Horv.                      | native   | !!                                                                           |
| 897 | Aesculus hippocastanum L.                  | alien    | spontaneously, young individuals !!                                          |
| 898 | Scrophularia nodosa L.                     | native   | Kreydyanska Dacha, 2016, KWHA !!                                            |
| 899 | Verbascum chaixii Vill. subsp. austriacum (Roem. & Schult.) Hayek | native   | Borshchivka – N, 2016, KWHA !!; Milova – SW, chalky slopes !!               |
| 900 | Verbascum lychnitis L.                     | native   | Borshchivka – N, 2016, KWHA !!                                              |
| 901 | Verbascum phlomoides L.                    | native   | Balakliya, 2016, KWHA !!; Kreydyanska Dacha !!; Protopopivka – N and NW !!; Petrivske !! |
| 902 | Verbascum phoeniceum L.                    | native   | Borshchivka – S 2.5 km, in the gully, 2016, KWHA !!; Petrivske – SE !!      |
| 903 | Alkekengi officinarum Moench (Physalis alkekengi L.) | alien    | Protopopivka – NW, forest plantation, 2016, KWHA !!                         |
| 904 | Datura stramonium L.                       | alien    | !!                                                                           |
| 905 | Hyoscyamus niger L.                        | alien    | Bayrak – W 4 km, Khomyn ravine !!                                           |
| 906 | Lycium barbarum L.                         | alien    | !!                                                                           |
| 907 | Solanum dulcamara L.                       | native   | Donets – in Zymnye lake, 09.06.2012 (Kazarinova, 2015); Savyntsi – in Siverskyi Donets, 03.08.2011 (Kazarinova, 2015); Kreydyanska Dacha !!; etc. !! |
| 908 | Solanum nigrum L.                          | alien    | !!                                                                           |
| 909 | Tilia cordata Mill.                        | native   | Protopopivka – N, in the oak forest, 2016, KWHA !!; etc. !!                |
| 910 | Ulmus glabra Huds.                         | native   | Balakliya – W, on the sandy area !!; Protopopivka – N, grove in the Siverskyi Donets valley; Petrivske – SE, in the pine forest !! |
| 911 | Ulmus laevis Pall.                         | native   | floodplain forests in Siverskyi Donets valley, north of Balakliya (Tkachenko, 1971); Kreydyanska Dacha 2016, KWHA !!; Petrivske – SE, in the pine forest !! |
| 912 | Ulmus minor Mill.                          | native   | !!                                                                           |
| 913 | Ulmus pumila L.                            | alien    | the first specimens were planted about 40 years ago along the streets of Balakliya and in some forests; in the last decade, there was a massive seed propagation: Balakliya – in the park, spontaneously, 2016, KWHA !! Sezonna station – SW, in Borysoglibskyi Bir !!; Sezonna station – on the territory of the cement factory !! |
| 914 | Urtica dioica L. subsp. dioica            | native   | !!                                                                           |
| 915 | Urtica dioica subsp. pubescens (Ledebr.) Domin (Urtica galeopsifolia Wierzb. ex Opiz) | native   | Izyum State Forestry (Kotov, 1965)                                         |
| 916 | Urtica urens L.                            | alien    | Protopopivka !!                                                             |

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**Appendix. Continued.**

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| Nr | Taxon                          | Category | Distribution                                                                 |
|----|-------------------------------|----------|-----------------------------------------------------------------------------|
| 917| Verbena officinalis L.        | alien    | !!                                                                          |
| 918| Sambucus nigra L.             | native   | !!                                                                          |
| 919| Sambucus racemosa L.          | alien    | Borschchivka – S, pine plantation, 2016, KWHA !!; Milova – W, on chalky slopes, 2016, KWHA !!; Kreydyanska Dacha !! |
| 920| Viburnum opulus L.            | native   | Balakliya – in the Serednya Balakliyka valley, 2016, KWHA !!; Protopopivka – N, in the oak forest, 2016, KWHA !!; Andriyivka – S, in the Siverskyi Donets valley !!; Balakliya – W, in the groves and wet depressions on sandy area !! |
| 921| Viola ambigua Waldst. & Kit.  | native   | Protopopivka – NW, in the gully, 2016, KWHA !! |
| 922| Viola arvensis Murray         | alien    | Balakliya – on the railway track, 2016, KWHA !!; etc. !! |
| 923| Viola elatior Fr. (Viola montana L.) | native   | Kreydyanska Dacha, 2016, KWHA !!; Balakliya – W, in the grove, 2016, KWHA !! |
| 924| Viola hirta L.                | native   | !!                                                                          |
| 925| Viola hymettia Boiss. & Heldr. (Viola lavrenkoana Klokov) | native   | Balakliya, sub V. cretacea Klokov (Klokov & Visjulina, 1955); Kreydyanska Dacha, abundantly, 2016, KWHA !!; between Andriyivka and Balakliya – Borysoglibskyi Bir !! |
| 926| Viola mirabilis L.            | native   | Kreydyanska Dacha, KWHA !!; Bayrak – E, in the oak forest !!; Protopopivka – N, in the oak forest near Kreydyana Hora !! |
| 927| Viola odorata L.              | native   | Izyum State Forestry (Kotov, 1965)                                         |
| 928| Viola suavis M. Bieb.         | native   | Bayrak – E, in the oak forest !!; Protopopivka – N, in the oak forest near Kreydyana Hora !! |
| 929| Viola tanaitica Grosset       | native   | Balakliya – W, in the grove                                                |
| 930| Viola tricolor L. subsp. matutina (Klokov) Valentine | native   | !!                                                                          |
| 931| Parthenocissus vitacea (Knerr) Hitchc. | alien   | Kreydyanska Dacha !!                                                         |
| 932| Vitis vulpina L.              | alien    | Balakliya – W, quarter Nr 128 of Borysoglibskyi Bir, 2016, KWHA !!; Kreydyanska Dacha, 2016, KWHA !!; Balakliya – occasionally in ruderal habitats !! |

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Чеклист флори околиць м. Балаклії (Харківська область, Україна): аборигенні та чужорідні таксони, поширення рідкісних рослин, нові знахідки

Олександр Шиндер *, Юлія Неграш

Національний ботанічний сад імені М.М. Гришка НАН України, вул. Тимірязєвська, 1, Київ, 01014, Україна; * shinderoleksandr@gmail.com

Вперше узагальнено відомості про флору басейну Сіверського Дінця в околицях м. Балаклії (Харківська область) на підставі всебічного аналізу літературних джерел, гербарних зборів та власних польових досліджень. Польові дослідження проводили у вересні 2015 р. та у березні-липні 2016 р.
Конспект флори включає 933 таксони судинних рослин зафіксованих у цьому районі, в тому числі 798 таксонів виявлених безпосередньо в ході польових досліджень. Зокрема, серед них виявлено 739 аборигенних і 194 чужорідних таксони. Підтверджено місцезростання 14 видів, занесених до Червоної книги України. Наведено місцезнаходження охоронюваних, малопоширених і нових для флори регіону видів рослин. Кілька видів, насамперед із групи кальцефітів (наприклад, *Astragalus albicaulis*, *Linum czernjajevii*, *Odontarrhena tortuosa subsp. cretacea*, *Scutellaria supina* та *Silene supina*), було виявлено за межами їх відомих ареалів. Виявлені місцезростання деяких інших видів (наприклад, *Ephedra distachya*, *Onosma simplicissima* та *Ornithogalum boucheanum*) значно доповнюють існуючі хорологічні дані для регіону. Також, наведено відомості про нові знахідки адвентивних видів (наприклад, *Cornus sanguinea subsp. australis*, *Fraxinus pennsylvanica*, *Sedum sexangulare*, *Ulmus pumila* та *Vitis vulpina*), які перебувають на стадії експансії.

Загалом, встановлено, що флора басейну Сіверського Дінця в околицях Балаклії є багатим природним центром флористичного різноманіття. Нині у районі дослідження відбуваються активні процеси адвентизації флори та заселення інвазійними видами рослин. Значну роль у розповсюдженні адвентивних рослин відіграють лісомеліоративні насадження, а міграційними коридорами для багатьох таких видів слугують залізниця і борова тераса Сіверського Дінця.

Ключові слова: флора, Сіверський Донець, нові локалітети, адвентивні види рослин, рідкісні види рослин