

Xenophytes of the Ukrainian flora: naturalized alien plants introduced unintentionally

Vira V. Protopopova^{1,2} & Myroslav V. Shevera^{2,1*}

¹Ferenc Rákóczi II Transcarpathian Hungarian University, Kossuth sq. 6, 90202 Berehove, Ukraine; ORCID: VVP <https://orcid.org/0000-0002-6942-6881>

²M.G. Kholodny Institute of Botany, National Academy of Sciences of Ukraine, Tereshchenkivska 2, 01601 Kiev, Ukraine; ORCID: MVS <https://orcid.org/0000-0002-1178-0458>

* corresponding author (e-mail: shevera.myroslav@ukr.net)

Abstract. The study is dedicated to xenophytes – species introduced accidentally or unintentionally by human activity into the naturalized alien flora of Ukraine. The species composition of this group (553 taxa) was determined, and an annotated checklist is provided. The status of some species previously regarded as apophytes has been revised. The characteristic features of xenophytes in Ukraine were: (a) the high number of species of the family Amaranthaceae (including Chenopodiaceae), because they are usually not among the ten richest families; (b) the complete absence of phanerophytes and a very limited representation of chamaephytes and nanophanerophytes among plant life-form spectra; (c) the highest number of species associated with anthropogenic habitats, and among natural ones – with sandy and rocky habitats; (d) the high percentage contribution of archaeophytes. The floristic composition of the analysed group can be considered broadly similar to that of the typical floras of the eastern part of the Ancient Mediterranean region.

Key words: alien plant species, checklist, taxonomy, phytogeography, Ukraine

1. Introduction

The spread of alien plant species and their establishment in the natural floras of new geographical regions under contemporary conditions is becoming increasingly widespread and intensive. At the same time, the duration of the stages associated with increasing levels of naturalization is decreasing, while the range of habitats subjected to invasion is expanding. In this process, the group of xenophytes is of particular scientific interest, as it comprises species capable of autonomous dispersal beyond their native ranges, withstanding competition from the flora of new floristic regions, and characterized by a high diversity of diaspore dispersal mechanisms, as well as by the breadth and variability of adaptive complexes. Their distribution indicates changes in environmental conditions and the extent of vegetation cover transformation.

Our study focused on xenophytes of Ukraine, i.e. alien species introduced by humans accidentally or unintentionally. The term was introduced by Domin (1947) and subsequently employed in numerous classifications. Greuter (1971) further advocated the use of this term

in reference to species originating from geographically distant floristic regions. The interpretation of the term in different classifications has been thoroughly described in many publications (Holub & Jirásek 1971; Sudnik-Wojcikowska & Kuźniewska 1988; Protopopova & Shevera 2012; Kucher 2014, etc.). Overall, the analysed group is fairly well delineated, with discussions arising only concerning certain taxa and the mechanisms by which they were introduced into new territories (Shnyder 2019).

Numerous publications on xenophytes as a distinct group are mainly devoted to their study in floras of some countries or regions, as well as in urban areas, botanical gardens, or in the context of specific floristic records (Ponert 1977; Browicz 1993; Aboucaya 1999; Verlaque *et al.* 2002; Verloove 2005, 2008, 2017; Verloove & Sánchez Gullón 2006; Pyke 2013; Sánchez Gullón & Verloove 2013; Vêla *et al.* 2013; Valdés 2015; Otto & Verloove 2016; Shnyder 2019; Taieb Brahim *et al.* 2024). Most often, this group has been analysed as part of the alien flora of various European countries (e.g., Protopopova 1973, 1991; Tokarska-Guzik 2005; Verloove 2006; Sîrbu & Oprea 2011; Medvecká *et al.* 2012;

Uludağ *et al.* 2017; Galasso *et al.* 2018; Onyshchenko 2019; Ecséri & Honfi 2020; Pyšek *et al.* 2022; Csiky *et al.* 2023; Kalusová *et al.* 2024; Glaser *et al.* 2025).

This study is a continuation of our previous research on the alien flora of Ukraine (Protopopova & Shevera 2005, 2014; Kalusová *et al.* 2024) and focuses on the group of xenophytes. The objectives of the study were: (a) to determine the species composition of xenophytes in the Ukrainian alien flora and to compile an annotated checklist; and (b) to elucidate the peculiarity of species belonging to this group.

2. Materials and methods

The study is based on original results of field investigations conducted using route methods in 2010–2025 and earlier, as well as on an analysis of herbarium collections of the M. G. Kholodny Institute of Botany, National Academy of Sciences (NAS) of Ukraine (KW); Institute of Ecology of the Carpathians, NAS of Ukraine (LWKS); M.M. Gryshko National Botanical Garden, NAS of Ukraine (KWAH); Donetsk Botanical Garden, NAS of Ukraine (DNZ); Kryvyi Rih Botanical Garden, NAS of Ukraine (KRW*); State Natural History Museum, NAS of Ukraine (LWS); Uzhhorod National University (UU); Yurii Fedkovych Chernivtsi National University (CHER); Ivan Franko Lviv National University (LW); Vasyl Stefanyk Precarpathian National University; Taras Shevchenko National University of Kyiv (KWU); Oles Honchar Dnipro National University (DNU); I.I. Mechnikov Odesa National University (MSDU); V.N. Karazin Kharkiv National University (CWU); Kamianets-Podilskyi Botanical Garden of Ivan Ohienko Kamianets-Podilskyi National University (PDH*); Lesia Ukrainka Volyn National University (LUU*); V.I. Vernadskyi Taurida National University (SIMF); Kherson State University (KHER); Mykola Hohol Nizhyn State University (NZHU*); T.H. Shevchenko National University “Chernihiv Colehium” (CHU*); Volodymyr Vynnychenko Central Ukrainian State University; Crimean Branch of the Agrotechnology Institute of the National University of Life and Environmental Sciences of Ukraine (CSAU); Nikitsky Botanical Garden–National Scientific Centre, National Academy of Agrarian Sciences of Ukraine (YALT); Kherson Natural History Museum; Vinnytsia Regional Museum of Local Lore (VIN*); and Volyn Regional Museum of Local Lore (LUM*). The study also incorporates personal collections, electronic databases (iNaturalist, UkrBIN, GBIF), and published literature data.

Comparative morphological and geographical methods were applied. The taxonomic structure (following Tolmachev 1974) and plant life-forms (following Raunkiaer 1934) of xenophyte species were analysed.

Species belonging to the alien and apophyte fractions are classified according to the approaches of Rikli, Naegeli, and Thellung, which have served as the basis for the development of several classification schemes and subsequently adapted for Ukraine by Protopopova (1991), so her publication is the most widely applied. The origins of alien species, as documented by Protopopova (1991), are presented alongside correlation data from Zajac (1979a, 1979b, 1987a, 1987b, 1988) and Terpo *et al.* (1999) for archaeophytes and Tokarska-Guzik (2005), Sirbu & Oprea (2011), Medvecká *et al.* (2012), Pyšek *et al.* (2022), Csiky *et al.* (2023) for aliens in border regions.

The botanical and geographical division of Ukraine follows Heluta (1989). The list of xenophytes was compiled according to the approach of Domin (1947). The taxa were analysed on the basis of their general and primary (native) ranges, time of arrival, the degree of naturalization both in the territory of Ukraine as a whole and in its natural zones, ecology and the harmonization of some species status with neighbouring regions.

The names of vascular plant species and their taxonomic coverage are presented in general accordance with the Plants of the World Online database (POWO 2025), although for some genera (*Epilobium*, *Oenothera*, *Xanthium*, etc.), an alternative taxonomic interpretation has been adopted. The acronyms of herbaria are given according to Thiers (2019 onwards), but several acronyms marked by an asterisk (*) are used as proposed by Shyian (2011).

3. Results and discussion

We found that the Ukrainian alien flora of vascular plants comprises 553 taxa of xenophytes (see Appendix 1) belonging to 245 genera and 53 families. Over the past 35 years, the composition of this group has increased by more than 70 taxa (Protopopova 1991).

Some species previously regarded as apophytes (Protopopova 1991; Ilyinska *et al.* 2007) have been revised – e.g. *Atriplex rosea*, *Bromus hordeaceus*, *B. japonicus*, *Lactuca tatarica*, *Melampyrum arvense*, *Silene csereii*, *S. noctiflora*, and *Sisymbrium strictissimum* – and now are classified as alien species (archaeophytes or xenophytes). The basis for this revision was the refinement of the species' native ranges and their ecological and coenotic affinities, new data on their current distribution (Fedoronchuk & Didukh 2002; Ilyinska *et al.* 2007; Mosyakin & Yavorska 2002; Didukh *et al.* 2004, 2010; Ostapko *et al.* 2010; Yena 2012; Orlov *et al.* 2022; Shynder *et al.* 2024), as well as the harmonization of their status with that adopted in countries neighbouring Ukraine (Zajac 1979a, 1979b, 1987a, 1979b, 1988; Terpo *et al.* 1999; Tokarska-Guzik 2005; Zajac & Zajac 2011; Sirbu & Oprea 2011; Medvecká *et al.*

2012; Uludağ *et al.* 2017; Pyšek *et al.* 2022; Csiky *et al.* 2023).

Among the alien taxa of the analysed group, according to residence time, 164 are classified as archaeophytes, whereas 387 are considered to be kenophytes either across Ukraine as a whole or in particular regions. Two species exhibit dual alien status: *Roemeria argemone* is classified as an archaeophyte in mainland Ukraine but as a kenophyte on Crimean Peninsula, and *Melampyrum arvense* is treated as an archaeophyte in the western regions, but as a kenophyte in the eastern regions and in Crimea. In addition, several species are classified inconsistently depending on the region, being regarded as alien in some areas and native in others. For example, *Euphorbia cyparissias* is considered to be a kenophyte in Crimea but is native to mainland Ukraine, while *Medicago minima* and *M. rigidula* as well as *Vicia sativa* subsp. *cordata* are kenophytes in mainland Ukraine and native to Crimea. Likewise, *Lathyrus aphaca* and *Sisymbrium strictissimum* are classified as a kenophyte in the western regions of Ukraine, while it is native to the eastern part of the country. *Atriplex micrantha* is a kenophyte in Right-Bank of Forest-Steppe and native in other regions, *Cirsium roseolum* is a kenophyte in Right-Bank of Forest-Steppe as well as Left-Bank of Forest zones but native to Steppe. *Galium humifusum* and *Gypsophila perfoliata* are regarded as kenophytes in the Forest-Steppe zone but are native to the Steppe zone, *Lamium amplexicaule* var. *orientale* is a kenophyte in Forest and north part of Forest-Steppe and native to Steppe and South-Eastern of Forest-Steppe, and *Corynephorus canescens* is a kenophyte in the Left-Bank Forest-Steppe, while being native to the Forest zone, among others.

In the analysed group, with respect to the degree of species naturalization, epocophytes predominate significantly (289), while the proportion of ephemerophytes is also relatively high (198 taxa); other subgroups are substantially smaller. Some species exhibit different degrees of naturalization in different regions of the country, e.g. *Phlomis fruticosa* behaves as an ephemerophyte in the Steppe zone but as an agriophyte (highly invasive) on Crimea, or *Acalypha australis* is a colonophyte (moderately invasive) in Forest-Steppe and epocophyte in Steppe zone, Crimea, and Transcarpathia.

This is due to the fact that the territory of Ukraine encompasses several natural climatic zones (the Forest, Forest-Steppe, and Steppe zones, as well as a natural fragment of the Mediterranean region on the Southern Bank of Crimea and 2 mountain regions: the Carpathians and the Crimean Mountains), which are characterized by diverse environmental conditions. In addition, the country's specific historical development and current ecological situation contribute to the dual nature

of the status of certain species and the degree of their naturalization in the different regions.

The richest 10 families of xenophytes in the flora of Ukraine (Table 1) comprise in total 388 taxa.

Table 1. The most species-rich families in the xenophyte flora of Ukraine

Family	No. of species
Poaceae	91
Asteraceae	76
Brassicaceae	58
Amaranthaceae s.l. (incl. Chenopodiaceae)	45
Lamiaceae	24
Euphorbiaceae	21
Fabaceae	20
Plantaginaceae (incl. Scrophulariaceae)	19
Boraginaceae	18
Papaveraceae	16

The Poaceae, Asteraceae, and Brassicaceae are the richest in species and jointly comprise 225 taxa. This is particularly evident in the composition of the families that shape it, primarily the Brassicaceae, Lamiaceae, and Fabaceae – typical Mediterranean families, which rank relatively high. However, several differences in the analysed group were found: (a) the Poaceae rank first, whereas this family typically holds the second or third position in regional floras; (b) the Amaranthaceae rank fourth, although they are usually absent from the list of 10 richest families; which reflects recent nomenclatural and taxonomic revisions, particularly the incorporation of Chenopodiaceae into this family; (c) the Fabaceae, one of the species-rich families, rank eighth, whereas they typically hold the first or second position; (d) although 6 additional families characteristic of Ancient Mediterranean floras are present in the overall family spectrum, in the xenophyte spectrum they are represented by only 1-3 species each. Thus, the floristic composition of xenophytes can be considered broadly similar to that of the typical floras of the eastern part of the Ancient Mediterranean region.

The ranking of the most species-rich genera of xenophytes is incomplete (Table 2). Three genera that are the richest in species jointly include 47 taxa. In the overall spectrum, there is a high proportion of genera with few species (each comprising 3-9); in particular, more than 40 genera are represented by only 2 species each, and over 100 by a single species, but this is typical for alien floras.

The analysis of plant life-forms among xenophyte species revealed a pronounced predominance of therophytes: 327 taxa (Table 3). The other groups are substantially smaller or mostly represented by few taxa.

Table 2. The most species-rich genera in the xenophyte flora of Ukraine

Genus	No. of species
<i>Euphorbia</i>	17
<i>Bromus</i>	16
<i>Amaranthus</i>	14
<i>Artemisia</i>	12
<i>Veronica</i>	12
<i>Oenothera</i>	11
<i>Chenopodium</i>	10

Table 3. The participation of plant life-forms in the xenophyte flora of Ukraine

Life-form	No. of species
Therophytes	327
Hemicryptophytes	109
Therophytes/hemicryptophytes	80
Geophytes	19
Chamaephytes	5
Hemicryptophytes/therophytes	5
Helophytes	4
Hemicryptophytes/geophytes	2
Therophyte/chamaephyte	1
Nanophanerophyte	1

A distinctive feature of xenophytes is the complete absence of phanerophytes, the presence of only a single nanophanerophyte, and just 5 chamaephytes.

The composition of xenophytes with respect to their primary (native) range, is highly diverse and comprises species originating from numerous floristic regions across all continents (Table 4). The largest number of species (196) is associated with the Mediterranean

Table 4. The main groups of xenophytes of the Ukrainian alien flora, according to their primary range of distribution

Region	No. of species
Mediterranean	196
Mediterranean-Iran-Turanian	58
Iran-Turanian	21
Mediterranean-Asian	7
North American	66
Southern American	15
Asian	24
Western Asian	12
Eastern Asian	10
Middle European	12
Western European	5
European-Mediterranean	6
Hybrid	11
Species with unknown origin	22
Other groups	95

region. The next groups are considerably less numerous represented, but they are also an important source of species enrichment. A distinctive feature of the spectrum is the prevalence of small groups representing areas of origin (*), each comprising 1-3 species, e.g. African (*Eragrostis aegyptiaca*), Australian (*Dysphania pumilio*), Balkan (*Nonea pallens*), Balkan-Asian Minor (*Anchusa stylosa*, *Onopordum tauricum*), Cis-Caspian (*Neotorularia contortuplicata*), Pannonian (*Anchusa officinalis*), Eastern Pontic (*Euphorbia sareptana*, *Lamium amplexicaule* var. *orientale*, *Sisymbrium volgense*), Mediterranean-Atlantic European (*Mutarda arvensis*), Palaeotropical African (*Setaria adhaerens*), etc.

Xenophytes are characterized by a high species richness, dynamism of instability of their ranges, and varying degrees of phytocoenotic activity, among other features. The success of migration of any species largely depends on its adaptive capacity, particularly the breadth of its ecological amplitude. A total of 312 species of the analysed group were recorded exclusively in various types of anthropogenic habitats, predominantly ruderal ones, which corresponds to the conditions of their initial introduction into new territories. The highest species richness was observed in well-lit roadside and railway habitats with sandy or rocky soils, while fewer species were recorded in fields, gardens, parks, etc., where they were represented by the genera *Amaranthus*, *Chenopodium*, *Eragrostis*, *Euphorbia*, *Oenothera*, *Xanthium*, among others. A total of 182 species were associated with both anthropogenic and natural habitats, indicating their broad adaptive capacity. The most species-rich habitats were sandy (82 species across 28 habitat types) and rocky (80 species across 21 habitat types). A considerable number of species are associated with sandy soils in anthropogenic habitat complexes. Many species occur in various types of open natural and anthropogenic habitats. For example, *Chaiturus marrubiastrum* grows in forest glades, among shrubs, in meadows, along riverbanks, and in anthropogenic habitats; *Myosotis arvensis* occurs among shrubs, in groves, on steppe and meadow-steppe slopes, as well as in anthropogenic habitats; *Orobancha minor* is found e.g. on rocky slopes, in forest glades, among shrubs, and in anthropogenic habitats. Most of the open habitats to which these species are adapted are characterized by nutrient-poor, dry, or otherwise specific soils, as well as various types of exposed substrates. In terms of light requirements, the majority of species are heliophilous, whereas with regard to the water regime they are mainly confined to insufficiently moist conditions, including sandy slopes, rocky and steppe habitats, as well as transformed natural habitats. Few groups (e.g. wetland and riparian) include species adapted to conditions of adequate or periodically insufficient moisture. Only 59 species are confined exclusively to natural habitats.

4. Conclusions

As a result of this study, the species composition of xenophytes in the Ukrainian alien flora was determined, and an annotated list is provided. Some species previously regarded as apophytes have been reclassified as alien. Xenophytes are inferior to ergasiophytes in both species richness and their negative environmental impact. Nevertheless, their role in understanding the processes of spontaneous plant dispersal is considerable.

Our future research will focus on: (a) clarifying the status of species with dual (alien or native) residence status in different regions; (b) investigating the ecological and coenotic peculiarities of species in order to determine their adaptive amplitude; and (c) confirming the earlier reported localities and identifying new ones, as well as monitoring newly recorded species.

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Author Contributions:

Research concept and design: V. V. Protopopova, M. V. Shevera

Collection and/or assembly of data: V. V. Protopopova, M. V. Shevera

Data analysis and interpretation: V. V. Protopopova, M. V. Shevera

Writing the article: V. V. Protopopova, M. V. Shevera

Critical revision of the article: M. V. Shevera

Final approval of article: M. V. Shevera

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Appendix 1. Annotation list of xenophytes of Ukrainian alien flora

The list includes the following information: name of species, family, life form, time of arrival (the year of the species record or the year of publication in which this was established), origin and degree of naturalization.

- Acalypha australis* L., Euphorbiaceae, Ther., Ken. (1981), S.E. Asia, Col./Epoec.
- Adonis aestivalis* L., Ranunculaceae, Ther., Arch., Med.-Ir.-Tur., Ephem.
- Adonis annua* L., Ranunculaceae, Ther., Ken. (1898), Med., Ephem.
- Adonis flammea* Jack., Ranunculaceae, Ther., Arch., Med.-Ir.-Tur., Ephem.
- Aegilops cylindrica* Host, Poaceae, Ther., Ken. (Carpathian, Forest zone), Med., Ephem.
- Aegilops geniculata* Roth, Poaceae, Ther., Ken., E. Med., Ephem.
- Aegilops ovata* L., Poaceae, Ther. Ken. (N. Cis-Black Sea), Med., Ephem.
- Aegilops peregrina* (Hack.) Maire & Weiller., Poaceae, Ther., Ken., Med., Ephem.
- Aegilops triuncialis* L., Poaceae, Ther., Ken., Med., Ephem.
- Aethusa cynapium* L., Apiaceae, Ther./Hemicr., Arch., Mid. Eur., Epoec.
- Ajuga chamaepitys* (L.) Schreb. subsp. *chamaepitys*, Lamiaceae, Ther./Hemicr., Arch., Med.-Ir.-Tur., Epoec.
- Ajuga chamaepitys* (L.) Schreb. subsp. *chia* (Schreb.) Arcang., Lamiaceae, Cham., Arch., Med.-W.As., Ephem.
- Alchemilla arvensis* (L.) Scop., Rosaceae, Ther., Arch., Med.-Atl., Eur., Epoec.
- Alopecurus myosuroides* Huds, Poaceae, Ther., Arch., Med.-Ir.-Tur., Agr.-Epoec.
- Alyssum desertorum* Stapf, Brassicaceae, Hemicr., Ken. (West regions of Ukraine), Unknown, Ephem.
- Alyssum hirsutum* M. Bieb., Brassicaceae, Ther., Ken. (West regions of Ukraine), Unknown, Ephem.
- Amaranthus albus* L., Amaranthaceae, Ther., Ken. (1880), N. Am., Epoec.
- Amaranthus blitoides* S. Wats., Amaranthaceae, Ther., Ken. (1926), N. Am., Epoec.
- Amaranthus blitum* L., Amaranthaceae, Ther., Ken. (1859), S. Am., Ephem.
- Amaranthus crispus* (Lesp. & Thévenau) A. Braun ex J.M.Coult. & S. Watson, Amaranthaceae, Ther., Ken. (1975), S. Am., Ephem.
- Amaranthus deflexus* L., Amaranthaceae, Ther., Ken. (1859), S. Am., Col.
- Amaranthus graecizans* L., Amaranthaceae, Ther., Ken. (1972), Med., Ephem.
- Amaranthus hybridus* L. s. str., Amaranthaceae, Ther., Ken., C. Am., Ephem.
- Amaranthus palmeri* S. Watson, Amaranthaceae, Ther., Ken. (1989), N. Am., Ephem.
- Amaranthus powellii* S. Watson, Amaranthaceae, Ther., Ken. (1989), C. & S. Am., Epoec.
- Amaranthus retroflexus* L., Amaranthaceae, Ther., Ken. (1807), N. Am., Epoec.
- Amaranthus rudis* Sauer, Amaranthaceae, Ther., Ken. (probably disappeared), N. Am., Ephem.
- Amaranthus × soproniensis* Priszter & Karpati, Amaranthaceae, Ther., Ken., Hybr., Ephem.
- Amaranthus tuberculatus* (Moq.) Sauer, Amaranthaceae, Ther., Ken. (1990), N. Am., Ephem.
- Amaranthus viridis* L., Amaranthaceae, Ther., Ken. (2000), S. & C. Am., Ephem.
- Ambrosia psilostachya* DC., Asteraceae, Hemicr., Ken. (1945), N. Am., Ephem.
- Ambrosia trifida* L., Asteraceae, Hemicr., Ken., N. Am., Col.
- Ammannia verticillata* (Ard.) Lam., Lythraceae, Ther., Ken., Med., Agr.
- Amsinckia calycina* (Moris) Chater, Boraginaceae, Ther., Ken. (1989), S. Am., Ephem.
- Anabasis aphylla* L., Amaranthaceae, Cham., Ken. (1935), E. Med.-W. As., Ephem.
- Anchusa arvensis* (L.) M.Bieb., Boraginaceae, Ther., Arch., Med., Epoec.
- Anchusa azurea* Mill., Boraginaceae, Hemicr., Ken., Med., Epoec.
- Anchusa leptophylla* Roem. & Schult., Boraginaceae, Hemicr., Ken., Med., Epoec.
- Anchusa officinalis* L., Boraginaceae, Hemicr., Arch., Pann., Epoec.
- Anchusa stylosa* M.Bieb., Boraginaceae, Ther., Ken., Balc.-As. Minor ?, Ephem.
- Anoda cristata* (L.) Schlecht., Malvaceae, Ther./Cham., Ken. (1992), N. & S. Am., Ephem.
- Anthemis arvensis* L., Asteraceae, Ther., Arch., Med., Epoec.
- Anthemis cotula* L., Asteraceae, Ther., Arch., Med., Epoec.
- Anthoxanthum aristatum* Boiss., Poaceae, Ther., Ken. (2020), Med., Ephem.
- Apera spica-venti* (L.) P. Beauv., Poaceae, Ther., Arch., Eur.-Med., Epoec.
- Arabidopsis thaliana* (L.) Heynh., Brassicaceae, Ther., Ken., Med.-Tur., Epoec.
- Artemisia absinthium* L., Asteraceae, Hemicr., Arch., Ir.-Tur., Epoec.
- Artemisia annua* L., Asteraceae, Ther., Ken. (1844), E. As., Agr.-Epoec.
- Artemisia argyi* Léveillé & Vaniot, Asteraceae, Hemicr., Ken. (1989), E. As. Ephem.
- Artemisia canadensis* Michx., Asteraceae, Hemicr., Ken. (1981), N.Am., Ephem.
- Artemisia glauca* Pall. ex Willd., Asteraceae, Geo., Ken. (1990), As., Ephem.
- Artemisia mongolica* (Fisch. ex Besser) Nakai, Asteraceae, Geo., Ken., As., Ephem.
- Artemisia rubripes* Nakai, Asteraceae, Hemicr., Ken. (1989, now disappeared), S. As., Ephem.

- Artemisia selengensis* Turcz. ex Besser, Asteraceae, Geo., Ken. (1991), E. As., Ephem.
- Artemisia sieversiana* Willd., Asteraceae, Ther./Hemicr., Ken. (1976), As., Ephem.
- Artemisia tournefortiana* Rchb., Asteraceae, Hemicr., Ken. (1953), W. As., Col.
- Artemisia umbrosa* (Turcz. ex Besser) Pamp., Asteraceae, Geo., Ken. (1988), E. As., Ephem.
- Artemisia verlotiorum* Lamotte, Asteraceae, Geo., Ken. (1929), As., Epoec.
- Arundo donax* L., Poaceae, Geo., Ken. (2009), Med., Ephem.
- Asperugo procumbens* L., Boraginaceae, Ther., Arch., Med., Epoec.
- Atriplex micrantha* Ledeb., Amaranthaceae, Ther., Ken. (Right Bank of Forest Steppe), Ir.-Tur., Ephem.
- Atriplex patula* L., Amaranthaceae, Ther., Arch., Eur.-Med.-As., Epoec.
- Atriplex rosea* L., Amaranthaceae, Ther., Arch., Eur.-Med., Epoec.
- Atriplex prostrata* Boucher ex DC., Amaranthaceae, Ther., Arch., Med.-Ir.-Tur., Agr.-Epoec.
- Atriplex sagittata* Borkh., Amaranthaceae, Ther., Arch., Med.-Ir.-Tur., Epoec.
- Atriplex sphaeromorpha* Iljin, Amaranthaceae, Ther., Ken., Med.-Ir.-Tur., Epoec.
- Atriplex tatarica* L., Amaranthaceae, Ther., Arch., Med.-Tur., Epoec.
- Avena barbata* Pott ex Link, Poaceae, Ther., Ken. (1903), Med., Ephem.
- Avena eriantha* Durieu, Poaceae, Ther., Ken.? (1830), Med., Ephem.
- Avena fatua* L., Poaceae, Ther., Arch., Med., Epoec.
- Avena sterilis* subsp. *ludoviciana* (Durieu) Gillet & Magne, Poaceae, Ther., Ken. (1855), Med., Epoec.
- Avena strigosa* Schreb., Poaceae, Ther., Arch., Anthropol., Epoec.
- Azolla filiculoides* subsp. *cristata* (Kaulf.) Fraser-Jenk, Salviniaceae, Hemicr., Ken. (1980), N. Am., Agr.
- Azolla filiculoides* Lam. subsp. *filiculoides*, Salviniaceae, Hemicr., Ken. (1972), N. Am., Agr.
- Ballota nigra* L. subsp. *nigra*, Lamiaceae, Hemicr., Arch., Med.-Ir.-Tur., Epoec.
- Ballota nigra* L. subsp. *foetida* (Vis.) Hayek, Lamiaceae, Hemicr., Ken., W. & S. Eur., Epoec.
- Barbarea verna* (Mill.) Aschers., Brassicaceae, Ther./Hemicr., Ken., Med., Ephem.
- Bassia laniflora* (S.G. Gmel.) A.J. Scott, Amaranthaceae, Ther., Ken., Med.-Ir.-Tur., Epoec.
- Beckmannia syzigachne* (Steud.) Fernald, Poaceae, Hemicr./Ther., Ken. (1990), As., Ephem.
- Bidens connata* Muehl. ex Willd., Asteraceae, Ther., Ken. (1986), N. Am., Agr.-Epoec.
- Bidens frondosa* L., Asteraceae, Ther., Ken. (1970), N. Am., Agr.-Epoec.
- Bifora radians* M. Bieb., Apiaceae, Ther., Arch., Med., Epoec.
- Bifora testiculata* (L.) Spreng, Apiaceae, Ther., Arch. ? (Crimea), Med., Epoec.
- Blitum bonus-henricus* (L.) Rchb., Amaranthaceae, Hemicr., Arch., Mid. Eur., Epoec.
- Blitum virgatum* L., Amaranthaceae, Ther., Ken., Eur.-Med.-As., Epoec.
- Bromus arvensis* L., Poaceae, Ther./hemicr., Arch., Med.-Ir.-Tur., Epoec.
- Bromus briziformis* Fisch. et C. A. Mey., Poaceae, Ther., Ken. (need confirmation), Med., Ephem.
- Bromus catharticus* Vahl, Poaceae, Ther./Hemicr., Ken. (1990), S. Am., Ephem.
- Bromus commutatus* Schrad., Poaceae, Ther., Ken., Mid. Eur., Epoec.
- Bromus diandrus* Roth, Poaceae, Ther., Ken., Med., Epoec.
- Bromus hordeaceus* L., Poaceae, Geo., Arch., N. Med., Epoec.
- Bromus inermis* Leyss, Poaceae, Geo., Arch., Med., Agr.-Epoec.
- Bromus japonicus* Thunb., Poaceae, Ther./Hemicr., Arch., Med., Epoec.
- Bromus lanceolatus* Roth, Poaceae, Ther., Ken. (1950, need confirmation), Med., Ephem.
- Bromus lepidus* Holmberg, Poaceae, Ther./Hemicr., Ken. (1968), C. Eur., Ephem.
- Bromus moeszii* Pénzes, Poaceae, Ther., Ken. (2006, need confirmation), Unknown, Ephem.
- Bromus scoparius* L., Poaceae, Ther., Ken., Med., Ephem.
- Bromus secalinus* L., Poaceae, Ther./Hemicr., Arch., Med., Epoec.
- Bromus squarrosus* L., Poaceae, Ther./Hemicr., Ken. (1859), Med.-Ir.-Tur., Epoec.
- Bromus sterilis* L., Poaceae, Ther./Hemicr., Arch., Med.-Ir.-Tur., Agr.-Epoec.
- Bromus tectorum* L., Poaceae, Ther., Arch., Med.-Ir.-Tur., Agr.-Epoec.
- Bryonia alba* L., Cucurbitaceae, Geo., Ken., Med.-Ir.-Tur., Agr.
- Bryonia dioica* Jacq., Cucurbitaceae, Geo., Arch., Med., Epoec.
- Bufonia parviflora* Griseb., Caryophyllaceae, Ther., Ken., Med., Ephem.
- Buglossoides arvensis* (L.) I.M. Johnst, Boraginaceae, Ther./Hemicr., Arch., Med.-Ir.-Tur., Epoec.
- Bunias erucago* L., Brassicaceae, Hemicr./Ther., Ken. (1864), Med., Ephem.
- Bunias orientalis* L., Brassicaceae, Ther./Hemicr., Ken., E. Med., Epoec.
- Bupleurum rotundifolium* L., Apiaceae, Ther., Arch., Med.-Ir.-Tur., Epoec.
- Calendula arvensis* L., Asteraceae, Ther., Ken., Med., Ephem.
- Camelina alyssum* (Mill.) Thell., Brassicaceae, Ther., Arch., Anthropol., Epoec.
- Camelina microcarpa* Andr. ex DC., Brassicaceae, Ther./Hemicr., Arch., Med.-E.-Ir.-Tur., Epoec.
- Camelina rumelica* Velen., Brassicaceae, Ther./Hemicr., Ken., Med.-Ir.-Tur., Epoec.
- Capsella bursa-pastoris* (L.) Medic., Brassicaceae, Ther./Hemicr., Arch., W. Med., Agr.-Epoec.

- Capsella rubella* Reut., Brassicaceae, Ther./Hemicr., Ken. (1940, probably disappeared), Med., Ephem.
- Cardamine occulta* Hornem., Brassicaceae, Ther./Hemicr., Ken. (2022), S. As., Ephem.
- Carduus acanthoides* L., Asteraceae, Hemicr., Arch., Med., Epoec.
- Carduus pycnocephalus* subsp. *cinereus* (M. Bieb.) P.H. Davis, Asteraceae, Ther., Ken., Ir.-Tur., Epoec.
- Carduus nutans* L., Asteraceae, Hemicr., Arch., Med., Epoec.
- Carthamus glaucus* M. Bieb., Asteraceae, Ther., Ken., W. As., Epoec.
- Carthamus lanatus* L., Asteraceae, Ther., Ken., Med., Epoec.
- Caucalis platycarpus* L., Apiaceae, Ther., Arch., Med.-Ir.-Tur., Epoec.
- Centaurea cyanus* L., Asteraceae, Ther., Arch., Med., Epoec.
- Centaurea depressa* M. Bieb., Asteraceae, Ther., Ken., Med., Epoec.
- Centaurea diffusa* Lam., Asteraceae, Hemicr., Ken. (1853), Med.-Ir.-Tur., Agr.-Epoec.
- Centaurea iberica* Trev., Asteraceae, Ther./Hemicr., Ken. (1972), Med., Col.
- Centaurea solstitialis* L., Asteraceae, Ther., Ken., Med., Epoec.
- Chaenorhinum minus* (L.) Lange, Plantaginaceae, Ther., Arch., Eur.-Med., Ephem.
- Chaerophyllum nodosum* (L.) Crantz, Apiaceae, Ther., Ken. (Forest-Steppe), Med., Col.
- Chaiturus marrubiastrum* (L.) Ehrh. ex Rchb., Lamiaceae, Hemicr., Ken. (Crimea), Unknown, Epoec.
- Chenopodiastrum hybridum* (L.) S. Fuentes, Uotila & Borsch, Amaranthaceae, Ther., Arch., S. & S.-E. As., Epoec.
- Chenopodiastrum murale* (L.) S. Fuentes, Uotila & Borsch, Amaranthaceae, Ther., Arch., Med., Epoec.
- Chenopodium album* var. *reticulatum* (Aellen) Uotila, Amaranthaceae, Ther., Ken., W. Eur., Ephem.
- Chenopodium berlandieri* Moq. var. *zschackei* (J. Murr) Zobel, Amaranthaceae, Ther., Ken., N. Am., Ephem.
- Chenopodium ficifolium* Smith, Amaranthaceae, Ther., Arch., Ir.-Tur., Epoec.
- Chenopodium betaceum* Andrzej., Amaranthaceae, Ther., Ken., N. Am., Ephem.
- Chenopodium opulifolium* Schrad. ex DC., Amaranthaceae, Ther., Arch., Med., Epoec.
- Chenopodium pratericola* Rydb., Amaranthaceae, Ther., Ken., N. Am., Epoec.
- Chenopodium striatifforme* Murr., Amaranthaceae, Ther., Ken., Med., Epoec.
- Chenopodium suecicum* J. Murr., Amaranthaceae, Ther., Ken., As., Epoec.
- Chenopodium ucrainicum* Mosyakin & Mandák, Amaranthaceae, Ther., Ken., Unknown, Ephem.
- Chenopodium vulvaria* L., Amaranthaceae, Ther., Arch., Med., Epoec.
- Chorispora tenella* (Pall.) DC., Brassicaceae, Ther., Ken., W. As., Epoec.
- Chrozophora plicata* (Vahl) A. Juss. ex Spreng., Euphorbiaceae, Ther., Ken., Med., Ephem.
- Chrozophora tinctoria* (L.) A. Juss., Euphorbiaceae, Ther., Ken., Med.-As., Ephem.
- Cichorium intybus* L., Asteraceae, Hemicr., Arch., Med.-Ir.-Tur., Agr.-Epoec.
- Cirsium roseolum* Gorl., Asteraceae, Hemicr., Ken. (Right-Bank of Forest-Steppe & Left-Bank of Forest) (Native in Steppe zone), E. Eur. Steppe, Ephem.
- Clypeola jonthlaspi* L., Brassicaceae, Ther., Ken., Ir.-Tur., Epoec.
- Conium maculatum* L., Apiaceae, Ther./Hemicr., Arch., Med.-Ir.-Tur., Epoec.
- Conringia orientalis* (L.) Dumort., Brassicaceae, Ther., Arch., Med.-Ir.-Tur., Epoec.
- Corispermum declinatum* Stephan ex Iljin, Amaranthaceae, Ther., Ken. (1959), As., Ephem.
- Corispermum pallasii* Steven, Amaranthaceae, Ther., Ken., S. Sib., Ephem.
- Corispermum redowskii* Fisch. ex Steven, Amaranthaceae, Ther., Ken. (1983), As., Ephem.
- Cornus sanguinea* L. subsp. *australis* (C.A. Mey.) Jáv., Cornaceae, Nanophan., Ken. (2022), Unknown, Ephem.
- Corynephorus canescens* (L.) P. Beauv., Poaceae, Hemicr., Ken.? (Left Bank of Forest-Steppe) (Native in Forest zone), Eur.-Med., Ephem.
- Cota altissima* (L.) J. Gray, Asteraceae, Ther., Ken. (1844), S. Eur.-W. As., Ephem.
- Cota austriaca* (Jacq.) Sch. Bip, Asteraceae, Ther., Ken., Med., Epoec.
- Crepis capillaris* (L.) Wallr., Asteraceae, Ther./Hemicr., Arch., W. Eur., Epoec.
- Crepis micrantha* Czerep., Asteraceae, Ther., Ken., Unknown, Epoec.
- Crepis setosa* Haller f., Asteraceae, Ther., Ken., Med., Epoec.
- Cuscuta australis* var. *cesatiana* (Bertol.) Yunck., Convolvulaceae, Ther., Ken., Ir.-Tur.?, Epoec.
- Cuscuta australis* var. *tineoi* (Insenga) Yunck., Convolvulaceae, Ther., Ken. (1830), N. Am., Epoec.
- Cuscuta campestris* Yunck., Convolvulaceae, Ther., Ken. (1915), N. Am., Epoec.
- Cuscuta epilinum* Weige, Convolvulaceae, Ther., Arch., As., Epoec.
- Cuscuta gronovii* Willd. ex Roem. & Schult., Convolvulaceae, Ther., Ken., N. Am., Ephem.
- Cuscuta suaveolens* Ser., Convolvulaceae, Ther., Ken. (1928), S. Am., Epoec.
- Cynodon dactylon* (L.) Pers., Poaceae, Geo., Ken. (1923), Med.-C. As., Epoec.
- Cynoglossum creticum* Mill., Boraginaceae, Hemicr., Ken., Med.?, Epoec.
- Cynoglossum officinale* L., Boraginaceae, Hemicr., Arch., Med., Epoec.
- Cyperus difformis* L., Cyperaceae, Ther., Ken. (1967), S.-E. As., Agr.
- Cyperus odoratus* L., Cyperaceae, Ther./Hemicr., Ken. (1980), S. & S.-E. As., Agr.-Epoec.
- Dasypyrum villosum* (L.) Borbás, Poaceae, Ther., Ken., Med., Epoec.

- Datura stramonium* L., Solanaceae, Ther., Ken., S.-E. As., Epoc.
- Delphinium ajacis* L., Ranunculaceae, Ther., Ken. (1855), Med., Ephem.
- Delphinium consolida* L. subsp. *consolida*, Ranunculaceae, Ther., Arch., Med.-Ir.-Tur., Epoc.
- Descurainia sophia* (L.) Prantl, Brassicaceae, Ther., Arch., Med.-As., Epoc.
- Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark, Poaceae, Hemisr., Ken. (1968), N. Am., Ephem.
- Dichasanthus confertus* (Steven ex Turcz.) V.I. Dorof., Brassicaceae, Ther., Ken. (1856), As. Min., Ephem.
- Digitaria ciliaris* (Retz.) Koeler, Poaceae, Ther./Hemisr., Ken., As., Ephem.
- Digitaria ischaemum* (Schreb.) Muehl., Poaceae, Ther., Arch., Med., Agr.-Epoc.
- Digitaria sanguinalis* (L.) Scop., Poaceae, Ther., Arch., Med., Epoc.
- Diplachne fusca* (L.) P. Beauv. ex Roem. & Schult. subsp. *fascicularis* (Lam.) P.M. Peterson & N. Snow, Poaceae, Ther./Hemisr., Ken. (2002), N & S. Am., Agr.-Epoc.
- Diplotaxis muralis* (L.) DC., Brassicaceae, Ther./Hemisr., Ken. (1884), Med., Epoc.
- Diplotaxis tenuifolia* (L.) DC., Brassicaceae, Cham., Ken. (1886), Med., Epoc.
- Diplotaxis viminea* (L.) DC., Brassicaceae, Ther., Ken. (Crimea), Med., Ephem.
- Dodartia orientalis* L., Mazaceae, Hemisr., Ken., Ir.-Tur., Ephem.
- Draba sibirica* (Pall.) Thell., Brassicaceae, Geo., Ken., As., Epoc.
- Dracocephalum thymiflorum* L., Lamiaceae, Ther., Ken., Unknown, Epoc.
- Dysphania ambrosioides* (L.) Mosyakin & Clemmants, Amaranthaceae, Hemisr., Ken., S. Am., Epoc.
- Dysphania botrys* (L.) Mosyakin & Clemmants, Amaranthaceae, Ther., Ken., Med.-As., Epoc.
- Dysphania pumilio* (R. Br.) Mosyakin & Clemmants, Amaranthaceae, Ther./Hemisr., Ken. (1983), Austr., Agr.-Epoc.
- Ecballium elaterium* (L.) A. Rich., Cucurbitaceae, Ther., Ken. (1894), Med., Epoc.
- Echinochloa colona* (L.) Link subsp. *colona*, Poaceae, Ther., Ken. (1988), Trop. As., Ephem.,
- Echinochloa colona* subsp. *edulis* (Honda) Banfi & Galasso, Poaceae, Ther., Ken. (1990), As., Ephem.
- Echinochloa crus-galli* (L.) P. Beauv., Poaceae, Ther., Arch., S.-E. As., Agr.-Epoc.
- Echinochloa muricata* (P. Beauv.) Fernald, Poaceae, Ther., Ken. (1990), N. Am., Ephem.
- Echinochloa oryzoides* (Ard.) Fritsch, Poaceae, Ther., Ken. (1932), Med., Ephem.
- Echium plantagineum* L., Boraginaceae, Ther./Hemisr., Ken., Med., Ephem.
- Eclipta prostrata* (L.) L., Asteraceae, Ther./Hemisr., Ken. (1997), Pantrop., Col.
- Eleusine indica* (L.) Gaertn., Poaceae, Ther./Hemisr., Ken. (1991, probably disappeared), Afr.-S. As., Ephem.
- Elsholtzia ciliata* (Thunb.) Hyl., Lamiaceae, Ther., Ken., As., Epoc.
- Elymus sibiricus* L., Poaceae, Hemisr., Ken. (1990), E. As., Ephem.
- Elymus violaceus* (Hornem.) J. Feilberg, Poaceae, Hemisr., Ken., N. Am., Epoc.
- Epilobium ciliatum* Raf., Onagraceae, Hemisr., Ken., N. Am., Agr.-Epoc.
- Epilobium* × *novae-civitat*is Smejkal, Onagraceae, Hemisr., Ken., Hybr., Ephem.
- Epilobium nutans* F.W. Schmidt, Onagraceae, Hemisr., Ken., Mid. Eur., Agr.-Epoc.
- Epilobium pseudorubescens* A.K. Skvortsov, Onagraceae, Hemisr., Ken. (1991), N. Am., Agr.-Epoc.
- Eragrostis aegyptiaca* (Willd.) Delile, Poaceae, Ther., Ken., Afr., Ephem.
- Eragrostis albensis* H. Scholz, Poaceae, Ther., Ken. (1997), Unknown, Ephem.
- Eragrostis cilianensis* (All.) Vign.-Lut. ex Janch., Poaceae, Ther., Ken., Med., Ephem.
- Eragrostis minor* Host, Poaceae., Ther./Hemisr., Ken., S. Eur., Epoc.
- Eragrostis pectinacea* (Michx.) Nees, Poaceae, Ther., Ken., N. Am., Ephem.
- Eragrostis pilosa* (L.) P. Beauv., Poaceae, Ther., Ken., Med., Ephem.
- Eragrostis virescens* J. Presl, Poaceae., Ther., Ken. (Crimea), S. Am., Ephem.
- Erechtites hieracifolia* (L.) Rafin. ex DC., Asteraceae, Ther., Ken. (1911). N. Am., Agr.-Epoc.
- Erigeron annuus* (L.) Pers., Asteraceae, Ther., Ken., N. Am., Agr.-Epoc.
- Erigeron canadensis* L., Asteraceae, Ther., Ken., N. Am., Agr.-Epoc.
- Erigeron floribundus* (Kunth) Sch. Bip., Asteraceae, Ther., Ken. (2013, Crimea), Trop. & Subtrop. Am., Ephem.
- Erigeron strigosus* Muhl. ex Willd., Asteraceae, Ther., Ken. (1974), N. Am., Epoc.
- Erigeron sumatrensis* Retz, Asteraceae, Ther., Ken. (2013, Crimea), S. Am., Ephem.
- Eriochloa villosa* (Thunb.) Kunth, Poaceae, Ther./Hemisr., Ken., E. As., Ephem.
- Erucastrum gallicum* (Willd.) O.E. Schulz, Brassicaceae, Ther./Hemisr., Ken. (1916), Mid. Eur., Ephem.
- Erucastrum nasturtiifolium* (Poir.) O.E. Schulz, Brassicaceae, Ther./Hemisr., Ken., Med., Epoc.
- Erysimum cheiranthoides* L., Brassicaceae, Ther., Arch., Eur-Med.-As, Epoc.
- Erysimum repandum* L., Brassicaceae, Ther., Arch., Med.-Ir.-Tur., Epoc.
- Euclidium syriacum* (L.) W.T. Aiton, Brassicaceae, Ther., Ken., Med., Epoc.
- Euphorbia aleppica* L., Euphorbiaceae, Ther., Ken., E. Med., Epoc.
- Euphorbia chamaesyce* L., Euphorbiaceae, Ther., Ken., Med., Epoc.
- Euphorbia cyparissias* L., Euphorbiaceae, Hemisr., Ken. (Crimea)/Native (in other regions of Ukraine), Med., Epoc.
- Euphorbia davidii* Subils, Euphorbiaceae, Ther., Ken. (1989), N. Am., Epoc.
- Euphorbia epithymoides* L., Euphorbiaceae, Hemisr., Ken., C. & S.E. Eur., Ephem.

- Euphorbia exigua* L., Euphorbiaceae, Ther., Arch., Med., Epoec.
Euphorbia falcata L., Euphorbiaceae, Ther., Arch., Med., Epoec.
Euphorbia glyptosperma Engelm, Euphorbiaceae, Ther., Ken. (2011), N. Am., Ephem.
Euphorbia helioscopia L., Euphorbiaceae, Ther., Arch., Med., Epoec.
Euphorbia humifusa Willd. ex Schlecht., Euphorbiaceae, Ther., Ken., Med.-As., Epoec.
Euphorbia maculata L., Euphorbiaceae, Ther., Ken., N. Am., Epoec.
Euphorbia peplus L., Euphorbiaceae, Ther., Arch., Med., Epoec.
Euphorbia platyphyllos L., Euphorbiaceae, Ther., Arch., Med., Epoec.
Euphorbia prostrata Aiton, Euphorbiaceae, Ther., Ken. (2019), S. Am., Ephem.
Euphorbia salicifolia Host, Euphorbiaceae, Hemicr., Ken., Mid. Eur., Epoec.
Euphorbia sareptana A. Becker, Euphorbiaceae, Hemicr., Ken., E. Pont., Ephem.
Euphorbia serpens Kunth, Euphorbiaceae, Ther., Ken. (2021), N. Am., Ephem.
Fagopyrum tataricum (L.) Gaertn., Polygonaceae, Ther., Ken. (1859), C. As., Epoec.
Fallopia convolvulus (L.) Á. Löve, Polygonaceae, Ther., Arch., Unknown, Epoec.
Festuca ambigua Le Gall, Poaceae, Ther., Ken., Med., Agr.-Epoec.
Festuca bromoides L., Poaceae, Ther., Ken., Med., Ephem.
Festuca heteromalla Pourr., Poaceae, Hemicr., Ken., Atl.-Mid. Eur., Epoec.
Festuca octoflora Walt., Poaceae, Ther., Ken. (2001), N. Am., Ephem.
Festuca myuros L., Poaceae, Ther., Arch.?, Med., Ephem.
Fumaria capreolata L., Papaveraceae, Ther., Ken. (2008), Med., Ephem.
Fumaria officinalis L., Papaveraceae, Ther., Arch., Med., Epoec.
Fumaria parviflora Lam., Papaveraceae, Ther., Ken., Med., Epoec.
Fumaria rostellata Knaf, Papaveraceae, Ther., Ken., Med., Epoec.
Fumaria schleicheri Soy.-Willem., Papaveraceae, Ther., Arch., Ir.-Tur., Epoec.
Fumaria vaillantii Loisel., Papaveraceae, Ther., Arch., Ir.-Tur., Epoec.
Gagea pratensis (Pers.) Dumort., Liliaceae, Geo., Arch., Med., Epoec.
Gagea villosa (M. Bieb.) Sweet, Liliaceae, Geo., Arch., Med., Epoec.
Galega officinalis L., Fabaceae, Hemicr., Ken., Eur.-Med., Agr.
Galeopsis angustifolia Ehrh. ex Hoffm., Lamiaceae, Ther., Ken. (2016), W. Eur., Ephem.
Galeopsis ladanum L., Lamiaceae, Ther., Arch., Med., Epoec.
Galinsoga × *mixta* J. Murray, Asteraceae, Ther., Ken., Hybr., Epoec.
Galinsoga parviflora Cav., Asteraceae, Ther., Ken. (1855), S. Am., Epoec.
Galinsoga quadriradiata Ruiz & Pav., Asteraceae, Ther., Ken. (1946), S. Am., Epoec.
Galium humifusum M. Bieb., Rubiaceae, Hemicr., Ken. (Forest-Steppe), E. Med., Col.
Galium spurium L., Rubiaceae, Ther., Arch., Med., Epoec.
Galium tricornerutum Dandy, Rubiaceae, Ther., Arch., Med.-Ir.-Tur., Agr.-Epoec.
Geranium bohemicum L., Geraniaceae, Hemicr., Ken., S. Eur., Agr.
Geranium columbinum L., Geraniaceae, Ther., Ken., Med.-Ir.-Tur., Epoec.
Geranium dissectum L., Geraniaceae, Ther., Arch., W. Med., Epoec.
Geranium molle L., Geraniaceae, Ther., Arch., Med.-Ir.-Tur., Epoec.
Geranium purpureum Vill., Geraniaceae, Ther./Hemicr., Ken. (2013), Med., Ephem.
Geranium pusillum L., Geraniaceae, Ther./Hemicr., Arch., Ir.-Tur., Epoec.
Geranium pyrenaicum Burm. fil., Geraniaceae, Hemicr., Ken. (1860), Med., Agr.-Epoec.
Geranium rotundifolium L., Geraniaceae, Ther., Ken., Med., Epoec.
Geranium sibiricum L., Geraniaceae, Hemicr., Ken. (1855), As., Epoec.
Geropogon hybridus (L.) Sch. Bip., Asteraceae, Ther., Ken. (1981, Crimea), Med., Epoec.
Glaucium corniculatum (L.) Rudolph, Papaveraceae, Ther./Hemicr., Arch., Med., Epoec.
Glebionis segetum (L.) Fourr., Asteraceae, Ther., Arch., S. & E. Med., Epoec.
Glyceria striata (Lam.) Hitchc., Poaceae, Hemicr., Ken. (1990), N. Am., Col.
Goldbachia laevigata (M. Bieb.) DC., Brassicaceae, Ther., Ken. (1990, now disappeared), Ir.-Tur., Ephem.
Grindelia squarrosa (Pursh) Dun., Asteraceae, Ther./Hemicr., Ken. (1949), N. Am., Agr.-Epoec.
Gypsophila perfoliata L., Caryophyllaceae, Hemicr., Ken. (Forest-Steppe), E. Med., Ephem.
Gypsophila scorzonifolia Ser., Caryophyllaceae, Hemicr., Ken. (1959), Med., Col.
Gypsophila vaccaria (L.) Sm., Caryophyllaceae, Ther., Arch., S.E. As., Epoec.
Heliotropium europaeum L., Boraginaceae, Ther., Arch., Med., Epoec.
Herniaria hirsuta L., Caryophyllaceae, Ther./Hemicr., Arch., Med.-Ir.-Tur., Epoec.
Hibiscus trionum L., Malvaceae, Ther./Hemicr., Arch., Med., Epoec.
Hippuris tetraphylla L., Plantaginaceae, Cham., Ken., Subarctic., Ephem.
Holosteum marginatum Fisch. & C.A. Mey, Caryophyllaceae, Ther., Ken.? (1958, need confirmation), Cauc., Ephem.
Hordeum bulbosum L., Poaceae, Hemicr., Ken., Med., Col.

- Hordeum murinum* subsp. *glaucum* (Steud.) Tzvelev, Poaceae, Ther., Ken., Med., Epoc.
- Hordeum murinum* subsp. *leporinum* (Link) Arcang., Poaceae, Ther., Ken., Med., Epoc.
- Hordeum murinum* L. subsp. *murinum*, Poaceae, Ther./Hemicr., Ken., Med.-Ir.-Tur., Epoc.
- Hordeum secalinum* Schreb., Poaceae, Hemicr., Ken., Med., Ephem.
- Hyoscyamus albus* L., Solanaceae, Ther./Hemicr., Ken. (1895), Med., Col.
- Hyoscyamus niger* L., Solanaceae, Ther./Hemicr., Ken., Med.-Ir.-Tur., Epoc.
- Hypocoum pendulum* L., Papaveraceae, Ther., Ken. (1903), Med., Ephem.
- Hypocoum procumbens* L., Papaveraceae, Ther., Ken. (1994, probably disappeared; 2013, Crimea), Ken., Med., Ephem.
- Impatiens parviflora* DC., Balsaminaceae, Ther. Ken. (1908), C. As., Agr.
- Isatis tinctoria* L., Brassicaceae, Hemicr., Ken., Ir.-Tur., Epoc.
- Juncus tenuis* Willd., Juncaceae, Hemicr., Ken. (1886), N. Am., Agr.-Epoc.
- Kickxia elatine* (L.) Dumort., Plantaginaceae, Ther., Arch., Med., Epoc.
- Kickxia spuria* (L.) Dumort., Plantaginaceae, Ther., Arch., Med., Epoc.
- Koelpinia linearis* Pall., Asteraceae, Ther., Ken., Med.-Ir.-Tur., Ephem.
- Lactuca serriola* L., Asteraceae, Ther./Hemicr., Arch., Med.-Ir.-Tur., Epoc.
- Lactuca tatarica* (L.) C.A. Mey., Asteraceae, Hemicr./Ther., Ken., Med., Epoc.
- Lamium album* L., Lamiaceae, Hemicr., Arch., Ir.-Tur., Epoc.
- Lamium amplexicaule* L., Lamiaceae, Ther./Hemicr., Arch., Med.-Ir.-Tur., Epoc.
- Lamium amplexicaule* L. var. *orientale* (Pacz.) Mennema, Lamiaceae, Ther., Ken. (Forest & N. part of Forest-Steppe) (Native in Steppe & S.-E. of Forest-Steppe), Pont., Epoc.
- Lamium caucasicum* Grossh., Lamiaceae, Ther., Ken. (1982), Cauc., Ephem.
- Lamium purpureum* L., Lamiaceae, Ther., Arch., N. Med., Epoc.
- Lappula patula* (Lehm.) Menyh., Boraginaceae, Ther., Ken., As., Epoc.
- Lappula squarrosa* (Retz.) Dumort., Boraginaceae, Ther./Hemicr., Arch., Med.-Ir.-Tur., Ephem.
- Lathyrus aphaca* L., Fabaceae, Ther., Ken. (West region of Ukraine), Med., Ephem.
- Lathyrus tuberosus* L., Fabaceae, Geo., Arch., Med., Agr.-Epoc.
- Lemna minuta* Kunth, Araceae, Ther., Ken. (1983), N. Am., Ephem.
- Lemna turionifera* Landolt, Araceae, Ther., Ken. (2013), N. Am., Ephem.
- Leontodon saxatilis* Lam. subsp. *saxatilis*, Asteraceae, Hemicr., Ken. (Crimea, 2004), W. Eur., Epoc.
- Leonurus cardiaca* L., Lamiaceae, Hemicr., Arch., Med.-Ir.-Tur., Epoc.
- Lepidium appelianum* Al-Shehbaz, Brassicaceae, Hemicr., Ken., Mid. Eur., Ephem.
- Lepidium campestre* (L.) R. Br., Brassicaceae, Ther./Hemicr., Arch., Med., Epoc.
- Lepidium coronopus* (L.) Al-Shehbaz, Brassicaceae, Ther., Arch., Med., Epoc.
- Lepidium densiflorum* Schrad., Brassicaceae, Ther., Ken. N. Am., Epoc.
- Lepidium draba* L., Brassicaceae, Hemicr., Ken. (1853), Med., Epoc.
- Lepidium perfoliatum* L., Brassicaceae, Ther./Hemicr., Ken., Med.-Ir.-Tur., Epoc.
- Lepidium propinquum* Fisch. et C.A. Meyer, Brassicaceae, Hemicr., Ken. (1910), Transcauc., Ephem.
- Lepidium ruderales* L., Brassicaceae, Ther./Hemicr., Arch., Ir.-Tur., Epoc.
- Lepidium virginicum* L., Brassicaceae, Ther., Ken. (1990), N. Am., Col.
- Linaria angustissima* (Loisel.) Borb., Plantaginaceae, Hemicr., Ken., C. & S. Eur., Ephem.
- Linaria simplex* Desf., Plantaginaceae, Ther., Ken., Med., Ephem.
- Lindernia procumbens* (Krock.) Philcox, Linderniaceae, Ther., Ken., Unknown, Ephem.
- Lipandra polysperma* (L.) S. Fuentes, Uotila & Borsch., Amaranthaceae, Ther., Arch., Unknown, Epoc.
- Lolium remotum* Schrank, Poaceae, Hemicr., Ken., Med. Epoc.
- Lolium rigidum* Gaudin, Poaceae, Ther./Hemicr., Ken., Med., Epoc.
- Lolium temulentum* L., Poaceae, Ther., Ken., Med., Epoc.
- Lotus tetragonolobus* L., Fabaceae, Ther., Ken. (1950), Med., Ephem.
- Lysimachia arvensis* (L.) U. Manns & Anderb., Primulaceae, Ther., Arch., S. & S.-E.As., Epoc.
- Lysimachia foemina* (Mill.) U. Manns & Anderb., Primulaceae, Ther., Arch., Med. Epoc.
- Malva neglecta* Wallr., Malvaceae, Ther./Hemicr., Arch., Med., Epoc.
- Malva pusilla* Smith, Malvaceae, Ther., Arch., S. Eur.-As., Epoc.
- Malva sylvestris* L., Malvaceae, Hemicr., Arch., Med., Epoc.
- Malvella sherardiana* (L.) Jaub. & Spach, Malvaceae, Hemicr., Ken., Med., Epoc.
- Marrubium anisodon* K. Koch, Lamiaceae, Hemicr., Ken. (1893), W. As., Ephem.
- Marrubium vulgare* L., Lamiaceae, Hemicr., Arch., Med.-Ir.-Tur., Epoc.
- Matricaria chamomilla* L., Asteraceae, Ther., Arch., Med., Epoc.
- Matricaria discoidea* DC., Asteraceae, Ther., Ken. (1872), N. Am., Epoc.
- Medicago arabica* (L.) Huds., Fabaceae, Ther., Ken., Med., Epoc.
- Medicago minima* (L.) Bartal., Fabaceae, Ther., Ken. (mainland Ukraine) (Native in Crimea), Med., Ephem.
- Medicago rigidula* (L.) All., Fabaceae, Ther., Ken. (mainland Ukraine) (Native in Crimea), Med., Ephem.

- Medicago soleirolii* Duby, Fabaceae, Ther., Ken. (1881, need confirmation), Med., Ephem.
- Medicago* × *varia* T. Martyn, Fabaceae, Hemicr., Ken., Hybr., Epoc.
- Melampyrum arvense* L., Orobanchaceae, Ther., Arch. (West regions of Ukraine)/Ken. (East regions of Ukraine & Crimea), Med., Ephem.
- Melilotus altissimus* Thuill., Fabaceae, Hemicr., Ken., Unknown, Ephem.
- Melilotus indicus* (L.) All., Fabaceae, Ther., Ken. (Crimea, need confirmation), Med.-As., Ephem.
- Melilotus tauricus* (M. Bieb.) Ser., Fabaceae, Ther./Hemicr., Ken., As. Min., Epoc.
- Mercurialis annua* L., Euphorbiaceae, Ther., Ken., Med., Epoc.
- Mirabilis nyctaginea* (Michx.) MacMill., Nyctaginaceae, Hemicr., Ken. (1895), N. Am., Epoc.
- Moehringia muscosa* L., Caryophyllaceae, Hemicr., Ken., W. Eur., Ephem.
- Mummenhoffia alliacea* (L.) Esmailbegi & Al-Shehbaz, Brassicaceae, Ther., Ken. (1913), S. Eur., Ephem.
- Mutarda arvensis* (L.) D.A. German, Brassicaceae, Ther., Arch., Med.-Atlant. Eur., Epoc.
- Myosotis arvensis* (L.) Hill, Boraginaceae, Ther./Hemicr., Arch., Med.-Ir.-Tur., Epoc.
- Najas graminea* Delile, Hydrocharitaceae, Ther., Ken. (2006, Crimea), Trop. As., Ephem.
- Neotorularia contortuplicata* (Stephan ex Willd.) Hedge & J. Léonard, Brassicaceae, Ther., Ken., Cis.-Casp., Ephem.
- Nepeta cataria* L., Lamiaceae, Hemicr., Arch., E. Med., Epoc.
- Neslia paniculata* (L.) Desv., Brassicaceae, Ther., Arch., Med., Epoc.
- Nigella arvensis* L., Ranunculaceae, Ther., Arch. W. Med., Epoc.
- Noccaea perfoliata* (L.) Al-Shehbaz, Brassicaceae, Ther., Ken., Med., Epoc.
- Nonea echioides* (L.) Roem. & Schult., Boraginaceae, Ther., Ken., Med., Epoc.
- Nonea pallens* Petrovic, Boraginaceae, Ther., Ken., Balc.?, Ephem.
- Nonea lutea* (Desr.) DC., Boraginaceae, Ther., Ken. (Forest & Forest-Steppe), As., Epoc.
- Odontites vernus* (Bellardi) Dumort., Orobanchaceae, Ther., Arch., Unknown, Epoc.
- Oenothera ammophyla* Focke., Onagraceae, Hemicr., Ken. (1821), Hybr., Ephem.
- Oenothera biennis* L., Onagraceae, Hemicr., Ken., N. Am., Agr.-Epoc.
- Oenothera biennis* L. × *Oenothera pycnocarpa* Atkinson & Bartlett, Onagraceae, Hemicr., Ken., Hybr., Ephem.
- Oenothera canovirens* E. S. Steele, Onagraceae, Hemicr., Ken., N. Am., Ephem.
- Oenothera depressa* E. Greene, Onagraceae, Hemicr., Ken., N. Am., Epoc.
- Oenothera* × *drawertii* Renner ex Rostański, Onagraceae, Hemicr., Ken., Hybr., Epoc.
- Oenothera laciniata* Hill, Onagraceae, Ther., Ken., N. Am., Ephem.
- Oenothera parviflora* L., Onagraceae, Hemicr., Ken., N. Am., Epoc.
- Oenothera pycnocarpa* Atkinson & Bartlett, Onagraceae, Hemicr., Ken., N. Am., Ephem.
- Oenothera rubricaulis* Kleb., Onagraceae, Hemicr. Ken., Hybr., Epoc.
- Oenothera* × *polgari* Rostański, Onagraceae, Hemicr., Ken., Hybr., Ephem.
- Onopordum acanthium* L., Asteraceae, Hemicr., Arch., Med.-Ir.-Tur., Epoc.
- Onopordum tauricum* Willd., Asteraceae, Hemicr., Ken. (Crimea), Balc.-As. Min., Epoc.
- Orlaya daucoides* (L.) Greuter, Apiaceae, Ther., Arch., Med.-Ir.-Tur., Epoc.
- Orlaya grandiflora* (L.) Hoffm., Apiaceae, Ther., Ken., Med., Epoc.
- Orobanche aegyptiaca* Pers., Orobanchaceae, Ther., Ken., W. As., Epoc.
- Orobanche cumana* Wallr., Orobanchaceae, Ther./Hemicr., Ken., W. As., Epoc.
- Orobanche gracilis* Smith, Orobanchaceae, Ther./Hemicr., Ken., W. As., Epoc.
- Orobanche minor* Smith, Orobanchaceae, Ther./Hemicr., Ken., W. As., Epoc.
- Orobanche mutelii* F.W. Schultz, Orobanchaceae, Ther./Hemicr., Ken., Unknown, Epoc.
- Orobanche ramosa* L., Orobanchaceae, Ther./Hemicr., Ken., W. As., Epoc.
- Oxalis corniculata* L., Oxalidaceae, Ther./Hemicr., Ken. (1895), Med.-As. Trop., Col.
- Oxalis dillenii* Jacq., Oxalidaceae, Ther./Hemicr., Ken. (1855), N. Am., Epoc.
- Oxalis stricta* L., Oxalidaceae, Hemicr./Ther., Ken. (1884), N. Am., Agr.-Epoc.
- Oxybasis urbica* (L.) S. Fuentes, Uotila & Borsch., Amaranthaceae, Ther., Arch., Pont.-Pann., Epoc.
- Panicum capillare* L., Poaceae, Ther., Ken. (1869), N. Am., Ephem.
- Panicum dichotomiflorum* Michx., Poaceae, Ther., Ken., N. Am., Ephem.
- Papaver dubium* L., Papaveraceae, Ther., Arch., Med.-Ir.-Tur., Epoc.
- Papaver rhoeas* L., Papaveraceae, Ther., Arch., Med.-Ir.-Tur., Epoc.
- Papaver somniferum* subsp. *setigerum* (DC.) Arcang., Papaveraceae, Ther., Ken., Med., Col.
- Papaver* × *strigosum* (Boenn.) Schur, Papaveraceae, Ther., Arch., Med.-Ir.-Tur., Epoc.
- Parapholis cylindrica* (Willd.) Romero Zarco, Poaceae, Ther., Ken., Med., Ephem.
- Parietaria officinalis* L., Urticaceae, Hemicr., Ken., Med., Epoc.
- Paspalum distichum* L., Poaceae, Geo., Ken. (1950), S.E. As., Epoc.
- Peganum harmala* L., Nitrariaceae, Hemicr., Ken. Med.-Ir.-Tur., Epoc.
- Phlomis fruticosa* L., Lamiaceae, Cham., Ken., Med., Ephem. (Steppe)/Agr. (Crimea)
- Phragmites australis* subsp. *isiacus* (Arcang.) J.H. Xue, Poaceae, Helo., Ken., Med., Epoc.

- Picnomona carna* (L.) Cass., Asteraceae, Ther., Ken., W. As., Epoc.
- Plantago aristata* Michx., Plantaginaceae, Ther./Hemicr., Ken. (1955), N. Am., Epoc.
- Poa infirma* Kunth, Poaceae, Ther., Ken. (1981), Med., Epoc.
- Polycnemum arvense* L., Amaranthaceae, Ther., Ken., Med.-Ir.-Tur., Epoc.
- Polycnemum majus* A. Braun ex Bogenh., Amaranthaceae, Ther., Ken., Med., Ephem.
- Polygonum arenastrum* Boreau, Polygonaceae, Ther., Ken., Tur., Ephem.
- Polygonum argyrocoleon* Steud. ex G. Kuntze, Polygonaceae, Ther., Ken. (1993), Ir.-Tur., Ephem.
- Polygonum bellardii* All., Polygonaceae, Ther., Ken., S. Eur., Ephem.
- Polygonum ramosissimum* Michx., Polygonaceae, Ther., Ken., N. Am., Ephem.
- Polygonum rigidum* B. Skvortsov, Polygonaceae, Ther., Ken. (1993), Unknown, Ephem.
- Polygonum rurivagum* Jord. ex Boreau, Polygonaceae, Ther., Ken. (1996), S. Eur.-Med., Epoc.
- Polypogon monspeliensis* (L.) Desf., Poaceae, Ther., Ken., S. As., Agr.
- Polypogon maritimus* Willd., Poaceae, Ther., Ken. (2020), Med.?, Ephem.
- Portulaca oleracea* L., Portulacaceae, Ther., Arch., Ir.-Tur., Epoc.
- Pontederia korsakowii* (Regel & Maack) M.Pell. & C.N.Horn, Pontederiaceae, Ther., Ken. (1972), E. As., Ephem.
- Potentilla longifolia* Willd. ex Schlecht, Rosaceae, Hemicr., Ken. (1990, now disappeared), As., Ephem.
- Potentilla tergemina* Soják, Rosaceae, Hemicr., Ken. (1990), E. As., Ephem.
- Potentilla virgata* Lehm., Rosaceae, Hemicr., Ken. (1997), Sib.-C. As., Ephem.
- Proboscidea louisiana* (Mill.) Thell., Martyniaceae, Ther., Ken. (1961, probably disappeared), Trop. Am., Ephem.
- Pteris cretica* L., Pteridaceae, Geo., Ken. (need confirmation), Med., Ephem.
- Puccinellia hauptiana* (V. Krecz.) Kitag., Poaceae, Hemicr., Ken. (1990), C. As., Ephem.
- Puccinellia nuttalliana* (Schult.) A.S. Hitchc., Poaceae, Hemicr., Ken. (1990), N. Am., Ephem.
- Puccinellia tenuissima* Litv. ex V. Krecz., Poaceae, Hemicr., Ken. (1990), Med.-C. As., Ephem.
- Ranunculus arvensis* L., Ranunculaceae, Ther., Arch., Med.-Ir.-Tur., Epoc.
- Raphanus raphanistrum* L., Brassicaceae, Ther., Arch., Med., Epoc.
- Rapistrum perenne* (L.) All., Brassicaceae, Hemicr., Ken., Med., Epoc.
- Rapistrum rugosum* (L.) All., Brassicaceae, Ther., Ken., Med., Epoc.
- Reseda lutea* L., Resedaceae, Ther./Hemicr., Ken., Med., Epoc.
- Reseda luteola* L., Resedaceae, Hemicr., Arch., Med.-Ir.-Tur., Epoc.
- Rhagadiolus stellatus* (L.) Gaertn., Asteraceae, Ther., Ken., Med., Epoc.
- Rhaponticum repens* (L.) Hidalgo, Asteraceae, Geo., Ken. (1848), Med., Epoc.
- Rhinanthus major* var. *apterus* Fries, Orobanchaceae, Ther., Arch., Unknown, Epoc.
- Roemeria argemone* (L.) C. Morales, R. Mend. & Romero García, Papaveraceae, Ther., Arch. (mainland Ukraine)/Ken. (Crimea), Med.-Ir.-Tur., Epoc.
- Roemeria ocellata* (Woronow) Banfi, Bartolucci, J.-M. Tison & Galasso, Papaveraceae, Ther., Ken. (1990), Ir.-Tur., Ephem.
- Roemeria refracta* DC., Papaveraceae, Ther., Ken., Med.-C. As., Ephem.
- Rumex dentatus* L. subsp. *halacsyi* (Rech.) Rech. f., Polygonaceae, Ther./Hemicr., Ken. (1984), C. As., Ephem.
- Rumex longifolius* DC., Polygonaceae, Hemicr., Ken., Unknown, Ephem.
- Rumex* × *pulcher* L., Polygonaceae, Hemicr., Ken. (1808), Med., Epoc.
- Rumex triangulivalvis* (Danser) Rech. f., Polygonaceae, Hemicr., Ken. (1990), N. Am., Ephem.
- Sagina apetala* Ard., Caryophyllaceae, Ther., Ken. (1869), Unknown, Ephem.
- Sagittaria latifolia* Willd., Alismataceae, Helo., Ken. (1978), N. Am., Agr.
- Sagittaria trifolia* L., Alismataceae, Helo., Ken. (1913), E. As., Ephem.
- Salvia reflexa* Hornem., Lamiaceae, Ther., Ken. (1927), N. Am., Col.
- Salvia viridis* L., Lamiaceae, Ther., Ken., Med., Ephem.
- Scandix pecten-veneris* L., Apiaceae, Arch., Ther., Med.-Ir.-Tur., Epoc.
- Scleranthus annuus* L., Caryophyllaceae, Ther./Hemicr., Arch., Med., Epoc.
- Sclerochloa dura* (L.) P. Beauv., Poaceae, Ther., Arch., Med.-Ir.-Tur., Agr.-Epoc.
- Senecio vernalis* Waldst. et Kit., Asteraceae, Ther., Ken., Med., Epoc.
- Senecio viscosus* L., Asteraceae, Ther./Hemicr., Ken., Mid. Eur., Epoc.
- Senecio vulgaris* L., Asteraceae, Ther., Arch., As., Epoc.
- Senna tora* (L.) Roxb., Fabaceae, Ther./Hemicr., Ken. (1996), Pantrop., Ephem.
- Setaria adhaerens* (Forssk.) Chiov., Poaceae, Ther., Ken. (1988), Paleotrop. Afr., Ephem.
- Setaria faberi* F. Herrmann, Poaceae, Ther., Ken. (1988), E. As., Ephem.
- Setaria pumila* (Poir.) Roem. & Schult., Poaceae, Ther./Hemicr., Arch., Med., Agr.-Epoc.
- Setaria verticillata* (L.) P. Beauv., Poaceae, Ther., Arch., Med., Epoc.
- Setaria verticilliformis* Dumort., Poaceae, Ther., Arch., Med., Ephem.
- Setaria viridis* (L.) P. Beauv. subsp. *viridis*, Poaceae, Arch., Ther./Hemicr., Med.-Ir.-Tur., Epoc.
- Setaria viridis* subsp. *pynocoma* (Steud.) Tzvelev, Poaceae, Ther./Hemicr., Ken., Med., Epoc.
- Sherardia arvensis* L., Rubiaceae, Ther., Arch., Med., Epoc.

- Sibbaldianthe orientalis* (Juz. ex Soják) Mosyakin & Shiyan, Rosaceae, Hemigr., Ken., W. As., Epoc.
- Sigesbeckia orientalis* L., Asteraceae, Ther., Ken., Trop. As., Col.
- Silene csereii* Baumg., Caryophyllaceae, Ther., Ken. (Forest-Steppe), Pont.-Med., Ephem.
- Silene gallica* L., Caryophyllaceae, Hemigr., Arch., Med., Col.
- Silene noctiflora* L., Caryophyllaceae, Ther./Hemigr., Arch., Pont.-Med., Ephem.
- Sinapis alba* subsp. *dissecta* (Lag.) Simonk., Brassicaceae, Ther., Ken. (1895), Med., Epoc.
- Sinapis arvensis* L., Brassicaceae, Ther., Arch., Med.-Atl.-Eur., Epoc.
- Sisymbrium altissimum* L., Brassicaceae, Ther./Hemigr., Ken., Med.-C. As., Epoc.
- Sisymbrium austriacum* Jacq., Brassicaceae, Ther./Hemigr., Ken. (1923, need confirmation), Mid. Eur., Ephem.
- Sisymbrium irio* L., Brassicaceae, Ther., Ken. (1822), Med.-As., Epoc.
- Sisymbrium loeselii* L., Brassicaceae, Ther., Ken., Med. & As., Epoc.
- Sisymbrium officinale* (L.) Scop., Brassicaceae, Ther., Arch., Med., Epoc.
- Sisymbrium orientale* L., Brassicaceae, Ther., Ken. (1926), Med., Epoc.
- Sisymbrium polymorphum* (Murray) Roth, Brassicaceae, Hemigr., Ken., Ir.-Tur., Ephem.
- Sisymbrium strictissimum* L., Brassicaceae, Hemigr., Ken. (1859, west regions of Ukraine)/Native (in eastern part), Eur.-Med., Epoc.
- Sisymbrium volgense* M. Bieb. ex Fourn., Brassicaceae, Hemigr./Geo., Ken. (1859), E. Pont., Epoc.
- Solanum angustifolium* Mill., Solanaceae, Ther., Ken. (1928), N. Am., Ephem.
- Solanum carolinense* L., Solanaceae, Hemigr., Ken. (1990), N. Am., Ephem.
- Solanum heterodoxum* Dun., Solanaceae, Ther., Ken. (1893), N. Am., Ephem.
- Solanum humile* Bernh. ex Willd., Solanaceae, Ther., Ken., Mid. Eur., Ephem.
- Solanum nigrum* L., Solanaceae, Ther., Arch., S. Eur.?, Epoc.
- Solanum sisymbriifolium* Lam., Solanaceae, Ther., Ken. (1925), S. Am., Ephem.
- Solanum villosum* Mill., Solanaceae, Ther., Ken., Med., Ephem.
- Sonchus arvensis* L., Asteraceae, Arch., Hemigr., Med., Epoc.
- Sonchus asper* (L.) Hill., Asteraceae, Arch., Ther., Med., Epoc.
- Sonchus oleraceus* L., Asteraceae, Arch., Hemigr., Med., Epoc.
- Sorghum halepense* (L.) Pers., Poaceae, Geo., Ken. (1925), Med., Col.
- Spergula arvensis* L. subsp. *arvensis*, Caryophyllaceae, Ther., Arch., Med., Epoc.
- Spergula arvensis* L. subsp. *linicola* (Boreau) Janch., Caryophyllaceae, Ther., Ken. (1928), Unknown, Epoc.
- Spergula arvensis* L. subsp. *maxima* (Weihe) O. Schwarz, Caryophyllaceae, Ther., Arch., Mid. Eur., Epoc.
- Stachys annua* (L.) L., Lamiaceae, Ther., Arch., Med., Epoc.
- Stachys aspera* Michx., Lamiaceae, Hemigr., Ken. (1985, need confirmation), N. Am., Ephem.
- Strigosella africana* (L.) Botsch., Brassicaceae, Ther., Ken., Med., Ephem.
- Symphotrichum ciliatum* (Ledeb.) Nesom, Asteraceae, Ther., Ken. (1986), As., Agr.-Epoc.
- Symphotrichum graminifolium* (Spreng.) G. L. Nesom, Asteraceae, Hemigr., Ken. (1976), S. Am., Ephem.
- Symphotrichum squamatum* (Spreng.) G. L. Nesom, Asteraceae, Hemigr., Ken. (1974), S. & N. Am., Ephem.
- Teucrium botrys* L., Lamiaceae, Ther./Hemigr., Ken. (1960, need confirmation), Unknown, Ephem.
- Thinoelymus × mucronatus* (Opiz) Ban., Poaceae, Hemigr., Ken. (1938), Hybr., Ephem.
- Thlaspi arvense* L., Brassicaceae, Ther., Arch., Ir.-Tur., Epoc.
- Thymelaea passerina* (L.) Coss. & Germ., Thymelaeaceae, Ther., Arch., Med.-Ir.-Tur., Epoc.
- Tordylium maximum* L., Apiaceae, Hemigr./Ther., Ken. (1872), Med., Ephem.
- Torilis arvensis* (Huds.) Link, Apiaceae, Ther., Arch., Med., Epoc.
- Torilis pseudonodosa* Bianca, Apiaceae, Ther., Ken. (2021), Med., Ephem.
- Tragus racemosus* (L.) All., Poaceae, Ther., Ken. (1895), Med., Epoc.
- Tribulus terrestris* L., Zygophyllaceae, Ther./Hemigr., Ken., Med., Epoc.
- Trifolium angulatum* Waldst. & Kit., Fabaceae, Ther., Ken. (1969), Med., Ephem.
- Tripleurospermum inodorum* (L.) Sch. Bip., Asteraceae, Ther./Hemigr., Arch., Unknown, Epoc.
- Turgenia latifolia* (L.) Hoffm., Apiaceae, Ther., Ken. (1882). Med., Epoc.
- Typha laxmannii* Lepech., Typhaceae, Helo., Ken. (1902), As., Epoc.
- Urtica cannabina* L., Urticaceae, Hemigr./Geo., Ken., As., Ephem.
- Urtica pilulifera* L., Urticaceae, Ther., Ken. (1842, Crimea), Med., Epoc.
- Urtica urens* L., Urticaceae, Ther., Arch., Med., Epoc.
- Valeriana dentata* (L.) All., Valerianaceae, Ther., Arch., Med., Epoc.
- Valeriana locusta* L., Valerianaceae, Ther./Hemigr., Arch., Med.-Ir.-Tur., Epoc.
- Valeriana muricata* (Steven ex Roem. & Schult.) Sennikov, Valerianaceae, Ther., Ken., Med., Epoc.
- Valeriana rimosa* (Bastard) Christenh. & Byng, Valerianaceae, Ther., Arch., Med., Epoc.
- Valeriana pumila* (L.) Willd., Valerianaceae, Ther., Ken., Med., Epoc.
- Valeriana uncinata* M. Bieb., Valerianaceae, Ther., Ken., As. Min., Epoc.
- Vallisneria spiralis* L., Hydrocharitaceae, Hemigr., Ken. (Crimea), As., Col.

Verbena officinalis L., Verbenaceae, Hemicr., Arch., Med.-Ir.-Tur., Epoec.
Verbena supina L., Verbenaceae, Ther., Ken., Med.-Ir.-Tur., Ephem.
Verbena urticifolia L., Verbenaceae, Hemicr., Ken. (1975), N. Am., Ephem.
Veronica agrestis L., Plantaginaceae, Ther., Arch., Med., Epoec.
Veronica argute-serrata Reg. & Schmalh., Plantaginaceae, Ther., Ken., As., Ephem.
Veronica arvensis L., Plantaginaceae, Ther., Arch., Med.-Ir.-Tur., Epoec.
Veronica cymbalaria Bodard, Plantaginaceae, Ther., Ken. (1808), Med., Epoec.
Veronica gentianoides Vahl., Plantaginaceae, Hemicr., Ken., W. As., Ephem.
Veronica hederifolia L., Plantaginaceae, Ther., Arch., Med., Ephem.
Veronica opaca Fries., Plantaginaceae, Ther., Arch., Med., Epoec.
Veronica peregrina L., Plantaginaceae, Ther., Ken. (1981), N. Am., Epoec.
Veronica persica Poir., Plantaginaceae, Ther., Ken. (1869), S.W. As., Epoec.
Veronica polita Fries., Plantaginaceae, Ther./Hemicr., Arch., Med.-Ir.-Tur., Agr.-Epoec.
Veronica triloba (Opiz) Opiz, Plantaginaceae, Ther./Hemicr., Arch., Med., Epoec.
Veronica triphyllos L., Plantaginaceae, Ther./Hemicr., Arch., As., Epoec.
Vicia ervilia (L.) Willd., Fabaceae, Ther./Hemicr., Ken., Ir.-Tur., Ephem.
Vicia hirsuta (L.) Gray, Fabaceae, Ther., Arch., W. Med., Epoec.
Vicia pannonica Crantz, Fabaceae, Ther., Arch., W. Med., Epoec.
Vicia sativa subsp. *cordata* (Wulfen ex Hoppe) Batt., Fabaceae, Ther., Ken. (Cis Black Sea area & Transcarpathia)/Native (in Crimea), Med.-Ir.-Tur., Ephem.
Vicia tetrasperma (L.) Schreb., Fabaceae, Ther., Arch., Med., Epoec.
Vicia villosa Roth, Fabaceae, Ther./Hemicr., Arch., Med., Agr.-Epoec.
Viola arvensis Murray, Violaceae, Ther., Arch., Med., Epoec.
Xanthium albinum (Widder) Scholz & Sukopp, Asteraceae, Ther., Ken. (1928), N. Am., Epoec.
Xanthium × *kostalii* Toel, Asteraceae, Ther., Ken., Hybr., Ephem.
Xanthium ripicola Holub, Asteraceae, Ther., Ken. Mid. Eur., Col.
Xanthium strumarium L., Asteraceae, Ther., Arch., Ir.-Tur., Epoec.
Xanthium spinosum L., Asteraceae, Ther., Ken. (1769), S. Am., Col.
Zygophyllum fabago L., Zygophyllaceae, Hemicr., Ken. (1895), Med.-Ir.-Tur., Epoec.

Explanations: life forms, Cham. – Chamaephyte, Geo – Geophyte, Helo. – Helophyte, Hemicr. – Hemicryptophyte, Ther. – Therophyte, Nanophan. – Nanophanerophyte; time of arrival, Arch. – archaeophytes, Ken. – kenophytes, ? – the assigned status is provisional and remains subject to discussion, requiring further research and verification; origin, Afr. – African, Afr.-S. As. – African-South Asian, As. – Asian, Anthrop. – Anthropogenic, As. Min. – Asian Minor, W. As. – Western Asian, Atl.-Mid. Eur. – Atlantic-Middle European, Austr. – Australian, Balc. – Balcanic, Balc.-As. Min. – Balcan-Asian Minor, Cauc. – Caucasic, Cauc.-E. Med. – Caucasic-East Mediterranean, C. Am. – Central American, C. As. – Central Asian, C. Eur. – Central European, C. & S. Am. – Central & South American, C. & S.E. Eur. – Central & South-East European, Cis.-Casp. – Cis-Caspian, E. As. – Eastern Asian, Eur.-Med. – European-Mediterranean, E. Med. – Eastern Mediterranean, E. Med.-W. As. – Eastern Mediterranean-Western Asian, E. Pont. – Eastern Pontic, Hybr. – hybrid, Ir.-Tur. – Iran-Turanian, Med. – Mediterranean, Med.-W. As. – Mediterranean-West Asian, Med.-As. – Mediterranean-Asian, Med.-As. Trop. – Mediterranean-Asian Tropical, Med.-C.As. – Mediterranean-Central Asian, Med.-Ir.-Tur. – Mediterranean-Iran-Turanian, Med.-E.Ir.-Tur. – Mediterranean-Eastern Iran-Turanian, Med.-Tur. – Mediterranean-Turanian, Mid. Eur. – Middle European, N. Am. – North American, N. & S. Am. – North & South American, N. Med. – Northern Mediterranean, Paleotrop. Afr. – Paleotropic African, Pantrop. – Pantropical, Pann. – Pannonian, Pont.-Med. – Pontic-Mediterranean, Pont.-Pann. – Pontic-Pannonian, S. Eur.-Med. – South European-Mediterranean, S. Am. – South American, S. As. – South Asia, S.-E. As. – South-Eastern Asian, S & S.-E. As. – South & South-Eastern Asian, S.-Eur. – South European, S. Eur.-As. – S.-Eur. – South European-Asian, S. Sib. – South Siberian, Sib.-C. As. – Siberian-Central Asian, S.W. As. – South-Western Asian, Subarctic. – Subarctical, Transcauc. – Transcaucasical, Trop. Am. – Tropical American, Trop. As. – Tropical Asian, Trop. & Subtrop. Am. – Tropical & Subtropical American, Tur. – Turanian, W. As. – West Asian, W. Eur. – West European, W. Med. – West Mediterranean, Unknown – species with unknown origin; degree of naturalization, Agr. – agriophytes, Agr.-Epoec. – agrio-epoecophytes, Col. – colonophytes, Ephem. – ephemero-phytes, Epoec. – epoecophytes