Casuals omitted from the sixth edition of *Nouvelle Flore de la Belgique*

Filip Verloove[1*], Ivan Hoste[1] and Jacques Lambinon[2]

[1] Botanic Garden Meise, Nieuwelaan 38, B-1860 Meise, Belgium
[2] Université de Liège, Institut de Botanique, Sart Tilman B22, B-4000 Liège, Belgique
[*] [filip.verloove@br.fgov.be]

Résumé. – Taxons supprimés dans la sixième édition de la *Nouvelle Flore de la Belgique*. Une liste comprenant les noms de 321 taxons non indigènes supprimés de la sixième édition de la *Nouvelle Flore de la Belgique* est présentée et accompagnée de commentaires. La plupart des suppressions concernent des taxons non revus en Belgique depuis 1950. D'autres se rapportent à des erreurs de détermination ou à des taxons pour lesquels aucune référence fiable (herbiers, littérature) n'a été retrouvée.

Samenvatting. – Exoten geschrapt in de zesde editie van de *Nouvelle Flore de la Belgique*. De namen van 321 niet-inheemse taxa die geschrapt werden in de zesde editie van de *Nouvelle Flore de la Belgique* worden opgesomd en deze lijst wordt van commentaar voorzien. In de meeste gevallen betreft het soorten die in België niet meer werden waargenomen na 1950. Andere schrappingen hebben betrekking op determinatiefouten of op taxa waarvoor geen enkele controleerbare referentie (herbarium, literatuur) werd teruggevonden.

Aliens in the *Nouvelle Flore*

The floristic composition of a given area is very dynamic and permanently influenced by numerous factors, e.g. the increase or decrease of populations, the continuous introduction of neophytes, the naturalization of some of these recent arrivals, and the extinction of native species. At the same time – as a result of changing taxonomic insights, the publication of new monographs, and improved identification keys – the knowledge about the composition of the Belgian flora has been constantly evolving. Moreover, the focus of field botanists has considerably changed during the past decades and this evidently affects our knowledge as well: for instance, more attention has been increasingly paid to garden escapes, the flora of urban habitats, the weed flora of containers in garden centres and several other aspects of our non-native flora; see for instance http://www.floraofbrussels.be/floraofbrussels/ (based on Allemeersch 2006), Hoste *et al.* (2009), Verloove (2013) and Verloove *et al.* (2007). All of this continuously necessitates important updates in the consecutive editions of the Belgian Flora.

In October 2012 the sixth edition of the *Nouvelle Flore de la Belgique, du Grand-Duché de Luxembourg, du Nord de la France et des Régions voisines* (Lambinon & Verloove 2012; hereafter *Nouvelle Flore*) was published. From the very first edition of this Flora (De Langhe *et al.* 1973) all native, more or less widely naturalized and frequently encountered casuals or escapes could be keyed-out. For the sake of completeness rare aliens were always listed with the corresponding families or genera. These lists were cumulative: in each new edition newly discovered aliens were added while all the old ones were kept on the list. As a consequence the lists evidently lengthened edition after edition. For instance, in the fifth edition of the *Nouvelle Flore* (Lambinon *et al.* 2004) the list of alien Poaceae (a family known to be particularly rich in alien species), exclusively restricted to genera not treated in detail in the Flora, included more than 75 species. Tens of other alien grasses were moreover listed with the corresponding genera (e.g. more than 20 species of *Eragrostis*).

The *Nouvelle Flore* and the *Manual of the Alien Plants of Belgium*

In recent years much attention has been paid to the non-native Belgian flora. Old herbarium collections were critically revised with the help of recent international taxonomic literature. Field work in the entire territory of the *Nouvelle Flore* enabled us to better document the constant influx of aliens in various habitats and their various vectors of introduction. In 2006, participation in the INPLANBEL project, supported by the Belgian Federal Office for Scientific, Technical and Cultural Affairs (OSTC) resulted in the publication of an exhaustive *Catalogue of Neophytes in Belgium (1800-2005)* (Verloove 2006).

After publication of the paper version, the species list of the *Catalogue* has been permanently kept up-to-date and is available online at the website of the *Manual of the Alien Plants of Belgium* (http://alienplantsbelgium.be).

Since the entire list of Belgian aliens can be consulted on the Internet, it no longer seemed necessary to reproduce it completely in the *Nouvelle Flore*. Moreover, without additional information to permit identification of these species, such lists of exotics are of little use to field botanists. It was therefore decided to remove from the sixth edition of the *Nouvelle Flore* (Lambinon & Verloove 2012) all aliens that were recorded in Belgium prior to 1950 only. Likewise, ephemeral aliens that have been recorded in the territory of the *Nouvelle Flore* but not in Belgium were removed, even when they were observed after 1950. In this way, numerous less relevant or even irrelevant names of taxa were deleted from the *Nouvelle Flore*, including those of many species that were introduced in Belgium only a long time ago and exclusively with imported wool. A series of other exceptional, historically introduced aliens, often originating from areas that are no longer important as sources of exotics, were also eliminated.

Part of the information on these omitted casuals was already published elsewhere (e.g. Verloove 2006, Verloove & Lambinon 2008). However, after the publication of the sixth edition of the *Nouvelle Flore* it seemed useful to provide a complete overview of these species (see annex).

A mere snapshot

The removal of 321 non-native taxa with a limited relevance for the field botanist emphasizes the essence of the *Nouvelle Flore*, namely providing information on the current flora of Belgium and adjacent areas. A large majority of the omitted taxa will probably not appear again in Belgium in the near future, simply because their main vectors of introduction do no longer exist. This particularly holds true for the numerous wool aliens that were repeatedly seen, up to the 1970s, in the valley of Vesdre river in the surroundings of Verviers.

The changing dynamics of our flora, as described in the introduction of this paper, will of course not cease. After the completion of the manuscript for the sixth edition of the *Nouvelle Flore* some of the omitted aliens were once again recorded in Belgium, for example *Arctotheca calendula*, *Eragrostis pectinacea* and *Trisetum paniceum* (all seen as grain aliens in 2012; observations F.V.), *Centaurea dealbata* (Châtelineau 2013; comm. M. Lannoy), *Sedum sediforme* (Ampsin 2013; comm. J.-Y. Baugnée) and *Cuscuta epilinum* (recently seen alongside river Maas; Barendse 2012). If criteria for inclusion in the next edition of the *Nouvelle Flore* remain unchanged, these aliens need to be inserted again in a future edition of the Flora.

In two cases (*Heteranthemis viscidehirta* and *Pholiurus pannonicus*) a reliably identified herbarium collection was recovered after publication of the sixth edition of the *Nouvelle Flore*. These aliens can therefore be reinstated as well.

A few taxa that are not listed in the annex require some additional comment. All Belgian claims for ×*Agropogon lutosus* turned out to be attributable to *Agrostis exarata* (Verloove & Lambinon 2008). However, this hybrid taxon was recently seen in the French part of the Maritime district and thus finally upheld. The name *Smilax rotundifolia* appeared in both the fifth and sixth editions of the *Nouvelle Flore* but it was erroneously referred to as *S. excelsa* by Verloove & Lambinon (2008). Finally, in the past decades no progress at all was made on the genus *Taraxacum* in Belgium. Some alien species of *Taraxacum*, all with a very obscure status and distribution, were omitted from the sixth edition of the *Nouvelle Flore* but not included in the annex.

New topics studied by field botanists, for instance new or previously poorly studied vectors of introduction, can produce remarkable records. Beside aliens that are newly reported from Belgium, aliens that were historically associated with introduction mechanisms that no longer exist (e.g. wool aliens) have popped up again in Belgium in the past few years. For instance, a recent painstaking inventory of the weed flora associated with plant containers introduced from the Mediterranean area (olives, palms, figs, etc.), yielded several alien species that had not been recorded after 1950, such as *Aster squamatus*, *Carrichtera annua*, *Galium murale*, *Lathyrus angulatus*, *Mesembryanthemum nodiflorum*, *Plantago sempervirens* and *Rumex bucephalophorus* (Hoste *et al*. 2009, Hoste 2013; unpublished data I.H.). Moreover, some of these container aliens are not rare at all.

Bonsai trees constitute another segment of the horticultural trade. A typical weed associated with this trade is *Centipedia minima*, a tiny Asteraceae formerly introduced as a wool alien in Belgium but not seen since 1911.

The relevance for aliens checklists of exotics that are merely found as stowaways that arrive in plant containers or with bonsai trees is open to discussion (Hoste 2013). Whether one-off oddities from these categories of aliens should be included in future editions of the *Nouvelle Flore* may be questioned. However, such records perfectly illustrate the phenomenon of 'non-natural', human induced dispersal of plants and animals over shorter or longer distances. These movements are characteristic of the 'Global Village' created by intercontinental transportation networks and cannot be ignored by students of the current and evolving flora of Belgium. Each new edition of the *Nouvelle Flore* inevitably has to cope with this topic of 'new' and 'old' exotics. The work is never finished.

The omitted taxa

The annex includes all taxa from the fifth edition that were no longer upheld in the sixth edition of the *Nouvelle Flore*. In total, this concerns 321 taxa.

The names in the annex are those from the fifth edition of the *Nouvelle Flore* (Lambinon *et al.* 2004). In some cases these names have become out-of-date for nomenclatural or taxonomical reasons (e.g. *Chenopodium multifidum*, *Melilotus siculus* and *Trigonella glabra*). For such taxa the currently accepted name is added in the column 'Remark'. Some of the omitted taxa were fully treated in the fifth edition (i.e. included in the identification keys

and with a species account); these are given in bold face. Comments provided in the column 'Remark' exclusively refer to the rejected name mentioned in the first column.

The reasons for the removal of a given taxon can be manyfold. We distinguish seven different categories, the first by far being the most important one:

• **<1950** [254 taxa]: all verified records are prior to 1950.

• **E / <1950** (Error) [15 taxa]: erroneously included name; the correct name (see column 'Remark') is not included in the sixth edition of the *Nouvelle Flore* since it refers to a taxon that was only recorded in Belgium prior to 1950.

• **E / >1950** (Error) [17 taxa]: erroneously included name; the correct name (see column 'Remark') is included in the sixth edition of the *Nouvelle Flore* since at least a part of the available herbarium material has been collected after 1950. See Verloove & Lambinon (2008) for additional information on taxa from this category.

• **NiB** (Not in Belgium) [5 taxa]: never reliably recorded in Belgium; within the territory covered by the *Nouvelle Flore* only known from records outside Belgium.

• **?** [12 taxa] and ***?** [14 taxa]: primary source unknown; no herbarium collection available for confirmation. Some of the taxa from this category were apparently initially introduced by De Langhe *et al.* (1967) but it remains unclear on which basis; see Verloove & Lambinon (2008). An asterisk precedes the question mark of those 14 taxa. The remaining 12 taxa were probably introduced last minute by one of the authors of the previous editions for an unknown reason.

• **Wrongly omitted** [3 taxa]: taxa omitted for which, after completion of the manuscript of the sixth edition of the *Nouvelle Flore*, a reliably identified collection from after 1950 was recovered.

• **Uncertain** [1 taxon]: a herbarium collection is available but the material is insufficient and does not warrant an accurate identification; taxon not taken into account by Verloove (2006) either.

References

Allemeersch L. (2006) – Opmaak van een volledige floristische inventaris van het Brussels Hoofdstedelijk Gewest en een florakartering. Meise, Nationale Plantentuin van België. [Studie in opdracht van het Brussels Instituut voor Milieubeheer, Afdeling Groene Ruimten.]

Barendse R. (2012) – Cuscuta epilinum (vlaswarkruid) voor het eerst sinds 1938 weer waargenomen in België, nu als neofyt. *Dumortiera* 101: 48-49.

De Langhe J.E., Delvosalle L., Duvigneaud J., Lambinon J., Lawalrée A., Mullenders W. & Vanden Berghen C. (1967) – Flore de la Belgique, du Nord de la France et des Régions voisines. Liège, Editions Desoer.

De Langhe J.E., Delvosalle L., Duvigneaud J., Lambinon J. & Vanden Berghen C. (1973) – Nouvelle Flore de la Belgique, du Grand-Duché de Luxembourg, du Nord de la France et des Régions voisines (Ptéridophytes et Spermatophytes). Bruxelles, Jardin botanique national de Belgique.

Hoste I. (2013) – Olijfbomen, palmen en tuincentra: een inleiding tot de containerfloristiek. *Dumortiera* 102: 10-16.

Hoste I., Verloove F., Nagels C., Andriessen L. & Lambinon J. (2009) – De adventievenflora van in België ingevoerde mediterrane containerplanten. *Dumortiera* 97: 1-16.

Lambinon J. (1957) – Valeriana pyrenaica L. en Belgique. *Bull. Soc. Roy. Bot. Belg.* 89: 107.

Lambinon J., Delvosalle L., Duvigneaud J. (2004) – Nouvelle Flore de la Belgique, du Grand-Duché de Luxembourg, du Nord de la France et des Régions voisines (Ptéridophytes et Spermatophytes). Cinquième édition. Meise, Jardin botanique national de Belgique.

Lambinon J. & Verloove F. (2012) – Nouvelle Flore de la Belgique, du Grand-Duché de Luxembourg, du Nord de la France et des Régions voisines. Sixième édition. Meise, Jardin botanique national de Belgique.

Meerts P. (1985) – La flore adventice d'un chantier du métro à Bruxelles. *Dumortiera* 32: 1-11.

Verloove F. (2006) – Catalogue of neophytes in Belgium (1800-2005). Meise, Jardin botanique national de Belgique. [*Scripta Botanica Belgica* 39.]

Verloove F. (2013) – Het genus Cotoneaster (Rosaceae) in het wild in België: een voorlopig overzicht. *Dumortiera* 103: 3-29.

Verloove F. & Lambinon J. (2008) – Neophytes in Belgium: corrections and adjustments. *Syst. Geogr. Pl.* 78: 63-79.

Verloove F., van der Ham R. & Denters T. (2007) – Exotische muurvarens in België en Nederland. *Dumortiera* 92: 1-16.

Annex. – Alphabetical list of taxa that are non-native to Belgium and that were omitted in the sixth edition of the *Nouvelle Flore de la Belgique* (Lambinon & Verloove 2012). See the text (under 'The omitted taxa') for details on the criteria used to distinguish the categories. In the second column 'Page' refers to the fifth edition of the *Nouvelle Flore*.

Name taxon	Page	Category	Remark
Achillea lanulosa Nutt.	716	NiB	
Achillea setacea Waldst. et Kit.	716	<1950	
Aegilops speltoides Tausch	876	NiB	
Aegilops triuncialis L.	876	<1950	
Aegilops ventricosa Tausch	876	<1950	
Agrimonia repens L.	348	<1950	
Alchemilla hoppeana (Reichenb.) D. Torre	351	E / <1950	Corrected name: *Alchemilla conjuncta* Bab.
Alternanthera caracasana Humb., Bonpl. et Kunth	166	<1950	
Alternanthera paronychioides A. St. Hil.	166	<1950	
Alternanthera pungens Humb., Bonpl. et Kunth	166	<1950	
Alyssum simplex Rudolphi	263	<1950	
Amaranthus acutilobus Uline et Bray	168	<1950	
Amaranthus capensis Thell.	168	<1950	
Amaranthus clementii Domin	168	<1950	
Amaranthus dinteri Schinz var. *uncinatus* Thell.	170	<1950	Current name: *Amaranthus capensis* Thell. subsp. *uncinatus* (Thell.) Brenan
Amaranthus macrocarpus Benth.	170	<1950	
Amaranthus mitchellii Benth.	170	<1950	
Amphibromus neesii Steud.	876	<1950	
Amsinckia eastwoodiae Macbr.	551	<1950	
Amsinckia intermedia Fisch. et C.A. Mey.	551	<1950	
Amsinckia retrorsa Suksd.	551	<1950	
Anacyclus valentinus L.	694	<1950	
Anchusa ovata Lehm.	561	<1950	
Anthemis hyalina DC.	715	NiB	
Antinoria agrostidea (DC.) Parl.	876	?	
Apera intermedia Hack.	917	<1950	
Aptenia cordifolia (L. f.) Schwantes	120	<1950	Current name: *Mesembryanthemum cordifolium* L. f.
Arctotheca calendula (L.) Levyns	694	<1950	
Aristida echinata Henrard	876	E / <1950	Corrected name: *Aristida adscensionis* L.
Artemisia ludoviciana Nutt.	720	<1950	
Artemisia pontica L.	720	<1950	
Asperula laevigata L.	660	<1950	
Asperula taurina L.	660	<1950	
Asperula tinctoria L.	660	<1950	
Asphodelus tenuifolius Cav.	966	<1950	
Aster squamatus (Spreng.) Hieron.	697	<1950	Current name: *Symphyotrichum subulatum* (Michaux) Nesom
Asteriscus aquaticus (L.) Less.	694	<1950	
Asterolinum linum-stellatum (L.) Duby	297	<1950	
Astragalus boeticus L.	388	<1950	
Astragalus cymbicarpos Brot.	388	<1950	
Astragalus onobrychis L.	388	<1950	
Astragalus pelecinus (L.) Barneby	388	<1950	Current name: *Biserrula pelecinus* L.
Astragalus stella L.	388	<1950	
Athanasia trifurcata L.	694	<1950	
Atriplex eardleyae Aell.	164	<1950	
Atriplex pseudocampanulata Aell.	164	<1950	
Avena brevis Roth	896	<1950	
Avena hispanica Ard.	896	<1950	
Avena madritensis Baum	896	<1950	
Bassia laniflora (S.G. Gmel.) A.J. Scott	155	<1950	
Beta macrocarpa Guss.	162	<1950	
Beta trigyna Waldst. et Kit.	162	<1950	
Bidens bipinnata L.	713	<1950	
Blumenbachia insignis Schrad.	211	E / >1950	Corrected name: *Blumenbachia hieronymi* Urban

Name taxon	Page	Category	Remark
Boreava orientalis Jaub. et Spach	248	<1950	
Bothriochloa decipiens (Hack.) C.E. Hubbard	884	<1950	
Brachiaria eruciformis (Smith) Griseb.	876	<1950	Current name: *Moorochloa eruciformis* (Smith) Veldkamp
Brachyachne tenella (R. Brown) C.E. Hubbard	876	E / <1950	Corrected name: *Brachyachne convergens* (F. Muell.) Stapf
Brachycome heterodonta DC.	694	<1950	
Brassica elongata Ehrh. subsp. *integrifolia* (Boiss.) Breistr.	278	<1950	
Bromus briziformis Fisch. et C.A. Mey.	928	<1950	
Bupleurum fontanesii Guss. ex Caruel	500	<1950	
Bupleurum praealtum L.	500	<1950	
Calamintha grandiflora (L.) Moench	580	<1950	Current name: *Clinopodium grandiflorum* (L.) O. Kuntze
Calotis hispidula F. Muell.	694	<1950	
Calotis lappulacea Benth.	694	<1950	
Calystegia japonica (Thunb.) Choisy	541	*?	
Camelina alyssum (Mill.) Thell.	268	<1950	
Camelina rumelica Velen.	268	<1950	
Carduus ×theriotii Rouy	735	<1950	
Carduus pycnocephalus L.	735	<1950	
Carrichtera annua (L.) DC.	248	<1950	
Carthamus leucocaulos Smith	746	E / >1950	Corrected name: *Carthamus lanatus* L.
Cenia turbinata (L.) Pers.	694	<1950	Current name: *Cotula turbinata* L. / Recorded as a wool alien only; omitted, although last collected 1951
Centaurea alba L.	742	<1950	
Centaurea algeriensis Coss. et Durieu	742	<1950	
Centaurea dealbata Willd.	742	<1950	
Centaurea depressa Bieb.	742	<1950	
Centaurea diffusa Lam.	742	<1950	
Centaurea glaberrima Tausch	742	<1950	
Centaurea orientalis L.	742	<1950	
Centaurea phrygia L.	742	<1950	
Centipeda minima (L.) A. Braun et Aschers.	694	<1950	
Cephalaria leucantha (L.) Roem. et Schult.	677	?	
Chaetotropis chilensis Kunth	876	<1950	Current name: *Polypogon chilensis* (Kunth) Pilger
Chaetotropis elongata (Humb., Bonpl. et Kunth) Björkman	876	<1950	Current name: *Polypogon elongatus* Humb., Bonpl. et Kunth
Chasmanthium latifolium (Michaux) Yates	876	<1950	
Chenopodium macrospermum Hook. f. subsp. *salsum* (Philippi) A. Tronc.	158	<1950	Current name: *Oxybasis macrosperma* (Hook. f.) Fuentes et al.
Chenopodium multifidum L.	158	<1950	Current name: *Dysphania multifida* (L.) Mosyakin et Clemants
Chloris scariosa F. Muell.	876	<1950	Current name: *Oxychloris scariosa* (F. Muell.) Lazarides
Coleostephus myconis (L.) Reichenb. f.	694	*?	
Conyza lechleri (Schultz-Bip.) Cabrera	701	E / <1950	Corrected name: *Dittrichia graveolens* (L.) Greuter
Corispermum intermedium Schweigg.	155	E / >1950	Corrected name: *Corispermum pallasii* Steven
Cosmos sulfureus Cav.	712	E / >1950	Corrected name: *Coreopsis tinctoria* Nutt.
Cotula australis (Sieber ex Spreng.) Hook. f.	694	<1950	
Crassula decumbens Thunb.	308	<1950	
Crepis nicaeensis Balb.	765	<1950	
Crypsis aculeata (L.) Ait.	912	<1950	
Cullen cinereum (Lindl.) J.W. Grimes	381	<1950	
Cuscuta epilinum Weihe	544	<1950	
Cyclospermum leptophyllum (Pers.) Sprague ex Britton et P.G. Wilson	493	<1950	
Cynara cardunculus L.	694	*?	
Cynara scolymus L.	694	*?	
Cyperus difformis L.	828	<1950	
Cyperus dives Delile	828	E / <1950	Corrected name: *Cyperus imbricatus* Retz.
Cyperus virens Michaux	828	<1950	
Dactyloctenium aegyptium (L.) Beauv.	876	<1950	

Name taxon	Page	Category	Remark
Danthonia racemosa R. Brown	889	<1950	Current name: *Austrodanthonia racemosa* (R. Brown) H.P. Linder var. *racemosa*
Danthonia setacea R. Brown	889	<1950	Current name: *Austrodanthonia setacea* (R. Brown) H.P. Linder
Datura pruinosa Greenm.	539	E / >1950	Corrected name: *Datura stramonium* L.
Daucus aureus Desf.	519	<1950	
Daucus durieua Lange	519	<1950	
Daucus glochidiatus (Labill.) Fisch., C.A. Mey. et Avé-Lall.	519	<1950	
Desmazeria sicula (Jacq.) Dum.	876	<1950	
Diplachne fascicularis (Lam.) Beauv.	876	<1950	Current name: *Diplachne fusca* (L.) Beauv. ex. Roemer. et Schult. subsp. *fascicularis* (Lam.) P.M. Peterson & N. Snow
Diplachne parviflora (R. Brown) Benth.	877	<1950	
Diplotaxis viminea (L.) DC.	277	E / >1950	Corrected name: *Diplotaxis muralis* (L.) DC.
Doronicum orientale Hoffmann	731	E / >1950	Corrected name: *Doronicum* ×*excelsum* (N.E. Brown) C.A. Stace
Dorycnium pentaphyllum Scop. subsp. *herbaceum* (Vill.) Bonnier et Layens	381	<1950	
Dysphania glomulifera (Nees) P.G. Wilson	149	<1950	
Ecballium elaterium (L.) A. Rich.	223	<1950	
Echinaria capitata (L.) Desf.	877	<1950	
Echinochloa turneriana (Domin) J.M. Black	880	E / >1950	Corrected name: *Echinochloa inundata* Michael et Vickery
Ehrharta longiflora Smith	877	<1950	
Elymus trachycaulus (Link) Gould ex Shinners	900	NiB	
Enneapogon desvauxii Beauv.	877	<1950	
Enneapogon scaber Lehm.	877	<1950	
Eragrostis advena (Stapf) S.M. Phillips	887	<1950	
Eragrostis alveiformis Lazarides	887	<1950	
Eragrostis atrovirens (Desf.) Trin. ex Steud.	887	<1950	
Eragrostis bahiensis Schrad. ex Schult.	887	<1950	
Eragrostis barrelieri Daveau	887	<1950	
Eragrostis bicolor Nees	887	<1950	
Eragrostis chloromelas Steud.	887	<1950	
Eragrostis ciliaris (L.) R. Brown	887	<1950	
Eragrostis dielsii Pilger	887	<1950	
Eragrostis elongata (Willd.) Jacq.	887	<1950	
Eragrostis lacunaria F. Muell. ex Benth.	888	<1950	
Eragrostis leptocarpa Benth.	888	<1950	
Eragrostis leptostachya (R. Brown) Steud.	888	<1950	
Eragrostis nigra Nees ex Steud.	888	<1950	
Eragrostis obtusa (Munro ex Ficalho) Hiern	888	<1950	
Eragrostis pectinacea (Michaux) Nees	888	<1950	
Eragrostis plana Nees	888	<1950	
Eragrostis planiculmis Nees	888	<1950	
Eragrostis procumbens Nees	888	<1950	
Eragrostis rotifer Rendle	888	<1950	
Eragrostis trichophora Coss. et Durieu	888	<1950	
Erigeron atticus Vill.	699	E / >1950	Corrected name: *Erigeron acris* L.
Erigeron philadelphicus L.	699	<1950	
Eriochloa procera (Retz.) C.E. Hubbard	877	<1950	
Erodium chium (L.) Willd.	470	<1950	
Erodium ciconium (L.) L'Hérit.	470	<1950	
Erysimum grandiflorum Desf.	252	E / <1950	Corrected name: *Erysimum ruscinonense* Jord.
Euphorbia falcata L.	445	?	
Galeopsis pubescens Besser	585	<1950	
Galium murale (L.) All.	663	<1950	
Geranium bohemicum L.	466	*?	
Geranium collinum Steph. ex Willd.	466	*?	
Geranium rivulare Vill.	466	*?	

Name taxon	Page	Category	Remark
Geranium versicolor L.	466	E / >1950	Corrected name: *Geranium ×oxonianum* Yeo
Gilia capitata Sims	546	<1950	
Glinus lotoides L.	120	<1950	
Gnaphalium calviceps Fernald	704	E / <1950	Corrected name: *Gamochaeta antillana* (Urban) Anderberg
Gnaphalium involucratum G. Forster	704	E / <1950	Corrected name: *Euchiton sphaericus* (Willd.) Holub
Gnaphalium undulatum L.	704	<1950	Current name: *Pseudognaphalium undulatum* (L.) Hilliard et Burtt
Harpachne schimperi A. Rich.	877	<1950	
Helianthus petiolaris Nutt.	711	<1950	
Heliophila pusilla L. f.	248	<1950	
Hemizonia fasciculata Torr. et A. Gray	694	<1950	
Hemizonia pungens (Hook. et Arnott) Torr. et A. Gray	694	<1950	
Heteranthemis viscidehirta Schott	694	Wrongly omitted	Specimen recently discovered in herbarium L. Delvosalle
Hieracium hirsutum Bernh. ex Froel.	770	?	
Hieracium pilosum Schleich. ex Froel.	770	<1950	
Hieracium speciosum Willd. ex Hornem.	770	<1950	
Hordeum pusillum Nutt.	906	<1950	
Hydrophyllum virginianum L.	546	*?	
Iberis gibraltarica L.	271	E / >1950	Corrected name: *Iberis amara* L. var. *coronaria* (D. Don) Voss
Iberis pinnata L.	271	<1950	
Inula hirta L.	705	<1950	
Ipomoea cairica (L.) Sweet	540	E / >1950	Corrected name: *Ipomoea wrightii* A. Gray
Ipomoea hederifolia L.	540	<1950	
Juncus imbricatus Laharpe	812	<1950	
Lamarckia aurea (L.) Moench	877	<1950	
Lathyrus angulatus L.	395	<1950	
Lathyrus clymenum L.	395	<1950	
Lathyrus inconspicuus L.	395	<1950	
Lathyrus sphaericus Retz.	395	<1950	
Lavatera thuringiaca L.	204	<1950	Current name: *Malva thuringiaca* (L.) Vis.
Lens nigricans (Bieb.) Godr.	394	<1950	
Leonurus sibiricus L.	590	E / >1950	Corrected name: *Leonurus japonicus* Houtt.
Lepidium fasciculatum Thell.	274	<1950	
Lepidium schinzii Thell.	274	<1950	
Leptochloa mucronata (Michaux) Kunth	877	?	
Linaria genistifolia (L.) Mill.	623	<1950	
Lotus angustissimus L.	411	<1950	
Lotus conimbricensis Brot.	411	<1950	
Lycopus exaltatus L. f.	567	<1950	
Madia sativa Molina	694	<1950	
Marrubium peregrinum L.	590	<1950	
Medicago carstiensis Wulfen	401	<1950	
Medicago ciliaris (L.) All.	401	<1950	Current name: *Medicago intertexta* (L.) Mill. subsp. *ciliaris* (L.) Ponert
Medicago doliata Carmign.	401	<1950	
Medicago fischeriana (Seringe) Trautv.	401	<1950	
Medicago italica (Mill.) Fiori	401	<1950	Current name: *Medicago tornata* subsp. *helix* (Willd.) Ooststr. & Reichg.
Medicago littoralis Rohde ex Loisel.	401	<1950	
Medicago monantha (C.A. Mey.) Trautv. subsp. *incisa* (Benth.) Verloove et Lambinon	401	<1950	
Medicago turbinata (L.) All.	401	<1950	
Melica altissima L.	918	<1950	
Melilotus siculus (Turra) B.D. Jackson	399	<1950	Current name: *Melilotus messanensis* (L.) All.
Mesembryanthemum nodiflorum L.	120	<1950	
Microlonchus salmanticus (L.) DC.	694	<1950	
Misopates calycinum Rothm.	624	<1950	
Modiola caroliniana (L.) G. Don f.	204	<1950	

Name taxon	Page	Category	Remark
Monsonia angustifolia E. Mey. ex A. Rich.	461	<1950	
Monsonia brevirostrata R. Knuth	461	<1950	
Muscari tenuiflorum Tausch.	975	?	
Myosotis sicula Guss.	560	E / >1950	Corrected name: *Myosotis arvensis* (L.) Hill and *M. laxa* Lehm. subsp. *cespitosa* (C.F. Schultz) Hyl. ex Nordh.
Nemophila menziesii Hook. et Arnott	546	<1950	
Neslia paniculata (L.) Desv. subsp. ***thracia*** (Velen.) Bornm.	268	<1950	
Nicotiana longiflora Cav.	540	<1950	
Nonea pulla DC.	550	<1950	
Odontites viscosus (L.) Clairv.	633	E / <1950	Corrected name: *Parentucellia viscosa* (L.) Caruel
Oenothera angustissima R.R. Gates	422	<1950	
Oenothera cruciata Nutt. ex G. Don	422	<1950	
Oenothera longiflora L.	423	E / >1950	Corrected name: *Oenothera affinis* Cambess. ex A. St. Hill.
Oenothera oakesiana (A. Gray) Robbins ex S. Watson et Coult.	422	<1950	
Omphalodes linifolia (L.) Moench	550	<1950	
Onobrychis caput-galli (L.) Lam.	415	<1950	
Ononis mitissima L.	398	?	
Orobanche flava C.F.P. Mart. ex F.W. Schultz	642	?	
Panicum bulbosum Kunth	878	<1950	Current name: *Zuloagaea bulbosa* (Kunth) Bess
Panicum coloratum L.	878	<1950	
Panicum decompositum R. Brown	878	<1950	
Panicum laevinode Lindl.	878	<1950	
Paronychia brasiliana DC.	124	<1950	
Paspalum vaginatum Swartz	877	*?	
Pentaschistis airoides (Nees) Stapf	877	<1950	
Periploca graeca L.	526	<1950	
Phalaris angusta Nees ex Trin.	891	<1950	
Phalaris coerulescens Desf.	891	<1950	
Phalaris platensis Henrard ex Heukels	891	<1950	
Pholiurus pannonicus (Host) Trin.	877	Wrongly omitted	Specimen recently discovered in herbarium L. Delvosalle
Piptochaetium bicolor (Vahl) Desv.	877	?	
Plagiobothrys elachanthus (F. Muell.) I.M. Johnston	550	Uncertain	Specimen too young for certain identification
Plantago altissima L.	603	E / >1950	Corrected name: *Plantago lanceolata* L.
Plantago heterophylla Nutt.	603	<1950	
Plantago myosuros Lam.	603	<1950	
Plantago sempervirens Crantz	603	*?	
Poa glauca Vahl	922	E / <1950	Corrected name: *Poa nemoralis* L. var. *glauca* Gaudin
Podolepis auriculata DC.	694	<1950	
Polycnemum arvense L.	153	<1950	
Polygonum plebejum R. Brown	182	<1950	
Polypogon fugax Nees ex Steud.	909	<1950	
Puccinellia stricta (Hook. f.) C. Blom	936	<1950	
Pulicaria arabica (L.) Cass.	706	<1950	
Ranunculus lanuginosus L.	82	<1950	
Rapistrum perenne (L.) All.	282	<1950	
Reseda crystallina Webb et Berth.	284	E / <1950	Corrected name: *Reseda lutea* L. subsp. *vivantii* (P. Monts.) Rovira
Rumex bucephalophorus L.	178	<1950	
Rumex obovatus Danser	178	<1950	
Sagittaria graminea Michaux	776	?	
Salvia aethiopis L.	574	<1950	
Salvia glutinosa L.	574	<1950	
Sanvitalia procumbens Lam.	694	E / <1950	Corrected name: *Helianthus petiolaris* Nutt.
Scandix australis L. subsp. *grandiflora* (L.) Thell.	498	<1950	
Sclerolaena muricata (Moq.) Domin var. *villosa* (Benth.) Ulbr.	149	<1950	
Scolymus hispanicus L.	694	<1950	

Name taxon	Page	Category	Remark
Scutellaria hastifolia L.	592	*?	
Securigera securidaca (L.) Degen et Dörfl.	414	<1950	
Sedum anopetalum DC.	310	<1950	
Sedum sediforme (Jacq.) Pau	310	NiB	
Senecio gallicus Vill.	727	<1950	
Senniella spongiosa (F. Muell.) Aell. var. *holocarpa* (F. Muell.) Aell.	149	<1950	Current name: *Atriplex holocarpa* F. Muell.
Sideritis lanata L.	567	<1950	
Sigesbeckia orientalis L.	694	<1950	
Sisymbrium strictissimum L.	249	<1950	
Solanum linnaeanum Hepper ex Jaeger	536	E / <1950	Corrected name: *Solanum sisymbriifolium* Lam.
Solanum retroflexum Dun.	536	*?	
Solanum scabrum Mill.	536	?	
Soliva anthemifolia (Juss.) R. Brown	694	<1950	
Soliva pterosperma (Juss.) Less.	694	<1950	
Sporobolus caroli Mez	877	<1950	
Stachys atherocalyx K. Koch	587	<1950	
Stachys cretica L.	587	<1950	
Stenotaphrum secundatum (Walter) O. Kuntze	877	?	
Stipa bromoides (L.) Dörfl.	877	<1950	
Stipa capillata L.	877	E / <1950	Corrected name: *Austrostipa scabra* (Lindl.) S.W.L. Jacobs et J. Everett subsp. *scabra*
Stipa formicarum Delile	877	<1950	Current name: *Nassella formicarum* (Delile) Barkworth
Stipa pennata L.	877	<1950	
Taeniatherum caput-medusae (L.) Nevski var. *crinitum* (Schreb.) C.J. Humphries	877	*?	
Thlaspi brachypetalum Jord.	269	<1950	Current name: *Noccaea brachypetala* (Jord.) F.K. Mey.
Thymus marschallianus Willd.	576	<1950	Current name: *Thymus pannonicus* All.
Trachyspermum ammi (L.) Sprague ex Turrill	498	Wrongly omitted	See Meerts (1985)
Tragus koelerioides Aschers.	877	<1950	
Trifolium retusum L.	407	<1950	
Trigonella glabra Thunb.	400	E / <1950	Corrected name: *Trigonella hierosolymitana* Boiss.
Trigonella procumbens (Besser) Reichenb.	400	<1950	
Trigonella spinosa L.	400	<1950	
Trigonella stellata Forssk.	400	<1950	
Triraphis mollis R. Brown	877	<1950	
Trisetum paniceum (Lam.) Pers.	894	<1950	Current name: *Trisetaria panicea* (Lam.) Maire
Triticum polonicum L.	904	<1950	
Urtica incisa Poiret	106	<1950	
Valeriana pyrenaica L.	674	<1950	Collection date uncertain; record published in Lambinon (1957)
Valerianella coronata (L.) DC.	676	<1950	
Verbascum banaticum Schrad.	612	<1950	
Verbascum chaixii Vill.	612	<1950	
Verbascum sinuatum L.	612	<1950	
Verbena litoralis Kunth	562	E / >1950	Corrected name: *Verbena litoralis* Kunth var. *brasiliensis* (Velloso) Briq.
Verbena supina L.	562	<1950	
Veronica ceratocarpa C.A. Mey.	618	<1950	
Vicia hybrida L.	391	<1950	
Vicia peregrina L.	391	<1950	
Vicia sylvatica L.	391	<1950	
Vulpia eriolepis (Desv.) C. Blom	940	<1950	Current name: *Vulpia antucensis* Trin.
Vulpia ligustica (All.) Link	940	<1950	
Vulpia octoflora (Walter) Rydberg	940	<1950	
Xanthium ambrosioides Hook. et Arnott	710	<1950	
Zinnia linearis Benth.	694	<1950	Current name: *Zinnia angustifolia* Humb., Bonpl. et Kunth var. *angustifolia*
Zygophyllum fabago L.	458	*?	