



ŠIAULIŲ
UNIVERSITETAS
BOTANIKOS SODAS

INDEX SEMINUM 2020 No 20





**BOTANICAL GARDEN OF
ŠIAULIAI UNIVERSITY**

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BOTANICAL GARDEN OF ŠIAULIAI UNIVERSITY

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Authors: Virginija Aleknienė, Martynas Kazlauskas, Rimanta Vainorienė, Žydrūnė Valainytė, Rita Šulskienė.

Cover design Karolis Grušas

Photos are from the archive of botanical garden

ŠIAULIAI UNIVERSITY BOTANICAL GARDEN

ŠIAULIAI AREA. Šiauliai is a city of Northern Lithuania. It counts its years from the Battle of Saulė which took place in 1236. Šiauliai is the fourth largest city by its population. Population: 106 400.

HISTORY. Šiauliai University Botanical Garden was established in 1997 at the former site of Agrobiological Station of Šiauliai University. Total area of the garden is 6.54 ha. Since 2003 Botanical Garden of Šiauliai University is a member of Botanic Gardens Conservation International, Planta Europa Network, Association of Botanic Gardens in the Baltic Sea Region, Botanical Gardens of the Baltic Countries and the Association of Lithuanian University Botanic Gardens (LUBSA). Since 2005 the Botanic Garden is a member of International Network of Phenological Gardens of Europe (IPG). There is a Club of Botanic Garden Friends at the Botanical Garden. The Garden exchanges seeds with more than 300 botanical gardens of the world. Director: dr. Martynas Kazlauskas.

Fields of research:

- research on plant biodiversity *ex situ* and *in situ*,
- research on introduction and acclimatization of ornamental plants,
- phenological observations.

Other activities:

- *ex situ* conservation,
- educational activities at the Botanical Garden,
- organization of events at the Botanical Garden.

COLLECTIONS OF THE BOTANICAL GARDEN. The garden has specimens of over 4000 species and varieties of plants. The plants are kept in 6 sections.

- **Section of Plant Systematics and Geography.** The plants are grouped and displayed in accordance with the system of *Magnoliophyta* division by A. L. Takhtajan. Plant families are arranged in alphabetical order. Since 2000 the section has specimens of over 850 plant species from 85 families. The section is supervised by botanical collections senior supervisor Žydrūnė Valainytė.
- **Section of Lithuanian Flora.** Section of Lithuanian Flora was established in 2011. The section includes herbaceous plants from different ecosystems: swamps, wet and dry meadows, forests. Priorities: rare and protected species of plants, beneficial (medicinal and ethnobotanical) plants. The section covers 70 species of plants included in the Red Book of Lithuania. The section is supervised by the botanical collections supervisor Virginija Aleknienė.
- **Section of Floriculture.** The section was opened in 2004. It currently has over 1200 different species and varieties of annual and perennial ornamental plants which fall under 58 families. The largest collections are those of *Lilium*, *Hemerocalis* and *Iris*. The section is supervised by botanical collections supervisor Rita Šulskienė.
- **Section of Mountain Plants.** Since 2000 this section has specimens of mountain flora from Europe, Asia, and North America. There are over 1000 species and varieties of plants which fall under 70 families. The main priorities for choosing the species are: ornamental features, natural resources of the species, beneficial features of the plant. The section is supervised by researcher dr. Rimanta Vainorienė.
- **Section of Dendrology.** Dendrological collection has been maintained since 1999. Currently it has over 900 taxons of woody plants. The area of the garden is not large, therefore, it mainly focuses on groundling plants. One of the largest collections is that of *Ericaceae* family, covering over 280 species and varieties from *Rhododendron*, *Calluna*, *Kalmia*, *Gaultheria*, *Erica* and

Vaccinium genera. The section is supervised by senior supervisor of botanical collections Vaidas Juknevičius.

- **Phenological Garden.** Since 2005 our Botanical Garden is a member of Phenological Observations Network in Europe. Phenological garden is intended for observation of phenological phases of plants and research on genetically identical woody plants. Supervisor: researcher dr. Rimanta Vainorienė.

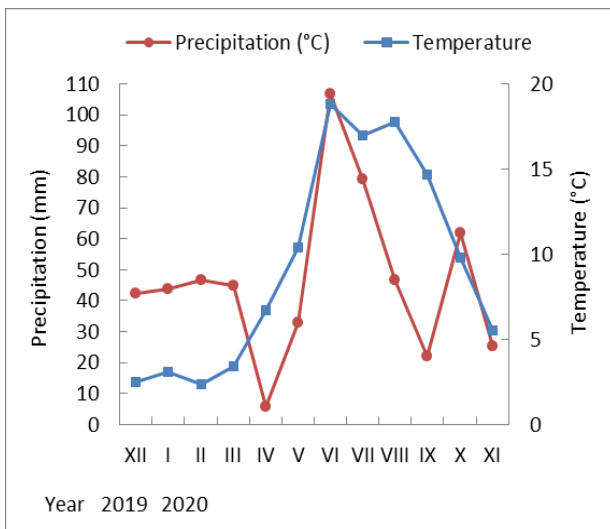
GEOGRAPHICAL SITUATION:

Latitude N 55° 55' 57.7"

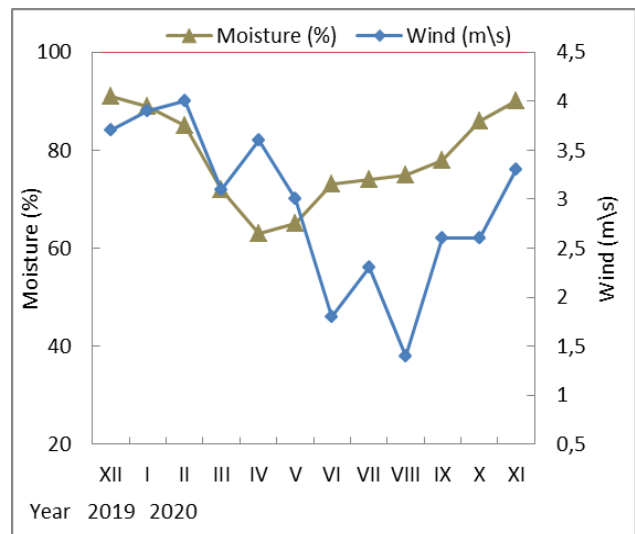
Longitude E 23° 16' 57.0"

Zone 5 (Baltic region plant hardiness map)

CLIMATIC CONDITIONS:



A



B

Distribution of mean month: precipitation and temperature (A), moisture and wind speed (B) from December 2019 till November 2020.

Collectors: V. Aleknienė, B. Balašaitienė, R. Vainorienė, Ž. Valainytė, R. Šulskienė, D. Ūsienė.

* - Seeds collected in 2019

** - Seeds collected in 2018

**SEEDS FROM PLANTS
CULTIVATED IN THE GARDEN
EXCEPT REPRESENTATIVES OF LITHUANIAN FLORA**

PINOPHYTA Cronquist, Takht. et W. Zimm. ex Reveal
PINOPSIDA Burnett

CUPRESSACEAE Rich. ex Bartl.

1. *Juniperus rigida* Siebold et Zucc. [Dubrava Arboretum of Dubrava Experimental-Training Forest Enterprise, Vaišvydava, Kaunas district, LT, 2005].

PINACEAE Lindl.

2. *Pseudotsuga menziesii* (Mirb.) Franco [Radviliškis Forest Enterprise, LT, 2003].
3. *Tsuga canadensis* (L.) Carriere [Private collection of A. Žakevičius, Šiauliai, LT, 2001].

MAGNOLIOPHYTA Cronquist, Takht. et W. Zimm. ex Reveal
MAGNOLIOPSIDA Brongn.

ACERACEAE Juss.

4. *Acer ginnala* Maxim. [Arboretum Novy Dvur, Opava, CZ, 2007].
5. *Acer tataricum* L. subsp. *tataricum* [Rogów Arboretum of Warsaw University of Life Sciences, PL, 2006].

ANACARDIACEAE Lindl.

6. *Rhus typhina* L.* [Botanical Garden of Šiauliai University, LT. No data available of their origin].

APIACEAE Lindl.

7. *Athamanta turbith* (L.) Brot. subsp. *haynaldii* (Borbás et Uechtr.) Tutin [Botanical Garden Rennsteiggarten Oberhof, DE, 2010].
8. *Bupleurum griffithii* 'Décor' [Ural State University Botanical Garden, Ekaterinburg, RU, 2004].
9. *Cuminum cyminum* L.** [Jardin Botanique de la Ville et de l'Université de Besançon, FR, 2011].
10. *Eryngium amethystinum* L.** [Ogród Botaniczny Zarząd Zieleni Miejskiej, PL, 2001].
11. *Eryngium bromeliifolium* F. Delaroché [Botanical Garden Teplice, CZ, 2015].
12. *Ferula assa-foetida* L. [Botanic Garden Meise, BE, 2002].
13. *Meum athamanticum* Jacq.** [Private collection of I. Burneckienė, Šiauliai, LT, 2006].
14. *Myrrhis odorata* (L.) Scop. [Botanical Garden of Šiauliai University, LT. No data available of their origin].
15. *Peucedanum cervaria* (L.) Cusson ex Lapeyr. [Botanical Garden of the University Vienna, AT, 2002].
16. *Seseli elatum* subsp. *osseum* (Crantz) P. W. Ball [The Botanical Garden of the University of Tübingen, DE, 2016].

AQUIFOLIACEAE Bartl.

17. *Ilex aquifolium* L.* [Ogród Botaniczny Zarząd Zieleni Miejskiej, PL, 2001].

ARALIACEAE Juss.

18. *Eleutherococcus sessiliflorus** (Rupr. et Maxim.) S. Y. Hu [Salaspils National Botanical Garden, LV, 2001].

ARISTOLOCHIACEAE Juss.

19. *Aristolochia clematitis* L. [Botanical Garden of Klaipėda University, LT, 2003].

ASTERACEAE Dumort.

20. *Alfredia cernua* (L.) Cass. [Central Botanical garden of National Academia Science of Belarus, Minsk, BY, 2003].
21. *Arnica chamissonis* Less.* [Botanical Garden of the Christian Albrechts University of Kiel, DE, 2003].
22. *Bupthalmum salicifolium* L. [Experimental Station of Field Floriculture, LT, 2004].
23. *Carlina acaulis* L.* [University of Salzburg Botanical Garden Department of Ecology and Evolution, AT, 2013].
24. *Chondrilla juncea* L. [The Botanical Garden of Bonn University, DE, 2003].
25. *Coreopsis grandiflora* Hogg ex Sweet [Experimental Station of Field Floriculture, LT, 2002].
26. *Echinops niveus* Wall.** [Vytautas Magnus University Botanical Garden, LT, 2000].
27. *Echinops orientalis* Trautv.* [Ogród Botaniczny Zarząd Zieleni Miejskiej, PL, 2003].

28. *Emilia coccinea* (Sims) G. Don [Prague Botanical Garden, CZ, 2019].
29. *Erigeron flettii* G. N. Jones* [Botanical Garden of the University of Tartu, EE, 2008].
30. *Galatella punctata* (Waldst. et Kit.) Nees [Salaspils National Botanical Garden, LV, 2001].
31. *Gynura aurantiaca* (Blume) Sch. Bip. ex DC.* [Private collection of S. Gliaudys, Šiauliai, LT, 2018].
32. *Hymenoxys hoopesii* (A. Gray) Bierner* [Botanical Garden of the University of Tartu, EE, 2011].
33. *Jurinea mollis* (L.) Rchb.** [The Botanical Garden of the University of Münster, DE, 2012].
34. *Leibnitzia anandria* (L.) Turcz.* [Nancy Botanical Garden, FR, 2009].
35. *Leontopodium ochroleucum* Beauverd [Reykjavik Botanical Garden, IS, 2011].
36. *Leontopodium wilsonii* Beauverd [The Botanical Garden of the University of Regensburg, DE, 2004].
37. *Ligularia alatipes* [Reykjavik Botanical Garden (China: Yunnan, Lijiang, Yulon Shan, Xie Ren Ji valley, above Mu Zhou Go (CLD 1189), 3300 m), IS, 2011].
38. *Ptilostemon afer* (Jacq.) Greuter [The Alpine Garden, south of the Upper Belvedere, Vienna, AT, 2011].
39. *Rhaponticum heleniifolium* Gren. et Godr.* [Botanical Garden, Faculty of Science, Masaryk University, Brno, CZ, 2017].
40. *Rhaponticum scariosum* Lam. subsp. *rhaponticum* (L.) Greuter [Botanical Garden University of Oslo, NO, 2010].
41. *Rudbeckia flava* Greene [Vytautas Magnus University Botanical Garden, LT, 2000].
42. *Serratula tinctoria* L. [The Botanical Garden at the Sorgenti del Cavuto, Anversa degli Abruzzi, IT, 2004].
43. *Solidago rigida* L. [Salaspils National Botanical Garden, LV, 2002].
44. *Solidago uliginosa* Nutt. [Salaspils National Botanical Garden, LV, 2004].
45. *Sonchus palustris* L. [Botanical Garden of Justus-Liebig-University Giessen, DE, 2020].
46. *Tanacetum corymbosum* (L.) Sch. Bip. [Botanic Garden of Petrozavodsk State University, RU, 2004].
47. *Tanacetum parthenium* (L.) Sch. Bip.* [The Botanical Garden "Vasile Fati" Jibou, RO, 2016].
48. *Vernonia gigantea* (Walter) Trel. ex Trel.* [Institute of Ecology and Botany Hungarian Academy of Sciences Botanical Garden, Vacratot, HU, 2003].

BERBERIDACEAE Juss.

49. *Podophyllum hexandrum* Royle [Botanical Garden of Šiauliai University, LT, 1997].
50. *Podophyllum peltatum* L. [The Alpine Garden, south of the Upper Belvedere, Vienna, AT, 2009].

BIGNONIACEAE Juss.

51. *Incarvillea mairei* (H.Lév.) Grierson* [The Alpine Botanical Garden "Rezia", Bormio, IT, 2017].
52. *Incarvillea olgae* Regel [Vytautas Magnus University Botanical Garden, LT, 2000].
53. *Incarvillea zhongdianensis* Grey-Wilson [The Polar Alpine Botanical Garden, Kirovsk, RU, 2015].

BORAGINACEAE Juss.

54. *Echium russicum* J. F. Gmelin [The Alpine Botanical Garden "Paradisio", IT, 2016].
55. *Lindelofia macrostyla* (Bunge) Popov [Botanical Garden of the Urals Branch of Russian Academy of Sciences, RU, 2019].
56. *Lithospermum officinale* L. [Traupis Botanical Garden, LT, 1999].
57. *Lithospermum purpureocaeruleum* Desf. ex DC. [Botanical Garden, Faculty of Science, Masaryk University, Brno, CZ, 2008].
58. *Omphalodes linifolia* (L.) Moench [Botanical Garden of the Technical University Braunschweig, DE, 2019].

BRASSICACEAE Burnett.

59. *Alyssoides utriculata* (L.) Medik.* [The Botanical Garden of Bonn University, DE, 2003].
60. *Camelina sativa* (L.) Crantz [Botanical Garden of the University of Tartu, EE, 2016].
61. *Degenia veleitica* (Degen) Hayek* [Botanical Garden Teplice, CZ, 2010].
62. *Isatis tinctoria* L. [National Botanic Garden of Belgium, Meise, BE, 2003].
63. *Lesquerella alpina* (Nutt.) S. Watson** [The Botanical Garden of the University of Regensburg, DE, 2010].

CAMPANULACEAE Juss.

64. *Asyneuma canescens* (Waldst. et Kit.) Griseb. et Schenk [Botanic Garden of Rennes, FR, 2011].
65. *Campanula* 'Cremewit' [Private collection of G. Pociūlienė, Pakalniškiai, Radviliškis district, LT, 2012].
66. *Campanula alliariifolia* Willd. [Institute of Botany Academy of Sciences of the Czech Republic, Pruhonice, CZ, 2012].
67. *Campanula glomerata* L. 'Alba' [Experimental Station of Field Floriculture, LT, 2001].
68. *Campanula moravica* (Spitzner) Kovanda** [Reykjavik Botanical Garden, IS, 2004].
69. *Campanula persicifolia* L. [Institute of Ecology and Botany Hungarian Academy of Sciences Botanical Garden, Vacratot, HU, 2004].
70. *Campanula sarmatica* Ker Gawl. [The Botanical Garden of the University of Tübingen, DE, 2003].
71. *Codonopsis ovata* Benth.** [Botanical Garden of the University of Zurich, CH, 2007].

72. *Jasione laevis* Lam.** [The Botanical Garden of Graz, Institute for Plant Science, Karl-Franzens-University Graz, AT, 2005].
73. *Phyteuma charmelii* Vill.* [Botanical Garden of the University of Potsdam, DE, 2006].

CAPRIFOLIACEAE Juss.

74. *Abelia mosanensis* Chung ex Nakai* [Vilnius University Botanical Garden, LT, 2002].
75. *Triosteum himalayanum* Wall. [Botanical Garden of the University of Tartu, EE, 2010].
76. *Triosteum pinatifidum*. Maxim. [University of Turku Botanic Garden, FI, 2004].
77. *Viburnum lantana* L. [Botanical park Obelynė, Akademija, Kaunas district, LT, 2001].

CARYOPHYLLACEAE Juss.

78. *Dianthus alpinus* L. 'Weiss'** [Experimental Station of Field Floriculture, LT, 2005].
79. *Dianthus carthusianorum* L. [Botanischer Garten Chemnitz, DE, 2020].
80. *Dianthus superbus* L. [Botanischer Garten Chemnitz, DE, 2020].
81. *Drypis spinosa* L. subsp. *jacquiniana* Murb. et Wettst.** [The Botanical Garden of Ljubljana, SI, 2008].
82. *Lychnis coronaria* (L.) Desr. 'Alba' [Cruickshank Botanic Gardens University of Aberdeen, UK, 2018].
83. *Saponaria caespitosa* DC.* [Botanical Garden of the University of Tartu, EE, 2003].
84. *Saponaria lutea* L.* [The Munich Botanical Garden, Nymphenburg (Italy, Vallone urtier, Alpe Manda, 2400 m), DE, 2004].
85. *Silene quadridentata* (L.) Pers.* [The Botanic Garden of the University of Padua (Monte Faverghera, Belluno (BL), 1500 m), IT, 2004].

CELASTRACEAE R. Br.

86. *Euonymus alatus* (Thunb.) Siebold* [Traupio Botanical Garden, LT, 2001].
87. *Euonymus europaeus* L. 'Albus'* [Botanical park Obelynė, Akademija, Kaunas district, LT, 2001].
88. *Euonymus fortunei* (Turcz.) Hand. - Mazz. var. *radicans** (Siebold ex Miq.) Rehder [The Botanical Garden of the University of Latvia, Riga, LV, 2002].
89. *Tripterygium regelii* Sprague et Takeda* [Vilnius University Botanical Garden, LT, 2001].

CONVOLVULACEAE Juss.

90. *Ipomoea tricolor* Cav.* [Botanic Garden of Technical University Dresden, DE, 2019].

CORYLACEAE Mirb.

91. *Carpinus betulus* L. [Botanical Garden of Šiauliai University, LT. No data available of their origin].

DIPSACACEAE Juss.

92. *Scabiosa graminifolia* L. [The Alpine Botanical Garden "Viotte", Trento, IT, 2002].

ERICACEAE Juss.

93. *Kalmia angustifolia* L.* [Botanical Garden Grugapark Essen, DE, 2007].
94. *Kalmia latifolia* L. f. *myrtifolia* (Bosse) K. Koch.* [Batumi Botanical Garden of the Academy of Sciences, GE, 2007].
95. *Ledum groenlandicum* Oeder* [Tallinn Botanic Garden, EE, 2004].
96. *Leucothoe fontanesiana* (Steud.) Sleumer* [Vilnius University Botanical Garden, LT, 2005].
97. *Rhododendron austrinum* Rehder* [Rhododendron nursery Babite University of Latvia, LV, 2002].
98. *Rhododendron brachycarpum* D. Don ex G. Don subsp. *fauriei* (Franchet) D. F. Chamb.* [Salaspils National Botanical Garden, LV, 2006].
99. *Rhododendron brachycarpum* G. Don* [The Botanical Garden of Lyon, FR, 2002].
100. *Rhododendron camtschaticum* Pall.* [Rhododendron nursery Babite University of Latvia, LV, 2003].
101. *Rhododendron canadense* (L.) Torr. * [The Montreal Botanical Garden, CA, 2002].
102. *Rhododendron catawbiense* Michx. * [Private collection of A. Žakevičius, Šiauliai, LT, 2002].
103. *Rhododendron degronianum* Carrière subsp. *heptamerum* (Machim.) Hara* [Rhododendron-Park and Botanical Garden of Bremen, DE, 2005].
104. *Rhododendron kaempferi* Planch.* [Botanical Garden, AV Fomina Kyiv National Taras Shevchenko University, UA, 2006].
105. *Rhododendron kiusianum* Makino* [Botanical Garden, AV Fomina Kyiv National Taras Shevchenko University, UA, 2004].
106. *Rhododendron luteum* (L.) Sweet.* [Rhododendron nursery Babite University of Latvia, LV, 2001].
107. *Rhododendron maximum* L.* [Rhododendron nursery Babite University of Latvia, LV, 2003].
108. *Rhododendron schlippenbachii* Maxim.* [Rhododendron nursery Babite University of Latvia, LV, 2002].

EUPHORBIACEAE Juss.

109. *Ricinus communis* L.** [Botanic Garden of Technical University Dresden, 2018, DE].

FABACEAE Lindl.

110. *Amorpha fruticosa* L.* [Botanical park Obelynė, Akademija, Kaunas district, LT, 2001].
111. *Astragalus cicer* L. [Botanic Garden of the Jagiellonian University, Kraków, PL, 2019].
112. *Baptisia australis* (L.) R. Br. [Traupio Botanical Garden, LT, 2001].
113. *Colutea arborescens* L. [Botanic Garden of the Jagiellonian University, Kraków, PL, 2012].
114. *Cytisus elongatus* Waldst. et Kit.* [Siberian Botanical Garden of Tomsk State University, RU, 2012].
115. *Genista radiata* (L.) Scop.* [The Alpine Botanical Garden “Rezia”, Bormio, IT, 2005].
116. *Genista sagittalis* L. [Salaspils National Botanical Garden, LV, 2006].
117. *Laburnum anagyroides* Medik.* [Skinderiškis Dendrology Park, Pajieslys, Kėdainiai district, LT, 2004].
118. *Lathyrus pisiformis* L. [Vilnius university Botanical Garden, LT, 2001].
119. *Onobrychis vicifolia* Scop.* [Universtiy of Salzburg Department of organismic biology Study Group Botanical Garten (Austria, Salzburg, Osterhorngruppe, St. Koloman SE, Seewaldsee W 0,5 km, roadside embankment, limestone, 1000 msm, 7/09 M), AT, 2009].
120. *Phaseolus coccineus* L. ‘Painted Lady’* [Horticultural Gardens (Faculty of Life Sciences), University of Copenhagen, DK, 2019].
121. *Trifolium fragiferum* L. [Jardin Botanique Bordeaux, FR, 2019].

GENTIANACEAE Juss.

122. *Gentiana asclepiadea* L. ‘Alba’ [Botanical Garden Rennsteiggarten Oberhof, DE, 2011].
123. *Gentiana lutea* L.* [The Botanical Garden of the University of Regensburg, DE, 2004].
124. *Gentiana tibetica* King ex Hook.f.** [National botanic garden of Belgium, Meise, BE, 2002].

GERANIACEAE Juss.

125. *Geranium thunbergii* Siebold ex Lindl. et Paxton [RHS Garden Wisley, UK, 2008].

GLOBULARIACEAE DC.

126. *Globularia punctata* Lapeyr. [Salaspils National Botanical Garden, LV, 2003].

HYPERICACEAE Juss.

127. *Hypericum inodorum* Willd. [Botanic Garden of the University of Stuttgart-Hohenheim, Stuttgart, DE, 2006].
128. *Hypericum orientale* L. [Vilnius University Botanical Garden, LT, 2007].
129. *Hypericum patulum* Thunb.* [Vilnius University Botanical Garden, LT, 2002].

JUGLANDACEAE A. Rich. ex Kunth

130. *Pterocarya stenoptera* C. DC.* [Botanical park Obelynė, Akademija, Kaunas district, LT, 2001].

LAMIACEAE Lindl.

131. *Calamintha einseleana* F. W. Schultz [The Botanical Garden of Ljubljana, SI, 2017].
132. *Calamintha nepetoides* Jord. [The Alpine Garden, south of the Upper Belvedere, Vienna, AT, 2016].
133. *Dracocephalum rupestre* Hance* [Vytautas Magnus University Botanical Garden, LT, 2017].
134. *Dracocephalum tanguticum* Maxim. [The Alpine Botanical Garden “Rezia”, Bormio, IT, 2009].
135. *Hyssopus officinalis* L. [Botanical Garden of Šiauliai University, LT, 2000].
136. *Lavandula angustifolia* L. ‘Nana Alba’** [Botanical Garden, Faculty of Science, Masaryk University, Brno, CZ, 2015].
137. *Leonurus quinquelobatus* Gilib. [The Botanical Garden of Udmurt State University, RU, 2017].
138. *Mentha gattefossei* Maire* [Botanischer Garten Chemnitz, DE, 2017].
139. *Micromeria thymifolia* (Scop.) Fritsch [National Botanic Garden of Belgium, Meise, BE, 2017].
140. *Nepeta camphorata* Boiss. et Heldr. [Prague Botanical Garden, CZ, 2017].
141. *Nepeta laevigata* (D.Don) Hand.-Mazz [Ural State University Botanical Garden, Ekaterinburg, RU, 2017].
142. *Nepeta manchuriensis* S. Moore [Botanischer Garten Chemnitz, DE, 2017].
143. *Nepeta nepetella* L. [The Alpine Botanical Garden “Paradisio”, IT, 2016].
144. *Nepeta pamirensis* Franch.* [The Alpine Botanical Garden “Rezia”, Bormio, IT, 2017].
145. *Nepeta podostachys* Benth. [Ural State University Botanical Garden, Ekaterinburg, RU, 2017].
146. *Nepeta subsessilis* Maxim.* [Botanic Gardens of Barcelona, IS, 2017].
147. *Nepeta transcaucasica* Grossh.* [The Alpine Botanical Garden “Rezia”, Bormio, IT, 2017].
148. *Perovskia atriplicifolia* Benth. [Botanic Garden and Arboretum Mendel University of Agriculture and Forestry Brno, CZ, 2011].
149. *Phlomis samia* L. [The Botanical Garden of the Heinrich-Heine University, Dusseldorf, DE, 2004].

150. *Salvia argentea* L. [Vytautas Magnus University Botanical Garden, LT, 2004].
 151. *Salvia fruticosa* Mill. [Botanical Garden of the University of Zurich, CH, 2017].
 152. *Salvia hians* Royle ex Benth.* [The Alpine Botanical Garden “Rezia”, Bormio, IT, 2016].
 153. *Salvia jurisicii* Kosanin [The Alpine Botanical Garden “Rezia”, Bormio, IT, 2016].
 154. *Scutellaria alpina* L.** [Botanic Garden of Johannes Gutenberg University Mainz, DE, 2002].
 155. *Sideritis glacialis* Boiss.** [The Botanical Garden Aarhus, DK, 2004].
 156. *Sideritis hyssopifolia* L. [The Alpine Botanical Garden “Viotte”, Trento, IT, 2004].
 157. *Stachys pradica* (Zanted.) Greuter et Pignatti [The Alpine Botanical Garden “Chanousia”, IT, 2010].

LOASACEAE Spreng.

158. *Blumenbachia hieronymi* Urb.* [The Botanical Garden of the University of Latvia, Riga, LV, 2019].

MAGNOLIACEAE Juss.

159. *Magnolia kobus* DC.* [Rogów Arboretum of Warsaw University of Life Sciences, PL, 2004].

MALVACEAE Juss.

160. *Lavatera thuringiaca* L.** [Vilnius University Botanical Garden, LT, 2003].
 161. *Kitaibelia vitifolia* Willd. [Botanical Garden of Amsterdam University, NL, 2004].

OLEACEAE Hoffmanns. et Link

162. *Syringa emodi* Wall. Ex G. Don [Russian Academy of Sciences far East Branch Sakhalin Botanical Garden, RU, 2004].
 163. *Syringa reticulata* (Blume) H. Hara subsp. *amurensis* (Rupr.) P. S. Green et M. C. Chang* [Skinderiškis Dendrology Park, Pajieslys, Kėdainiai district, LT, 2004].

PAPAVERACEAE Juss.

164. *Meconopsis cambrica* (L.) Vig.** [Botanic Garden of Nantes, FR, 2002].
 165. *Papaver alpinum* L.* [Botanical Garden of Šiauliai University, LT. No data available of their origin].
 166. *Papaver bracteatum* Lindl.* [The Botanical Garden of the University of Regensburg, DE, 2004].

PHYTOLACCACEAE R. Br.

167. *Phytolacca acinosa* Roxb.** [Botanic Garden of Rostock University, DE, 2011].
 168. *Phytolacca esculenta* L.** [Alexandru Borza Cluj-Napoca University Botanic Garden, RO, 2008].

PLANTAGINACEAE T. Lestib. ex Dumort.

169. *Plantago sempervirens* Crantz.* [Botanic Garden of Nantes, FR, 2016].
 170. *Psyllium afrum* Mirb. [Botanical Garden of the Christian Albrechts University of Kiel, DE, 2013].

POLEMONIACEAE Juss.

171. *Linanthus liniflorus* (Benth.) Greene* [The Botanical Garden of the Heinrich-Heine University, Dusseldorf, DE, 2007].
 172. *Polemonium caeruleum* L. [Vytautas Magnus University Botanical Garden, LT, 2020].

POLYGONACEAE Juss.

173. *Eriogonum heracleoides* Nutt.* [The Botanical Garden of Graz, Institute for Plant science, Karl-Franzens-University Graz, AT, 2014].
 174. *Eriogonum umbellatum* Torr. var. *bahiiforme* (Torr. et A. Gray) Jeps.** [Utrecht University Botanic Garden, NL, 2012].
 175. *Eriogonum umbellatum* Torr. var. *stellatum* (Benth.) M. E. Jones* [Botanic Garden of the Philipp University of Marburg (CA, B. Columbia, Jones Corbin, 4940 N 114 49 W 488 m, BG Vancouver (MR, 2005)), DE, 2011].
 176. *Rumex conglomeratus* Murray [The Botanical Garden of the University of Münster, DE, 2003].

PORTULACACEAE Juss.

177. *Anacampseros comptonii* Pillans* [Botanical Garden of the Carinthian Botanic Center, Klagenfurt, AT, 2015].
 178. *Anacampseros rufescens* Sweet* [Botanical Garden of the Carinthian Botanic Center, Klagenfurt, AT, 2015].

RANUNCULACEAE Juss.

179. *Aconitum lycoctonum* L. [The Botanical Garden of Graz, Institute for Plant science, Karl-Franzens-University Graz, AT, 2006].

180. *Aconitum tanguticum* (Maxim.) Stapf** [Gothenburg Botanical Garden (China: Sichuan, 3500 m), SE, 2007].
181. *Actaea rubra* (Aiton) Willd. [Salaspils National Botanical Garden, LV, 2002].
182. *Anemone altaica* Fisch. ex C. A. Mey. [Botanic Garden of the Comenius University, Bratislava, SK, 2004].
183. *Anemone rupicola* Cambess. ex Jacquem.* [Collector A. Grišaitė, (The Botanical Garden of Schellerhau, DE), 2011].
184. *Aquilegia buergeriana* Siebold. et Zucc. 'Calimero' [Memorial University of Newfoundland Botanical Garden, CA, 2019].
185. *Aquilegia canadensis* L. [Botanic Garden of the Jagiellonian University, Kraków, PL, 2004].
186. *Aquilegia chrysantha* A. Gray var. *chaplinae* (Standl. ex Payson) Lott* [Reykjavik Botanical Garden, IS, 2009].
187. *Aquilegia flabellata* Sieb. et Zucc. 'Alba'** [Institute of Botany Academy of Sciences of the Czech Republic, Pruhonic, CZ, 2005].
188. *Aquilegia sibirica* Lam.** [The South-Siberian Botanical Garden, Barnaul, RU, 2011].
189. *Clematis hirsutissima* Pursh [Botanical Garden University Innsbruck, AT, 2007].
190. *Clematis ianthina* Koehne** [University of Alberta Devonian Botanic Garden, CA, 2012].
191. *Clematis viticella* L. [Skinderiškis Dendrology Park, Pajieslys, Kėdainiai district, LT, 2002].
192. *Helleborus foetidus* L.* [Institute of Ecology and Botany Hungarian Academy of Sciences Botanical Garden, Vacratot, HU, 2002].
193. *Thalictrum foetidum* L.** [Institute of Ecology and Botany Hungarian Academy of Sciences Botanical Garden, Vacratot, HU, 2003].
194. *Thalictrum rochebrunnianum* Franch. et Sav. [The Botanical Garden of the University of Regensburg, DE, 2011].

ROSACEAE Juss.

195. *Agrimonia procera* Wallr. [Vytautas Magnus University Botanical Garden, LT, 2018].
196. *Alchemilla mollis* (Buser) Rothm. [Experimental Station of Field Floriculture, LT, 2002].
197. *Cotoneaster atropurpureus* Flinck et B. Hylmo* [Botanical Garden of the University of Strasbourg, FR, 2010].
198. *Cotoneaster glacialis* (Hook. f. ex Wenzig) G. Panigrahi et A. Kumar* [Botanical Garden of the University of Strasbourg, FR, 2009].
199. *Cotoneaster microphyllus* Lindl.* [Experimental Station of Field Floriculture, LT, 2002].
200. *Cotoneaster procumbens* Klotz* [Botanical Garden of the University of Strasbourg, FR, 2010].
201. *Cotoneaster subadpressus* T. T. Yu* [Botanical Garden of the University of Strasbourg, FR, 2009].
202. *Cotoneaster zabelii* C. K. Schneid.* [The Alpine Botanical Garden "Rezia", Bormio, IT, 2004].
203. *Dryas octopetala* L. var. *vestita* Beck* [Botanical Garden Rennsteiggarten Oberhof, DE, 2010].
204. *Malus toringo* Siebold* [Botanical park Obelynė, Akademija, Kaunas district, LT, 2001].
205. *Pyracantha coccinea* M. Roem.* [Skinderiškis Dendrology Park, Pajieslys, Kėdainiai district, LT, 2004].
206. *Rhodotypos scandens* (Thunb.) Makino* [Vilnius University Botanical Garden, LT, 2002].
207. *Sanguisorba dodecandra* Moretti* [Tallinn Botanic Garden, EE, 2004].
208. *Sorbus koehniiana* C. K. Schneid. [Botanical Garden of the University of Tartu, EE, 2001].

RUBIACEAE Juss.

209. *Asperula aristata* L. f. [Institute of Ecology and Botany Hungarian Academy of Sciences Botanical Garden, Vacratot, HU, 2006].

RUTACEAE Juss.

210. *Phellodendron amurense* Rupr.* [Botanical Garden of Šiauliai University, LT. No data available of their origin].
211. *Ptelea trifoliata* L.* [Vilnius University Botanical Garden, LT, 2001].

SAXIFRAGACEAE Juss.

212. *Heuchera pulchella* Wooton et Standl.** [Gothenburg Botanic Garden (USA, New Mexico, Bernalillo CO, 3200), SE, 2010].
213. *Saxifraga australis* Moric.** [The Alpine Botanical Garden "Viotte", Trento, IT, 2007].
214. *Saxifraga apiculata* Engl. 'Alba'* [Private collection of G. Pociūlienė, Pakalniškiai, Radviliškis district, LT, 2012].
215. *Saxifraga sancta* Griseb.* [Private collection of G. Pociūlienė, Pakalniškiai, Radviliškis district, LT, 2012].

SCROPHULARIACEAE Juss.

216. *Penstemon cyaneus* Pennell [The Botanical Garden of Bonn University, DE, 2004].
217. *Penstemon eatonii* A. Gray [RHS Garden Wisley, UK, 2011].
218. *Penstemon procerus* Dougl. ex Graham [Botanic Garden of Warsaw University, PL, 2011].

219. *Penstemon procerus* Dougl. ex Graham var. *tolmiei* (Hook.) Cronq.* [Akureyri Botanical Garden, IS, 2007].
 220. *Penstemon smalii* A. Heller [Institute of Ecology and Botany Hungarian Academy of Sciences Botanical Garden, Vacratot, HU, 2003].
 221. *Veronica armena* Boiss. et A. Huet** [Botanical Garden of the Christian Albrechts University of Kiel, DE, 2006].
 222. *Veronica spicata* L. 'Nana' [Experimental Station of Field Floriculture, LT, 2005].

SOLANACEAE Juss.

223. *Datura stramonium* L. var. *tatula* (L.) Torr* [Botanical Garden, Faculty of Science, Palacky University in Olomouc, CZ, 2019].
 224. *Nicotiana rustica* L.** [Botanical Garden of the Carinthian Botanic Center, Klagenfurt, AT, 2018].

LILIOPSIDA Batsch

ALLIACEAE J. Agardh

225. *Allium cyathophorum* Bureau et Franch. [University of Oxford Botanic Garden and Harcourt Arboretum, UK, 2002].
 226. *Allium karataviense* Regel** [Vilnius University Botanical Garden, LT, 2006].
 227. *Allium pskemense* B. Fedtsch. [Gothenburg Botanical Garden (Uzbekistan: Ugam Mtn. Range, Urungachsay, 2555-2800 m), SE, 2007].
 228. *Allium sikkimense* Baker [Gothenburg Botanical Garden, SE, 2013].
 229. *Allium victorialis* L.** [Botanic Garden and Botanical Museum Berlin-Dahlem, DE, 2006].

AMARYLLIDACEAE J. St.-Hil

230. *Leucojum aestivum* L.** [Utrecht University Botanic Garden, NL, 2002].

ASPARAGACEAE Juss.

231. *Asparagus officinalis* L. [Botanical Garden of Šiauliai University, LT. No data available of their origin].

CANNACEAE Juss.

232. *Canna indica* L. [Leuven Botanical Garden, BE, 2010].

IRIDACEAE Juss.

233. *Sisyrinchium angustifolium* Mill. [The Botanical Garden of the University of Tübingen, DE, 2002].
 234. *Iris laevigata* Fisch. [The Alpine Botanical Garden "Viotte", Trento, IT, 2003].

JUNCACEAE Juss.

235. *Luzula alpinopilosa* (Chaix) Breistr. [The Alpine Botanical Garden "Rezia", Bormio, IT, 2013].
 236. *Luzula luzuloides* (Lam.) Dandy et Wilmott [Vytautas Magnus University Botanical Garden, LT, 2000].
 237. *Juncus effusus* L. [Botanic Garden and Botanical Museum Berlin-Dahlem, DE, 2008].

LILIACEAE Juss.

238. *Fritillaria involucreta* All. [Botanical Garden of Šiauliai University, LT, No data available of their origin].
 239. *Fritillaria pallidiflora* Schrenk** [Salaspils National Botanical Garden, LV, 2003].

POACEAE (R. Br.) Bernhart

240. *Aira praecox* L.* [Jardin Botanique Bordeaux, FR, 2019].
 241. *Andropogon gerardi* Vitman** [Botanical Garden, Faculty of Science, Palacky University in Olomouc, CZ, 2012].
 242. *Deschampsia tzevelevii* Prob. [Botanical Garden-Institute Vladivostok, RU, 2004].
 243. *Molinia caerulea* (L.) Moench* [Botanical Garden of the Christian Albrechts University of Kiel, DE, 2016].
 244. *Pennisetum alopecuroides* Ham. [Botanic Garden of University of Konstanz, DE, 2017].
 245. *Pennisetum villosum* Fresen. [The nursery „Virblės medelynas“, Butkai, Klaipėda district, LT, 2020].
 246. *Sorghum bicolor* (L.) Moench* [Botanic Garden of Rennes, FR, 2019].
 247. *Sporobolus heterolepis* (Gray) A.Gray [The nursery „Virblės medelynas“, Butkai, Klaipėda district, LT, 2020].
 248. *Stipa calamagrostis* (L.) Wahlenb. [The nursery „Virblės medelynas“, Butkai, Klaipėda district, LT, 2020].

SEED FROM PLANTS OF LITHUANIAN FLORA PROTECTED *EX-SITU* IN THE GARDEN

MAGNOLIOPHYTA Cronquist, Takht. et W. Zimm. ex Reveal.

MAGNOLIOPSIDA Brongn.

APIACEAE Lindl.

- 249. *Angelica archangelica* L. [The local area Joniškis district, LT, 2012].
- 250. *Astrantia major* L. [The local area Žagarė, Joniškis district, LT, 2000].
- 251. *Laserpitium latifolium* L. [The local area Mažeikiai district, LT, 2007].

ASTERACEAE Dumort.

- 252. *Gnaphalium luteoalbum* L.* [The local area Merkinė, Varėna district, LT, 2008].

BRASSICACEAE Burnett

- 253. *Lunaria rediviva* L.* [The local area Varėna district, LT, 2000].

CAMPANULACEAE Juss.

- 254. *Campanula bononiensis* L. [The local area Kėdainiai district, LT, 2007].
- 255. *Campanula cervicaria* L. [The local area Paryžė, Kupiškis district, LT, 2007].

CARYOPHYLLACEAE Juss.

- 256. *Dianthus arenarius* L. [The local area Marcinkonys, Varėna district, LT, 2008].
- 257. *Dianthus arenarius* L. subsp. *arenarius* [The local area Perloja, Varėna district, LT, 2007].
- 258. *Dianthus borbasii* Vandas* [The local area Dzūkija National Park, Varėna district, LT, 2003].
- 259. *Silene lituanica* Zapał. [The local area Marcinkonys, Varėna district, LT, 2008].
- 260. *Silene tatarica* (L.) Pers. [The local area Liškiava, Varėna district, LT, 2008].

CELASTRACEAE R. Br.

- 261. *Euonymus verrucosus* Scop.* [The local area Žagarė, Joniškis district, LT, 1999].

DIPSACACEAE Juss.

- 262. *Scabiosa columbaria* L. [The local area Vilnius district, LT, 2007].
- 263. *Succisella inflexa* Kluk [The local area Kupiškis district, LT, 2010].

FABACEAE Lindl.

- 264. *Astragalus glycyphyllos* L.* [The local area Bubiai, Šiauliai district, LT, 2019].
- 265. *Lathyrus sylvestris* L. [The local area Radviliškis district, LT, 2000].
- 266. *Sarothamnus scoparius* (L.) Wimm. ex W. D. J. Koch** [The local area Krokšlys, Varėna district, LT, 2013].
- 267. *Trifolium arvense* L.* [The local area Spaudžiai, Kelmė district, LT, 2019].

GENTIANACEAE Juss.

- 268. *Gentiana cruciata* L. [The local area Lazdijai district, LT, 2005].

HYPERICACEAE Juss.

- 269. *Hypericum hirsutum* L. [The local area Satkūnai, Joniškis district, LT, 2007].

LAMIACEAE Lindl.

- 270. *Dracocephalum ruyschiana* L. [The local area Anykščiai district, LT, 2008].
- 271. *Mentha longifolia* (L.) Huds.* [The local area Pupiniai, Kupiškis district, LT, 2007].
- 272. *Prunella grandiflora* (L.) Scholler [The local area Varėna district, LT, 2008].
- 273. *Salvia ×sylvestris* L.** [The local area Vizgūnai, Kupiškis district, LT, 2009].
- 274. *Stachys recta* L. [The local area Kaišiadorys district, LT, 2002].

PRIMULACEAE Vent.

- 275. *Androsace septentrionalis* Retz. [The local area Šiauliai district, LT, 2005].

RANUNCULACEAE Juss.

- 276. *Pulsatilla patens* (L.) Mill.* [The local area Varėna district, LT, 2008].

VIOLACEAE Batsch

277. *Viola elatior* Fr. [The local area Vilnius district, LT, 2007].

LILIOPSIDA Batsch

ALLIACEAE J. Agardh

278. *Allium scorodoprasum* L. [The local area Priekulė, Klaipėda district, LT, 2007].

ASPHODELACEAE Juss.

279. *Anthericum ramosum* L. [Kurtuvėnai Regional Park, Šiauliai district, LT, 2000].

CYPERACEAE Juss.

280. *Carex buxbaumii* Wahlenb.* [The local area Kėdainiai district, LT, 2008].

IRIDACEAE Juss.

281. *Gladiolus imbricatus* L. [The local area Širvintos district, LT, 2007].
282. *Iris sibirica* L. [The local area Truskava, Kėdainiai district, LT, 2008].

LILIACEAE Juss.

283. *Lilium martagon* L.** [The local area Varėna district, LT, 2013].

MELANTHIACEAE Batsch.

284. *Tofieldia calyculata* (L.) Wahlenb. [The local area Lazdijai district, LT, 2001].

ORCHIDACEAE Juss.

285. *Dactylorhiza fuchsii* (Druce) Soó [The local area Kupiškis district, LT, 2008].

POACEAE (R. Br.) Bernhart

286. *Alopecurus arundinaceus* Poir* [The local area Pakruojis district, LT, 2008].
287. *Festuca psammophila* (Hack. ex Celak.) Fritch. [The local area Varėna district, LT, 2008].
288. *Melica ciliata* L. [The local area Anykščiai district, LT, 2001].
289. *Poa remota* Forselles [The local area Žemaitėliai, Anykščiai district, LT, 2005].
290. *Sesleria caerulea* (L.) Ard. [The local area Gudmonišķė, Kelmė district, LT, 2005].

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