



ŠIAULIŲ
UNIVERSITETAS
BOTANIKOS SODAS

INDEX SEMINUM 2019 No 19





BOTANICAL GARDEN OF
ŠIAULIAI UNIVERSITY

INDEX SEMINUM 2019
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2020

BOTANICAL GARDEN OF ŠIAULIAI UNIVERSITY

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Žydrūnė Valainytė, Rita Šulskienė.

Cover design Karolis Grušas
Photographer Romualdas Struoga

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*, *Hemerocallis* 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.

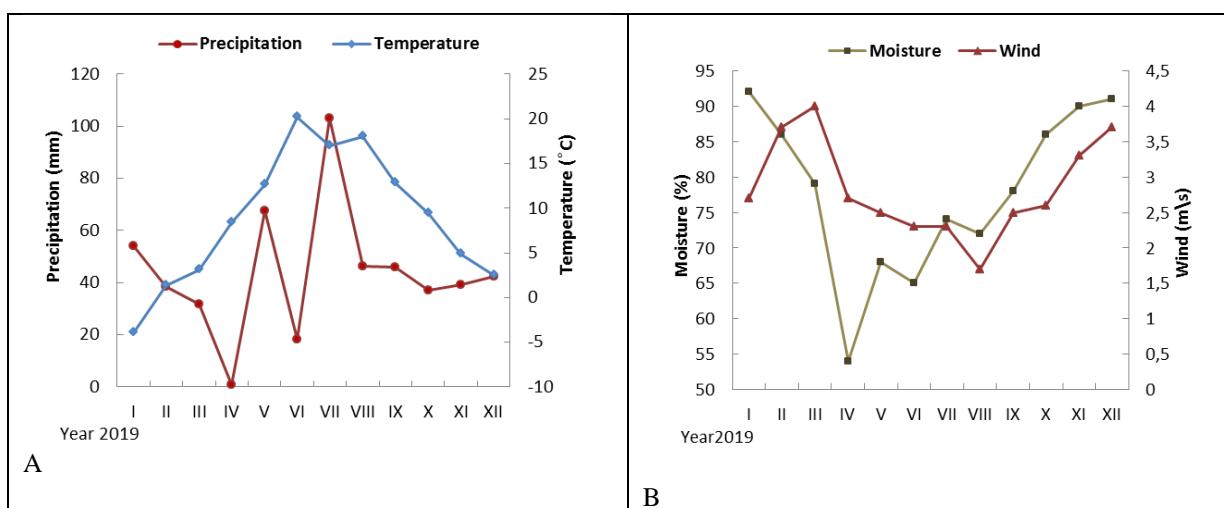
GEOGRAPHICAL SITUATION:

Latitude N 55° 55' 57.7"

Longitude E 23° 16' 57.0"

Zone 5 (Baltic region plant hardiness map)

CLIMATIC CONDITIONS:



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

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

* - Seeds collected in 2018

** - Seeds collected in 2017

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

PINOPHYTA Cronquist, Takht. et W. Zimm. ex Reveal
GNETOSIDA Thomé

EPHEDRACEAE Dumort.

1. *Ephedra monosperma* J. G. Gmelin ex C. A. Meyer [Botanic Garden and Arboretum Mendel University of Agriculture and Forestry Brno (China: Sechuan, Shen Shan, 3800 m), CZ, 2008].

PINOPSIDA Burnett

CUPRESSACEAE Rich. ex Bartl.

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

PINACEAE Lindl.

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

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

ACERACEAE Juss.

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

ANACARDIACEAE Lindl.

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

APIACEAE Lindl.

8. *Athamanta turbith* (L.) Brot. subsp. *haynaldii* (Borbás et Uechtr.) Tutin [Botanical Garden Rennsteiggarten Oberhof, DE, 2010].
9. *Cuminum cyminum* L.* [Jardin Botanique de la Ville et de l'Universite de Besancon, FR, 2011].
10. *Endressia pyrenaica* (Gay ex DC.) Gay** [The Alpine Botanical Garden “Rezia”, Bormio, IT, 2008].
11. *Eryngium amethystinum* L.* [Ogród Botaniczny Zarząd Zieleni Miejskiej, PL, 2001].
12. *Eryngium spinalba* Vill.** [Botanic Garden and Arboretum Mendel University of Agriculture and Forestry Brno, CZ, 2008].
13. *Meum athamanticum* Jacq* [Private collection of I. Burneckienė, Šiauliai, LT, 2006].

AQUIFOLIACEAE Bartl.

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

ARALIACEAE Juss.

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

ASTERACEAE Dumort.

16. *Alfredia cernua* (L.) Cass. [Central Botanical garden of National Academia Sciense of Belarus, Minsk, BY, 2003].
17. *Antennaria microphylla* Rydberg** [Salaspils National Botanical Garden, LV, 2002].
18. *Arnica alpina* (L.) Olin** [The Botanical Garden of the University of Regensburg, DE, 2002].
19. *Arnica chamissonis* Less. [Botanical Garden of the Christian Albrechts University of Kiel, DE, 2003].
20. *Aster alpinus* L. var. *dolomiticus* Beck.** [The Alpine Botanical Garden “Paradisia”, IT, 2009].
21. *Aster alpinus* L.** [Institute of Ecology and Botany Hungarian Academy of Sciences Botanical Garden, Vacratot, HU, 2002].
22. *Buphthalmum 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. *Echinops niveus* Wall.* [Vytautas Magnus University Botanical Garden, LT, 2000].
25. *Echinops orientalis* Trautv. [Ogród Botaniczny Zarząd Zieleni Miejskiej, PL, 2003].
26. *Erigeron flettii* G. N. Jones [Botanical Garden of the University of Tartu, EE, 2008].
27. *Gynura aurantiaca* (Blume) Sch. Bip. ex DC. [Private collection of S. Gliaudys, Šiauliai, LT, 2018].
28. *Helichrysum montanum* DC.** [Botanic Garden and Arboretum Mendel University of Agriculture and Forestry Brno, CZ, 2010].
29. *Hymenoxys hoopesii* (A. Gray) Bierner [Botanical Garden of the University of Tartu, EE, 2011].
30. *Jurinea mollis* (L.) Rchb.* [The Botanical Garden of the University of Münster, DE, 2012].
31. *Leibnitzia anandria* (L.) Turcz. [Nancy Botanical Garden, FR, 2009].
32. *Leontopodium wilsonii* Beauverd** [The Botanical Garden of the University of Regensburg, DE, 2004].
33. *Ptilostemon afer* (Jacq.) Greuter [The Alpine Garden, south of the Upper Belvedere, Vienna, AT, 2011].
34. *Rhaponticum helenifolium* Gren.& Godr. [Botanical Garden, Faculty of Science, Masaryk University, Brno, CZ, 2017].
35. *Rhaponticum scariosum* Lam. subsp. *bickelli* (Gugler) Pign.** [The Alpine Botanical Garden "Viotte", Trento, IT, 2011].
36. *Rudbeckia flava* Greene* [Vytautas Magnus University Botanical Garden, LT, 2000].
37. *Tanacetum parthenium* (L.) Sch. Bip. [The Botanical Garden "Vasile Fati" Jibou, RO, 2016].
38. *Vernonia gigantea* (Walter) Trel. ex Trel. [Institute of Ecology and Botany Hungarian Academy of Sciences Botanical Garden, Vacratot, HU, 2003].

BERBERIDACEAE Juss.

39. *Podophyllum hexandrum* Royle [Botanical Garden of Šiauliai University, LT, 1997].

BIGNONIACEAE Juss.

40. *Incarvillea mairei* (H.Lév.) Grierson [The Alpine Botanical Garden "Rezia", Bormio, IT, 2017].

BRASSICACEAE Burnett.

41. *Alyssoides utriculata* (L.) Medik. [The Botanical Garden of Bonn University, DE, 2003].
42. *Degenia velebitica* (Degen) Hayek [Botanical Garden Teplice, CZ, 2010].
43. *Draba aspera* Bertoloni** [Botanical Garden of the University of Tartu, EE, 2004].
44. *Erysimum majellense* Polatschek [The Botanical Garden of the University of Münster, DE, 2016].
45. *Isatis tinctoria* L. [National Botanic Garden of Belgium, Meise, BE, 2003].
46. *Lesquerella alpina* (Nutt.) S. Watson* [The Botanical Garden of the University of Regensburg, DE, 2010].

CAMPANULACEAE Juss.

47. *Campanula moravica* (Spitzner) Kovanda* [Reykjavík Botanical Garden, IS, 2004].
48. *Campanula persicifolia* L.* [Institute of Ecology and Botany Hungarian Academy of Sciences Botanical Garden, Vacratot, HU, 2004].
49. *Campanula sarmatica* Ker Gawl.** [The Botanical Garden of the University of Tübingen, DE, 2003].
50. *Codonopsis ovata* Benth.* [Botanical Garden of the University of Zurich, CH, 2007].
51. *Jasione laevis* Lam. * [The Botanical Garden of Graz, Institute for Plant Science, Karl-Franzens-University Graz, AT, 2005].
52. *Phyteuma charmelii* Vill. [Botanical Garden of the University of Potsdam, DE, 2006].

CAPRIFOLIACEAE Juss.

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

CARYOPHYLLACEAE Juss.

57. *Arenaria gypsophiloides* L. var. *glabra* Fenzl** [Botanic Garden of the Philipp University of Marburg, DE, 2003].
58. *Arenaria kingii* Jones** [Botanical Garden University of Oslo, NO, 2004].
59. *Arenaria procera* Spreng. subsp. *glabra* (F. N. Williams) Holub** [The Botanical Garden of the University of Latvia, Riga, LV, 2003].
60. *Dianthus alpinus* L. 'Weiss'* [Experimental Station of Field Floriculture, LT, 2005].
61. *Dianthus praecox* Willd. ex Spreng.*** [Botanical Garden of P. J. Šafárik University, Košice, SK, 2010].
62. *Drypis spinosa* L. subsp. *jacquiniana* Murb. et Wettst. * [The Botanical Garden of Ljubljana, SI, 2008].

63. *Saponaria caespitosa* DC. [Botanical Garden of the University of Tartu, EE, 2003].
64. *Saponaria lutea* L. [The Munich Botanical Garden, Nymphenburg (Italy, Vallone urtier, Alpe Manda, 2400 m), DE, 2004].
65. *Silene quadridentata* (L.) Pers. [The Botanic Garden of the University of Padua (Monte Faverghera, Belluno (BL), 1500 m), IT, 2004].

CELASTRACEAE R. Br.

66. *Euonymus alatus* (Thunb.) Siebold [Traupio Botanical Garden, LT, 2001].
67. *Euonymus europaeus* L. 'Albus' [Botanical park Obelynè, Akademija, Kaunas district, LT, 2001].
68. *Euonymus fortunei* (Turcz.) Hand. - Mazz. var. *radicans* (Siebold ex Miq.) Rehder [The Botanical Garden of the University of Latvia, Riga, LV, 2002].
69. *Euonymus verrucosus* Scop. [The local area Žagarė, Joniškis district, LT, 1999].
70. *Tripterygium regelii* Sprague et Takeda [Vilnius University Botanical Garden, LT, 2001].

CONVOLVULACEAE Juss.

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

CORYLACEAE Mirb.

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

ERICACEAE Juss.

73. *Kalmia angustifolia* L. [Botanical Garden Grugapark Essen, DE, 2007].
74. *Kalmia latifolia* L. f. *myrtifolia* (Bosse) K. Koch. [Batumi Botanical Garden of the Academy of Sciences, GE, 2007].
75. *Ledum groenlandicum* Oeder [Tallinn Botanic Garden, EE, 2004].
76. *Leucothoe fontanesiana* (Steud.) Sleumer [Vilnius University Botanical Garden, LT, 2005].
77. *Rhododendron austrinum* Rehder [Rhododendron nursery Babite University of Latvia, LV, 2002].
78. *Rhododendron brachycarpum* D. Don ex G. Don subsp. *fauriei* (Franchet) D. F. Chamb. [Salaspils National Botanical Garden, LV, 2006].
79. *Rhododendron brachycarpum* G. Don [The Botanical Garden of Lyon, FR, 2002].
80. *Rhododendron camtschaticum* Pall. [Rhododendron nursery Babite University of Latvia, LV, 2003].
81. *Rhododendron canadense* (L.) Torr. [The Montreal Botanical Garden, CA, 2002].
82. *Rhododendron catawbiense* Michx. [Private collection of A. Žakevičius, Šiauliai, LT, 2002].
83. *Rhododendron degronianum* Carrière subsp. *heptamerum* (Machim.) Hara [Rhododendron-Park and Botanical Garden of Bremen, DE, 2005].
84. *Rhododendron kaempferi* Planch. [Botanical Garden, AV Fomina Kyiv National Taras Shevchenko University, UA, 2006].
85. *Rhododendron kiusianum* Makino [Botanical Garden, AV Fomina Kyiv National Taras Shevchenko University, UA, 2004].
86. *Rhododendron luteum* (L.) Sweet. [Rhododendron nursery Babite University of Latvia, LV, 2001].
87. *Rhododendron maximum* L. [Rhododendron nursery Babite University of Latvia, LV, 2003].
88. *Rhododendron schlippenbachii* Maxim. [Rhododendron nursery Babite University of Latvia, LV, 2002].

EUPHORBIACEAE Juss.

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

FABACEAE Lindl.

90. *Amorpha fruticosa* L. [Botanical park Obelynè, Akademija, Kaunas district, LT, 2001].
91. *Baptisia australis* (L.) R. Br. [Traupio Botanical Garden, LT, 2001].
92. *Colutea arborescens* L. [Botanic Garden of the Jagiellonian University, Kraków, PL, 2012].
93. *Cytisus elongatus* Waldst. et Kit. [Siberian Botanical Garden of Tomsk State University, RU, 2012].
94. *Genista radiata* (L.) Scop. [The Alpine Botanical Garden "Rezia", Bormio, IT, 2005].
95. *Genista sagittalis* L. [Salaspils National Botanical Garden, LV, 2006].
96. *Laburnum anagyroides* Medik. [Skinderiškis Dendrology Park, Pajieslys, Kėdainiai district, LT, 2004].
97. *Lathyrus pisiformis* L.* [Vilnius university Botanical Garden, LT, 2001].
98. *Onobrychis viciifolia* Scop. [Universtiyy 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].
99. *Phaseolus coccineus* L. 'Painted Lady' [Horticultural Gardens (Faculty of Life Sciences), University of Copenhagen, DK, 2019].
100. *Trifolium fragiferum* L. [Jardin Botanique Bordeaux, FR, 2018].

GENTIANACEAE Juss.

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

GERANIACEAE Juss.

104. *Geranium bohemicum* L.** [Botanic Garden of the Philipp University of Marburg, DE, 2011].

GLOBULARIACEAE DC.

105. *Globularia incanescens* Viv.** [The Botanical Garden of the University of Regensburg (I, Alpi Apuane, Nordwestl. Von Monte Pelato, BG Firenze, 950713), DE, 2009].
106. *Globularia punctata* Lapeyr.** [Salaspils National Botanical Garden, LV, 2003].
107. *Globularia trichosantha* Fischer et G. A. Mey** [Botanic Garden of the Philipp University of Marburg, DE, 2002].

HYPERICACEAE Juss.

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

JUGLANDACEAE A. Rich. ex Kunth

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

LAMIACEAE Lindl.

112. *Dracocephalum argunense* Fisch. ex Link** [Botanical Garden University of Oslo, NO, 2007].
113. *Dracocephalum rupestre* Hance [Vytautas Magnus University Botanical Garden, LT, 2017].
114. *Lavandula angustifolia* L. ‘Nana Alba’* [Botanical Garden, Faculty of Science, Masaryk University, Brno, CZ, 2015].
115. *Leonurus quinquelobatus* Gilib. [The Botanical Garden of Udmurt State University, RU, 2017].
116. *Mentha gattefossei* Maire [Botanischer Garten Chemnitz, DE, 2017].
117. *Nepeta manchuriensis* S. Moore [Botanischer Garten Chemnitz, DE, 2017].
118. *Nepeta nepetella* L. [The Alpine Botanical Garden “Paradisia”, IT, 2016].
119. *Nepeta pamirensis* Franch. [The Alpine Botanical Garden “Rezia”, Bormio, IT, 2017].
120. *Nepeta podostachys* Benth. [Ural State University Botanical Garden, Ekaterinburg, RU, 2017].
121. *Nepeta subsessilis* Maxim. [Botanic Gardens of Barcelona, IS, 2017].
122. *Nepeta transcaucasica* Grossh. [The Alpine Botanical Garden “Rezia”, Bormio, IT, 2017].
123. *Perovskia atriplicifolia* Benth. [Botanic Garden and Arboretum Mendel University of Agriculture and Forestry Brno, CZ, 2011].
124. *Phlomis russeliana* (Sims) Benth.** [Botanic Garden of Cologne, DE, 2004].
125. *Phlomis tuberosa* L.** [The Munich Botanical Garden, Nymphenburg, DE, 2011].
126. *Salvia hians* Royle ex Benth. [The Alpine Botanical Garden “Rezia”, Bormio, IT, 2016].
127. *Scutellaria alpina* L.* [Botanic Garden of Johannes Gutenberg University Mainz, DE, 2002].
128. *Sideritis glacialis* Boiss.* [The Botanical Garden Aarhus, DK, 2004].
129. *Teucrium marum* L.** [Jardin Botanique Municipal Édouard-Marie Heckel, FR, 2011].

LINACEAE DC. ex Gray

130. *Linum extraaxillare* Kit.** [Botanical Garden of P. J. Šafárik University, Košice, SK, 2004].

LOASACEAE Spreng.

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

MAGNOLIACEAE Juss.

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

MALVACEAE Juss.

133. *Lavatera thuringiaca* L.* [Vilnius University Botanical Garden, LT, 2003].

OLEACEAE Hoffmanns. et Link

134. *Syringa emodi* Wall. Ex G. Don [Russian Academy of Sciences far East Branch Sakhalin Botanical Garden, RU, 2004].

135. *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.

136. *Meconopsis cambrica* (L.) Vig.* [Botanic Garden of Nantes, FR, 2002].
137. *Meconopsis forrestii* Prain [The Botanical Garden of the University of Tübingen, DE, 2013].
138. *Papaver alpinum* L. [Botanical Garden of Šiauliai University, LT. No data available of their origin].
139. *Papaver bracteatum* Lindl. [The Botanical Garden of the University of Regensburg, DE, 2004].

PHYTOLACCACEAE R. Br.

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

PLANTAGINACEAE T. Lestib. ex Dumort.

142. *Plantago sempervirens* Crantz. [Botanic Garden of Nantes, FR, 2016].

PLUMBAGINACEAE Juss.

143. *Armeria splendens* (Lagasca et Rodr.) Webb.** [Vytautas Magnus University Botanical Garden, LT, 2008].

POLEMONIACEAE Juss.

144. *Linanthus liniflorus* (Benth.) Greene [The Botanical Garden of the Heinrich-Heine University, Dusseldorf, DE, 2007].
145. *Polemonium caeruleum* L. [Vytautas Magnus University Botanical Garden, LT, 2001].

POLYGONACEAE Juss.

146. *Eriogonum heracleoides* Nutt. [The Botanical Garden of Graz, Institute for Plant science, Karl-Franzens-University Graz, AT, 2014].
147. *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].
148. *Eriogonum umbellatum* var. *bahüiforme* (Torr. et A. Gray) Jeps.* [Utrecht University Botanic Garden, NL, 2012].
149. *Fagopyrum esculentum* Moench ‘Vokiai’** [Vilnius University Botanical Garden, LT, 2006].
150. *Rumex conglomeratus* Murray [The Botanical Garden of the University of Münster, DE, 2003].

PORTULACACEAE Juss.

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

RANUNCULACEAE Juss.

153. *Aconitum compactum* Rchb.** [The Ecological-Botanical Garden of the University of Bayreuth, DE, 2009].
154. *Aconitum decipiens* Vorosch. et Anfalov** [The Botanical Garden of the University of Regensburg, DE, 2011].
155. *Aconitum tanguticum* (Maxim.) Stapf* [Gothenburg Botanical Garden (China: Sichuan, 3500 m), SE, 2007].
156. *Anemone altaica* Fisch. ex C. A. Mey. [Botanic Garden of the Comenius University, Bratislava, SK, 2004].
157. *Anemone rupestris* Cambess. ex Jacquem. [Collector A. Grišaitė, (The Botanical Garden of Schellerhau, DE), 2011].
158. *Aquilegia chrysanthia* A. Gray var. *chaplinei* (Standl. ex Payson) Lott [Reykjavik Botanical Garden, IS, 2009].
159. *Aquilegia flabellata* Sieb. et Zucc. ‘Alba’* [Institute of Botany Academy of Sciences of the Czech Republic, Pruhonice, CZ, 2005].
160. *Aquilegia flabellata* Sieb. et Zucc. var. *pumila* (Huth) Kudo** [Reykjavik Botanical Garden, IS, 2006].
161. *Aquilegia sibirica* Lam.* [The South-Siberian Botanical Garden, Barnaul, RU, 2011].
162. *Clematis ianthina* Koehne* [University of Alberta Devonian Botanic Garden, CA, 2012].
163. *Helleborus foetidus* L. [Institute of Ecology and Botany Hungarian Academy of Sciences Botanical Garden, Vacratot, HU, 2002].
164. *Pulsatilla vulgaris* Mill. ‘Rote Glocke’** [Arboretum “Kokaudzētava Baltezers”, LV, 2004].
165. *Thalictrum foetidum* L.* [Institute of Ecology and Botany Hungarian Academy of Sciences Botanical Garden, Vacratot, HU, 2003].

ROSACEAE Juss.

166. *Agrimonia procera* Wallr. [Vytautas Magnus University Botanical Garden, LT, 2018].
167. *Cotoneaster atropurpureus* Flinck et B. Hylmo [Botanical Garden of the University of Strasbourg, FR, 2010].
168. *Cotoneaster glacialis* (Hook. f. ex Wenzig) G. Panigrahi et A. Kumar [Botanical Garden of the University of Strasbourg, FR, 2009].
169. *Cotoneaster microphyllus* Lindl. [Experimental Station of Field Floriculture, LT, 2002].
170. *Cotoneaster procumbens* Klotz [Botanical Garden of the University of Strasbourg, FR, 2010].
171. *Cotoneaster subadpressus* T. T. Yu [Botanical Garden of the University of Strasbourg, FR, 2009].
172. *Cotoneaster zabelii* C. K. Schneid. [The Alpine Botanical Garden “Rezia”, Bormio, IT, 2004].
173. *Dryas octopetala* L. var. *vestita* Beck [Botanical Garden Rennsteiggarten Oberhof, DE, 2010].
174. *Malus toringo* Siebold [Botanical park Obelynè, Akademija, Kaunas district, LT, 2001].
175. *Pyracantha coccinea* M. Roem. [Skinderiškis Dendrology Park, Pajieslys, Kėdainiai district, LT, 2004].
176. *Rhodotypos scandens* (Thunb.) Makino [Vilnius University Botanical Garden, LT, 2002].
177. *Sangisorba dodecandra* Moretti* [Tallinn Botanic Garden, EE, 2004].

RUTACEAE Juss.

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

SAXIFRAGACEAE Juss.

180. *Elmera racemosa* (S. Watson) Rydb.** [Botanical Garden of the University of Tartu, EE, 2009].
181. *Heuchera grossularifolia* Rydb.** [Botanical Garden of Šiauliai University, LT. No data available of their origin].
182. *Heuchera pulchella* Wooton et Standl.* [Gothenburg Botanic Garden (USA, New Mexico, Bernalillo CO, 3200), SE, 2010].
183. *Saxifraga australis* Moric.* [The Alpine Botanical Garden “Viotte”, Trento, IT, 2007].
184. *Saxifraga exarata* Villars** [Alpine Botanical Garden of Lautaret, FR, 2005].
185. *Saxifraga hostii* Tausch** [University of Oxford Botanic Garden and Harcourt Arboretum, UK, 2004].
186. *Saxifraga apiculata* Engl. ‘Alba’ [Private collection of G. Pociūlienė, Pakalniškiai, Radviliškis district, LT, 2012].
187. *Saxifraga sancta* Griseb. [Private collection of G. Pociūlienė, Pakalniškiai, Radviliškis district, LT, 2012].

SCROPHULARIACEAE Juss.

188. *Penstemon cardwellii* Howell** [Botanical Garden Teplice, CZ, 2010].
189. *Penstemon eatonii* A. Gray [RHS Garden Wisley, UK, 2011].
190. *Penstemon procerus* Dougl. ex Graham var. *tolmiei* (Hook.) Cronq. [Akureyri Botanical Garden, IS, 2007].
191. *Penstemon procerus* Dougl. ex Graham** [Botanic Garden of the University of Stuttgart-Hohenheim, Stuttgart, DE, 2003].
192. *Penstemon smallii* A. Heller [Institute of Ecology and Botany Hungarian Academy of Sciences Botanical Garden, Vácratot, HU, 2003].
193. *Veronica armena* Boiss. et A. Huet* [Botanical Garden of the Christian Albrechts University of Kiel, DE, 2006].

SOLANACEAE Juss.

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

LILIOPSIDA Batsch

ALLIACEAE J. Agardh

196. *Allium christophii* Trautv.** [Botanic Garden and Botanical Museum Berlin-Dahlem, DE, 2006].
197. *Allium karataviense* Regel* [Vilnius University Botanical Garden, LT, 2006].
198. *Allium pskemense* B. Fedtsch.* [Gothenburg Botanical Garden (Uzbekistan: Ugam Mtn. Range, Urungachsay, 2555-2800 m), SE, 2007].
199. *Allium stipitatum* Regel** [Private collection of A. Markevičius, Neverony, Kaunas district, LT, 2011].
200. *Allium suworowii* Regel* [Salaspils National Botanical Garden, LV, 2007].
201. *Allium victorialis* L.* [Botanic Garden and Botanical Museum Berlin-Dahlem, DE, 2006].

AMARYLLIDACEAE J. St.-Hil

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

ASPARAGACEAE Juss.

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

ASPHODELACEAE Juss.

204. *Eremurus himalaicus* Bak.** [Botanic Garden of the University of Stuttgart-Hohenheim, Stuttgart, DE, 2003].
205. *Eremurus stenophyllum* (Boissier et Buhse) Baker** [Botanical Garden of Maria Curie-Skłodowska University, Lublin, PL, 2005].

CANNACEAE Juss.

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

IXIOLIRIACEAE (Pax) Nakai

207. *Ixiolirion tataricum* (Pall.) Herb.** [Botanical Garden University of Oslo, NO, 2006].

LILIACEAE Juss.

208. *Fritillaria bucharica* Regel* [Salaspils National Botanical Garden, LV, 2004].
209. *Fritillaria involucrata* All. [Austrian Horticultural Society, Graz, AT, 2009].
210. *Fritillaria pallidiflora* Schrenk* [Salaspils National Botanical Garden, LV, 2003].
211. *Fritillaria roylei* J. D. Hook.* [Botanical Garden University of Oslo, NO, 2003].

POACEAE (R. Br.) Bernhart

212. *Aira praecox* L. [Jardin Botanique Bordeaux, FR, 2019].
213. *Andropogon gerardi* Vitman* [Botanical Garden, Faculty of Science, Palacky University in Olomouc, CZ, 2012].
214. *Molinia caerulea* (L.) Moench [Botanical Garden of the Christian Albrechts University of Kiel, DE, 2016].
215. *Pennisetum alopecuroides* Ham. [Botanic Garden of University of Konstanz, DE, 2017].
216. *Sorghum bicolor* (L.) Moench [Botanic Garden of Rennes, FR, 2019].

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

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

MAGNOLIOPSIDA Brongn.

APIACEAE Lindl.

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

ASTERACEAE Dumort.

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

BORAGINACEAE Juss.

- 221. *Lithospermum officinale* L. [Traupis Botanical Garden, LT, 1999].

BRASSICACEAE Burnett

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

CAMPANULACEAE Juss.

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

CARYOPHYLLACEAE Juss.

- 225. *Dianthus arenarius* L. [The local area Marcinkonys, Varėna district, LT, 2008].
- 226. *Dianthus arenarius* L. subsp. *arenarius* [The local area Perloja, Varėna district, LT, 2007].
- 227. *Dianthus borbasii* Vandas [The local area Dzūkija National Park, Varėna district, LT, 2003].
- 228. *Silene lituanica* Zapał. [The local area Marcinkonys, Varėna district, LT, 2008].
- 229. *Silene tatarica* (L.) Pers. [The local area Liškiava, Varėna district, LT, 2008].

CHENOPodiaceae Vent.

- 230. *Polyneum arvense* L.** [The local area Kupiškis district, LT, 2010].

DIPSACACEAE Juss.

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

FABACEAE Lindl.

- 233. *Sarothamnus scoparius* (L.) Wimm. ex W. D. J. Koch* [The local area Krokšlys, Varėna district, LT, 2013].

GENTIANACEAE Juss.

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

HYPERICACEAE Juss.

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

LAMIACEAE Lindl.

- 236. *Dracocephalum ruyschiana* L. [The local area Anykščiai district, LT, 2008].
- 237. *Mentha longifolia* (L.) Huds. [The local area Pupiniai, Kupiškis district, LT, 2007].
- 238. *Prunella grandiflora* (L.) Scholler [The local area Varėna district, LT, 2008].
- 239. *Salvia pratensis* L.** [The local area Smalininkai, Jurbarkas district, LT, 2001].
- 240. *Salvia ×sylvestris* L.* [The local area Vizgūnai, Kupiškis district, LT, 2009].
- 241. *Scutellaria hastifolia* L.** [The local area Gazdonai, Šilutės district, LT, 1998].
- 242. *Stachys recta* L. [The local area Kaišiadorys district, LT, 2002].

MELANTHIACEAE Batsch.

- 243. *Tofieldia calyculata* (L.) Wachlenb.* [The local area Lazdijai district, LT, 2001].

POLYGONACEAE Juss.

- 244. *Fagopyrum tataricum* (L.) Gaertn.** [The local area Šalčininkai district, LT, 2007].

PRIMULACEAE Vent.

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

RANUNCULACEAE Juss.

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

VIOLACEAE Batsch

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

LILIOPSIDA Batsch

ALLIACEAE J. Agardh

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

ASPHODELACEAE Juss.

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

CYPERACEAE Juss.

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

FABACEAE Lindl.

251. *Astragalus glycyphyllos* L. [The local area Bubiai, Šiauliai district, LT, 2019].

252. *Trifolium arvense* L. [The local area Spaudžiai, Kelmė district, LT, 2019].

IRIDACEAE Juss.

253. *Gladiolus imbricatus* L. [The local area Širvintai district, LT, 2007].

254. *Iris sibirica* L. [The local area Truskava, Kėdainiai district, LT, 2008].

LILIACEAE Juss.

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

ORCHIDACEAE Juss.

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

POACEAE (R. Br.) Bernhart

257. *Alopecurus arundinaceus* Poir [The local area Pakruojis district, LT, 2008].

258. *Festuca psammophila* (Hack. ex Celak.) Fitch. [The local area Varėna district, LT, 2008].

259. *Poa remota* Forselles* [The local area Žemaitėliai, Anykščiai district, LT, 2005].

260. *Sesleria caerulea* (L.) Ard. [The local area Gudmoniškė, Kelmė district, LT, 2005].

REFERENCES

1. Brummitt R. K., 1992: Vascular plant families and genera. – Royal Botanic Gardens, Kew.
- Cullen J., 2005: Hardy Rhododendron Species: a guide to identification. – Royal Botanic Garden Edinburgh.
2. Cullen J., Alexander J. C. M., Brady A., Brickell C. D., Green P. S., Heywood V. H., Jørgensen P. - M., Jury S. L., Knees S. G., Leslie A. C., Matthews V. A., Robson N. K. B., Walters S. M., Webb D. A., Wijnands D. O., Yeo P. F., 2002: The European garden flora, 4. – Cambridge.
3. Cullen J., Alexander J. C. M., Brickell C. D., Edmondson J. R., Green P. S., Heywood V.
4. Cullen J., Alexander J. C. M., Brickell C. D., Edmondson J. R., Green P. S., Heywood V.
5. Czerepanov S. K., 1995: Vascular plants of Russia and adjacent states. – Cambridge.
6. Grey-Wilson C., Cribb P., 2011: Guide to the flowers of western China. – Royal Botanic Gardens, Kew.
7. Gudžinskas Z., 1999: Lietuvos induočiai augalai [Vascular plants of Lithuania]. – Vilnius.
H., Jørgensen P. - M., Jury S. L., Knees S. G., Matthews V. A., Maxwell H. S., Miller D. M., Nelson E. C., Robson N. K. B., Walters S. M., Yeo P. F., 1997: The European garden flora, 5. – Cambridge.
H., Jørgensen P. - M., Jury S. L., Knees S. G., Matthews V. A., Maxwell H. S., Miller D. M., Robson N. K. B., Walters S. M., Yeo P. F., 2000: The European garden flora, 6. – Cambridge.
8. Jankevičienė R., 1998: Botanikos vardų žodynas [Dictionary of plant names]. – Vilnius.
9. Lammers T. G., 2007: Campanulaceae. – Royal Botanic Gardens Kew.
10. Navasaitis M., 2004: Dendrologija. – Vilnius.
11. Takhtajan A., 2009: Flowering plants. – Springer.
12. Vojtěch Holubec, Pavel Křivka, 2006: The Caucasus and its flowers. – LOXIA.
13. Walters S. M., Alexander J. C. M., Brady A., Brickell C. D., Cullen J., Green P. S., Heywood V. H., Matthews V. A., Robson N. K. B., Yeo P. F., Knees S. G., 2004: The European garden flora, 3. – Cambridge.
14. Walters S. M., Brady A., Brickell C. D., Cullen J., Green P. S., Lewis J., Matthews V. A., Webb D. A., Yeo P. F., Alexander J. C. M., 2002: The European garden flora, 1. – Cambridge.
15. Walters S. M., Brady A., Brickell C. D., Cullen J., Green P. S., Lewis J., Matthews V. A., Webb D. A., Yeo P. F., Alexander J. C. M., 2003: The European garden flora, 2. – Cambridge.

LINKS

16. A gardeners forum [<https://www.agardenersforum.com/zone/place/12/lithuania.html>].
17. Lady Bird Johnson Wildflower Center [<http://www.wildflower.org/plants/>].
18. The International Plant Names Index [<http://www.ipni.org/index.html>].
19. The PFAF Database [<http://www.pfaf.org/user/default.aspx>].
20. The Plant List [<http://www.theplantlist.org>].

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