

MONGOLIAN ACADEMY OF SCIENCES  
INSTITUTE OF BOTANY

NATIONAL UNIVERSITY OF MONGOLIA  
DEPARTMENT OF BIOLOGY

# CONSPECTUS OF THE VASCULAR PLANTS OF MONGOLIA

Compiled by:

*Magsar URGAMAL*  
*Batlai OYUNTSETSEG*  
*Dashzeveg NYAMBAYAR*  
*Choimaa DULAMSUREN*

Edited by:

*Chinbat SANCHIR*  
*Tseden JAMSRAN*

ULAANBAATAR, 2014

*Published on the Occasion of the  
40th Anniversary of the Institute of Botany,  
Mongolian Academy of Sciences*

**DDC**  
**580.7**  
**Cons-75I**

**ISBN 978-99973-0-356-1**

This publication is funded by the Ministry of Environment and Green Development of Mongolia.

An annotated checklist of vascular plant species for Mongolia is present. At present, **3127 species and subspecies** of vascular plants, distributing **over 683 genera, 112 families and 39 orders** are recorded from Mongolia. Since Gubanov's conspectus (1996) published, **1 family, 20 genera and 412 species and subspecies** have been added to the flora, about 480 new nomenclatural combinations on species and 62 on genus level have been made and more than 2700 new occurrences for about 1200 species have been found. A total of **153 species** (4.89% of total vascular flora) are endemic to Mongolia (**added 11 species**), further **458 species** (14.64%) are subendemic to Mongolia. The information on the Mongolian vascular plant species regionalized by presenting the records separately for 16 phytogeographical regions, which introduced in earlier published works by V.I. Grubov (1982) and I.A. Gubanov (1996).

Citation: ***Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch. 2014.*** Conspectus of the vascular plants of Mongolia. (Editors: *Sanchir, Ch. & Jamsran, Ts.*). Ulaanbaatar, Mongolia. "Admon" Press. 282 (A4) pp.

**Copyright: © The authors, 2014. All rights reserved.**

## CONTENTS

<b>PREFACE</b>	<b>4.</b>
<b>FOREWORD</b>	<b>5.</b>
<b>SYMBOLS AND ABBREVIATIONS</b>	<b>7.</b>
<b>INTRODUCTION</b>	<b>10.</b>
<b>CONCLUSION</b>	<b>14.</b>
<b>CONSPECTUS OF VASCULAR FLORA</b>	<b>27.</b>
<b>FERNS</b>	<b>27.</b>
<b>LYCOPODIOPHYTA</b>	<b>27.</b>
1. Lycopodiopsida	
2. Isoetopsida	
<b>PTERIDOPHYTA</b>	<b>27.</b>
3. Psilotopsida	
4. Equisetopsida	
5. Polypodiopsida	
<b>GYMNOSPERMS</b>	<b>31.</b>
<b>PINOPHYTA</b>	<b>31.</b>
6. Pinopsida	
<b>GNETOPHYTA</b>	<b>32.</b>
7. Gnetopsida	
<b>ANGIOSPERMS</b>	<b>33.</b>
<b>MAGNOLIOPHYTA</b>	<b>33.</b>
8. Monocots	
9. Commelinids	
10. Probably sister eudicots	
11. Eudicots	
12. Core eudicots	
13. Rosids	
14. Asterids	
<b>INDEX OF FAMILY NAMES</b>	<b>216.</b>
<b>INDEX OF GENUS NAMES</b>	<b>217.</b>
<b>REFERENCES</b>	<b>225.</b>
<b>ONLINE DATA PROVIDERS</b>	<b>253.</b>
<b>APPENDIX</b>	<b>254.</b>
Appendix I. Additions to the vascular plant flora of Mongolia compared to Gubanov (1996)	<b>254.</b>
Appendix II. Synonyms of vascular plant species (in comparison with names used in Gubanov (1996))	<b>263.</b>
Appendix III. Synonyms of vascular plant genera (in comparison with names used in Gubanov (1996))	<b>274.</b>
Appendix IV. Vascular plants endemic to Mongolia	<b>276.</b>
Appendix V. Very rare plant species of Mongolia (Law on Natural Plant 1995)	<b>280.</b>

## PREFACE

The Government of Mongolia approved “Program for Conservation of Natural Plants” in order to actualize Complex Policy for National Development, based on the tasks of Millennium Development of Mongolia and Government Action program for 2012-2016. The fifth task of the program states to renovate the database on the species composition, taxonomy, distribution, resources and ecology of natural plants every ten years. The Global Strategy for Plant Conservation emphasized that main requirement of the activity to conserve natural plants was to register all known plant species.

The “*Conspectus of vascular plants to the flora of Mongolia*” this project aims to evaluate and enumerate the native and naturalized vascular plant species to the flora of Mongolia.

Renovating the taxonomy of families and genera as well as species composition of the Flora in Mongolia according to the phylogenetic classification system (Angiosperm Phylogeny Group III, 2009) which was approved by the International Botanical Congress and has internationally been accepted is an inevitable task.

Since the first checklist of the vascular plant flora of Mongolia was compiled by V.I. Grubov, a Russian botanist, in 1955 several other scientists such as V.I. Grubov (1982), N. Ulziykhutag (1989) and I.A. Gubanov (1996) published their works. As it has passed almost 20 years since the last publication appeared, quantitative data and the nomenclature of the species and genera, as well as data on endemics in the flora are outdated.

The present work, filling the gap of 20 years gives a possibility to reveal current state of floristic composition, furthermore to identify very rare and rare, medicinal and other useful plants in the Flora of Mongolia.

The checklist contains nomenclatural, taxonomical, distributional and other relevant data of 3127 species and subspecies belong to 683 genera of 112 families. Since Gubanov’s conspectus (1996) published 1 family, 20 genera and 412 species and subspecies of plants have been added to the flora, about 480 new nomenclatural combinations on species level have been made and more than 2700 new occurrences for about 1200 species have been found.

I hope that new conspectus of vascular plants to the flora of Mongolia will be in daily use of researchers and students in the related fields, as well as a basic source of research works and legal documents in Mongolia.

*General Secretary of the Ministry of Environment and Green Development  
Doctor, Jamsran BATBOLD*

## FOREWORD

Classification and nomenclature are two important divisions of the Science of Systematics. The classification is a process defining a taxon and its characteristics. A result of this process can be a system. One example is Hutchinson's system for flowering plants. The classification is the preceding step of the nomenclature.

Sometimes the nomenclature is substantive from the classification. Giving a proper name to a taxon is an important part of the nomenclature. Because a proper name of a plant or animal is a utensil of the communication and key for the learning, also could give a possibility to avoid huge amount of information, notifications and explanations.

Taxonomy is the result of a process to study some individuals living on a certain land in a certain period of time and to group them into a taxon, according to their general and most stable characteristics. Taxonomical hierarchy can be said as a concept of the taxonomy. Nowadays, taxon and taxonomical unit are accepted as different conceptions, not like some period of the history when these two were thought as same.

International Codex for Botanical Nomenclature is published with the approval of the International Botanical Congress every four to six years to avoid using same name for different individuals or several names for an individual. During the Congress, special section of the nomenclature works on the systematical issues.

Today the taxonomical category includes 24 (26) taxa, starting from kingdom till subform. The present work, compiled by young botanists, is based on this concept.

The present work includes 3127 species and infraspecific taxa, belonging to 683 genera of 112 families, registered in the Flora of Mongolia and data on their nomenclature, classification and distributions. Since I.A. Gubanov published the "*Conspectus of the flora of Outer Mongolia (vascular plants)*" in 1996, one family, 20 genera and 412 species have been newly registered in the Flora, 480 nomenclatural changes at the species level have been made and more than 2700 new data on the species distribution have been revealed.

This book can play important role in that research on botany, specially classification and nomenclature in Mongolia to approach to the international level. Without the nomenclature, research of plant systematics, flora and vegetation can not reach to the upper level and fulfill the requirement of theory and application. There is no need to hide that we are more than 20 years backwards then some developed countries such as United States, England, Germany, Japan, Austria and Sweden. It is not easy task to catch up the international level. We are counting on young generations to actualize this task. This work, compiled on right time to fulfill the present necessity may have mistakes and failings. But I am confident that it has more advantages than disadvantages.

Reviews and suggestions from readers and researchers are welcomed and would be helpful for the future works. At the end, I would like to wish our young botanists to be full of insights and motivations to do more and more excellent works.

*Doctor of Biological Sciences (Sc.D., Professor)  
Khavkhchin Chinbat SANCHIR*

## FOREWORD

Vast territory of country of Mongolia is rich in plant resources. The research of Flora and Vegetation in Mongolia started in 19<sup>th</sup> century by the researchers, who studied Central Asia. Later, Science Committee and Mongolian committee at the Russian Academy of Sciences, founded in 1920's, organized agricultural expedition in 1947-1951, which played important role in the study of plant resources of the country. As a result of this expedition, V.I. Grubov compiled "Conspectus of the Flora of Mongolia", where 1877 species of vascular plants belonging to 552 genera and 97 families were included.

Since research and educational organizations such as National University of Mongolia (1942), Mongolian Academy of Sciences (1961) and Institute of Botany (1974) founded and Mongolian-Russian Biological Complex Expedition started in 1970, the research of the flora had been intensified. The species number in the flora increased up to 2239 in V.I. Grubov's key to the vascular plants in 1982 and to 2823 in I.A. Gubanov's conspectus in 1996. In the latter conspectus 25 families such as Sinopteridaceae, Melantiaceae, Molluginaceae, Grossulariaceae and Nitrariaceae and more than 60 genera such as Sagittaria, Fumaria and Bistorta were added and many new combinations were made in the genus and species level.

Last 18 years I.A. Gubanov's conspectus had been an important handbook for educational and scientific works. But since 1996 many new species of plants have been found and published in different journals and scientific works. Considering the necessity to renew the conspectus, the compilers have worked on the checklist of vascular plant species for Mongolia. This praiseworthy work is supported by the Ministry of Environment and Green Development of Mongolia.

The present work includes more than 400 new taxa, added last twenty years and about 480 new nomenclatural combinations, made according to the International Codex of Botanical Nomenclature. Nowadays science of plant systematics considers phylogeny and origin of a taxon for the classification, as well as chemical composition, specific substances and nucleic acids of a plant. APG III system (2009), accepted in the present work, is the latest of many phylogenetic systems starting from H. Hallier's and J. Hutchinson's, followed by A. Takhtajan's and A. Cronquist's versions.

I am grateful for a compilers' effort to cohere their work into the internationally accepted system. This conspectus can be the starting point of a new period of plant systematics' development, as well as a motive for the further works in botanical science in Mongolia. Basing on this conspectus, "Flora of Mongolia", a multivolume work should be compiled and a checklist of the local names of the plants should be renovated. Mongolian names of the plants are important and accessible for the public to identify and use them. The previous checklist, compiled by the linguists B. Renchin and Ch. Luvsanjav in 1965 on the idea of botanist D. Banzragch, includes Latin, Mongolian and Russian names of 1865 plant species. It is necessary to compile the checklist of local names of all plants, included in the present work. To fulfill these important goals, the cooperation of researchers from relevant organizations such as National University of Mongolia, Institute of Botany and other universities, also those of neighboring countries is required.

*Mongolian State Honored Teacher, Doctor, Professor  
Tseden JAMSRAN*

## SYMBOLS AND ABBREVIATIONS

### Symbols:

- + before taxon name: new to Mongolia (not listed in Gubanov 1996)
- + following phytogeographical region: new for this region (not listed in Gubanov 1996)
- # before taxon name: name change (new combination) since Gubanov (1996)
- ? before taxon name: unresolved or uncertain taxon

### Taxa:

subfo.	- subforma
subsp.	- subspecies
var.	- varietes

### Categories for Regionally Threatened (Nyambayar *et al.* 2011, Mongolian Red List)

EX	- Extinct
EW	- Extinct in the Wild
RE	- Regionally Extinct
CR	- Critically Endangered
EN	- Endangered
VU	- Vulnerable
NT	- Near Threatened
LC	- Least Concern
DD	- Data Deficient
NA	- Not Applicable

### Categories for conservation status (Mongolian Law on Natural Plants 1995; Red Book 2013)

R	- Rare
VR	- Very Rare
RB	- Red Book
RL	- Relict

### Organizations:

APG	- Angiosperm Phylogeny Group
APW	- Angiosperm Phylogeny Website
BGBM	- Botanischer Garten und Botanisches Museum
CBD	- Convention on Biological Diversity
GBIF	- Global Biodiversity Information Facility
GCC	- Global Compositae Checklist
GSPC	- Global Strategy for Plant Conservation
GRIN	- Germplasm Resources Information Network
IAPT	- International Association for Plant Taxonomy
ICBN	- International Codex of Botanical Nomenclature
ILDIS	- International Legume Database & Information Service
ING	- Index Nominum Genericorum
INF	- Index Nominum Familiarium
IPCN	- International Plant Chromosome Numbers
IPNI	- International Plant Names Index
IOPI	- International Organization for Plant Information
IUCN	- International Union for Conservation of Nature

LAPG	- Linear Angiospermae Phylogeny Group
MAS	- Mongolian Academy of Sciences
NYBG	- The New York Botanical Garden
NUM	- National University of Mongolia
SPP	- Species Plantarum Programme
TICA	- The International Compositae Alliance
USDA	- United States Department of Agriculture
WCSP	- World Checklist Selected Plant

### Herbarium index:

A	- Herbarium, Arnold Arboretum of Harvard University, USA, Cambridge.
AA	- Herbarium of the Botanical Institute of the Academy of Sciences of Kazakhstan, Alma-Ata.
ALTB	- Altai State University, Russian, Barnaul
B	- Botanisches Museum, Germany, Berlin-Dahlem.
BM	- British Museum of Natural History, U.K. England, London.
C	- Botanical Museum and Herbarium, Denmark, Copenhagen.
E	- Royal Botanic Garden, Germany, Edinburg.
G	- Conservatoire et Jardin botaniques, Switzerland, Geneve.
GAT	- Gatersleben, Zentral Institut fur Genetik und Kulturpflanzenforschung
GB	- Botanical Museum, Germany, Goteburg.
GH	- Harvard University, USA Massachusetts, Cambridge
HAL	- Martin-Luther-Universitet, Germany, Halle
HIMC	- Herbarium, Department of Biology, University of Inner Mongolia, Huhehot.
K	- The Herbarium, Royal Botanic Gardens, Kew, U.K. England, London.
KUN	- Herbarium of Kunming Institute of Botany, Academia Sinica, Kunming
L	- Rijksherbarium, China, Leiden.
LE	- Herbarium of the Komarov, Botanical Institute of the Russian Academy of Sciences, Russia, St.-Peterburg.
LINN	- The Linnean Society of London, , U.K. England, London.
LIV	- Herbarium, Merseyside Country Museum, , U.K. England, Liverpool.
LY	- Herbaries de l'Universite de Lyon, Departement de Biologie Vegetale, France, Villeurbanne.
LZDI	- Herbarium, Institute of Desert Research. Academia Sinica, Gansu, China, Lanzhou.
LZU	- Herbarium of the Lanzhou University, Gansu, China, Lanzhou.
MICH	- Herbarium of the University of Michigan, Ann Arbor, USA, Michigan.
MO	- Herbarium, Missouri Botanical Garden, St. Louis, USA, Missouri.
MW	- Herbarium of the Moscow State University, Russia, Moscow.
NS	- The Central Siberian Garden of the Siberian Division of the Russian Academy of Sciences, Russia, Novosibirsk.
NY	- Herbarium, New York Botanical Garden, Bronx, USA, New York.
NWBI	- Herbarium North-Western Plateau Institute of Biology, Academia Sinica, Shaanxi, China, Wugung.
O	- Botanical Museum, Norway, Oslo.
OSBU	- University of Osnabruck, Germany, Osnabruck
OXF	- University of Oxford, U.K. England, Oxford,
P	- Museum National d'Histoire Naturelle, France, Paris.
PE	- Institute of Botany, Chinese Academy of Sciences, China, Beijing.
PR	- National Museum in Prague, Czech Republic. Praha.

S	- Swedish Museum of Natural History, Sweden, Stockholm.
SSBG	- South Siberia Botanical Garden, Altai State University, Russia.
TI	- University of Tokyo, Japan, Tokyo.
TK	- Krylov Herbarium University, Russia, Tomsk.
THS	- National Science Museum, Department of Botany, Japan, Tokyo.
UBA	- Herbarium of the Botanical Institute of the Mongolian Academy of Sciences, Mongolia, Ulaanbaatar.
UBU	- Herbarium of the National University of Mongolia, Mongolia, Ulaanbaatar.
UC	- University of California, USA, California, Berkeley.
US	- National Herbarium, Department of Botany, Smithsonian Institution, USA, Washington.
W	- Naturhistorisches Museum, Austria, Wien.
YNFI	- Herbarium, Yunnang Institute of Forestry, China, Yunnang.
XJBI	- Herbarium of the Institute of Biology, Soil and Desert Sciences, Xinjiang, Academy of Sinica, China, Urumgi.
Z	- Institute fur Systematische Botanik der Universitat, Switzerland, Zurich.

## INTRODUCTION

Knowledge of the vascular plant flora of Mongolia has been first compiled by Grubov (1982) in the “Keys to vascular plants of Mongolia”, a flora which was published in Russian and later on translated into English (Grubov 2001). While Grubov’s flora includes keys for species identification and information on the distribution of species within Mongolia, Gubanov (1996) published a list of the vascular plant species and their distribution known at that time from Mongolia in his “Conspectus of the flora of Outer Mongolia (vascular plants)”.

Since the publication of Gubanov’s conspectus in 1996 new records of vascular plant species for Mongolia or for phytogeographical regions within Mongolia have been made. Furthermore, the recent rapid progress in the taxonomy and systematics of vascular plants, which was strongly triggered by the application of molecular methods, has produced numerous changes in plant names and in the systematic position of taxa. The objective of the present work was, thus, to compile an updated version of the checklist of the vascular plants of Mongolia to summarize the recent progress in the knowledge of the occurrence and distribution of vascular plant species in Mongolia and in plant taxonomy on the basis of the published earlier work by Grubov (1982, 2001) and Gubanov (1996).

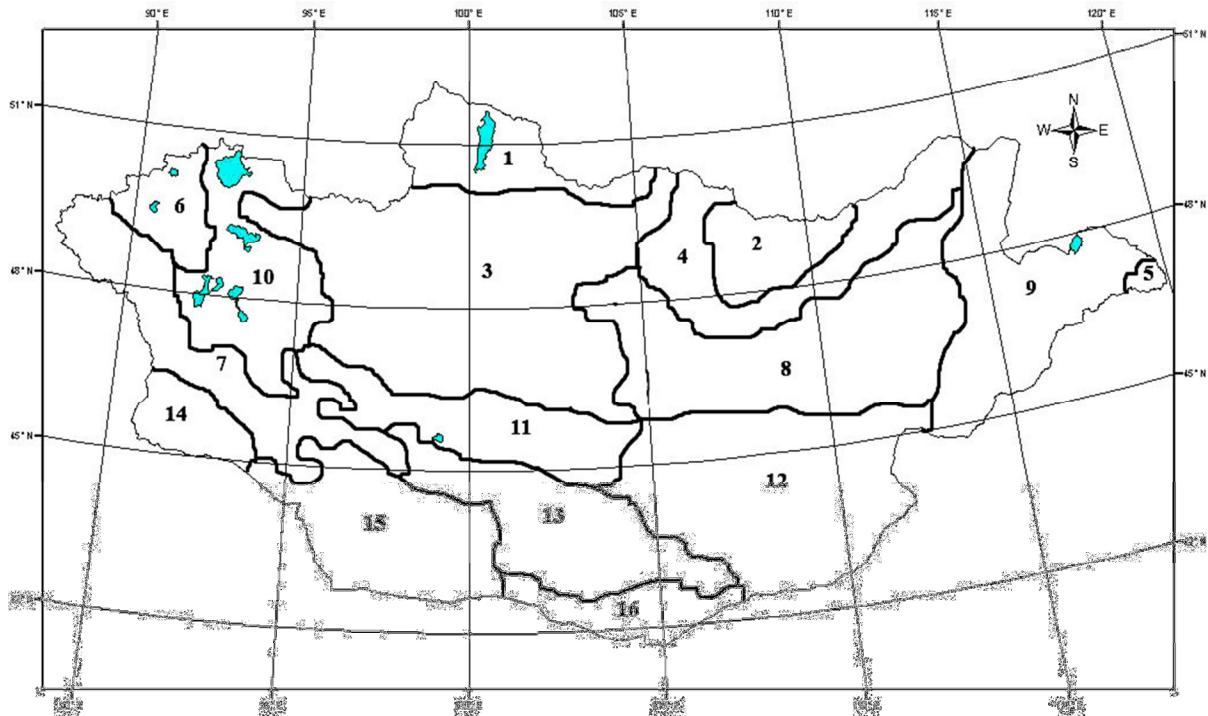
## METHODS

### Structure of the conspectus

The checklist includes the accepted names of all vascular plant species known from Mongolia and, in addition, the names of accepted subspecies and varieties. Selected synonyms are given to facilitate the access to older names in the published literature on the Mongolian flora and to point out that others might assign a different taxonomic status to the taxon (e.g. appraise a species as subspecies or variety, or the other way round). Plant names are cited with author names following Brummitt & Powell (1992) and the International Plant Name Index (IPNI; <http://www.ipni.org>) along with the citation of the reference where the relevant plant name was published. For species described based on Mongolian type material, the *locus classicus* of the type collection is cited. Taxa which are endemic to Mongolia or subendemic to Mongolia and its vicinity are specified. Species are arranged family-wise and sorted alphabetically within the family. Families are arranged following the Angiosperm Phylogeny Group (APG III 2009). The distribution within Mongolia is given as explained below.

### Regional distribution

We follow the division of Mongolia into 16 phytogeographical regions, which has been introduced by Grubov (1982) and later adopted by Gubanov (1996) for regionalization of the information of the occurrence of plant species in Mongolia. The phytogeographical regions are defined in Fig. 1.



**Figure 1.** Phytogeographical regions of Mongolia (after Grubov 1982).

1 – Khotsgol

2 – Khentei

3 – Khangai

4 – Mongolian Dauria

5 – Foothills of Great Khingan

6 – Khovd

7 – Mongolian Altai

8 – Middle Khalkha

9 – East Mongolia

10 – Depression of Great Lakes

11 – Valley of Lakes

12 – East Gobi

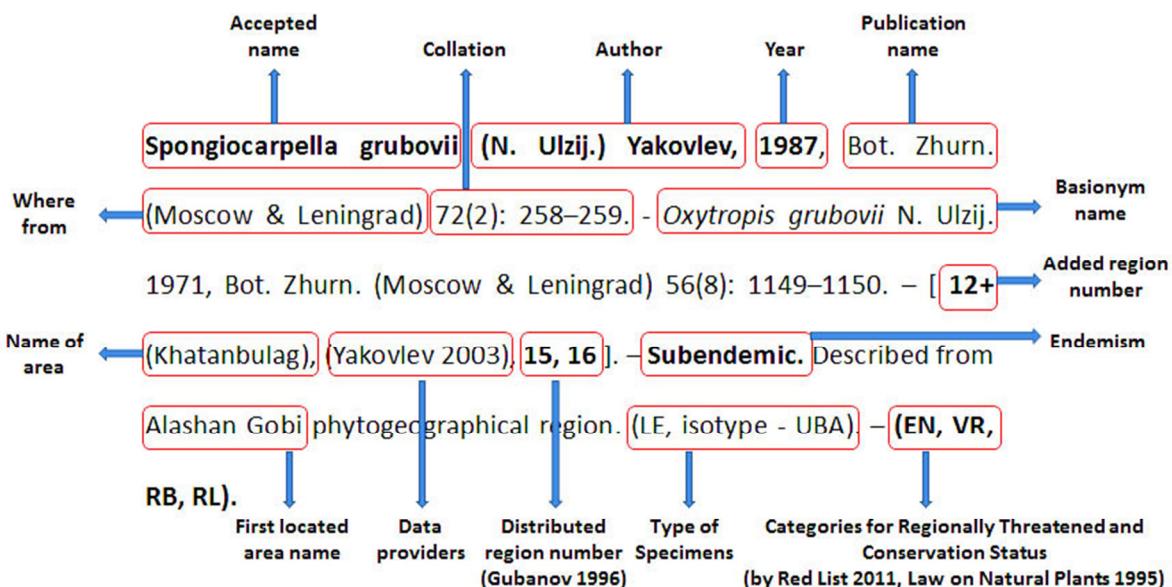
13 – Gobi Altai

14 – Dzungarian Gobi

15 – Transalatai Gobi

16 – Alashan Gobi

#### Text example:



## Nomenclature

Nomenclature and systematic placement of the vascular plant species are based on *Angiosperm Phylogeny Group* (APG III 2009), *Angiosperm Phylogeny Website* (APWeb version 13), *International Plant Name Index* (IPNI), *W3 Tropicos*, *World Checklist Selected Plants* (WCSP), *Global Biodiversity Information Facility* (GBIF), *The Plant List*, *Royal Botanic Gardens, Kew* and *Germplasm Resources Information Network* (ARS-GRIN).

The Angiosperms subclass level classification (Subclass Magnoliidae Novek ex Takht.) and Gymnosperms (Conifers, Ephedras) follows Chase & Reveal (2009), Gymnosperms records derive primarily from WCSP and incorporate the *World Checklist of Conifers* by Farjon (2001). The classification of Pteridophyta follows Smith *et al.* (2006), Christenhusz & al. (2011) and Schmakov (2009).

For the following families, we used the following references for nomenclature: Amaranthaceae (Chenopodiaceae): Grubov (1982), Lomonosova & Freitag (2003); Amaryllidaceae (Alliaceae): Friesen & Oyunsetseg (2013), Ulziykhutag & Enkhmaa (2013); Apiaceae: Urgamal (2009, 2013); Asteraceae: Grubov (2003, 2005); Filatova (2003, 2007), Tzvelev (2008), Dariimaa (2008, 2014); Brassicaceae: German & Oyunsetseg (2008, 2012); Caryophyllaceae: Lazkov (1999); Cyperaceae: Nyambayar (2009, 2011); Fabaceae: Yakovlev (2003), Sanchir (1999, 2000), Ulziykhutag (2003, 2004); Iridaceae: Alexeev (2006, 2008), Zumberelmaa (2009); Lamiaceae: Mathiesen *et al.* (2011); Poaceae: Tzvelev (2001); Polygonaceae: Tupitsyna (2011); Ranunculaceae: Friesen & Timokhina (2003); Rosaceae: Sojak (2007, 2009), Kechaykin & Shmakov (2013); Valerianaceae: Grubov (2001); Violaceae: Nikitin (2008).

## Evaluation of literature and herbarium specimens

The present checklist is based on Gubanov (1996). Monographs and published papers dealing with the flora and vegetation of Mongolia were systematically evaluated for new vascular plant taxa for Mongolia and new taxa for the individual phytogeographical regions.

The herbaria at the Institute of Botany of Mongolian Academy of Sciences (UBA) and at the Department of Biology of the National University of Mongolia (UBU) were checked for new findings and the material was partly critically revised. UBA contains more than 125,000 specimens and UBU about 12,000 specimens. The total 137,000 specimens in both herbaria represent 2745 species of vascular plants belonging to c. 640 genera and 108 families.

Data from these sources and from Gubanov (1996) were compiled in the Database of the Mongolian Flora and Herbarium (UBA) (Urgamal 2008-2014) and used for this conspectus.

## Reviewer's contribution

**Ch. Dulamsuren** (Dr.): Campanulaceae, Caprifoliaceae, Elaeagnaceae, Geraniaceae, Haloragaceae, Hypericaceae, Lythraceae, Malvaceae, Menyanthaceae, Onagraceae, Polemoniaceae, Polygalaceae, Primulaceae, Rhamnaceae, Rutaceae, Thymelaeaceae, Violaceae

<b>V. Gundegmaa</b> (M.Sc.):	genus <i>Potentilla</i>
<b>B. Oyuntsetseg</b> (Dr. Ass. Prof.):	Brassicaceae
<b>T. Munkh-Erdene</b> (M.Sc.):	genus <i>Corydalis</i>
<b>D. Nyambayar</b> (Dr. Ass. Prof.):	Cyperaceae
<b>Ch. Sanchir</b> (Dr. Prof.):	genus <i>Caragana</i>
<b>R. Tungalag</b> (M.Sc.):	Amaranthaceae
<b>M. Urgamal</b> (Dr.):	Apiaceae and other families

## CONCLUSION

### Number of vascular plant taxa known from Mongolia

The present conspectus includes 3127 species and infraspecific taxa, belonging to 683 genera, 112 families and 39 orders (Table 1).

**Table 1. Outline of vascular plant families known from Mongolia**  
(based on APG III and LAPG III, 2009; arranged by APWeb version 13, 2013)

No.	Family	Order	Number of genera	Number of species
# 1	<b>Lycopodiaceae P. Beauv. ex Mirb. 1802</b> [incl. Huperziaceae]	Lycopodiales	3	5
2	Selaginellaceae Willk. 1854	Selaginellales	1	2
\$ 3	<b>Ophioglossaceae Martinov 1820</b> [incl. Botrychiaceae]	Ophioglossales	1	2
4	Equisetaceae Michx. ex DC. 1804	Equisetales	1	9
\$ 5	<b>Dennstaedtiaceae Lotsy 1909</b> [incl. Hypolepidaceae]	Polypodiales	1	1
\$ 6	<b>Pteridaceae E.D.M. Kirchn. 1831</b> [incl. Cryptogrammaceae, Sinopteridaceae]	Polypodiales	2	2
\$ 7	<b>Cystopteridaceae Shmakov 2001</b> [incl. <i>Cystopteris</i> from Athyriaceae]	Polypodiales	1	2
8	Aspleniaceae Newman 1840	Polypodiales	2	5
9	Thelypteridaceae Ching ex Pic. Serm. 1970	Polypodiales	1	1
# 10	<b>Woodsiaceae Herter 1949</b> [incl. <i>Athyrium</i> , <i>Diplazium</i> , <i>Gymnospermum</i> from Athyriaceae]	Polypodiales	4	13
+ 11	<b>Onocleaceae Pic. Serm. 1970</b> [incl. new genus <i>Matteuccia</i> ]	Polypodiales	2	2
\$ 12	<b>Dryopteridaceae Herter 1949</b> [incl. Aspidiaceae]	Polypodiales	1	3
13	Polypodiaceae Bercht. & J. Presl 1822	Polypodiales	2	2
14	Pinaceae Spreng. ex Rudolphi 1830	Pinales	4	9
15	Cupressaceae Gray 1822	Pinales	1	4
16	Ephedraceae Dumort. 1829	Ephedrales	1	9
17	Nymphaeaceae Salish. 1805	Nymphaeales	2	3
\$ 18	<b>Acoraceae Martinov 1820</b> [incl. <i>Acorus</i> from Araceae]	Acorales	1	1
19	Araceae Juss. 1789 [incl. Lemnaceae]	Alismatales	2	4
\$ 20	<b>Tofieldiaceae Takht. 1995</b> [incl. <i>Tofieldia</i> from Melanthiaceae]	Alismatales	1	1
21	Alismataceae Vent. 1799	Alismatales	2	4
22	Butomaceae Mirbel 1804	Alismatales	1	2
\$ 23	<b>Hydrocharitaceae Juss. 1789</b> [incl. Najadaceae]	Alismatales	1	1
24	Scheuchzeriaceae F. Rudolphi 1830	Alismatales	1	1
25	Juncaginaceae Rich. 1808	Alismatales	1	2
# 26	<b>Potamogetonaceae Bercht. &amp; J. Presl 1823</b> [incl. Zannichelliaceae]	Alismatales	3	17
27	Ruppiaceae Horan. 1834	Alismatales	1	1
# 28	<b>Melanthiaceae Batsch. ex Borkh. 1797</b> [incl. Trilliaceae]	Liliales	3	5
29	Liliaceae Juss. 1789	Liliales	6	15
30	Orchidaceae Juss. 1789	Asparagales	15	27
31	Iridaceae Lindl. 1836	Asparagales	1	20

\$ 32	<b>Xanthorrhoeaceae Dumort. 1829</b> [incl. Hemerocallidaceae]	Asparagales	1	2
\$ 33	<b>Amaryllidaceae J. St.-Hil. 1805</b> [incl. Alliaceae]	Asparagales	1	52
# 34	<b>Asparagaceae Juss. 1789</b> [incl. Asphodelaceae, Convallariaceae]	Asparagales	5	19
# 35	<b>Typhaceae Juss. 1789</b> [incl. Sparganiaceae]	Poales	2	11
36	Juncaceae Juss. 1789	Poales	2	31
37	Cyperaceae Juss. 1789	Poales	13	132
38	Poaceae Barnhart 1895 (Gramineae Juss. 1789)	Poales	62	259
39	Ceratophyllaceae Gray 1822	Ceratophyllales	1	1
# 40	<b>Papaveraceae Juss. 1789</b> [incl. Fumariaceae, Hypocoaceae]	Ranunculales	7	29
41	Menispermaceae Juss. 1789	Ranunculales	1	1
42	Berberidaceae Juss. 1789	Ranunculales	1	2
43	Ranunculaceae Juss. 1789	Ranunculales	21	138
44	Paeoniaceae Raf. 1815	Saxifragales	1	3
45	Grossulariaceae DC. 1805	Saxifragales	1	13
46	Saxifragaceae Juss. 1789	Saxifragales	5	21
47	Crassulaceae J. St.-Hil. 1805	Saxifragales	6	19
48	Haloragaceae R. Br. 1814	Saxifragales	1	2
49	Cynomoriaceae Endl. ex Lindl. 1833	Saxifragales	1	1
50	Santalaceae R. Br. 1810	Santalales	1	5
51	Frankeniaciae Desv. 1817	Caryophyllales	1	2
52	Tamaricaceae Link 1821	Caryophyllales	3	13
# 53	<b>Plumbaginaceae Juss. 1789</b> [incl. Limoniaceae]	Caryophyllales	4	19
54	Polygonaceae Lindl. 1836	Caryophyllales	12	66
55	Droseraceae Salisb. 1808	Caryophyllales	1	2
56	Caryophyllaceae Juss. 1789	Caryophyllales	22	97
# 57	<b>Amaranthaceae Juss. 1789</b> [incl. Chenopodiaceae]	Caryophyllales	28	105
58	Molluginaceae Bartl. 1825	Caryophyllales	1	1
\$ 59	<b>Montiaceae Raf. 1820</b> [incl. genus <i>Claytonia</i> from Portulacaceae]	Caryophyllales	1	1
60	Portulacaceae Juss. 1789	Caryophyllales	1	1
61	Zygophyllaceae R. Br. 1814	Zygophyllales	3	13
# 62	<b>Celastraceae R. Br. 1814</b> [incl. Parnassiaceae]	Celastrales	2	3
63	Oxalidaceae R. Br. 1818	Oxalidales	1	1
64	Euphorbiaceae Juss. 1789	Malpighiales	1	14
\$ 65	<b>Phyllanthaceae Martinov 1820</b> [incl. new genus <i>Flueggea</i> to replaced <i>Securinaga</i> from Euphorbiaceae]	Malpighiales	1	1
66	Salicaceae Mirb. 1815	Malpighiales	2	49
67	Violaceae Batsch. 1802	Malpighiales	1	26
68	Linaceae DC. ex Perleb 1818	Malpighiales	1	5
69	Hypericaceae Juss. 1789	Malpighiales	1	4
70	Fabaceae Lindl. 1836 (Leguminosae Juss. 1789)	Fabales	26	356
71	Polygalaceae Hoffmanns. & Link 1809	Fabales	1	3
72	Betulaceae Gray. 1822	Fagales	2	10
73	Rosaceae Juss. 1789	Rosales	28	161
74	Elaeagnaceae Juss. 1789	Rosales	2	3
75	Rhamnaceae Juss. 1789	Rosales	1	5
76	Ulmaceae Mirb. 1815	Rosales	1	3
77	Cannabaceae Martinov 1820	Rosales	1	1

78	Urticaceae Juss. 1789	Rosales	2	4
79	Geraniaceae Juss. 1789	Geriales	2	14
80	Lythraceae J. St.-Hil. 1805	Myrales	2	3
81	Onagraceae Juss. 1789	Myrales	2	11
# 82	<b>Cleomaceae Bercht. &amp; J. Presl 1825</b> [incl. genus <i>Cleoma</i> from Capparaceae]	Brassicales	1	1
83	Brassicaceae Burnett 1835 (Cruciferae Juss. 1789)	Brassicales	61	160
84	Malvaceae Juss. 1789	Malvales	3	6
85	Thymelaeaceae Juss. 1789	Malvales	2	3
86	Biebersteiniaceae Schnizlein 1856	Sapindales	1	1
# 87	<b>Nitrariaceae Lindl. 1830</b> [incl. Peganaceae]	Sapindales	2	6
88	Rutaceae Juss. 1789	Sapindales	2	2
89	Cornaceae Bercht. ex J. Presl 1825	Cornales	1	1
90	Balsaminaceae A. Rich. 1822	Ericales	1	1
91	Polemoniaceae Juss. 1789	Ericales	2	4
92	Primulaceae Batsch ex Borkh. 1797	Ericales	5	28
# 93	<b>Ericaceae Juss. 1789</b> [incl. Vacciniaceae, Empetraceae, Pyrolaceae, Monotropaceae]	Ericales	12	27
94	Boraginaceae Juss. 1789	Boraginales	22	66
95	Rubiaceae Juss. 1789	Gentianales	3	13
96	Gentianaceae Juss. 1789	Gentianales	8	34
# 97	<b>Apocynaceae Juss. 1789</b> [incl. Asclepiadaceae]	Gentianales	2	10
# 98	<b>Plantaginaceae Juss. 1789</b> [incl. <i>Lagotis</i> , <i>Linaria</i> , <i>Pseudolysimachion</i> , <i>Veronica</i> , <i>Veronicastrum</i> from Scrophulariaceae Callitrichaceae and Hippuridaceae]	Lamiales	8	46
99	Scrophulariaceae Juss. 1789	Lamiales	3	6
\$ 100	<b>Phrymaceae Schauer 1847</b> [incl. two genera <i>Dodartia</i> , <i>Lancea</i> from Scrophulariaceae; genus <i>Mazus</i> from Mazaceae]	Lamiales	3	3
# 101	<b>Lamiaceae Martinov 1820</b> (Labiatae Juss. 1789) [incl. <i>Caryopteris</i> from Verbenaceae]	Lamiales	24	103
# 102	<b>Orobanchaceae Vent. 1799</b> [incl. <i>Castilleja</i> , <i>Cymbalaria</i> , <i>Euphrasia</i> , <i>Odontites</i> , <i>Pedicularis</i> , <i>Rhinanthus</i> from Scrophulariaceae]	Lamiales	9	59
103	Lentibulariaceae Rich 1808	Lamiales	2	6
104	Bignoniaceae Juss. 1789	Lamiales	1	1
# 105	<b>Convolvulaceae Juss. 1789</b> [incl. Cuscutaceae]	Solanales	4	16
106	Solanaceae Juss. 1789	Solanales	4	9
107	Campanulaceae Juss. 1789	Asterales	4	17
108	Menyanthaceae Dumort. 1829	Asterales	2	2
109	Asteraceae Bercht. & J. Presl 1820 (Compositae Giseke 1792)	Asterales	87	478
110	Apiaceae Lindl. 1836 (Umbelliferae Juss. 1789)	Apiales	37	74
111	Adoxaceae E. Mey. 1839 [incl. <i>Sambucus</i> , <i>Viburnum</i> from Caprifoliaceae]	Dipsacales	3	7
# 112	<b>Caprifoliaceae Juss. 1789</b> [incl. Valerianaceae, Dipsacaceae]	Dipsacales	5	24
<b>Total</b>		<b>39 orders</b>	<b>683</b>	<b>3127</b>

**Symbols explaining changes compared to Gubanov (1996):**

- # - includes species which were formerly assigned to another family
- + - new addition to the flora of Mongolia
- \$ - name change (new combination)

Affiliation of the 39 plant orders with species occurring in Mongolia to higher taxonomic units is compiled in Table 2.

**Table 2. Classification of the vascular plants known from Mongolia in higher taxonomic units** (based on APG III; arranged by APWeb, version 13, 2013)

Superclade	Division	Class or clade	Order	Number of families
Ferns	1. Lycopodiophyta	1. Lycopodiopsida	1. Lycopodiales	1
		2. Isoetopsida	2. Selaginellales	1
	2. Pteridophyta	3. Psilotopsida	3. Ophioglossales	1
		4. Equisetopsida	4. Equisetales	1
		5. Polypodiopsida	5. Polypodiales	9
Gymnosperms	3. Pinophyta	6. Pinopsida	6. Pinales	2
	4. Gnethophyta	7. Gnetales	7. Ephedrales	1
Angiosperms	5. Magnoliophyta	-	8. Nymphaeales	1
		8. Monocots	9. Acorales	1
			10. Alismatales	9
			11. Liliales	2
			12. Asparagales	5
		9. Commelinids	13. Poales	4
		10. Probably sister eudicots	14. Ceratophyllales	1
		11. Eudicots	15. Ranunculales	4
		12. Core eudicots	16. Saxifragales	6
			17. Santalales	1
			18. Caryophyllales	10
		13. Rosids	19. Zygophyllales	1
			20. Celastrales	1
			21. Oxalidales	1
			22. Malpighiales	6
			23. Fabales	2
			24. Fagales	1
			25. Rosales	6
		Eurosids I (Fabids)	26. Geraniales	1
			27. Myrtales	2
			28. Brassicales	2
			29. Malvales	2
			30. Sapindales	3
	14. Asterids		31. Cornales	1
			32. Ericales	4
		Euasterids I (Lamiids)	33. Boraginales	1
			34. Gentianales	3
	Euasterids II (Campanulidiids)		35. Lamiales	7
			36. Solanales	2
			37. Asterales	3
			38. Apiales	1
			39. Dipsacales	2

The 20 largest families as well as the 20 largest genera of the Mongolian vascular plant flora are listed in Table 3. The Asteraceae are by far the largest family with 478 species, followed by the Fabaceae (356 species) and the Poaceae (259 species). Other species-rich families with more than 100 species in the Mongolian flora include the Rosaceae, Brassicaceae, Ranunculaceae, Cyperaceae, Amaranthaceae, and Lamiaceae. *Astragalus* (132 species), *Artemisia* (104 species), *Oxytropis* (99 species) and *Carex* (92 species) are the largest genera of the Mongolian flora.

**Table 3. The twenty largest genera and families to the flora of Mongolia**

Family	Number of species	Percent of total	Genus	Number of species	Percent of total
1. Asteraceae Bercht. & J. Presl	478	15.28	1. <i>Astragalus</i> L.	132	4.22
2. Fabaceae Lindl.	356	11.38	2. <i>Artemisia</i> L.	104	3.32
3. Poaceae Barnhart	259	8.28	3. <i>Oxytropis</i> DC.	99	3.16
4. Rosaceae Juss.	161	5.14	4. <i>Carex</i> L.	92	2.94
5. Brassicaceae Burnett	160	5.11	5. <i>Potentilla</i> L.	73	2.33
6. Ranunculaceae Juss.	138	4.41	6. <i>Taraxacum</i> F.H. Wigg.	57	1.82
7. Cyperaceae Juss.	132	4.22	7. <i>Saussurea</i> DC.	53	1.69
8. Amaranthaceae Juss.	105	3.35	8. <i>Allium</i> L.	52	1.66
9. Lamiaceae Martinov	103	3.29	9. <i>Salix</i> L.	43	1.37
10. Caryophyllaceae Juss.	97	3.10	10. <i>Pedicularis</i> L.	36	1.15
11. Apiaceae Lindl.	74	2.36	11. <i>Poa</i> L.	31	0.99
12. Boraginaceae Juss.	66	2.11	12. <i>Stipa</i> L.	27	0.86
13. Polygonaceae Lindl.	66	2.11	13. <i>Ranunculus</i> L.	26	0.83
14. Orobanchaceae Vent.	59	1.88	14. <i>Viola</i> L.	26	0.83
15. Amaryllidaceae J. St.-Hil.	52	1.66	15. <i>Aconitum</i> L.	24	0.76
16. Salicaceae Mirb.	49	1.56	16. <i>Silene</i> L.	24	0.76
17. Plantaginaceae Juss.	46	1.47	17. <i>Vicia</i> L.	23	0.73
18. Gentianaceae Juss.	34	1.08	18. <i>Hedysarum</i> L.	22	0.70
19. Juncaceae Juss.	31	0.99	19. <i>Juncus</i> L.	21	0.67
20. Papaveraceae Juss.	29	0.92	20. <i>Festuca</i> L.	21	0.67

#### Comparison of species numbers with former conspectus

A total of 3127 vascular plant species and subspecies presently known from Mongolia. This is an increase by 412 species and subspecies compared to Gubanov's conspectus (1996) and by 887 species compared to Grubov (1982) (Table 4).

**Table 4. Development of the number of vascular plant taxa known from Mongolia**

Sources and references	Family	Genus	Species and infraspecific taxa
Grubov (1955)	97	555	1897
Grubov (1982)	103	599	2239
Ulziykhutag (1989)	122	625	2443
Gubanov (1996)	128	662	2823
Virtual Flora of Mongolia (FloraGREIF, Germany, 2013)	128	669	2871

Oyuntsetseg & Urgamal (as of September 2013)	*112	676	3014
Urgamal, Oyuntsetseg & Nyambayar (2013)	*112	679	3053
Tserenbaljid (2014)	-	-	3100
Urgamal & Sanchir (as of April 2014)	*112	683	3113
<b>This conspectus (as of August 2014)</b>	<b>*112</b>	<b>683</b>	<b>3127</b>

\* families are based on APG (LAPG) III

Most new records are from the largest plant families in the flora of Mongolia (Table 5). A total of 80 new species was found in the Asteraceae and 54 new species for Mongolia were recorded in the Fabaceae since Gubanov (1996).

**Table 5. Numbers of new vascular plant species in the individual families recorded after Gubanov (1996)**

Family	Number of species	Family	Number of species	Family	Number of species
1. Adoxaceae	1	17. Elaeagnaceae	1	33. Orobanchaceae	7
2. Amaranthaceae	13	18. Ericaceae	5	34. Papaveraceae	5
3. Amaryllidaceae	4	19. Euphorbiaceae	5	35. Phrymaceae	1
4. Apiaceae	9	20. Fabaceae	54	36. Pinaceae	1
5. Apocynaceae	2	21. Gentianaceae	2	37. Plantaginaceae	7
6. Asparagaceae	3	22. Geraniaceae	1	38. Poaceae	25
7. Asteraceae	80	23. Iridaceae	7	39. Polygonaceae	2
8. Boraginaceae	19	24. Juncaceae	2	40. Primulaceae	2
9. Brassicaceae	30	25. Lamiaceae	16	41. Ranunculaceae	23
10. Campanulaceae	2	26. Liliaceae	4	42. Rhamnaceae	1
11. Caprifoliaceae	5	27. Linaceae	2	43. Rosaceae	24
12. Caryophyllaceae	14	28. Lythraceae	2	44. Rubiaceae	2
13. Crassulaceae	2	29. Nitrariaceae	1	45. Scrophulariaceae	2
14. Cyperaceae	6	30. Onagraceae	2	46. Thymelaeaceae	1
15. Cystopteridaceae	1	31. Onocleaceae	2	47. Typhaceae	2
16. Dryopteridaceae	1	32. Orchidaceae	1	48. Violaceae	8
<b>Total: 412</b>					

The largest families also contribute most to the endemic and subendemic vascular plant species in Mongolia (Table 6). In total, 153 endemic (4.89%) and 458 subendemic (14.64%) species belong to the Mongolian flora according to the present state of taxonomic and phytogeographical knowledge. The Fabaceae and Asteraceae include most of these species.

**Table 6. Distribution of endemic and subendemic vascular plant species in the Mongolian flora over families**

Endemic			Subendemic		
Family name	Species number	Percent of total	Family name	Species number	Percent of total
1. Fabaceae	47	1.50	1. Fabaceae	117	3.74
2. Asteraceae	32	1.02	2. Asteraceae	94	3.00
3. Rosaceae	17	0.54	3. Brassicaceae	30	0.95
4. Brassicaceae	8	0.25	4. Poaceae	26	0.83

5. Ranunculaceae	7	0.22	5. Rosaceae	22	0.70
6. Lamiaceae	6	0.19	6. Boraginaceae	18	0.57
7. Papaveraceae	6	0.19	7. Lamiaceae	17	0.54
8. Caryophyllaceae	5	0.15	8. Ranunculaceae	17	0.54
9. Juncaceae	3	0.09	9. Amaranthaceae	16	0.51
10. Plumbaginaceae	3	0.09	10. Apiaceae	13	0.41
11. Amaranthaceae	2	0.06	11. Amaryllidaceae	10	0.31
12. Plantaginaceae	2	0.06	12. Violaceae	10	0.31
13. Solanaceae	2	0.06	13. Caryophyllaceae	8	0.25
14. Apocynaceae	1	0.03	14. Plantaginaceae	7	0.22
15. Bignoniaceae	1	0.03	15. Iridaceae	6	0.19
16. Campanulaceae	1	0.03	16. Orobanchaceae	6	0.19
17. Caprifoliaceae	1	0.03	17. Zygophyllaceae	5	0.15
18. Caryophyllaceae	1	0.03	18. Crassulaceae	4	0.12
19. Cleomaceae	1	0.03	19. Euphorbiaceae	4	0.12
20. Euphorbiaceae	1	0.03	20. Liliaceae	3	0.09
21. Gentianaceae	1	0.03	21. Gentianaceae	2	0.06
22. Orobanchaceae	1	0.03	22. Grossulariaceae	2	0.06
23. Polygonaceae	1	0.03	23. Nitrariaceae	2	0.06
24. Rubiaceae	1	0.03	24. Plumbaginaceae	2	0.06
25. Scrophulariaceae	1	0.03	25. Polygonaceae	2	0.06
26. Zygophyllaceae	1	0.03	26. Salicaceae	2	0.06
			27. Campanulaceae	1	0.03
			28. Adoxaceae	1	0.03
			29. Apocynaceae	1	0.03
			30. Asparagaceae	1	0.03
			31. Caprifoliaceae	1	0.03
			32. Cyperaceae	1	0.03
			33. Frankeniaceae	1	0.03
			34. Geraniaceae	1	0.03
			35. Linaceae	1	0.03
			36. Saxifragaceae	1	0.03
			37. Scrophulariaceae	1	0.03
			38. Solanaceae	1	0.03
			39. Thymelaeaceae	1	0.03
<b>26 families</b>	<b>153</b>	<b>4.89%</b>	<b>39 families</b>	<b>458</b>	<b>14.64%</b>

### Regional differences in species numbers

The individual 16 phytogeographical regions of Mongolia (Fig. 1) strongly differ in the number of recorded vascular plant species (Table 7). The mountainous areas in the west (Mongolian Altai, Khovd) and the north (Khangai, Mongolian Dauria, Khentei, Khovsgol) of Mongolia show the highest richness of known vascular plant species with 1078 to 1636 species per region. The lowest species numbers are found in some of the dry phytogeographical regions, viz. the Alashan Gobi, Transaltai Gobi, Valley of Lakes and Depression of Great Lakes with a range of 272 to 481 species per region.

**Table 7. Total and added species in the phytogeographical regions of Mongolia**

<b>Phyto-geographical region name and number (as found in the checklist)</b>	<b>Number of new records</b>	<b>Total species</b>	<b>Percent of total flora</b>	<b>Rank</b>
1. Khovsgol	73	1078	34.4	V
2. Khentei	108	1266	40.4	IV
3. Khangai	75	1547	49.4	II
4. Mongolian Dauria	90	1307	41.7	III
5. Foothills of Great Khingan	39	846	27.0	XI
6. Khovd	86	1041	33.2	VI
7. Mongolian Altai	246	1636	52.3	I
8. Middle Khalkha	65	791	25.3	XII
9. East Mongolia	69	971	31.0	VII
10. Depression of Great Lakes	88	897	28.6	VIII
11. Valley of Lakes	39	481	15.3	XIII
12. East Gobi	32	480	15.3	XIV
13. Gobi Altai	62	888	28.3	IX
14. Dzungarian Gobi	96	865	27.6	X
15. Transalтай Gobi	26	383	12.2	XV
16. Alashan Gobi	34	272	8.6	XVI

The regional differences in species richness are in part due to differences in habitat characteristics and diversity between the individual regions. The main part of specific richness is concentrated in the middle altitudinal belts of great mountain systems of Mongolian Altai, Gobi Altai, Khangai, Khentei, southern Sayans and the Sangilen river basin, as well as in the area of these landscapes is not large, but the flora is rich enough. However, there are also marked difference in the state of floristic research, as is evidenced by high increases in vascular plant species compared to the conspectus of Gubanov (1996) in the Mongolian Altai and the Khentei (Table 7).

## ACKNOWLEDGMENTS

We would like to express our thanks to all contributions:

The Dr. J. Batbold, Kh. Oyunbileg (Ministry of Environment and Green Development of Mongolia), Academician A. Dulmaa (Institute of Biology, Mongolian Academy of Sciences), Dr. Prof., Ts. Jamsran, Dr. Prof., Ts. Tsendeekhuu, Dr. Prof., B. Bayartogtokh, Dr. Prof., N.Soninkhishig, Dr. Prof., D. Suran, M.Sc. R. Tungalag (National University of Mongolia), Dr. Prof., Ch. Sanchir, Dr. Ass. Prof., I. Tuvshintogtokh, Dr., B. Mandakh, B. Munkhjargal, M.Sc. B. Bat-Enerel, M.Sc. T. Munkh-Erdene, M.Sc. Kh. Solongo (Institute of Botany, Mongolian Academy of Sciences), Dr. U. Ligaa (Mongolian State University of Agriculture), Dr. Prof., Markus Hauck (Georg August University of Goettingen, Germany), Dr. Nikolai Friesen (University of Osnabrueck, Germany), Dr. Dmitrii German (University of Heidelberg, Germany), Dr. Karsten Wesche (Senckenberg Museum of Natural History, Görlitz, Germany), M.Sc. V. Gundegmaa (Mongolian State University of Education), D. Darikhand (Khovd University) and others.

## ТАНИЛЦУУЛГА

Монголын гуурст ургамлыг бүртгэсэн анхны ажил бол В.И. Грубовын 1955 онд орос хэл дээр хэвлүүлсэн “Конспект Флоры Монгольской Народной Республики” юм. Энэхүү бүтээлд 1875 зүйл ургамлыг бүртгэж, тэдгээрийн ургах орчин, тархалтын талаарх мэдээллийг багтаасан. Бүртгэл бичгийг И.А. Губанов 1996 онд шинэчлэн мянга орчим зүйлийг нэмж бүртгэсэн ба зүйл тус бүрийн тархалтын мэдээлэл бүхий энэхүү хураангуй жагсаалт “Конспект Флоры Внешней Монголии (сосудистые растения)” нэртэйгээр мөн орос хэл дээр хэвлэгдсэн. Үүнээс хойш эдүгээ бараг 20 жил өнгөрсөн боловч өнөөг хүртэл бүртгэлийг шинэчлээгүй тул өдгөө Монгол улсад баримталж буй ургамлын төрөл ба зүйлийн тоо, нэршил, тархалт, түүнчлэн унаган болон завсрын унаган хийгээд нэн ховор, ховор зүйлийн мэдээллүүд нэгэнтээ хоцрогджээ. Өнөөдөр Монгол улс өөрийн орны гуурст дээд ургамлын аймгийн бүтэц бүрэлдэхүүн болох овог, төрөл, зүйлийн бүртгэлийг өнөөгийн түвшинд шинжлэх ухааны үндэслэлтэй, олон улсад мөрдөгдөж буй Дэлхийн Ургамлын Ангилалзүйчдын Их Хурлаас баталсан удамшлын молекул мэдээлэлд үндэслэгдсэн Далд үртний филогенетик ангиллын (Angiosperm Phylogeny Group, APG III) системийн дагуу байрлуулан бичих явдал зайлшгүй болсон. Бид энэхүү бүтээлдээ Монгол оронд тархсан гуурст ургамлын овог, төрөл, зүйлийг өдгөө дэлхий нийтээр баримталж буй ангиллын (APG III system) шинэ системийн дагуу бичиж, нэршлийг (Plant Nomenclature) үнэн зөв тогтоохын зэрэгцээ өмнөх бүтээлүүдээс (Гробов 1982; Губанов 1996) хойш шинээр тэмдэглэгдсэн тархалтын мэдээллийг нэгтгэхийг зорилоо.

## АРГА АРГАЧЛАЛ

### Бүтэц

Бүртгэл бичигт Монголын ургамлын аймагт бүртгэгдсэн бүх гуурст ургамлын зүйл, дэд зүйлийн хүчин төгөлдөр нэрс багтсан. Өмнө хэвлэгдсэн бүтээлүүдэд ангиллын өөр түвшинд, эсвэл өөр нэрээр бичигдсэн тохиолдолд харгалзах адилцаа нэrsийг зүйлийн нэрийн ард бичив. Ургамлын нэршил зохиогчийн нэрийг хэвлэгдсэн бүтээлийн ишлэлийн хамт Brummitt & Powell (1992)-ийн бүтээл ба Олон Улсын Ургамлын Нэрийн Индекст (IPNI; <http://www.ipni.org>) ашиглаж буй хэлбэрээр авсан. Монголоос олдсон тип материалд үндэслэн бичигдсэн зүйлийн тип цуглуулга олдсон газрын нэр ба хадгалагдаж буй цуглуулгын сангийн товчилсон нэрийг дурдсан. Монголын унаган ба завсрын унаган зүйлийг тодотгон тэмдэглэсэн. Овгуудыг APG III (2009) системийн дагуу, овогт хамаарах зүйлүүдийг цагаан толгойн үсгийн дарааллаар байрлуулсан.

### Монгол дахь тархалт

Тухайн зүйл ургамал тохиолдох ургамал-газарзүйн тойргийн дугаарыг зүйлийн нэрийн ард тогтсон дарааллын дагуу жагсаасан. Ургамал-газарзүйн 16 тойргийн хил хязгаарыг В.И. Грубовын (1982) бүтээлд хэвлэгдэж, И.А. Губановын (1996) бүртгэл бичигт баримталсан хувилбараар авч ашиглав (Зураг 1-ийг үзнэ үү).

## Монгол орны ургамал-газарзүйн тойргууд

- |                   |                       |
|-------------------|-----------------------|
| 1 – Хөвсгөл       | 9 – Дорнод Монгол     |
| 2 – Хэнтий        | 10 – Их нуур          |
| 3 – Хангай        | 11 – Олон нуур        |
| 4 – Монгол Дагуур | 12 – Дорнод говь      |
| 5 – Хянган        | 13 – Говь-Алтай       |
| 6 – Ховд          | 14 – Зүүнгарын говь   |
| 7 – Монгол Алтай  | 15 – Алтайн өвөр говь |
| 8 – Дундад Халх   | 16 – Алашаа говь      |

### Томъёолсон тэмдэглэл

- + нэрийн өмнө: Монголд шинэ (Губановын бүртгэл бичгээс (1996) хойш нэмэгдсэн)
- + тойргийн дугаарын ард: тухайн тойротг шинээр тэмдэглэгдсэн (1996 оноос хойш)
- # нэрийн өмнө: нэр өөрчлөгдсөн (1996 оноос хойш)
- ? нэрийн өмнө: ангиллын байр суурь бүрэн шийдвэрлэгдээгүй, тодорхойгүй нэгж

### Жишээ текст:



### Нэрлэлзүй

Ангиллын нэгжүүдийн нэрлэлзүйд болон систем дараалалд байрлуулахад дараах мэдээллийн сан, цахим хуудсуудад буй мэдээллийг голлон харгалзав. Үүнд: *Angiosperm Phylogeny Website* (APWeb version 13), *International Plant Name Index* (IPNI), *W3 Tropicos*, *World Checklist Selected Plants* (WCSP), *Global Biodiversity Information Facility* (GBIF), *The Plant List*, *Royal Botanic Gardens, Kew* and *Germplasm Resources Information Network* (ARS-GRIN).

Далд үртний дэд ангийн түвшний (Subclass Magnoliidae Novek ex Takht.) болон Нүцгэн үртний (Conifers, Ephedras) ангилалд Chase & Reveal (2009)-ын бүтээлийг баримталсан. Нүцгэн үртний холбогдолтой мэдээлэлд голчлон WCSP, Farjon (2001)-ий Дэлхийн шилмүүстний бүртгэл бичгийг (*World Checklist of Conifers*), Ойм хэлбэртний (Pteridophyta) ангилалд Smith *et al.* (2006), Christenhusz & al. (2011), Schmakov (2009) нарын бүтээлийг тус тус харгалзав.

Нэр бүхий зарим овгийн боловсруулалтад дараах бүтээлүүдийг ашиглав. Үүнд: Amaranthaceae (Chenopodiaceae): Grubov (1982), Lomonosova & Freitag (2003); Amaryllidaceae (Alliaceae): Friesen & Oyunsetseg (2013), Ulziykhutag & Enkhmaa (2013); Apiaceae: Urgamal (2009, 2013); Asteraceae: Grubov (2003, 2005); Filatova (2003, 2007), Tzvelev (2008), Dariimaa (2008, 2014); Brassicaceae: German & Oyunsetseg (2008, 2012); Caryophyllaceae: Lazkov (1999); Cyperaceae: Nyambayar (2009, 2011); Fabaceae: Yakovlev (2003), Sanchir (1999, 2000), Ulziykhutag (2003, 2004); Iridaceae: Alexeev (2006, 2008), Zumberelmaa (2009); Lamiaceae: Mathiesen *et al.* (2011); Poaceae: Tzvelev (2001); Polygonaceae: Tupitsyna (2011); Ranunculaceae: Friesen & Timokhina (2003); Rosaceae: Sojak (2007, 2009), Kechaykin & Shmakov (2013); Valerianaceae: Grubov (2001); Violaceae: Nikitin (2008).

### **Холбогдох хэвлэлийн ба цуглуулгын материалын шүүн боловсруулалт**

Бүртгэл бичгийг Губановын конспектэд (1996) тулгуурлаж, зохих нэмэлт, өөрчлөлтүүдийг хийсэн. Монголын ургамлын аймаг, ургамалжилтын чиглэлээр бичигдсэн нэг сэдэвт бүтээл, хэвлэгдсэн өгүүлэл, илтгэл нийт 720 гаруйг шүүн боловсруулж шинээр нэмэгдсэн ургамал, тархалтын шинэ цэгүүдийг олж тогтоосон.

ШУА-ийн Ботаникийн хүрээлэнгийн ургамлын сан (UBA), МУИС-ийн ургамлын санд (UBU) хадгалагдаж буй цуглуулгын зарим материалыг хянан боловсруулах замаар шинэ ургамал, тархалтын шинэ цэгүүдийг баталгаажуулсан. Ботаникийн хүрээлэнгийн ургамлын сан 125,000 орчим, МУИС-ийн ургамлын сан 12,000 орчим хуудас цуглуулгатай бөгөөд эдгээр цуглуулга нийтдээ 108 овгийн 640 орчим төрлийн 2745 зүйлд хамаарна. Дээр дурдсан бүх мэдээллийг нэгтгэж “Монголын ургамлын аймаг ба цуглуулгын мэдээллийн сан”-г (Urgamal 2008-2014) бүрдүүлээд байна.

#### **Шүүн боловсруулагчдын оролцоо**

**Ч. Дуламсүрэн** (доктор): Campanulaceae, Caprifoliaceae, Elaeagnaceae, Geraniaceae, Haloragaceae, Hypericaceae, Lythraceae, Malvaceae, Menyanthaceae, Onagraceae, Polemoniaceae, Polygalaceae, Primulaceae, Rhamnaceae, Rutaceae, Thymelaeaceae, Violaceae

**В. Гүндэгмаа** (магистр): *Potentilla* төрөл

**Б. Оюунцэцэг** (доктор, дэд профессор): Brassicaceae

**Т. Мөнх-Эрдэнэ** (магистр): *Corydalis* төрөл

**Д. Нямбаяр** (доктор, дэд профессор): Cyperaceae

**Ч. Санчир** (доктор, профессор): *Caragana* төрөл

**Р. Тунгалаг** (магистр): Amaranthaceae

**М. Ургамал** (доктор): Apiaceae ба бусад овгууд

## ДҮГНЭЛТ

### Монголын ургамлын аймаг дахь гуурст ургамлын тоон үзүүлэлт

Монголын ургамлын аймагт одоогоор 39 баг, 112 овог, 683 төрөлд хамаарах 3127 зүйл, дэд зүйлийн гуурст ургамал бүртгэгдээд байна (Хүснэгт 1 ба 2-ыг үзнэ үү).

Ургамлын аймгийн хамгийн олон зүйлтэй томоохон овог, төрлүүдийг Хүснэгт 3-т жагсаав. Томоохон овгуудыг Asteraceae 478, Fabaceae 356, Poaceae 259 зүйлтэй тэргүүлэх ба зуугаас олон зүйлтэй Rosaceae, Brassicaceae, Ranunculaceae, Cyperaceae, Amaranthaceae, Lamiaceae овгууд удаалж байна. Томоохон төрөлд *Astragalus* (132 зүйл), *Artemisia* (104 зүйл), *Oxytropis* (99 зүйл) ба *Carex* (92 зүйл) төрлүүд багтав.

### Өмнө хэвлэгдсэн бүтээлүүдтэй харьцуулсан үзүүлэлт

Бүртгэл бичигт нийт 3127 зүйл, дэд зүйл бүртгэгдсэн нь Губановын бүтээлээс (1996) 412 зүйлээр, Грубовын тодорхойлох бичгээс (1982) 887 зүйлээр илүү байна (Хүснэгт 4).

Томоохон овгуудад илүү олон шинэ олдвор бүртгэгдсэн ба тухайлбал Губановын бүртгэл бичгээс (1996) хойш Asteraceae овогт 80 зүйл, Fabaceae овогт 54 зүйл нэмэгджээ (Хүснэгт 5).

Монголын унаган ба завсрыйн унаган ургамлын эзлэх хувиар мөн томоохон овгууд тэргүүлнэ (Хүснэгт 6). Ангилал ба ургамал-газарзүйн өнөөгийн мэдээ баримтаас үзвэл Монголын ургамлын аймагт нийт 153 унаган (4.89%), 458 завсрыйн унаган (14.64%) ургамал байгаагийн олонх нь Fabaceae ба Asteraceae овогт хамаарч байна.

### Бүс нутгуудын харьцуулсан үзүүлэлт

Ургамал-газарзүйн 16 тойргийг (Зураг 1) зүйлийн тоогоор харьцуулахад ихээхэн ялгаатай байна (Хүснэгт 7). Монгол Алтай, Ховд зэрэг баруун Монголын, Хангай, Монгол Дагуур, Хэнтий, Хөвсгөл зэрэг умард Монголын уулархаг нутгууд нэг тойрогт 1078-аас 1636 хүртэл зүйл ургамал бүртгэгдсэн үзүүлэлтээр ургамлын зүйлийн бүрдлээр хамгийн баялаг бүс нутагт тооцогдов. Харин Алашаа.gov, Алтайн өвөр.gov, Их нууруудын хотгор, Олон нуурын хөндий зэрэг хуурай гандуу бүс нутгуудад хамгийн цөөн буюу 272-оос 481 зүйл бүртгэгджээ.

Бүс нутгууд ургамлын зүйлийн бүрдлээр ялгаатай байгаа нь нэг талаас амьдрах орчны онцлогоос хамаарч байгаа боловч нөгөө талаас бүс нутаг бүрт ургамлын аймгийн судалгаа ижил түвшинд хийгдээгүйтэй холбоотой байж болох юм.

## **ТАЛАРХАЛ**

Энэхүү бүртгэл бичгийг бүтээх нөр их ажлын бүх үе шатанд оролцож, хувь нэмрээ оруулсан хүмүүст талархаж байна.

Номын эхийг шүүн тунгааж, хянан тохиолдуулсан доктор, профессор Ч. Санчир (ШУА-ийн Ботаникийн хүрээлэн), Монгол улсын гавьяат багш, доктор, профессор Ц. Жамсран (МУИС) нарт онцгойлон талархал илэрхийлье.

Бидний ажлыг олон талаар дэмжиж тусалсан, үнэтэй санал шүүмжээ ирүүлсэн доктор Ж. Батболд, Х. Оюунбилэг (БОНХЯ), академич А. Дулмаа (ШУА-ийн Биологийн хүрээлэн), доктор М. Хаук (Георг-Августын Их Сургууль, Гётtingен, ХБНГУ), доктор, профессор Б. Баяртготох (МУИС), доктор, профессор Д. Суран, Р. Тунгалаг (МУИС), доктор У. Лигаа (ХААИС), доктор, дэд профессор И. Түвшинтогтох, доктор Б. Мандах, магистр Т. Мөнх-Эрдэнэ (ШУА-ийн Ботаникийн хүрээлэн), докторант В. Гүндэгмаа (МУБИС), докторант Д. Дарьханд (Ховд их сургууль), доктор Н. Фризен (Оснабрюкийн их сургууль, ХБНГУ), доктор Д. Герман (Хайделбергийн их сургууль, ХБНГУ), доктор К. Веше (Зенкенбергийн байгалийн түүхийн музей, Герлиц, ХБНГУ) нарт гүн талархал илэрхийлье.

Бүтээлийн талаарх санал шүүмжийг ШУА-ийн Ботаникийн хүрээлэн, МУИС-ийн Биологийн тэнхимд хаяглан номын төгсгөлийн хуудсан дахь цахим хаягуудаар ирүүлбэл бид талархан хүлээн авах болно.

# **CONSPECTUS OF THE VASCULAR PLANTS OF MONGOLIA**

Compiled by:

***Magsar URGAMAL, Batlai OYUNTSETSEG, Dashzeveg NYAMBAYAR,  
Choimaa DULAMSUREN***

Edited by:

***Chinbat SANCHIR  
Tseden JAMSRAN***

Technical-Edited by:

***Magsar URGAMAL***

Design by:

**Damba OYUN** (Admon Printing)

## **Address of Authors:**

**Dr. Magsar URGAMAL**

*Institute of Botany, Mongolian Academy of Sciences*

*email: urgamal@botany.mas.ac.mn; urgaa2007@gmail.com*

**Dr., Ass. Prof. Batlai OYUNTSETSEG**

*Department of Biology, National University of Mongolia*

*email: oyuntsetseg@num.edu.mn; oyuna62@yahoo.com*

**Dr., Ass. Prof. Dashzeveg NYAMBAYAR**

*Department of Biology, National University of Mongolia*

*email: nyambayar@num.edu.mn; dash.nyambayar@yahoo.com*

**Dr. Choimaa DULAMSUREN**

*Center for Nature Conservation, University of Goettingen, Germany*

*email: dchoima@gwdg.de*

**ISBN 978-99973-0-356-1**

**Citation:** Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch. 2014. *Conspectus of the vascular plants of Mongolia*. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp. (p. 30-37).

**FERNS**

**1. LYCOPODIOPHYTA D.N. SCOTT. 1900**

Stud. Foss. Bot. 13: 500–501

**1. LYCOPODIALES DC. EX BERCHT. & J. PRESL, 1820**

Prir. Rostlin: 272

**# 1. LYCOPODIACEAE P. BEAUV. EX MIRB. 1802 (3/5)**

Hist. Nat. Veg. 4: 293

# [incl. Huperziaceae].

**Diphasiastrum alpinum (L.) Holub, 1975**, Preslia, 47(2): 107. - *Lycopodium alpinum* L. 1753, Sp. Pl. 2: 1104. - [ 1, 2 ]. - (EN, VR, RB).

**D. complanatum (L.) Holub, 1975**, Preslia 47(2): 108. - *Lycopodium complanatum* L. 1753, Sp. Pl. 2: 1104. - [ 1 (Egiin gol) ]. - (EN).

**Huperzia selago (L.) Bernh. ex Schrank & Mart, 1829**, Hort. Monac.: 3. - *Lycopodium selago* L. 1753, Sp. Pl. 2: 1102. - [ 1, 2 ].

**Lycopodium annotinum L. 1753**, Sp. Pl. 2: 1103. - [ 1+ (Oyumaa & Paula de Priest 2011), 2 ].

**L. clavatum L. 1753**, Sp. Pl. 2: 1101. - [ 2 (Minjiin gol) ]. - (EN, VR, RB).

**2. SELAGINELLALES PRANTL, 1874**

Lehrb. Bot.: 116, 124

**2. SELAGINELLACEAE WILLK. 1854 (1/2)**

Anleit. Stud. Bot. 2: 163

**Selaginella borealis (Kaulf.) Spring, 1843**, Bull. Acad. Roy. Sci. Bruxelles, 10(1): 141, no. 40. - *Lycopodium boreale* Kaulf. 1842, Enum. Filic. 17–18. - *Selaginella borealis* (Kaulf.) Rupr. 1845, Beitr. Pflanzenk. Russ. Reichen 3: 32. - [ 1, 3, 4, 8 ].

**S. sanguinolenta (L.) Spring, 1843**, Bull. Acad. Roy. Sci. Bruxelles, 10(1): 135. - *Lycopodium selaginoides* L. 1753, Sp. Pl. 2: 1104. - [ 1, 2, 3, 4, 8 ].

**2. PTERIDOPHYTA SCHIMP. 1879**

Handb. Palaeont. Paleophyt.: 1

**3. OPHIOGLOSSALES LINK, 1833**

Hort. Berol. 2: 151

**\$ 3. OPHIOGLOSSACEAE MARTINOV, 1820 (1/2)**

Tekhno-Bot. Slovar.: 438

\$ [incl. Botrychiaceae].

# **Botrychium dusenii Alston, 1960**, Lilloa, 30: 107. - *B. lunaria* (L.) Sw. 1801, J. Bot. (Schrader): 110. - [ 1, 2, 3, 4, 5, 7, 9 ].

**B. lanceolatum (S.G. Gmel.) Angstrom, 1854**, Bot. Not.: 68. - *Osmunda lanceolata* S.G. Gmel. 1768, Novi Comment. Acad. Sci. Imp. Petrop. 12: 516. - [ 3 (Khalzan davaa) ]. - (NA, VR, RB).

#### 4. EQUISETALES DC. EX BERCHT. & J. PRESL, 1829

Prir. Rostlin: 271

##### 4. EQUISETACEAE MICHX. EX DC. 1804 (1/9)

Michx. ex DC., 1804, Essai Propr. Med. Pl.: 49

**Equisetum arvense L. 1753**, Sp. Pl. 2: 1061. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14 ].

**E. fluviatile L. 1753**, Sp. Pl. 2: 1062. - [ 1, 2, 3, 4, 5, 6+ (Beket 2009), 7, 8+ (Ogii nuur), (Dulmaa *et al.* 2011), 9, 10, 14 ].

**Notes:** *E. arvense* x *E. fluviatile* are distributed in Khangai and Valley Lakes phytogeographical regions (Gubanov, 1982).

**E. hyemale L. 1753**, Sp. Pl. 2: 1062. - [ 3, 4, 5+ (Dorofeyev *et al.* 2011) ].

**E. palustre L. 1753**, Sp. Pl. 2: 1061. - [ 1, 2, 3, 4, 5, 6, 7, 8+ (Sanchir & Mandakh 2008), 9, 10, 14 ].

**E. pratense Ehrn. 1784**, Hannover. Mag. 22: 138. - *E. umbrosum* J.G.F. Mey. ex Willd. 1809, Enum. Pl. 2: 1065. - [ 1, 2, 3, 4, 5, 6, 7, 9, 10 ].

**E. ramosissimum Desf. 1799**, Fl. Atlant. 2: 398–399. - [ 14 ]. - (R).

**E. scirpoideus Michx. 1803**, Fl. Bor.-Amer. 2: 281. - [ 1, 2, 3, 4, 6 ].

**E. sylvaticum L. 1753**, Sp. Pl. 2: 1061. - [ 1, 2, 3, 4, 5, 8, 9 ].

**E. variegatum Schleich. ex F. Weber & D. Mohr, 1807**, Bot. Tasch. 60: 447. - [ 1, 4 ]. - (R).

#### 5. POLYPODIALES LINK, 1833

Hort. Berol. 2: 5

##### \$ 5. DENNSTAEDIACEAE LOTSY, 1909 (1/1)

Vortr. Bot. Stammesgesch. 2: 655

\$ [incl. Hypolepidaceae].

**Pteridium aquilinum (L.) Kuhn, 1879**, Bot. Ost-Afrika 3(3): 11. - *Pteris aquilina* L. Sp. Pl. 2: 1075. - [ 2, 3, 4, 5 ]. - (R).

##### \$ 6. PTERIDACEAE E.D.M. KIRCHN. 1831 (2/2)

Schul.-Bot.: 109

\$ [incl. Cryptogrammaceae, Sinopteridaceae].

# **Cheilanthes argentea (S.G. Gmel.) Kunze, 1850**, Linnaea 23: 242. - *Aleuritopteris argentea* (S.G. Gmel.) Fee 1852, Mem. Foug., Gen. Filic. 154. - *Pteris argentea* S.G. Gmel. 1768, Novi Comment. Acad. Sci. Imp. Petrop. 12: 519. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 13 ].

**Cryptogramma stelleri (S.G. Gmel.) Prantl, 1882**, Bot. Jahrb. Syst. 3(5): 413. - *Pteris stelleri* S.G. Gmel. 1768, Novi Comment. Acad. Sci. Imp. Petrop. 12: 519. - [ 1 (Arsain gol) ].

## \$ 7. CYSTOPTERIDACEAE SHMAKOV, 2001 (1/2)

Turczaninowia 4: 60

\$ [incl. *Cystopteris* from Athyriaceae].

# **Cystopteris fragilis (L.) Bernhardi, 1805**, Neues J. Bot. 1(2): 27. - *Polypodium fragile* L. 1753, Sp. Pl. 2: 1091. - *C. dickieana* R. Sim, 1848, Gard. Farmers J. 2: 308. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10+ (Revushkin et al. 2001), 13, 14, 15 ].

+ **C. sudetica A. Braun & Milde, 1855**, Jahresber. Schles. Ges. Vaterl. Cult. 1855: 92. - *C. leucosoria* Schur, 1858, Oesterr. Bot. Z. 8: 328. - [ 2+ (Sangastai, Khonin nuga), (Dulamsuren et al. 2004; Kamelin & Ulziykhutag 2005; Urgamal et al. 2013) ].

## 8. ASPLENIACEAE NEWMAN, 1840 (2/5)

Hist. Brit. Ferns: 6

**Asplenium altajense (Kom.) Grubov, 1960**, Bot. Mater. Gerb. Bot. Inst. Acad. Nauk SSSR 20: 33. - *A. sarelii* f. *altajense* Kom. 1916, Izv. Glavn. Bot. Sada SSSR 16: 150. - [ 1, 3, 4, 7+ (Uenchiin gol), 10+ (Khovd gol, Rashaantiin gol), (Revushkin et al. 2001; Kechaykin et al. 2014), 13 ].

**A. ruta-muraria L. 1753**, Sp. Pl. 2: 1081. - [ 7, 14+ (Uvgud uul), (Smirnov et al. 2003) ].

**A. septentrionale (L.) Hoffm. 1795**, Deutschl. Fl. 2: 12–13. - *Acrostichum septentrionale* L. 1753, Sp. Pl. 2: 1068. - [ 7+ (Mogoin gol), (Revushkin et al. 2001), 8, 10, 14+ (Uvgud uul), (Smirnov et al. 2003) ].

**A. yunnanense Franch. 1885**, Bull. Soc. Bot. France 32: 28. - *A. exiguum* Bedd. 1864, Ferns S. India 49, pl.: 146. - [ 7+ (Jargalant Khairkhan uul, Gurvan-Uliasiin gol), (Revushkin et al. 2001), 13 (Dund Saikhan uul) ].

**Camptosorus sibiricus Rupr. 1845**, Beitr. Pflanzenk. Russ. Reiches 3: 45. - [ 2, 3, 4 ].

## 9. THELYPTERIDACEAE CHING EX PIC. SERM. 1970 (1/1)

Webbia 24: 709

**Phegopteris connectilis (Michx.) Watt, 1866**, Canad. Naturalist & Quart. J. Sci. 3: 29. - *Polypodium connectile* Michx. 1803, Fl. Bor.-Amer. 2: 271–273. - *Thelypteris phegopteris* (L.) Sloss. ex Rydb. 1917, Fl. Rocky Mts.: 1043. - [ 2, 4 ].

## # 10. WOODSIACEAE HERTER, 1949 (4/13)

Revista Sudamer. Bot. 9: 14

\$ [incl. *Athyrium*, *Diplazium*, *Gymnospermum* from *Athyriaceae*].

***Athyrium filix-femina* (L.) Roth, 1800**, Tent. Fl. Germ. 3(1): 65. - *Polypodium filix-femina* L. 1753, Sp. Pl.: 1090. - [ 1, 2+ (Sangastai, Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3, 4, 5 ].

***A. monomachi* (Kom.) Kom. 1931**, Bull. Jard. Bot. Kieff. 13: 145. - *Polypodium filix-femina* var. *monomachi* Kom. 1916, Bull. Pet. Bot. Gard. 16: 149. - [ 2, 3, 4, 5 ].

***A. sinense* Rupr. 1845**, Beitr. Pflanzenk. Russ. Reiches 3: 41. - [ 3, 5, 9 ].

***Diplazium sibiricum* (Turcz. ex Kuntze) Sa. Kurata, 1961**, Enum. Jap. Pterid.: 292, 340. - *Asplenium sibiricum* Turcz. ex Kuntze, 1837, Analecta Pteridogr.: 25. - *Athyrium crenatum* (Sommerf.) Rupr. 1844, Spic. Il. Pl. Fern 2: 14. - [ 1, 2, 3, 4, 5 ].

***Gymnocarpium dryopteris* (L.) Newman, 1841**, Phytologist 4, 1: 371. - *Polypodium dryopteris* L. 1753, Sp. Pl.: 1093. - [ 2, 4 ].

***G. jessoense* (Koidz.) Koidz. 1936**, Acta Phytotax. Geobot. 5(1): 40. - *Dryopteris jessoensis* Koidz. 1924, Bot. Mag. Tokyo 38: 104. - [ 1, 2, 3, 4, 5, 8 ].

**Notes:** *C. dryopteris* x *C. jessoense* hybrid are collected from Khovsgol and Khangai phytogeographical regions (Gubanov, 1989; Flora of Khangai, 1989).

***Woodsia acuminata* (Fomin) Sipliv. 1974**, Novosti Syst. Vyssh. Rast. 11: 327. - *W. ilvensis* var. *acuminata* Fomin, 1925, Visn. Kiew, Bot. Gard. 3: 3. - [ 1, 2, 3, 4, 7, 8, 9 ].

? ***W. calcarea* (Fomin) Shmakov, 1995**, Obzor Vidov. Sem. Woodsiaceae Evraz.: 29. - *W. ilvensis* var. *calcarea* Fomin, 1930, Fl. Sibir. & Far East 5: 21. - [ 1, 3, 4 ].

***W. glabella* R. Br. ex Richardson, 1823**, Narr. Journey Polar Sea: 754. - [ 1, 7+ (Sutai Khairkhan uul, Shavartiin gol), (Revushkin et al. 2001), 10 ].

? ***W. heterophylla* (Turcz. ex Fomin) Shmakov, 1995**, Obzor Vidov. Sem. Woodsiaceae Evraz.: 54. - *W. glabella* var. *heterophylla* Turcz. ex Fomin, 1925, Visn. Kiew, Bot. Gard. 3: 5. - [ 1 (Darkhadiin khotgor) ].

***W. ilvensis* (L.) R. Br. 1815**, Trans. Linn. Soc. London 11: 173. - *Acrostichum ilvense* L. 1753, Sp. Pl.: 1071. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 13 ].

? ***W. pseudopolystichoides* (Fomin) Kiselev & Shmakov, 1995**, Obzor Vidov. Sem. Woodsiaceae Evraz.: 29. - *W. ilvensis* var. *pseudopolystichoides* Fomin, 1925, Visn. Kiew, Bot. Gard. 3: 3. - [ 5 (Numrugiin gol) ]. - Described from Eastern Mongolia.

***W. subcordata* Turcz. 1832**, Bull. Soc. Imp. Nat. Moscou 5: 206. - [ 4, 5, 9 ].

**Notes:** *W. alpina* (Bolton) S.F. Gray is irregularity determined in the Grubov's (1982) book.

+ 11. ONOCLEACEAE PIC. SERM. 1970 (2/2)

Webbia 24: 708

+ ***Matteuccia struthiopteris* (L.) Todaro, 1866**, Giorn. Sci. Nat. Econ. Palermo 1(3-4): 235. - *Osmunda struthiopteris* L. 1753, Sp. Pl. 2: 1066. - *Onoclea struthiopteris* (L.) Hoffm. 1795, Deutschl. Fl. 2: 11. - *Pterinodes struthiopteris* (L.) Kuntze, 1891, Revis. Gen. Pl. 2: 820. - [ 2+ (Khonin nuga, Khuderiin gol), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004; Kamelin & Dariimaa 2004), 4+ (Galanin et al. 2008; Urgamal et al. 2013) ].

+ **Onoclea sensibilis L.** 1753, Sp. Pl. 2: 1062. – [ 2+ (Kharasiin gol), (Urgamal *et al.* 2013) ].

**\$ 12. DRYOPTERIDACEAE HERTER, 1949 (1/3)**

Revista Sudamer. Bot. 9: 15

§ [incl. Aspidiaceae].

**Dryopteris dilatata (Hoffm.) A.Gray, 1848**, Manual Bot.: 631. - *Polypodium dilatum* Hoffm. 1795, Deutschl. Fl. 2: 7–8. – [ 2+ (Sangastai, Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 5 (Numrugin gol) ]. – (EN, VR, RB).

+ **D. expansa (C. Presl) Fraser-Jenk. & Jermy, 1977**, Brit. Fern Gaz. 11(5): 338. - *Nephrodium expansum* C. Presl, 1825, Reliq. Haenke. 1(1): 38. – [ 2+ (Sangastai, Khonin nuga), (Dulamsuren *et al.* 2004; Kamelin & Ulziykhutag 2005), 5+ (Grubov 1982; Urgamal *et al.* 2013) ].

**Notes:** This is species was not given in Gubanov's conspectus (1996).

**D. fragrans (L.) Schott 1834**, Gen. Fil. Pl.: 9. - *Polypodium fragrans* L. 1753, Sp. Pl. 2: 1089. – [ 2, 3, 4, 5, 7, 10+ (Khovd gol), (Ebel & Rudaya 2002) ].

**13. POLYPODIACEAE BERCHT. & J. PRESL, 1822 (2/2)**

Delic. Prag.: 159

**Lepisorus clathratus (C.B. Clarke) Ching, 1933**, Bull. Fan Mem. Inst. Biol. 4(3): 71 –72. - *Polypodium clathratus* C.B. Clarke, 1880, Trans. Linn. Soc. London Bot. 1(8): 559. – [ 13 (Dund Saikhan uul) ].

# **Polypodium virginianum L. 1753**, Sp. Pl. 2: 1085. – *P. sibiricum* Sipliv. 1974, Novosti Syst. Vyssh. Rast. 11: 329. – [ 1, 2, 3, 4+ (Galanin *et al.* 2008), 5, 8+ (Sanchir & Mandakh 2008) ].

**GYMNOSPERMS**

**3. PINOPHYTA CRONQUIST, TAKHT. & W. ZIMM. EX REVEAL, 1995**

Phytologia 79(2): 70

**6. PINALES GOROZH. 1904**

Lekts. Morf. Sist. Archegon.: 88

**14. PINACEAE SPRENG. EX RUDOLPHI, 1830 (4/9)**

Syst. Orb. Veg.: 35

**Abies sibirica Ledeb.** 1833, Fl. Altaic. 4: 202. – [ 1 (Shishkhidiin gol), 2 (Khuder and Eroo gol) ]. – (EN, VR, RB, RL).

+ **Larix czekanowskii Szafran**, 1913, Kosmos 38: 1297. – [ 4+ (Onon gol), (Galanin *et al.* 2008; Urgamal *et al.* 2013) ].

**Notes:** It was informed that *L. sibirica* x *L. dahurica* is synonyms of *L. czekanowskii* Szafran (Orlova, 2011).

# **L. gmelinii (Rupr.) Kuzen.** 1920, Trudy Bot. Muz. Rossiisk. Akad. Nauk 18: 41. - *Abies gmelinii* Rupr. 1845, Beitr. Pflanzenk. Russ. Reiches 2: 56. - *Larix dahurica* Laws. 1836, Agricult. Man.: 389. - *L. dahurica* Turcz. 1838, Bull. Mosk. Obač. Isp. Prir., Otd. Biol. 101. 1838. - [ 2, 4 ]. - (NT).

**L. sibirica** Ledeb. 1833, Fl. Altaic. 4: 204. - [ 1, 2, 3, 4, 6, 7, 8, 10, 14 ].

**Picea obovata** Ledeb. 1833, Fl. Altaic. 4: 201. - [ 1, 2, 3, 6, 7 ].

**Pinus pumila (Pall.) Regel**, 1859, Index Sem. (St.-Petersburg) 1858: 23. - *P. cembra* var. *pumila* Pall. 1859, Fl. Ross. 1(1): 5. - *P. cembra* subsp. *pumila* (Pall.) Endl. 1847, Syn. Conif.: 142. - [ 2 (Kherlen gol) ]. - (EN, VR, RB).

**P. sibirica** Du Tour. 1803, Dict. Sci. Nat. (ed. 2) 18: 18. - [ 1, 2, 3, 6, 7 ]. - (R).

**P. sylvestris** L. 1753, Sp. Pl. 2: 1000. - [ 1, 2, 3, 4, 5, 8, 9 ].

# **P. sylvestris** var. **mongolica** Litv. 1905, Sched. Herb. Fl. Ross. 5: 160. 1905. - *P. krylovii* Serg. & Kondr. 1953, Bot. Zhurn. (Kiev) 10(1): 42. - *P. sylvestris* subsp. *mongolica* (Litv.) Silba, 2009, J. Int. Conifer Preserv. Soc. 16(1): 34. - [ 2, 4+ (Galanin *et al.* 2008), 5 ].

**Notes:** The information for *P. sylvestris* subsp. *kulundensis* Sukacz. and *P. sylvestris* subsp. *ursina* Orlova are distributed in part of Northern Mongolia (Orlova & Byalt 2006).

## 15. CUPRESSACEAE GRAY, 1822 (1/4)

Nat. Arr. Brit. Pl. 2: 222, 225

# **Juniperus communis** L. 1753, Sp. Pl. 2: 1040. - *J. sibirica* Burgsd. 1787, Anleit. Sich. Erzieh. Holzart. 2: 124. - [ 1, 2, 3, 4, 6, 7 ].

**J. pseudosabina** Fisch. & C.A. Mey. 1841, Index Sem. (St.-Petersburg) 8: 15. - [ 1, 2, 3, 4, 7, 8, 13 ]. - (EN, R).

**J. sabina** L. 1753, Sp. Pl. 2: 1039. - [ 2, 3, 4, 6, 7, 8, 10, 11, 13, 14 ]. - (EN, VR, RB).

# **J. sabina** var. **davurica** (Pall.) Farjon, 2001, World Checkl. Bibliogr. Conif. 2: 73. - *J. davurica* Pall. 1789, Fl. Ross. 1(2): 13. - [ 2 ]. - (R).

## 4. GNETOPHYTA BESSEY, 1907

Nebraska Univ. Stud. 7: 323

## 7. EPHEDRALES DUMORT. 1829

Anal. Fam. Pl.: 11

## 16. EPHEDRACEAE DUMORT. 1829 (1/9)

Anal. Fam. Pl.: 11, 12

**Ephedra dahurica** Turcz. 1856, Bull. Soc. Imp. Nat. Moscou 26(1): 421. - [ 2, 3, 8+ (Sanchir & Mandakh 2008), 9, 12 ].

**E. equisetina** Bunge, 1852, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 6, Sci. Math. 7: 501. - [ 3, 6, 7, 8, 9, 12, 13, 14, 15, 16 ]. - (VU, VR, RB).

**E. fedtschenkoae** Paulsen, 1905, Bot. Tidsskr. 26: 254. - [ 2, 3, 4, 7 ]. - (NT, VR, RB).

**E. glauca** Regel, 1880, Trudy Imp. S.-Peterburgsk. Bot. Sada 6: 484. - [ 12, 14, 15 ].

**E. intermedia Schrenk & C.A. Mey. 1846**, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 6, Sci. Math. 5: 278. – [ **7, 14, 15** ].

**E. lomatolepis Schrenk, 1845**, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 3: 2. – [ **12, 14, 15** ].

**E. monosperma C.A. Mey. 1846**, Mem. Acad. Imp. Sci. St.-Petersbourg Ser. 6, Sci. Math. 5: 279. – [ **1, 2, 3, 4, 5, 6, 7, 8, 10, 12, 13** ].

**E. przewalskii Stapf, 1889**, Akad. Wiss. Wien, Math.-Naturwiss. Kl., Denkschr. 56(2): 40. – *E. kaschgarica* B. Fedtsch. & Bobrov, 1950, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 13: 46. - *E. przewalskii* var. *kaschgarica* (B. Fedtsch. & Bobrov) C.Y. Cheng, 1978, Fl. Reipubl. Popularis Sin. 7: 473. – [ **6, 7, 11, 12, 13, 14, 15, 16** ]. – (RL).

**E. sinica Stapf ,1927**, Bull. Misc. Inform. Kew (3): 133. – *E. ma-huang* Liu, 1927, China Journ. 6(5): 257. – [ **2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15** ]. – (R).

**Notes:** It was informed that *A. pseudodistachya* Pachom. is distributed in Western Mongolia (Peshkova, 2004).

**Citation:** Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch. 2014. *Conspectus of the vascular plants of Mongolia*. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp. (p. 37-45).

## ANGIOSPERMS

### 5. MAGNOLIOPHYTA CRONQUIST, TAKHT. & W. ZIMM. EX REVEAL, 1966 Phytologia 79: 70

### 8. NYMPHAEALES SALISB. EX BERCHT. & J. PRESL, 1820 Prir. Rostlin 270

#### 17. NYMPHAEACEAE SALISB. 1805 (2/3) Ann. Bot. (Konig & Sims) 2: 70

**Nuphar pumila (Timm.) DC. 1821**, Syst. Nat. 2: 61. - *Nymphaea lutea* var. *pumila* Timm, 1795, Mag. Naturk. Oekon. Mecklenburgs 2: 250. - [ **1, 3, 10, 11+** (Buuntsagaan nuur), (Dulmaa *et al.* 2011) ]. - (**EN, VR, RB, RL**).

**Nymphaea candida C. Presl. 1822**, Delic. Prag. 224. - [ **3, 10, 11+** (Buuntsagaan nuur), (Dulmaa *et al.* 2011) ]. - (**EN, VR, RB, RL**).

**N. tetragona Georgi, 1775**, Bemerk. Reise Russ. Reich. 1: 220. - [ **1, 3, 10, 11+** (Buuntsagaan nuur), (Dulmaa *et al.* 2011) ]. - (**EN, R, RB, RL**).

### 9. ACORALES MART, 1835 Consp. Regn. Veg. 6

#### \$ 18. ACORACEAE MARTINOV, 1820 (1/1) Tekhno-Bot. Slovar.: 6

\$ [incl. *Acorus* from Araceae]

**Acorus calamus L. 1753**, Sp. Pl. 1: 324. - [ **1+** (Egiin gol), (Dulmaa 2004), **3, 4, 5, 8+** (Ogii nuur), (Dulmaa *et al.* 2011), **9** ]. - (**VU, VR, RB**).

### 10. ALISMATALES R. BR. EX BERCHT. & J. PRESL, 1820 Prir. Rostlin 270

#### # 19. ARACEAE JUSS. 1789 (2/4) Gen. Pl.: 23

# [incl. Lemnaceae]

**Lemna minor L. 1753**, Sp. Pl. 2: 970. - [ **1+** (Egiin gol), (Dulmaa 2004), **3, 4, 7, 8, 9, 10, 11, 13** ].

**L. trisulca L. 1753**, Sp. Pl. 2: 970. - [ **1, 2, 3, 4, 5, 8+** (Ogii nuur), **9, 10+** (Airag nuur), (Dulmaa *et al.* 2011), **11** ].

**L. turionifera Landolt, 1975**, Aquatic Bot. 1(4): 355. - [ **9, 11** ].

**Spirodela polyrhiza (L.) Schleid.** 1839, Linnaea 13: 392. - *Lemna polyrhiza* L. 1753, Sp. Pl. 2: 970. - [ 5 ].

**\$ 20. TOFIELDIACEAE TAKHT. 1995 (1/1)**  
Bot. Zhurn. (Moscow & Leningrad) 17(12): 65

\$ [incl. *Tofieldia* from Melanthiaceae]

**Tofieldia coccinea Richardson,** 1823, Narr. Journey Polar Sea: 736. - [ 1 ]. - (VU, VR, RB).

**21. ALISMATACEAE VENT. 1799 (2/4)**  
Tabl. Regn. Veg. 2: 157

**Alisma gramineum Lej.** 1811, Fl. Spa 1: 175. - [ 5, 7+ (Uench gol), (German *et al.* 2009), 8, 10, 11, 14 ].

**A. plantago-aquatica L.** 1753, Sp. Pl. 1: 342. - [ 1+ (Egiin gol), (Dulmaa 2004), 2+ (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Kamelin & Ulziykhutag 2005), 3, 4, 5, 8+ (Sanchir & Mandakh 2008), 9, 10, 14 ].

**Sagittaria natans Pall.** 1776, Reise Russ. Reich. 3: 757. - [ 4+ (Galanin *et al.* 2008), 9+ (Buir nuur), (Dulmaa *et al.* 2011), 10, 14 ]. - (LC, VR, RB).

**S. trifolia L.** 1753, Sp. Pl. 2: 993. - [ 1+ (Egiin gol), (Dulmaa 2004), 4, 5, 9, 14 ].

**22. BUTOMACEAE MIRBEL, 1804 (1/2)**  
Hist. Nat. Pl. 8: 194

**Butomus junceus Turcz.** 1854, Bull. Soc. Imp. Nat. Moscou 27(2): 60. - [ 1, 8+ (Sanchir *et al.* 2004), 9, 10, 14 ]. - (R).

**B. umbellatus L.** 1753, Sp. Pl. 1: 372. - [ 1, 2, 3, 4, 5, 8, 9, 14 ].

**\$ 23. HYDROCHARITACEAE JUSS. 1789 (1/1)**  
Gen. Pl.: 67

\$ [incl. Najadaceae]

# **Najas marina L.** 1753, Sp. Pl. 2: 1015. - *N. major* All. 1785, Auct. Syn. Stirp. Horti Taur. 3 1773. - *N. gracilis* Morong 1893, Mem. Torrey Bot. Club 3(2): 61. - *N. marina* auct. Fl. Mong., non L. - [ 10 (Chono Kharaikhiin gol), 11+ (Buuntsagaan nuur), (Dulmaa *et al.* 2011)]. - (R).

**24. SCHEUCHZERIACEAE F. RUDOLPHI, 1830 (1/1)**  
Syst. Orb. Veg.: 28

**Scheuchzeria palustris L.** 1753, Sp. Pl. 1:338. - [ 2 (Khuderiiin gol) ]. - (LC, VR, RB).

**25. JUNCAGINACEAE RICH. 1808 (1/2)**  
Demonstr. Bot.: 9

**Triglochin maritima L. 1753**, Sp. Pl. 1: 339. - [ **1-16** (all regions) ].

**T. palustris L. 1753**, Sp. Pl. 1: 338-339. - [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12+** (Dariimaa et al. 2004), **13, 14, 15, 16** ].

**# 26. POTAMOGETONACEAE BERCHT. & J. PRESL, 1823 (3/17)**

Prir. Rostlin 1(7): 1, 3

# [incl. Zannichelliaceae]

# **Potamogeton alpinus subsp. tenuifolius (Raf.) Hulten 1937**, Fl. Aleut. Isl.: 65. - *P. tenuifolius* Raf. 1811, Med. Repos. Ser 3, 2: 409. - [ **3, 4, 9, 10, 12+** (Ikh Nart ?) ].

**P. berchtoldii Fieber 1838**, Oekon.-techn. Fl. Bohm. 2: 40, 277. - [ **3, 6, 7, 9** ].

**P. compressus L. 1753**, Sp. Pl. 1: 127. - *P. zosterifolius* Schumach. 1801, Enum. Pl. 50, 168. - [ **1, 8+** (Ogii nuur), **9+** (Buir nuur), (Dulmaa et al. 2011), **10, 14** ].

**P. crispus L. 1753**, Sp. Pl. 1: 126. - [ **1+** (Egiin gol), (Dulmaa 2004), **8, 10** ].

**P. friesii Rupr. 1845**, Beitr. Pflanzenk. Russ. Reiches 4: 43. - [ **5, 8+** (Ogii nuur), (Dulmaa et al. 2011), **9** ].

**P. gramineus L. 1753**, Sp. Pl. 1: 127. - *P. heterophyllus* Schreb. 1771, Spic. Fl. Lips. 21. - [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14** ].

**P. lucens L. 1753**, Sp. Pl. 1: 126. - [ **1+** (Egiin gol), (Dulmaa 2004), **8+** (Ogii nuur), (Dulmaa et al. 2011), **10** (Khungyi-Khar, Khar-Us nuur), (Dulmaa, 1974) ]. - (R).

**P. mandschuriensis (A. Benn.) A. Benn. 1924**, Trans. & Proc. Bot. Soc. Edinburgh 29: 50. - *P. acutifolius* subsp. *mandschuriensis* A. Benn. 1904, J. Bot. 42: 76. - [ **5** ].

**P. natans L. 1753**, Sp. Pl. 1: 126. - [ **1+** (Egiin gol), (Dulmaa 2004), **10** (Khar, Khar-Us nuur) ]. - (R).

**P. obtusifolius Mert. & W. D. J. Koch, 1823**, Deutschl. Fl. 1: 855. - [ **1+** (Egiin gol), (Dulmaa 2004), **3, 5** ]. - (R).

**P. perfoliatus L. 1753**, Sp. Pl. 1: 126. - [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 16** ].

**P. praelongus Wulfen, 1805**, Arch. Bot. (Leipzig) 3(3): 331. - [ **1+** (Egiin gol), (Dulmaa 2004), **3, 4, 8, 9+** (Buir nuur), (Dulmaa et al. 2011) ]. - (R).

**P. pusillus L. 1753**, Sp. Pl. 1: 127. - [ **1+** (Egiin gol), (Dulmaa 2004), **2, 3, 4, 5, 6, 8, 9+** (Pistrick et al. 2012), **10, 11, 13, 14** ].

# **Stuckenia filiformis (Pers.) Borner, 1912**, Fl. Deut. Volk 713. - *Potamogeton filiformis* Pers. 1805, Syn. Pl. 1: 152. - [ **1, 3, 6, 7, 8, 9+** (Pistrick et al. 2012), **10, 11, 13, 15** ].

# **S. pectinata (L.) Borner, 1912**, Fl. Deut. Volk 713. - *Potamogeton pectinatus* L. 1753, Sp. Pl. 1: 127. - [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11** ].

**Notes:** *Potamogeton pectinatus* subsp. *mongolicus* (A. Benn.) Volobaev is not pointed in Mongolia (Volobaev, 1991).

# **S. vaginata (Turcz.) Holub, 1984**, Folia Geobot. Phytotax. 19: 215. - *Potamogeton vaginatus* Turcz. 1854, Bull. Soc. Imp. Nat. Moscou 27: 65. - [ **1, 3, 4, 5, 6, 7, 8, 10, 11, 13** ].

# **Zannichellia palustris L. 1753**, Sp. Pl. 2: 969. - *Z. pedunculata* Rchb. 1829, Handb. Nat. Pfl.-Syst. 3: 1591. - *Z. palustris* subsp. *repens* (Boenn.) Schuebl. & G. Martens, 1834, Fl. Wurtemberg: 579. - [ **3, 4, 7, 8, 9, 10, 11, 15** ].

**27. RUPPIACEAE HORAN. 1834 (1/1)**

Prim. Lin. Syst. Nat. 46

**Ruppia maritima L. 1753**, Sp. Pl. 1: 127-128. – *R. maritima* subsp. *drepanensis* (Tineo) Maire & Weiller, 1952, Fl. Afr. Nord 1: 198. – [ **10** (Khar nuur) ].

**Notes:** The some with It was informed that *R. drepanensis* Tineo is distributed in Mongolia (Kipriyanova 2009).

**11. LILIALES PERLEB, 1826**

Lehrb. Naturgesch. Pflanzenr. 129

**# 28. MELANTHIACEAE BATSCHE EX BORKH. 1797 (3/5)**

Bot. Worterb. 2: 8

# [incl. Trilliaceae]

**# Anticlea sibirica (L.) Kunth, 1843**, Enum. Pl. 4: 191. - *Melanthium sibiricum* L. 1753, Sp. Pl. 1: 339. - *Zigadenus sibiricus* (L.) A. Gray, 1847, Ann. Lyceum Nat. Hist. New York 4: 112. – [ **1** ]. – (**LC, VR, RB, RL**).

**Paris quadrifolia L. 1753**, Sp. Pl. 1: 367. – [ **2, 3, 4, 5** ].

**# P. verticillata M. Bieb. 1819**, Fl. Taur.-Caucas. 3: 287. – *P. hexaphylla* Cham. 1831, Linnaea 6: 586–587. – [ **2, 4, 5** ]. – (**VU, VR, RB**).

**Veratrum lobelianum Bernh. 1807**, Neues J. Bot. 2: 356. – [ **1, 3, 4, 5, 7, 9** ].

**V. nigrum L. 1753**, Sp. Pl. 2: 1044. – [ **3, 4, 5, 9** ].

**29. LILIACEAE JUSS. 1789 (6/15)**

Gen. Pl. 48

+ **Erythronium sibiricum (Fisch. & C.A. Mey.) Krylov, 1929**, Fl. Zap. Sibiri 3: 641.

- *E. dens-canis* var. *sibiricum* Fisch. & C.A. Mey. 1841, Index Sem. (St.-Petersburg) 7: 47. - *E. sibiricum* subsp. *altaicum* Rukans, 2007, Buried Treasures 362. – [ **7+** (Yolt uul, Yoltiin gol), (German *et al.* 2009) ].

+ **Fritillaria dagana Turcz. 1834**, Flora 17(1 Beibl.): 25. - *Imperialis dagana* (Turcz.) Turcz. 1837, Bull. Soc. Imp. Nat. Moscou 10(1): 62. – [ **1+** (Khuvsgul, Erdenebulgan), (Sandanov, 2013), **2+** (Kamelin & Ulziykhutag 2005; Urgamal *et al.* 2013) ]. – **Subendemic**.

+ **Gagea brevistolonifera Levichev, 1982**, Novosti Syst. Vyssh. Rast. 19: 63. – [ **7+** (Nariin gol) (Gubanov 1999; Dariimaa 2009) ].

**G. filiformis (Ledeb.) Kunth, 1843**, Enum. Pl. 4: 237. - *Ornithogalum filiforme* Ledeb. 1830, Flora Altaic. 2: 30. - *Gagea filiformis* (Ledeb.) Kar. & Kir. 1841, Bull. Soc. Imp. Nat. Moscou 14: 751. – [ **7** ]. – Described from Mongolia (MW).

**G. granulosa Turcz. 1854**, Bull. Soc. Imp. Nat. Moscou 27(2): 112. – [ **7** ].

**G. hiensis Pascher, 1904**, Ueber *Gagea* 16. – [ **1+** (Oyumaa & Paula de Priest 2011), **2** ]. – (**VU, VR, RB**).

+ **G. kuraiensis Levichev, 2001**, Turczaninowia 4(1–2): 16. – [ **7+** (Levichev, 2001; Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic**.

# **G. liotardii (Sternb.) Schult. & Schult. f.** 1829, Syst. Veg. 7: 545. - *Ornithogalum liotardii* (Vill.) Sternb. 1818, Denkschr. Koenigl.-Baier. Bot. Ges. Regensburg 2: 56. - *Gagea emarginata* Kar. & Kir. 1841, Bull. Soc. Imp. Nat. Moscou 14: 851. - *G. fragifera* (Vill.) E. Bayer & G. Lopez, 1989, Taxon 38: 643. - [ 7 ].

**G. pauciflora (Turcz. ex Trautv.) Ledeb.** 1853, Fl. Ross. 4: 143. - [ 1, 2, 3, 4, 5, 7, 9, 14+ (Uushigiin us), (Ebel & Rudaya 2002) ].

# **Lilium concolor var. pulchellum (Fisch.) Baker,** 1874, J. Linn. Soc. Bot. 14: 237. - *L. pulchellum* Fisch. 1839, Index Sem. (St. Petersburg) 6: 56. - *L. buschianum* Lodd. 1830, Bot. Cab. 1818. - *L. concolor* var. *buschianum* (Lodd.) Baker, 1874, J. Linn. Soc. Bot. 14: 236. - [ 5 ]. - **Subendemic.** - (R).

**L. martagon** L. 1753, Sp. Pl. 1: 303. - [ 1, 2, 3, 4, 5, 6, 7 ]. - (NT, VR, RB).

# **L. pensylvanicum Ker Gawl.** 1805, Bot. Mag. 22: 872. - *L. dauricum* Ker Gawl. 1809, Botanical Magazine 30: 1210. - *L. dahuricum* Reuthe, 1891, Gartenflora 41: 476. - [ 2, 4, 5 ]. - (NT, VR, RB).

**L. pumilum Delile** 1812, Liliac. 7: 378. - *L. pumilum* var. *potaninii* (Vrishcz) Y.Z. Zhao, 1985, Fl. Intramongolica 8: 179. - *L. potaninii* Vrishcz, 1968, Bot. Zhurn. SSSR 53: 1472. - [ 1, 2, 3, 4, 5, 8, 9, 12+ (Ikh Nart ?) ]. - (R).

**Lloydia serotina (L.) Salisb. ex Rchb.** 1830, Fl. Germ. Excurs. 102. - *Bulbacodium serotinum* L. 1753, Sp. Pl. 1: 294. - [ 1, 2, 3, 6, 7, 13 ].

**Tulipa uniflora (L.) Besser ex Baker,** 1875, J. Linn. Soc., Bot. 14(76): 295. - *Ornithogalum uniflorum* L. 1767, Mant. Pl. 1: 62. - [ 3, 5, 7, 8+ (Sanchar & Mandakh 2008), 9, 10, 14 ]. - (VU, VR, RB).

## 12. ASPARAGALES LINK, 1829

Handbuch 1: 272

### 30. ORCHIDACEAE JUSS. 1789 (15/27)

Gen. Pl. 64-65

**Calypso bulbosa (L.) Oakes.** 1842, Cat. Vermont Pl. 1: 200. - *Cypripedium bulbosa* L. 1753, Sp. Pl. 2: 951. - [ 2+ (Sangastai, Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 4 ]. - (CR, VR, RB).

**Corallorrhiza trifida Chatel.** 1760, Spec. Inaug. *Corallorrhiza* 8. - [ 1, 2, 4 ]. - (VU, VR, RB).

**Cypripedium calceolus** L. 1753, Sp. Pl. 2: 951. - [ 1, 2, 4 ]. - (VU, VR, RB).

**C. guttatum Sw.** 1800, Kongl. Vetensk. Acad. Nya Handl. 21(3): 251. - [ 1, 2, 3, 4, 5 ].

**C. macranthon Sw.** 1800, Kongl. Vetensk. Acad. Nya Handl. 21(3): 251. - [ 1, 2, 4, 5 ]. - (VU, VR, RB).

+ **C. ventricosum Sw.** 1800, Kongl. Vetensk. Acad. Nya Handl. 21(3): 251. - [ 2+ (Eruu, Galttain gol), (Doronkin 2012; Urgamal *et al.* 2013) ].

# **Dactylorhiza fuchsii (Druce.) Soo,** 1962, Nom. Nova Gen. *Dactylorhiza* 8. - *Orchis fuchsii* Druce, 1914, Rep. Bot. Exch. Club London. 4: 105. - *Dactylorhiza meyeri* (Rchb. f.) Aver. 1982, Bot. Zhurn. SSSR 67: 307. - [ 2, 4 ]. - (CR, VR, RB).

**D. incarnata (L.) Soo, 1962**, Nom. Nova Gen. *Dactylorhiza* 3. - *Orchis incarnata* L. 1755, Fl. Suec. 312. - [ 3, 5 ]. - (R, RB).

# **D. incarnata subsp. *cruenta* (O.F. Mull.) P.D. Sell, 1967**, Watsonia 6: 317. - *Orchis cruenta* O.F. Mull. 1782, Flora Danica: 876. - *Dactylorhiza cruenta* (O. F. Mull.) Soo, 1962, Nom. Nova Gen. *Dactylorhiza* 4. - [ 3 ]. - (R, RB).

**D. salina (Turcz. ex Lindl.) Soo, 1962**, Nom. Nova Gen. *Dactylorhiza* 4. - *Orchis salina* Turcz. ex Lindl. 1835, Gen. Sp. Orchid. Pl.: 259. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14 ].

**Notes:** *D. cruenta* x *D. salina* hybrid are collected in Khovsgol phytogeographical region (Kamelin *et al.* 1991).

# **D. umbrosa (Kar. & Kir.) Nevski, 1937**, Trudy Bot. Inst. Akad. Nauk SSSR Ser. 1, Fl. Sist. Vyss. Rast. 4: 332. - *Orchis umbrosa* Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 504. - [ 1, 3+, 4+ (Kamelin & Ulziykhutag 2005), 7, 10, 14 ].

# **D. viridis (L.) R.M. Bateman, Pridgeon & M.W. Chase, 1997**, Lindleyana 12: 129. - *Satyrium viride* L. 1753, Sp. Pl. 2: 944. - *Coeloglossum viride* (L.) Hartm. 1820, Handb. Skand. Fl. 329. - [ 1, 2, 3, 4, 5, 6, 7+ (Yolt uul), (German *et al.* 2009) ].

**Notes:** *D. longifolia* (Neuman) Aver [ *D. baltica* (Klinge) Orlova] is not pointed in Mongolia (Flora of Siberia, 1987). Also *D. sambucina* (L.) Soo is irregularity areal in Northern Mongolia (Grubov 1982) because this species distributed Northern Europe.

**Epipactis helleborine (L.) Crantz. 1769**, Stirp. Austr. Fasc. 2: 467. - *Serapias helleborine* L. 1753, Sp. Pl. 2: 949. - [ 6 ].

**E. palustris (L.) Crantz. 1769**, Stirp. Austr. Fasc. 6: 462. - *Serapias helleborine* var. *palustris* L. 1753, Sp. Pl. 2: 950. - [ 7 ].

**Epipogium aphyllum Sw. 1814**, Summa Veg. Scand.: 32. - *Epipogon aphyllum* auct. Fl. Mong., non Sw. - [ 1+ (Oyumaa & Paula de Priest 2011), 2, 3, 4 ]. - (VU, VR, RB).

**Goodyera repens (L.) R. Br. 1813**, Hort. Kew. (ed. 2) 5: 198. - *Satyrium repens* L. 1753, Sp. Pl. 2: 945. - [ 1, 2, 3, 4, 6 ].

**Gymnadenia conopsea (L.) R. Br. 1813**, Hort. Kew. (ed. 2) 5: 191. - *Orchis conopsea* L. 1753, Sp. Pl. 2: 942. - [ 1, 2, 3, 4, 5 ]. - (R).

**Herminium monorchis (L.) R. Br. 1813**, Hort. Kew. (ed. 2) 5: 198. - *Ophrys monorchis* L. 1753, Sp. Pl. 2: 947. - [ 1+ (Oyumaa & Paula de Priest 2011), 2, 3, 4, 8, 10 ].

**Malaxis monophyllos (L.) Sw. 1800**, Kongl. Svenska Vetensk. Acad. Handl. 21: 234. - *Ophrys monophyllos* L. 1753, Sp. Pl. 2: 948. - *Microstylis monophyllos* (L.) Lindl. 1830, Gen. Sp. Orchid. Pl.: 19. - [ 1, 2, 3, 4, 5 ].

**Neottia camtschatea (L.) Rchb. f. 1851**, Icon. Fl. Germ. Helv. 13/14: 146. - *Ophrys camtschatea* L. 1753, Sp. Pl. 2: 948. - [ 1, 2, 3, 7+ (Sutai Khairkhan uul, Khushuutiin gol), (Revushkin *et al.* 2001) ]. - (CR, VR, RB).

# **N. puberula (Maxim.) Szlach. 1995**, Fragm. Florist. Geobot. Suppl. 3: 118. - *Listera puberula* Maxim. 1884, Bull. Acad. Imp. Sci. St-Petersbourg 29: 204. - *L. savatieri* Maxim. ex Kom. 1901, Trudy Imp. S.-Peterburgsk. Bot. Sada 20: 526. - *L. major* Nakai, 1914, Bot. Mag. Tokyo 28: 327. - [ 5 ].

**Neottianthe cucullata (L.) Schltr. 1919**, Repert. Spec. Nov. Regni Veg. 16(23–25): 292. - *Orchis cucullata* L. 1753, Sp. Pl. 2: 939. - [ 1+ (Oyumaa & Paula de Priest 2011), 2, 3, 4 ]. - (CR, VR, RB).

**Orchis militaris L.** 1753, Sp. Pl. 2: 941. – [ 2+ (Galanin *et al.* 2008), 3, 4, 7+ (Darikhand 2013) ]. – (EN, VR, RB).

**Platanthera bifolia (L.) C. M. Rich.** 1817, Mem. Mus. Hist. Nat. 4: 57. - *Orchis bifolia* L. 1753, Sp. Pl. 2: 949. – [ 1+ (Oyumaa & Paula de Priest 2011), 2, 3, 4 ]. – (CR, VR, RB).

**Notes:** *P. hologlottis* Maxim. is collected in Foothills of Great Khingan phytogeographical region (MW).

# **P. fuscescens (L.) Kraenzl.** 1899, Orchid. Gen. Sp. 1: 637. - *Orchis fuscescens* L. 1753, Sp. Pl. 2: 943. - *Tulotis fuscescens* (L.) Czer. 1973, Flora URSS 622. - *Platanthera souliei* Kraenzl. 1908, Repert. Spec. Nov. Regni Veg. 5(91–92): 199–200. - *Perularia fuscescens* (L.) Lindl. 1835, Gen. Sp. Orchid. Pl.: 281. – [ 2, 3, 4, 5 ].

# **P. obtusata subsp. oligantha (Turcz.) Hulten,** 1943, Acta Univ. Lund. 39(1): 481. – *P. oligantha* Turcz. 1854, Bull. Soc. Imp. Nat. Moscou 27(2): 86. - *Lysiella oligantha* (Turcz.) Nevski, 1935, Fl. URSS 4: 663. – [ 1, 3 ]. – (R, RB).

**Spiranthes sinensis (Pers.) Ames,** 1908, Orchidaceae 2: 53. – *Neottia sinensis* Pers. 1807, Syn. Pl. 2: 53, 510. – *N. amoena* M. Bieb. 1819, Fl. Taur.-Caucas. 3: 606. - *Spiranthes amoena* (M. Bieb.) Spreng. 1826, Syst. Veg. 3: 708. – [ 2, 3, 4, 5, 8, 9, 10 ].

### 31. IRIDACEAE JUSS. 1789 (1/20)

Gen. Pl. 57

**Iris bungei Maxim.** 1880, Bull. Acad. Imp. Sci. St.-Petersbourg 26(3): 509. – [ 3, 5+ (Neuffer *et al.* 2012), 8, 9, 11, 12, 13, 16 ]. – **Subendemic.** Described from Eastern Mongolia (LE).

**I. dichotoma Pall.** 1776, Reise Russ. Reich. 3: 712. - *Pardanthopsis dichotoma* (Pall.) Lenz. 1972, Aliso 7(4): 403. – [ 2, 4, 5, 8, 9 ].

**I. glaucescens Ledeb.** 1829, Fl. Altaic. 1: 58. – [ 6 ]. – (R).

**I. halophila Pall.** 1773, Reise Russ. Reich. 3: 713. – [ 6, 14 ]. – (R).

**I. humilis Georgi,** 1775, Reise Russ. Reich. 1: 196. – *I. flavissima* Pall. 1776, Reise Russ. Reich. 3: 715. – [ 1, 2, 3, 4, 5, 8, 9, 12+ (Dariimaa *et al.* 2004), 13 ]. – (R).

**Notes:** The *I. humilis* var. *umbrosa* Alexeev is founded in the nearest of Khuvgul nuur (Alexeev 2011).

+ **I. ivanovaе Doronkin,** 1987, Fl. Sibir. 4: 117. – [ 2+, 3+ (Khundlun Ikh uul), (Alexeev 2011) ]. – **Subendemic.**

+ **I. kamelinii Alexeeva,** 2006, Novosti Syst. Vyssh. Rast. 38: 116. – [ 1+ (Khukh gol), (Alexeev 2011), 7+ (Bugat nuur), (Alexeev 2011; Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic.**

# **I. lactea Pall.** 1776, Reise Russ. Reich. 3: 713. – *I. oxypetala* Bunge, 1832, Enum. Pl. China Bor. 63. - *Eremiris lactea* (Pall.) Rodion. 2006, Bot. Zhurn. SSSR 91: 1708. - *Iris biglumis* Vahl, 1806, Enum. Pl. 3: 149. – *I. pallasii* Fisch. var. *chinensis* Fisch. 1822, Bot. Mag. 49: 2331. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16 ].

+ **I. loczyi** Kanitz, 1891, Bot. Resl. Szech. Cent. As. Exped. 58. – *I. tenuifolia* var. *thianshanica* Maxim. 1880, Bull. Acad. Imp. Sci. St.-Petersbourg 26(3): 512. – [ 7+ (Khovd gol), (Smirnov *et al.* 2003), 10+ (Altan els), (Enkhtuya & Munkh-Erdene, 2013) ].

+ **I. ludwigii** Maxim. 1880, Bull. Acad. Imp. Sci. St.-Petersbourg 26(3): 508. – Xyridion ludwigii (Maxim.) Rodion. 2005, Bot. Zhurn. (Moscow & Leningrad) 90: 59. – [ 7+ (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic**.

**I. potaninii** Maxim. 1880, Bull. Acad. Imp. Sci. St.-Petersbourg 26(3): 528. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13 ]. – **Subendemic**. – (R).

+ **I. psammocola** Y.T. Zhao, 1992, Acta Phytotax. Sin. 30(2): 181–182. – *I. potaninii* var. *arenaria* Doronkin, 1990, Bot. Zhurn. (Moscow & Leningrad) 75: 415. – [ 10+ (Altan els), (Doronkin & Shaulo 2007; Enkhtuya & Munkh-Erdene 2013) ].

+ **I. pseudothoroldii** Galanin 2009, Fl. Daurica, 2: 130. – [ 4+ (Ulz gol), (Galanin 2009; Urgamal *et al.* 2013) ]. – **Subendemic**.

**I. ruthenica** Ker-Gavler 1808, Bot. Mag. 28: 1123. – *I. ruthenica* var. *brevituba* Maxim. 1880, Bull. Acad. Imp. Sci. St.-Petersbourg 26(3): 516. - *I. brevituba* (Maxim.) Vved. ex E. Nikit. 1951, Fl. Kirgh. SSR 3: 131. – [ 1, 2, 3, 4, 5 ].

**Notes:** *I. ruthenica* subsp. *brevituba* (Maxim.) Doronkin are not pointed in Mongolia (Flora of Siberia 1987).

**I. sanguinea** Donn ex Hornem. 1813, Hort. Bot. Hafn. 1: 58. – *I. sibirica* var. *sanguinea* (Donn ex Hornem.) Ker Gawl. 1813, Bot. Mag. 35: 1604. - *I. sibirica* auct. Fl. Mong., non L. – [ 2, 4, 5, 9 ].

+ **I. sibirica** L. 1753, Sp. Pl. 1: 39. – [ 4+ (Khurkh, Shuusiin gol), (Zumberelmaa 2004, 2009; Galanin 2009; Urgamal *et al.* 2013) ].

**I. tenuifolia** Pall. 1776, Reise Russ. Reich. 3: 714. – [ 7, 8, 9, 10, 11, 12, 13, 14, 15 ].

**I. tigridia** Bunge ex Ledeb. 1829, Fl. Altaic. 1: 60–61. – *I. ivanovaе* V. Doronkin, 1987, Fl. Sibir. 4: 117. – [ 1, 2, 3, 4, 8 ].

**I. uniflora** Pall. ex Link 1820, Jahrb. Gewachsk. 1(3): 71. – [ 4, 5 ].

**I. ventricosa** Pall. 1776, Reise Russ. Reich. 3: 712. – [ 5, 9 ].

## \$ 32. XANTHORRHOEACEAE DUMORT. 1829 (1/2)

Anal. Fam. Pl. 60, 62, 103

\$ [incl. Hemerocallidaceae]

**Hemerocallis lilioasphodelus** L. 1753, Sp. Pl. 1: 324. – [ 4, 5, 9 ].

**H. minor** Mill. 1768, Gard. Dict. (ed. 8): 2. – [ 1, 2, 3, 4, 5, 8, 9 ].

**Citation:**

**Urgamal, M., Oyunsetseg, B., Nyambayar, D. & Dulamsuren, Ch.** 2014. Conspectus of the vascular plants of Mongolia. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp.

**\$ 33. AMARYLLIDACEAE J. ST.-HIL. 1805 (1/52) \***

Expos. Fam. Nat. 1: 134

\$ [incl. Alliaceae] \* based on N.V. Friesen & B. Oyunsetseg (2013)

**Allium altaicum Pall.** 1773, Reise Russ. Reich. 2: 737. – [ 1, 2, 3, 6, 7, 8, 10, 13, 14 ]. – Subendemic. (VU, R, RL).

**A. amphibolum Ledeb.** 1830, Fl. Altaic. 2: 5. – [ 1, 2, 3, 4+ (Galanin & Belikovich 2011) 6, 7, 10+ (Khovd, Mankhan), (Kechaykin et al. 2014), 13, 14 ].

**A. anisopodium Ledeb.** 1852, Fl. Ross. 4: 183. – [ 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 ]. – (R).

**A. austrosibiricum N. Friesen,** 1987, in Fl. Sibir. Arac.–Orch. 4: 66. – *A. senescens* var. *serotinum* Regel, 1875, Trudy Imp. St.-Peterburgsk. Bot. Sada 3(2): 139. – *A. senescens* var. *montanum* Kryl. 1929, Fl. Sibir. 3: 618. – [ 3, 6, 7, 10, 14+ (Friesen 1995) ].

# **A. bidentatum Fisch. ex Prokh. & Ikonn.-Gal.** 1929, Mat. Comm. Etude Republ. Mong. Touva & Bour. 2: 83. – *A. omiostema* Airy Shaw, 1931, Notes Roy. Bot. Gard. Edinburgh 16: 144. – [ 1, 2, 3, 4, 5, 6, 8, 9, 10+ (Friesen 1995; Kechaykin et al. 2014), 11, 12 ].

**A. bogdoicola Regel** 1880, Trudy Imp. St.-Peterburgsk. Bot. Sada 6: 530. – [ 3, 6, 7, 10+ (Khovd, Mankhan), (Kechaykin et al. 2014), 13+ (Friesen 1995), 14 ].

**A. burjaticum N. Friesen,** 1987, in Fl. Sibir. Arac.–Orch. 4: 68. – *A. prostratum* subsp. *burjaticum* (Friesen) Sancir, 1992, in Hanelt et al. genus *Allium* : 294, comb. Invalid. – [ 3, 4, 8 ].

+ **A. carolinianum DC.** 1804, in Redoute, Liliac. 2: 101. – [ 14+ (Baitag Bogd uul), (Oyunsetseg et al. 2013; Urgamal et al. 2013) ].

**A. chamarense M. Ivanova,** 1965, Novosti Syst. Vyssh. Rast. 2: 286. – *A. leucocephalum* subsp. *chamarense* (M. Ivanova) Sanczir, 1992, in Hanelt et al. genus *Allium*: 295. – [ 1, 2, 3 ].

**A. clathratum Ledeb.** 1830, Fl. Altaic. 2: 18. – [ 3, 6, 7, 10, 11 ].

**A. condensatum Turcz.** 1855, Bull. Soc. Imp. Nat. Moscou 27(2): 121. – [ 5, 9 ]. – (R).

**A. eduardii Stearn,** 1944, Herbertia 11: 102. – [ 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ]. – Subendemic.

**A. flavidum Ledeb.** 1830, Fl. Altaic. 2: 7-8. – [ 1+, 2+, 3, 4+ (Galanin & Belikovich 2011), 6, 7, 13, 14 ].

**A. galanthum Kar. & Kir.** 1842, Bull. Soc. Imp. Nat. Moscou 15: 508. – [ 7, 14 ]. – (R).

**A. hymenorrhizum Ledeb.** 1830, Fl. Altaic. 2: 12-13. – [ 7 (Khovd), 14 (Ulziykhutag & Enkhmaa 2013) ].

**A. karelinii Poljakov, 1950**, Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Kazahsk. SSR 12: 70. – [ **7, 14** (Ulziykhutag & Enkhmaa 2013) ].

**A. ledebourianum Schult.. & Schult.. f. 1830**, Syst. Veg. 7: 1029. – [ **7** (Olonova & Beket 2010; Ulziykhutag & Enkhmaa 2013) ]. – **Subendemic**.

**A. leucocephalum Turcz. ex Ledeb.** 1852, Fl. Ross. 4(12): 179. – [ **1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14** ].

**A. lineare L.** 1753, Sp. Pl. 1: 295. – [ **1, 2, 3, 4, 6, 7, 10, 13, 14** ]. – **(R)**.

# **A. macrostemon Bunge, 1833**, Enum. Pl. China Bor.: 65. – *A. macrostemon* var. *uratense* (Franch.) Airy Shaw, 1931, Notes Roy. Bot. Gard. Edinburgh 16: 136. - *A. uratense* Franch. 1884. Nouv. Arch. Mus. Hist. Nat. Ser. 2, 7: 114. – [ **8, 9** (Dornod, Matad sum, Tsogt Delger uul), (Ligaa *et al.* 2008; Nyambayar *et al.* 2011) ]. – **(CR, VR, RB)**.

**A. malyschevii N. Friesen, 1987**, in Fl. Sibir. Arac.–Orch. 4: 89. – [ **1, 2, 3** ].

**A. maximowiczii Regel, 1875**, Trudy Imp. St.-Peterburgsk. Bot. Sada 3(2): 153. – [ **2, 4, 5, 9** ]. – **(R)**.

**A. microdictyon Prokh.** 1930, Trudy Prikl. Bot. 24(2): 174. – *A. victoralis* auct. Fl. Mong., non L. - [ **1+** (Oyumaa & Paula de Priest 2011; Ulziykhutag & Enkhmaa 2013), **2, 3, 4** ].

**A. monadelphum Less. ex Kunth, 1843**, Bull. Soc. Imp. Nat. Moscou 15: 508. - *A. monadelphum* var. *atrosanguineum* (Schrenk) Regel, 1887, Trudy Imp. St.-Peterburgsk. Bot. Sada 10: 309. - [ **1, 2, 3+** (Ulziykhutag & Enkhmaa 2013), **6, 7** ]. – **Subendemic**.

**A. mongolicum Turcz. ex Regel, 1875**, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(2): 160. – [ **3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16** ]. – **Subendemic**. Described from Eastern Mongolia (LE).

# **A. neriniflorum (Herb.) G. Don, 1855**, Encycl. Pl. Phys. 12(142): 290. - *Calloscordum nerinifolium* Herb. 1844, Edwards's Bot. Reg. 30: 67. – [ **4, 5, 9** ].

**A. obliquum L.** 1753, Sp. Pl. 1: 296. – [ **7** (Yolt, Songiniin gol), (Ulziykhutag 1985; Beket 2009; Ulziykhutag & Enkhmaa 2013) ]. – **(CR, VR, RB, RL)**.

**A. oliganthum Kar. & Kir. 1841**, Bull. Soc. Imp. Nat. Moscou 14: 856. – [ **6, 7, 10, 14** ].

+ **A. pallasii Murr. 1775**, Comment. Soc. Regiae Sci. Gott. 6: 32. – [ **14+** (Sanchir 1992; Friesen 1995; Ulziykhutag & Enkhmaa 2013) ].

# **A. platyspathum Schrenk ex Fisch. & C.A. Mey. 1841**, Enum. Pl. Nov. 1: 7. – *A. amblyophyllum* Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 510. – [ **3+, 6+** (Friesen 1995), **7, 13+** (Friesen, 1995), **14** ].

# **A. platyspathum subsp. *amblyophyllum* N. Friesen, 1987**, Fl. Sibir. Arac.–Orch. 4: 81. – *A. alataviense* Regel, 1868, Bull. Soc. Imp. Nat. Moscou 41: 448. – *A. amblyophyllum* Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 510. – [ **7, 13+** (Yoliin am), (Friesen 1995), **14** ].

**A. polyrhizum Turcz. ex Regel, 1875**, Trudy Imp. St.-Peterburgsk. Bot. Sada 3(2): 162. – [ **1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 15, 16** ]. – **Subendemic**.

**A. prostratum Trev. 1822**, Allii Sp. 16. – [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11+** (Ulziykhutag & Enkhmaa 2013), **12, 13** ].

**A. pumilum** Vved. 1934, *Bull. Sredne-Aziatsk. Gosud. Univ.* 19: 121. – [ 6, 7 (Shaulo et al. 2002; Olonova & Beket 2010), 14+ (Baitag Bogd uul, Budun Khargaitiin gol), (Kechaykin et al. 2014) ]. – **Subendemic**.

**A. ramosum** L. 1753, *Sp. Pl.* 1: 296. – *A. odoratum* L. 1767, *Mant. Pl.* 1: 62. – [ 1, 2, 3, 4, 5, 6, 7+ (Ulziykhutag & Enkhmaa 2013), 8, 9, 10, 11, 12, 13 ]. – **(R)**.

+ **A. rubens** Schrad. ex Willd. 1809, *Enum. Pl.* 1: 360. – [ 6+ (Ulziykhutag & Enkhmaa 2013), 7+, 14+ (Friesen 1995; Urgamal et al. 2013) ].

**A. schischkinii** K. Sobolevsk. 1949, *Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva* 1949: 1-2. – [ 3, 6, 7, 10, 11, 13 ].

**A. schoenoprasum** L. 1753, *Sp. Pl.* 1: 301. – *A. sibiricum* L. 1771, *Mant. Pl.* 2: 562. - *A. raddeanum* Regel, 1875, *Trudy Imp. St.-Peterburgsk. Bot. Sada* 3(2): 155. – [ 1, 2, 3, 4, 5, 6, 7, 10 ].

**A. senescens** L. 1753, *Sp. Pl.* 1: 299-300. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13 ].

# **A. senescens** subsp. *glaucum* (Regel) Dostal, 1984, *Folia Mus. Rerum Nat. Bohem. Occid. Bot.* 21: 16. – *A. senescens* var. *glaucum* Regel, 1875, *Trudy Imp. St.-Peterburgsk. Bot. Sada* 3(2): 139. – [ 1, 3+, 4, 5+ (Dariimaa 2009), 9, 10+ (?) (Ulziykhutag & Enkhmaa 2013) ].

**A. splendens** Willd. ex Schult. & Schult. f. 1830, *Syst. Veg.* 7: 1025. – [ 1, 2, 3, 4, 5, 8, 9 ].

+ **A. spirale** Willd. 1814, *Enum. Pl. Suppl.*: 17. – [ 1+, 4+, 9+ (Ulziykhutag & Enkhmaa 2013) ].

# **A. spurium** G. Don, 1827, *Mem. Wern. Nat. Hist. Soc.* 6: 59. - *A. dauricum* N. Friesen, 1987, *in Fl. Sibir. Arac.-Orch.*: 68. – [ 1, 2+ (Friesen 1995), 4, 5, 9 ].

**A. stellerianum** Willd. 1799, *Sp. Pl.* 2: 92. – [ 1, 2, 3+ (Friesen 1995), 4 ].

**A. strictum** Schrad. 1809, *Hort. Gott. 7.* – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14 ].

**A. subtilissimum** Ledeb. 1830, *Fl. Altaic.* 2: 22. – [ 3, 14 (Ulziykhutag & Enkhmaa 2013) ]. – **Subendemic**.

**A. tenuissimum** L. 1753, *Sp. Pl.* 1: 301. – [ 1, 2, 3, 4, 5, 7, 8, 9, 11, 12, 13, 14, 15 ].

**A. tuberosum** Rottler ex Spreng. 1824, *Syst. Veg.* 2: 38. – *A. uliginosum* auct. *Fl. Mong.*, non G. Don – [ 5, 9 (Ulziykhutag & Enkhmaa 2013) ].

**Notes:** *A. tuberosum* is generally regarded as a cultivated species (Flora of China 2000; Ulziykhutag & Enkhmaa 2013).

**A. tuvinicum** (N. Friesen) N. Friesen, 1987, *in Fl. Sibir. Arac.-Orch.*: 75. – *A. stellerianum* subsp. *tuvinicum* N. Friesen, 1985, *in Fl. Sibir. Arac.-Orch.*: 75. – [ 3+ (Tesiin gol), (Ulziykhutag & Enkhmaa 2013), 6, 7, 10 ].

**A. tytthocephalum** Schutes & Schnites f. 1830, *Syst. Veg.* 7: 1133. – [ 4+ (Galanin & Belikovich 2011), 6+ (Ulziykhutag & Enkhmaa 2013), 7, 13+ (Neuffer et al. 2012) ]. – **Subendemic**.

**A. ubsicola** Regel, 1887, *Trudy Imp. St.-Peterburgsk. Bot. Sada* 10: 342. – [ 6+ (Tsagaannuur), (Kechaykin et al. 2014), 10 (Ubs nuur), (Ulziykhutag & Enkhmaa 2013), 14+ (Enkhmaa 2009) ]. – Described from nearest of Ubs nuur (LE). – **Subendemic**.

**A. vodopjanovae** N. Friesen, 1985, *Bot. Zhurn. (Kiev)* 70: 1247. – [ 3, 4, 6, 7, 8, 10, 11, 12, 13, 14, 15 ].

**Notes:** *A. kerulenicum* (Dashnjam 1974) are not pointed in Mongolia. Also *A. gobicus* Galanin sp. nov. prov. collected in Mongolian Dauria and Gobi Altai (Gurvan Saikhan uul) phytogeographical regions of Mongolia (Flora of Dauria 2011). The cultivated plants followed in the Amaryllidaceae family: *A. cepa* L., *A. chinensis* G. Don. f., *A. fistulosum* L., *A. omiostema* Airy Shaw, *A. ovalifolium* Hand.-Mazz. (Mongolian Altai), *A. porrum* L. and *A. sativum* L. (Gubanov, 1996; Ulziykhutag & Enkhmaa 2013; Urgamal *et al.* 2013).

**Citation:** Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch. 2014. *Conspectus of the vascular plants of Mongolia*. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp. (p. 49-60).

# 34. ASPARAGACEAE JUSS. 1789 (5/19)

Gen. Pl. 40

# [incl. Asphodelaceae, Convallariaceae]

**Anemarrhena asphodeloides** Bunge, 1833, Enum. Pl. China Bor. 66. – [ 5, 9 ]. – (DD, VR, RB).

**Asparagus brachyphyllus** Turcz. 1840, Bull. Soc. Imp. Nat. Moscou 13: 78. – [ 9 ].

+ **A. burjaticus** Peschkova, 1974, Novosti Syst. Vyssh. Rast. 11: 86. – [ 4+ (Galanin 2009; Urgamal *et al.* 2013) ].

# **A. dauricus** Fisch. ex Link, 1821, Enum. Hort. Berol. Alt. 1: 340. – *A. gibbus* Bunge, 1832, Enum. Pl. China Bor. 66. – [ 2, 3, 4, 5, 6+ (Kamelin & Ulziykhutag 2005), 8, 9, 11, 12 ].

+ **A. neglectus** Kar. & Kir. 1841, Bull. Soc. Imp. Nat. Moscou 14: 750. – *A. misczenkoi* Iljin, 1935, 4: 746. – [ 14+ (Kamelin *et al.* 1991; Urgamal *et al.* 2013) ].

**A. gobicus** Ivanova ex Grubov, 1955, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 17: 9. – [ 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ]. – **Subendemic**. First located from Depression of Great Lake phytogeographical region (LE).

**A. oligoclonos** Maxim. 1859, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 9: 286. – [ 5 (Khavirga uul) ]. – (R, RB).

**A. pallasii** Miscz. 1916, Vestn. Tiflissk. Bot. Sada 12: 27. – [ 7, 10, 11 ].

**A. schoberioides** Kunth 1850, Enum. Pl. 5: 70. – [ 5 ].

**A. tamariscinus** Ivanova ex Grubov, 1955, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 17: 10. – [ 10, 14, 15, 16 ].

**A. trichophyllus** Bunge, 1832, Enum. Pl. China Bor.: 65. – [ 10, 12, 15, 16 ].

**Notes:** *A. persicus* Baker and *A. neglectus* Kar. et Kir. are not pointed in Depression of Great Lake and Dzungarian Gobi regions of Mongolia.

**Convallaria keiskei** Miq. 1867, Ann. Mus. Bot. Lugduno-Batavi 3: 148. – [ 2, 5 ]. – (EN, VR, RB).

**Maianthemum bifolium** (L.) F.W. Schmidt, 1794, Fl. Boem. Cent. 4: 55. – *Convallaria bifolia* L. 1753, Sp. Pl. 1: 316. – [ 1, 2, 3, 4, 5 ].

**M. dilatatum** (Wood) Nelson & Macb. 1916, Bot. Gaz. 61(1): 30. – *M. bifolium* var. *dilatatum* Wood, 1868, Proc. Acad. Nat. Sci. Philadelphia 20(6): 174. – [ 3, 4, 5, 9 ]. – (VU, VR, RB).

**M. intermedium** Vorosch. 1960, Izv. Glavn. Bot. Sada RSFSR 38: 50. – [ 5 ].

+ **M. trifolium** (L.) Sloboda, 1852, Rostlinnictv: 192. - *Convallaria trifolia* L. 1753, Sp. Pl. 1: 316. – *Smilacina trifolia* (L.) Desf. 1807, Ann. Mus. Natl. Hist. Nat. 9: 52. – [ 2+ (Galanin & Belikovich 2011; Urgamal *et al.* 2013) ].

**Polygonatum humile** Fisch. ex Maxim. 1859, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 9: 275. – [ 4, 5 ]. – (VU, VR, RB).

**P. odoratum (Mill.) Druce, 1906**, Ann. Scott. Nat. Hist. 60: 226. - *Convallaria odorata* Mill. 1768, Gard. Dict. (ed. 8) 4. - [ 1, 2, 3, 4, 5, 8, 9 ].

**P. sibiricum Delaroche, 1812**, Liliac. 6: 315. - [ 1+ (Doronkin & Khan, 2012), 2, 3, 4, 5, 8, 9, 12+ (Dariimaa *et al.* 2004) ].

### 13. POALES SMALL, 1903

Fl. S.E. U.S. 48

#### # 35. TYPHACEAE JUSS. 1789 (2/11)

GEN. PL. 25

# [incl. Sparganiaceae]

**Sparganium emersum Rehmann, 1871**, Verh. Naturf. Vereins Bernn 10: 80. - [ 3, 5, 6, 7, 9, 10 ].

# **S. erectum subsp. stoloniferum (Buch.-Ham. ex Graebn.) H. Hara, 1976**, J. Jap. Bot. 51(8): 228. - *S. ramosum* subsp. *stoloniferum* Buch.-Ham. ex Graebn. 1900, *Pflanzenr. IV*, 10: 14. - *S. stoloniferum* (Buch.-Ham. ex Graebn.) Buch.-Ham. ex Juz. 1934, *Fl. URSS 1: 219*. - [ 1, 4, 8+ (Sanchir *et al.* 2004; Dulmaa *et al.* 2011), 9, 10 ].

**S. glomeratum (Laest. ex Beurl.) Neuman, 1889**, Handb. Skand. Fl. 12: 111. - [ 2 (Shoroitiin gol), 4 ]. - (R).

# **S. natans L. 1753**, Sp. Pl. 2: 971. - *S. minimum* Wallr. 1840, Fl. Hercn. 2: 297. - [ 7+ (Beket 2009), 10 ].

**Typha angustifolia L. 1753**, Sp. Pl. 2: 971. - [ 1+ (Egiin gol), (Dulmaa 2004), 10 (Khar-Us nuur) ].

**T. domingensis Pers. 1807**, Syn. Pl. 2: 532. - *T. australis* Schumach. 1827, Beskr. Guin. Pl.: 401. - [ 4, 10 ].

+ **T. joannis Mavrodiev, 2002**, Feddes Repert. 113: 283. - [ 9+ (Mavrodiev 2002) ].

**T. laxmannii Lepech. 1801**, Nova Acta Acad. Sci. Imp. Petrop. Hist. Acad. 12: 84, 335. - [ 3, 4, 5, 6, 8, 9, 11 ].

**T. minima Funk ex Hoppe, 1794**, Bot. Taschenb. 5: 187. - [ 9+ (Buir nuur), (Dulmaa *et al.* 2011), 10 (Ubs nuur) ]. - (NT, VR, RB).

**T. orientalis C. Presl 1851**, Abh. Konigl. Bohm. Ges. Wiss., Ser. 5 6: 599. - [ 5 (Numrugiin gol) ].

+ **T. tzvelevii Mavrodiev, 2002**, Feddes Repert. 113: 283. - [ 4+ (Mavrodiev 2002) ].

#### 36. JUNCACEAE JUSS. 1789 (2/31)

Gen. Pl. 43

**Juncus alpinoarticulatus subsp. fischerianus (Turcz. ex V.I. Krecz.) Haemit.-Achti, 1980**, Memoranda Soc. Fauna Fl. Fenn. 56: 97. - *J. fischerianus* Turcz. ex V.I. Krecz. 1931, *Fl. Transbaic. 2: 142*. - *J. alpinus* var. *macrocephalus* Hyl. 1953, *Bot. Not. 1953: 353*. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14 ].

# **J. arcticus subsp. grubovii (Novikov) Novikov, Kirschner & Snogerup, 2002**, Preslia 74: 252. - *J. grubovii* Novikov, 1981, Bull. Moskovsk. Obač. Isp. Prir. Otd. Biol. 86(5):

103. – [ 1, 2+ (Eruugiin khaluun rashaan), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3 ]. – **Endemic.**

**Notes:** *J. grubovii* Novikov was described from Northern Mongolia (MW).

**J. articulatus L. 1753**, Sp. Pl. 1: 327. – [ 4+ (Galanin et al. 2008) 9, 14 ]. – (R).

# **J. articulatus subsp. limosus (Vorosch.) Vorosch.** 1985, Florist. issl. v razn. Raionakh SSSR 157. – [ 3, 4, 5, 9 ].

**J. biglumis L. 1753**, Sp. Pl. 1: 328. – [ 1, 6, 7 ].

**J. bufonius L. 1753**, Sp. Pl. 1: 328. – [ 1-16 (all regions) ].

**J. bufonius subsp. ambiguus (Guss.) Schinz. & Thell.** 1923, Fl. Schweiz 1: 126. – *J. ambiguus* Guss. 1827, Fl. Sicul. Prodr. 1: 435. – [ 3, 4, 6, 7, 9, 10, 11, 13, 14, 15 ].

**J. bufonius subsp. nastanthus (V.I. Krecz. & Gontsch.) Soo,** 1971, Acta Bot. Acad. Sci. Hung. 16: 366. - *J. nastanthus* V.I. Krecz. & Gontsch. 1935, Fl. URSS 3: 624. – [ 10, 14+ (Uushigii us), (Ebel & Rudaya 2002) ].

**J. bufonius subsp. turkestanicus (V.I. Krecz. & Gontsch.) Novikov,** 1987, Novosti Syst. Vyssh. Rast. 24: 60. - *J. turkestanicus* V.I. Krecz. & Gontsch. 1935, Fl. URSS 3: 625. – [ 3, 4, 5, 7, 9, 10, 14 ].

# **J. castaneus subsp. leucochlamys (V.J. Zinger ex V.I. Krecz.) Hulten,** 1967, Ark. Bot. 7(1): 31. - *J. leucochlamys* Zing. ex V.I. Krecz. 1931, Fl. Transbaic. 2: 141. – [ 1, 2, 3, 4, 6, 7, 9 ].

# **J. castaneus subsp. triceps (Rostk.) Novikov,** 1979, Novosti Syst. Vyssh. Rast. 15: 92. – *J. triceps* Rostk. 1801, De Junco: 48. – [ 1, 2, 3, 6, 7, 13+ (Neuffer et al. 2012) ].

**J. compressus Jacq. 1762**, Enum. Stirp. Vindob. 60: 235. – [ 1+ (Egiin gol), (Dulmaa 2004), 3, 4, 5, 8, 9, 10, 13, 14 ].

+ **J. filiformis L. 1753**, Sp. Pl. 1: 326. – [ 7+ (Tsagaan gol), (Krasnoborov 2006) ].

**J. gerardii Loisel. 1809**, J. Bot. (Paris) 2: 284. – [ 2, 3, 4, 6, 7, 8, 9, 10, 13, 14, 15 ].

**Notes:** *J. gerardii* var. *ubsunuricus* Novikov (Novikov 1987) was described from nearest Ubs nuur (MW).

**J. gracillimus (Buchenau) V.I. Krecz. & Gontsch. 1935**, Fl. URSS 3: 528. - *J. compressus* var. *gracillimus* Buchenau, 1906, Pflanzenr. 35(IV. 36): 112. – [ 2, 3, 5, 9 ].

**J. orchonicus Novikov 1981**, Russian publ. 90(5): 110. – [ 2, 3, 4, 5, 8, 9, 10 ]. – Described from Northern Mongolia (MW).

# **J. persicus subsp. libanoticus (J. Thiebaut) Novikov & Snogerup,** 2002, Preslia 74: 252. – *J. vvedenskyi* V.I. Krecz. 1935, Bull. Sredne-Aziatsk. Gosud. Univ. 21: 176. – [ 3, 4, 6, 7 ].

**J. salsuginosus Turcz. ex C.A. Mey. 1853**, Fl. Ross. 4: 230. – [ 1, 2, 3, 4, 6, 7, 8, 10, 11, 12, 13, 15 ].

**J. soranthus Schrenk, 1843**, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 2: 193. – [ 3, 7 ].

**J. triglumis L. 1753**, Sp. Pl. 1: 328. – [ 1, 2, 3, 4, 6, 7, 10, 13+ (Neuffer et al. 2012), 14 ].

+ **J. virens Buchenau, 1906**, Pflanzenr. IV, 36: 220. – *J. papillosum* var. *virens* (Buchenau) Vorosch. 1985, Fl. Issl. v Razn. Roinakh SSSR 157. – [ 4+ (Onon gol), (Galanin et al. 2008) ].

**Luzula changaica** V.S. Novikov, 1989, Novosti Syst. Vyssh. Rast. 26: 31. - [ 3 ]. - **Endemic** (MW, isotype - LE).

**L. confusa** Lindeb. 1885, Bot. Not. 1855: 9. - [ 1, 2, 6, 7 ].

**L. multiflora** (Ehrh.) Lej. 1811, Fl. Spa 1: 169. - *Juncus multiflorus* Ehrh. 1791, Calam. Gramin. Tripetal. Linn. Exsicc.: 127. - [ 3 (Khan Khukhii) ].

**L. multiflora** subsp. **frigida** (Buchenau) V.I. Krecz. 1928, Bot. Zhurn. SSSR 12: 490. - *L. frigida* (Buchenau) Sam. ex Lindm. 1918, Sv. Fanerogamfl.: 161. - [ 7 ].

# **L. multiflora** subsp. **sibirica** V.I. Krecz. 1928, Bot. Zhurn. SSSR 12: 491. - *L. sibirica* (V.I. Krecz.) V.I. Krecz. 1931, *Fl. Transbaic.* 2: 144. - [ 1, 2, 3, 4, 6, 7 ].

**L. nivalis** (Laest.) Spreng. 1825, Syst. Veg. 2: 111. - *L. campestris* var. *nivalis* Laest. 1822, Kongl. Vetensk. Acad. Handl. 1822: 334. - [ 1 (Darkhadiin Khotgor) ].

# **L. pallescens** Sw. 1814, Summa Veg. Scand.: 13. - *L. pallidula* Krischner, 1990, - Taxon 39(1): 106. - [ 1, 2, 3, 4, 5, 7, 9 ].

**L. parviflora** (Ehrh.) Desv. 1808, J. Bot. (Morot) 1: 144. - *Juncus parviflorus* Ehrh. 1791, Beiträge zur Naturkunde 6: 139. - [ 1, 2, 3, 6, 7 ].

**L. rufescens** Fisch. ex E. Mey. 1849, Linnaea 22(4): 385. - [ 1, 2, 3, 4 ].

**Notes:** *L. rufescens* var. *macrocarpa* Buchenau [*L. macrocarpa* (Buchenau) Nakai] is collected in Khovsgol and Khangai phytogeographical regions (Flora of Khangai 1989).

**L. spicata** subsp. **mongolica** V.Novikov, 1989, Novosti Syst. Vyssh. Rast. 26: 34. - *Luzula brevispicata* Knjasev, 2008 (publ. 2009), Novosti Syst. Vyssh. Rast. 40: 35. - [ 1, 2, 3, 6, 7, 13 ]. - **Endemic**. Described from Mongolian Altai phytogeographical region (MW, isotype - LE).

### 37. CYPERACEAE JUSS. 1789 (13/132) \*

Gen. Pl. 26

\* by D. Nyambayar (2009)

# **Blysmus compressus** subsp. **brevifolius** (Decne.) Kukkonen, 1995, Ann. Bot. Fenn. 32: 154. - *B. sinocompressus* Tang & Wang, 1961, Fl. Resp. Pop. China 11: 224. - [ 2, 3, 4, 5, 7, 8, 9, 11, 13, 14 ].

**B. rufus** (Hudson) Link, 1827, Hort. Berol. 1: 278. - *Schoenus rufus* Hudson, 1798, Fl. Engl. (ed. 2) 1: 15. - [ 1+ (Nyambayar 2009), 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ].

**Bolboschoenus maritimus** (L.) Palla, 1905, Syn. Deut. Schweiz. Fl. (ed. 3) 3: 2532. - *Scirpus maritimus* L. 1753, Sp. Pl. 1: 51. - [ 14, 16+ (Nyambayar 2009) ].

**B. planiculmis** (Fr. Schmidt) T.V. Egorova, 1967, Rast. Centr. Azii, Mater. Bot. Inst. Komarov 3: 20. - *B. compactus* Drobow, 1913, Trudy Bot. Muz. Imp. Akad. Nauk 11: 92, p. p., excl. pl. europ. - *Scirpus planiculmis* Fr. Schmidt, 1868, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7. 12(2): 190. - [ 4, 5, 8, 9, 10, 11, 12, 15 ].

**B. popovii** T.V. Egorova, 1967, Rast. Centr. Azii, Mater. Bot. Inst. Komarov 3: 21. - *B. affinis* (Roth) Drobow, 1916, Trudy Bot. Muz. Imp. Akad. Nauk 16: 139. - [ 10, 11, 12+ (Tatanov, 2007), 13, 14, 15, 16 ].

**Carex acuta** L. 1753, Sp. Pl. 2: 978. - *C. fuscovaginata* Kuk. 1904, Bull. Herb. Boissier. Ser. 2, 4: 56. - *C. gracilis* Curtis, 1783, Fl. Lond. 4, tab. 60. - [ 2, 3, 14 ].

- C. alba** Scop. 1772, Fl. Carniol. (ed. 2) 2: 216. – [ 1, 2+ (Neuffer *et al.* 2012) ]. – (R).
- C. amgunensis** Fr. Schmidt, 1868, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7. 12(2): 69. – [ 1, 2, 3, 5, 7+ (Nyambayar 2009) ].
- C. appendiculata** (Trautv. & C.A. Mey.) Kuk. 1904, Bull. Herb. Boissier. Ser. 2, 4: 54. – *C. acuta* var. *appendiculata* Trautv. & C.A. Mey. 1856, Reise Nord. Ost. Sib. 1, 2, 3: 100. – [ 2, 4, 5, 8, 9, 10 ].
- C. argunensis** Turcz. ex Trev. 1852, Fl. Ross. 4: 267. – *C. alticola* Popl. ex Sukacz. 1912, Arbeiten Amur-Exped., Bot. 1: 277. – *C. argunensis* subsp. *alticola* (Popl. ex Sukacz.) Malyschev, 1990. – [ 2, 4, 5, 7, 9 ].
- C. arnellii** Christ, 1888, Kongl. Svenska Vetensk. Acad. Handl. 22(10): 177. – [ 2, 3, 4, 5, 9 ].
- C. aterrima** Hoppe, 1826, Caricolog. Germ.: 51. – *C. perfusca* V.I. Krecz. 1935, Fl. URSS 3: 256, 600. – [ 1, 2, 3, 6, 7 ].
- C. atherodes** Spreng. 1826, Syst. Veg. 3: 828. – *C. orthostachys* C.A. Mey. 1833, Fl. Altaic. 4: 231. – [ 1, 2, 3, 4, 5, 7, 8, 9, 11 ].
- C. atrofusca** Schkuhr, 1801, Beschr. Riedgras. : 106. – *C. stilbophaea* V. Krecz. 1935, Fl. URSS 3: 605. – [ 1, 3, 7 ].
- # **C. bigelowii** subsp. *ensifolia* (Gorodkov) Holub, 1968, Folia Geobot. Phytotax. 3(2): 190. - *C. ensifolia* Turcz. ex V.I. Krecz. 1931, Fl. Transbaic. 2: 120. – [ 1, 2, 3, 6, 7 ].
- # **C. bigelowii** subsp. *rigidioides* (Gorodkov) T.V. Egorova, 1973, Novosti Syst. Vyssh. Rast. 10: 103. - *C. rigidioides* (Gorodkov) V.I. Krecz. 1935, Fl. URSS 3: 228. – [ 2, 3 ].
- C. bohemica** Schreber, 1772, Beschr. Graes. 2(2): 52. – *C. cyperoides* Murr. 1774, Syst. Veg., ed. 13: 703. – [ 4 (Onon gol) ].
- C. brunnescens** (Pers.) Poir., 1813, Encycl., Suppl. 3: 286. – [ 2, 9+ (Nyambayar 2009) ].
- # **C. canescens** L. 1753, Sp. Pl. 2: 974. – *C. cinerea* Poll. 1977, Hist. Pl. Palat. 2: 571. – [ 2, 4, 7 ].
- C. capitata** L. 1759, Syst. Nat. ed. 10 (2): 1261. – [ 1, 2, 3, 7+ (Krasnoborov 2006) ].
- C. caryophyllea** Latour. 1785, Chlor. Lugd. 27. - *C. conspissata* V.I. Krecz. 1935, Fl. URSS 3: 326, 611. – *C. ruthenica* V.I. Krecz. 1935, Fl. URSS 3: 325, 610. – [ 1, 2, 3, 4, 6, 7, 8+ (Neuffer *et al.* 2012), 13 ].
- C. cespitosa** L. 1753, Sp. Pl. 2: 978. – [ 1, 2, 3, 5, 6, 7, 8+ (Sanchir & Mandakh 2008), 9, 10, 15 ].
- # **C. chloroleuca** Meinh. 1893, Trudy Imp. St.-Peterburgsk. Bot. Sada 18: 398. – *C. amgunensis* var. *chloroleuca* (Meinh.) Kuk. 1909, Pflanzenr. IV, 20(38): 447. – [ 1+ (Nyambayar 2009), 2 (?) (Kamelin *et al.* 1991) ].
- + **C. chordorrhiza** Ehrh. ex L. f. 1781, Suppl. Pl.: 414. – [ 2+ (Khonin nuga: Ulaan Burgas), (Dulamsuren & Muhlenberg 2003; Nyambayar 2009) ].
- C. coriophora** Fisch. & C.A. Mey. ex Kunth, 1837, Enum. Pl. 2: 463. – [ 1, 2, 3, 4, 5, 8, 9 ].
- C. curaica** Kunth, 1837, Enum. Pl. 2: 375. – [ 1, 2, 3, 6, 7, 10, 11, 14 ].

- C. curaica** subsp. **pycnostachya** (Kar. & Kir.) T.V. Egorova, 1973, Novosti Syst. Vyssh. Rast. 10: 104. – *C. pycnostachya* Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 522. – [ 3, 11, 14 ].
- C. dahurica** Kuk. 1910, Repert. Spec. Nov. Regni Veg. 8: 326. – [ 1, 2 ].
- C. delicata** C.B. Clarke, 1908, Bull. Misc. Inform. Kew, Addit. Ser. 8: 79. – *C. karoī* auct. Fl. Mong., non (Freyn) Freyn – [ 1, 2, 3, 4, 5, 6, 7+ (Bulgan gol), (German et al. 2009), 8, 9, 10, 13, 14+ (Baitag Bogd uul) ].
- C. diandra** Schrank, 1781, Cent. Bot. Anmerk.: 49. – [ 2, 5, 9, 10 ].
- C. diluta** M. Bieb. 1808, Fl. Taur.-Caucas. 2: 388. – [ 10 (Ulaangom) ].
- C. diplasiocarpa** V.I. Krecz. 1935, Fl. URSS 3: 135, 590. – [ 2+ (Dariimaa et al. 2009), 5, 9 ].
- # **C. distans** subsp. **aspratilis** (V.I. Krecz.) T.V. Egorova, 1976, Fl. Evr. Chasti SSSR 2: 177. – *C. aspratilis* V.I. Krecz. 1935, Fl. URSS 3: 398, 618. – [ 4, 10 ].
- # **C. disticha** subsp. **lithophila** (Turcz.) L. Hamet-Ahti, 1970, Ann. Bot. Fenn. 7: 272. – *C. lithophila* Turcz. 1855, Bull. Soc. Imp. Nat. Moscou 28(1): 328. – *C. mongolica* A.I. Baranov & Skvortsov, 1965, Quart. Journ. Taiwan. Mus. 18: 224. – [ 2, 3, 4, 5, 7, 9, 10 ].
- C. duriuscula** C.A. Mey. 1831, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 1: 214. – *C. stenophylla* var. *duriuscula* (C.A. Mey.) Trautv. 1887, Trudy Imp. St.-Peterburgsk. Bot. Sada 10(2): 537. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16 ].
- C. eleusinoides** Turcz. ex Kunth, 1837, Enum. Pl. 2: 407. – [ 2, 3 ].
- C. enervis** C.A. Mey. 1833, Fl. Altaic. 4: 209. – *C. stenophylla* var. *enervis* (C.A. Mey.) Kuk. 1909, Pflanzenr. 38: 122. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ].
- # **C. eremopyroides** V.I. Krecz. 1935, Fl. URSS 3: 384, 617. – *C. secalina* auct. Fl. Mong., non Willd. ex Wahlenb. – [ 9, 11 ].
- C. ericetorum** Pollich, 1777, Hist. Pl. Palat. 2: 580. – [ 4 (Dzurgucheeviin nuur) ].
- C. falcata** Turcz. 1855, Bull. Soc. Imp. Nat. Moscou 28(1): 338. – [ 2, 3 ].
- C. globularis** L. 1753, Sp. Pl. 2: 976. – [ 1, 2, 7 ].
- C. hancockiana** Maxim. 1870, Bull. Soc. Imp. Nat. Moscou 54(1): 66. – [ 2+ (Khonin nuga: Sangastai), (Dulamsuren et al. 2004), 3, 5 ].
- C. heterolepis** Bunge, 1833, Enum. Pl. China Bor.: 69. – *C. chamarensis* T.V. Egorova 1965, Novosti Syst. Vyssh. Rast. 2: 84. – [ 5 (Khan Chandmani uul) ].
- C. iljinii** V.I. Krecz. 1935, Fl. URSS 3: 137, 590. – [ 1, 2, 3 ].
- C. juncella** Th. Fries, 1857, Bot. Not.: 207. – *C. wiluica* Meinh. 1886, Vilyuisk. Okrugs Yakutsk. Obl. 2: 308. – [ 1, 3 ].
- C. korshinskyi** Kom. 1901, Trudy Imp. St.-Peterburgsk. Bot. Sada 20: 394. – *C. supina* subsp. *korshinskyi* (Kom.) Malyschev, 1990, Fl. Sibir. 3: 133. – [ 1, 2, 3, 4, 5, 6, 8, 9, 10, 12+ (Ikh Nart ?), 13 ].
- # **C. lachenalii** Schkuhr, 1801, Beschr. Riedgras. 1: 51. – *C. leporina* L. 1753, Sp. Pl. 2: 973, p.p., excl. typo. - *C. bipartita* All. 1785, Fl. Pedem. 2: 265. – *C. tripartita* auct. Fl. Mong., non All. – [ 1, 7, 14 ].
- C. lanceolata** Boott, 1857, Narr. Exped. China Japan 2: 326. – [ 2 ].

- + **C. lasiocarpa** Ehrh. **1784**, Hannover. Mag. 9: 132. – [ 2+ (Malgait uul), (Zoyo & Nyambayar 2004] .
- C. laxa** Wahlenb. **1803**, Kongl. Vetensk. Acad. Nya Handl.: 156. – [ 1, 2 ].
- C. ledebouriana** C.A. Mey. ex Trev. **1863**, Bull. Soc. Imp. Nat. Moscou 36(1): 540. – [ 1, 2, 3, 6, 7 ].
- # **C. leporina** L. **1753**, Sp. Pl. 2: 973. – *C. ovalis* Good, 1794, Trans. Linn. Soc. London, 2: 148. – [ 2, 3, 7 ]. – (R).
- + **C. limosa** L. **1753**, Sp. Pl. 2: 977. – [ 2+ (Khertsiiin gol), (Zoyo & Nyambayar 2004) ].
- C. loliacea** L. **1753**, Sp. Pl. 2: 974. – [ 2, 5 ].
- # **C. macrogyna** Turcz. ex Steud. **1855**, Syn. Pl. Glumac. 2: 236. – *C. petricosa* auct. Fl. Mong., non Dewey – [ 1, 3, 6, 7, 13 ].
- C. macroura** Meinh. **1901**, Trudy Imp. St.-Peterburgsk. Bot. Sada 18(3): 404. – *C. pediformis* subsp. *macroura* (Meinh.) Podp. 1928, Spisy PYÍr. Fak. Masarykovy Univ. 101: 21. – [ 1, 2, 3, 5, 7 ].
- + **C. magellanica** subsp. *irrigua* (Wahlenb.) Hiit. **1933**, Suom. Kasvio: 161. – *C. irrigua* (Wahlenb.) Smith ex Hoppe, 1826, Caric. Germ. : 72. – [ 2+ (Malgait uul), (Zoyo & Nyambayar 2004), 3+ (Jargalantiin gol ?) ].
- C. media** R. Br. **1823**, Frankl. Narr. 1st Journ.: 750. - *C. angarae* Steud. 1855, Syn. Pl. Glum. 2: 190. – [ 1, 2, 3, 4, 6, 7 ].
- C. melanantha** C.A. Mey. **1833**, Fl. Altaic. 4: 216. - *C. melanthiformis* Litv. 1910, Trudy Bot. Muz. Imp. Akad. Nauk 7: 90. – [ 1, 2, 3, 6, 7, 9, 13 ].
- C. melanocephala** Turcz. **1855**, Bull. Soc. Imp. Nat. Moscou 28(2): 334. – [ 1, 3, 7 ].
- C. meyeriana** Kunth, **1837**, Enum. Pl. 2: 438. – [ 1, 2, 3, 5 ].
- C. microglochin** Wahlenb. **1803**, Kongl. Vetensk. Acad. Nya Handl. 24: 140. – [ 1, 2, 3, 4, 6, 7+ (Bodonchiin gol), (Neuffer et al. 2003; German et al. 2003, 2009), 8, 11, 14 ].
- # **C. norvegica** Retz. **1779**, Fl. Scand. Prodr.: 179. – *C. halleri* Gunn. 1772, Fl. Norv.: 106. – [ 1, 2, 3, 4, 6, 7 ].
- Notes:** *C. norvegica* auct. Fl. Mong., non Retz. was accepted as a synonym of *C. media* R.Br. in Gubanov's conspectus (1996).
- C. obtusata** Liljeblad, **1793**, Kongl. Vetensk. Acad. Nya Handl. 14: 69. – [ 1, 2, 3, 6, 7, 9, 13 ].
- C. orbicularis** Boott, **1846**, Proc. Linn. Soc. Lond. 1: 254. – [ 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15 ].
- C. orbicularis** subsp. *altaica* (Gorodkov) T.V. Egorova, **1985**, Novosti Syst. Vyssh. Rast. 22: 54. - *C. altaica* (Gorodkov) V.I. Krecz. 1935, Fl. URSS 3: 227. – [ 3 (Burengiin nuruu)].
- C. pallida** C.A. Mey. **1831**, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 1: 215. – *C. accrescens* Ohwi, 1931, Mem. Coll. Sci. Kyoto Univ. Ser. B, 6, 5: 255. – [ 2 ].
- # **C. pamirica** subsp. *dichroa* (Freyn) T.V. Egorova, **1999**, Sedges Russia & Adj. States 183. - *C. dichroa* (Freyn) V.I. Krecz. 1935, Fl. URSS 3: 447. – *C. pamirensis* subsp. *dichroa* (Freyn) Malyshev, 1990, Fl. Sibir. 3: 95. – [ 1, 2, 3, 4, 6, 7, 10 ].

# ***C. parallela* subsp. *redowskiana* (C.A. Mey.) T.V. Egorova, 1973**, Novosti Syst. Vyssh. Rast. 10: 104. - *C. redowskiana* C.A. Mey. 1831, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 1: 207. - [ 1, 7 ].

***C. parva* Nees, 1834**, Contr. Bot. India: 120. - [ 3 ]. - (VU, R).

***C. pediformis* C.A. Mey. 1831**, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 1: 219. - *C. kirilowii* Turcz. 1855, Bull. Soc. Imp. Nat. Moscou 28: 340. - *C. macroura* subsp. *kirilowii* (Turcz.) Malyshev, 1990, Fl. Sibir. 3: 123. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 14 ].

+ ***C. praecox* Schreb. 1771**, Spic. Fl. Lips.: 63. - [ 2+ (Khonin nuga: Sangastai), (Dulamsuren & Muhlenberg 2003), 4+ (Shaamar) ].

***C. pseudofoetida* Kuk, 1907**, Bot. Tidsskr. 28(2): 226. - *C. slobodovii* V. Krecz. 1935, Fl. URSS 3: 191, 595. - [ 7, 13 ].

+ ***C. raddei* Kuk. 1899**, Bot. Centralbl. 77: 67. - [ 2+ (Malgait uul), (Zoyo & Nyambayar 2004) ].

***C. relaxa* V.I. Krecz. 1935**, Fl. URSS 3: 379, 616. - [ 3, 4, 8, 9 ].

***C. reptabunda* (Trautv.) V.I. Krecz. 1932**, Izv. Bot. Sada Akad. Nauk SSSR 30: 134. - *C. stenophylla* var. *reptabunda* Trautv. 1871, Trudy Imp. St.-Peterburgsk. Bot. Sada 1(2): 194. - [ 1, 3, 4, 5, 8, 9, 11, 12, 16 ]. - Described from Mongolia (LE).

***C. rhynchophysa* C.A. Mey. 1844**, Index Sem. Hort. Bot. Petropol. 9: 9. - [ 2, 3, 4, 5, 9, 10 ].

***C. rostrata* Stokes, 1787**, Bot. Arr. Brit. Pl. (ed. 2) 2: 1059. - *C. inflata* auct. Fl. Mong., non Huds. - [ 1, 2, 3, 4+ (Neuffer et al. 2012), 5, 8, 9, 10 ].

***C. rupestris* All. 1785**, Fl. Pedem. 2: 264. - [ 1, 2, 3, 6, 7, 13 ].

***C. sabulosa* Turcz. ex Kunth, 1837**, Enum. Pl. 2: 432. - [ 1, 2, 3, 4, 7, 8, 10 ].

***C. sabynensis* Less. ex Kunth, 1837**, Enum. Pl. 2: 440. - [ 2, 3 ].

***C. sajanensis* V.I. Krecz. 1931**, Izv. Bot. Sada Akad. Nauk SSSR 30: 124. - [ 1, 2, 3, 4, 6, 7, 8, 9, 11, 12 ].

***C. saxatilis* subsp. *laxa*** (Trautv.) Kalela, 1940, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 14(2): 15. - *C. procerula* V.I. Krecz. 1935, Fl. URSS 3: 449, 622. - *C. saxatilis* L. 1753, Sp. Pl. 2: 976. - [ 1, 3 ].

***C. schmidtii* Meinh. 1871**, Beitr. Kenntn. Russ. Reiches 26: 224. - *C. lineolata* Cham. ex V. Krecz. 1935, Fl. URSS 3: 223, 598. - [ 2, 3, 4, 5, 8+ (Sanchir & Mandakh 2008), 9 ].

***C. sedakowii* C.A. Mey. ex Meinh. 1901**, Trudy Imp. St.-Peterburgsk. Bot. Sada 18(3): 360. - *C. chaffanjonii* E.G. Camus, 1912, Notul. Syst. (Paris), 2,: 205. - [ 1, 2, 4 ].

# ***C. selengensis* Ivanova, 1937**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 7: 276. - *C. delicata* subsp. *selengensis* (Ivanova) T.V. Egorova, 1980, Novosti Syst. Vyssh. Rast. 17: 109. - *C. capillaris* auct. Fl. Mong., non L. - [ 2, 3, 4, 5, 9, 10 ]. - Described from Mongolia (LE). - (NT, R).

***C. songorica* Kar. & Kir. 1842**, Bull. Soc. Imp. Nat. Moscou 15: 525. - *C. fedtschenkoana* Kuk. 1910, Feddes Repert. 8: 327. - [ 4, 5, 9+ (Pistrick et al. 2012), 10, 14 ].

***C. songorica* subsp. *gotoi* (Ohwi) Popov, 1955**, in Herb. Fl. URSS 13: 6. - *C. gotoi* Ohwi. 1930, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, Biol. 5(3): 248. - *C. sukaczewii* V. Krecz. 1931, Fl. Transbaic. 2: 136. - [ 4, 5, 9 ].

**C. sordida** Van Heurck & Muell. Arg. **1870**, Observ. Bot. 1: 33. – [ **1, 2, 3, 6, 7, 8, 13, 14** ].

# **C. stenophylla** subsp. **stenophylloides** (V.I. Krecz.) T.V. Egorova, **1972**, Fl. Erevana, ed. 2: 339. - *C. stenophylloides* V.I. Krecz. 1932, Fl. Turkmen. 1: 230. - *C. discessa* V.I. Krecz. ex Grubov, 1955, Bot. Mat. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 17: 7. – *C. uralensis* C.B. Clarke, 1908, Kew Bull. Add. Ser. 8: 76. – [ **3, 7, 8, 9+** (Pistrick *et al.* 2012), **10, 11, 12, 13, 14, 15, 16** ].

# **C. supermascula** V.I. Krecz. **1946**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 9: 188. – [ **1, 2, 4, 5, 9, 13+** (Neuffer *et al.* 2012) ].

**Notes:** This species was accepted as a synonym of *C. macroura* subsp. *kirilowii* (Turcz.) Malyshev in Gubanov's conspectus (1996).

**C. tenuiflora** Wahlenb. **1803**, Kongl. Vetensk. Acad. Nya Handl. 24: 147. – [ **1, 2, 3** ].

**C. tomentosa** L. **1767**, Mant. Pl. : 123. – [ **2, 4, 8** ].

# **C. tristis** subsp. **stenocarpa** (Turcz. ex V.I. Krecz.) T.V. Egorova, **1999**, Sedges Russia & Adj. States: 147. - *C. stenocarpa* Turcz. ex V.I. Krecz. 1935, Fl. URSS 3: 291, 607. – *C. sempervirens* auct. Fl. Mong., non Vill. – [ **1, 2, 3, 6, 7, 8, 13, 14** ].

**C. vaginata** Tausch, **1821**, Flora 4: 557. - *C. algida* Turcz. ex V.I. Krecz. 1935, Fl. URSS 3: 345, 612. - *C. quasivaginata* C.B.Clarke, 1908, Kew Bull. Add. Ser. 8: 79. - *C. vaginata* subsp. *quasivaginata* (C.B. Clarke) Malyshev, 1965, Fl. East. Sayan.: 90. – [ **1, 2, 3** ].

**C. vesicata** Meinh. **1900**, Trudy Imp. St.-Peterburgsk. Bot. Sada 18(3): 367. – [ **1, 2, 3, 4, 5, 6, 8, 9, 14** ].

**C. williamsii** Britton, **1901**, Bull. New York Bot. Gard. 2(6): 159. – *C. novograblenovii* Kom. 1932, Izv. Bot. Sada Akad. Nauk SSSR 30: 199. – [ **2** (Kherlen gol) ].

**Cyperus fuscus** L. **1737**, Sp. Pl. 1: 46. – [ **8, 9, 10** ].

**Dichostylis micheliana** (L.) Nees, **1834**, Linnaea 9: 289. – *Scirpus michelianus* L. 1753, S. Pl. 1: 52. - *Cyperus michelianus* (L.) Delile, 1813, Descr. Egypte, Hist. Nat. 9: 50. – [ **4** ].

**Eleocharis acicularis** (L.) Roem. & Schult. **1817**, Syst. Veg. 2: 154. – [ **2, 3, 4, 6, 7, 8+** (Sanchir *et al.* 2004), **9, 14** ].

**E. acicularis** subsp. **yokoscensis** (Franch. & Savat.) T.V. Egorova, **1980**, Novosti Syst. Vyssh. Rast. 17: 69. - *E. yokoscensis* (Franch. & Savat.) Tang & Wang, 1961, Fl. Reipubl. Popularis Sin. 11: 54. – *E. svensonii* Zinserl. 1935, Fl. URSS 3: 71, 580. – [ **2, 3, 4, 5, 8+** (Sanchir *et al.* 2004), **9, 14** ].

**E. klingei** (Meinh.) B. Fedtsch. **1915**, Rastit. Turkest.: 165. – [ **3** (Khoid Tamiriin gol) ].

**E. mamillata** Lindb. f. **1902**, Herb. Norm. 44: 108. – [ **10** (Khar-Us nuur)].

**E. mitracarpa** Steud. **1855**, Syn. Pl. Glumac. 2: 77. - *E. equisetiformis* (Meinh.) B. Fedtsch. 1915, Rastit. Turkest.: 165. – [ **7, 14, 15** ].

**E. palustris** (L.) Roem. & Schult. **1817**, Syst. Veg. 2: 151. – *E. intersita* Zinserl. 1935, Fl. URSS 3: 76. – *E. eupalustris* H. Lindb. 1902, Herb. Norm. 44: 108. – [ **1-16** (all regions) ].

# **E. quinqueflora** (F.X. Hartmann) O. Schwarz. **1849**, Mitt. Thuering. Bot. Ges. 1: 89. – *E. meridionalis* Zinserl. 1935, Fl. URSS 3: 580. – *Scirpus quinqueflorus* Hartmann, 1767, Prim. Lin. Inst. Bot. : 85. – [ **2, 3, 4, 7, 8, 10, 15** ].

**E. uniglumis (Link) Schult.** 1824, Mant. 2: 88. – *E. sareptana* Zinserl. 1929, Trudy Glavn. Bot. Sada 40(3): 279. - *E. euuniglumis* Zinserl. 1935, Fl. URSS 3: 82, 584. - *Scirpus uniglumis* Link, 1820, Jahrb. Gewaechsk. 1(3): 77. – [ 1, 3, 4, 5, 8, 9, 10, 12, 13, 14, 15 ].

# **Eriophorum altaicum Meinhsh.** 1901, Trudy Imp. St.-Peterburgsk. Bot. Sada 18(3): 267. – *E. scheuchzeri* subsp. *altaicum* (Meinhsh.) N. Bondareva, 1990, Fl. Sibir. 3: 15. - *E. scheuchzeri* auct. Fl. Mong., non Hoppe – [ 1, 2, 3, 6, 7 ].

# **E. angustifolium Honck.** 1782, Verz. Gew. Teutsch. 1: 153. – *E. polystachyon* L. 1753, Sp. Pl. 1: 52. – *E. angustifolium* Roth, 1788, Tent. 1: 24. – [ 1, 2, 3, 4, 5, 6, 7, 9, 10, 11+ (Buuntsagaan nuur), (Dulmaa *et al.* 2011) ].

# **E. angustifolium** subsp. **komarovii (V.N. Vassil.) M.S. Novos.** 2001, Novosti Sist. Vyssh. Rast. 33: 48. - *E. komarovii* V.N. Vassil. 1940, Bot. Mat. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 8: 102. - *E. polystachyon* subsp. *komarovii* (V.N. Vassil.) M.S. Novos. 1994, Bot. Žhurn. (Moscow & Leningrad) 79(11): 87. - *E. latifolium* auct. Fl. Mong., non Hoppe – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 ].

**E. brachyantherum Trautv. & C.A. Mey.** 1856, Reise Nord. Ost. Sibir. 1, 23: 98 (Fl. Ochot.). – [ 1, 2, 3, 4, 6+, 7+ (Neuffer *et al.* 2003), 10 ].

**E. callitrix Cham. ex C.A. Mey.** 1831, Mem. Savantes Etranges Acad. Petersbourg 1: 203. – [ 1 (Khoridol Saridag) ].

**E. gracile** subsp. **asiaticum (V.N. Vassil.) M.S. Novos.** 1994, Bot. Zhurn. (Moscow & Leningrad) 79(11): 84. – *E. asiaticum* V.N. Vassil. 1940, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 8: 104. – [ 3, 4 ].

**E. humile** Turcz. ex Steud. 1855, Syn. Pl. Glumac. 2: 128. – [ 1, 2, 3, 6, 7 ].

**E. mandshuricum Meinhsh.** 1901, Trudy Imp. St.-Peterburgsk. Bot. Sada 18(3): 268. – *E. russeolum* auct. Fl. Mong., non Fries – [ 1, 2, 3, 4, 5, 7 ].

**E. vaginatum** L. 1753, Sp. Pl. 1: 52. – [ 3 (Khan Khukhiin nuruu) ].

**Juncellus pannonicus (Jacq.) C.B. Clarke,** 1908, Bull. Misc. Inform. Kew, Addit. Ser. 8: 3. *Cyperus pannonicus* Jacq. 1778, Fl. Austriac. 5: 29. - *Acorellus pannonicus* (Jacq.) Palla, 1907, Syn. Deut. Schweiz. Fl. (ed. 3) 2: 2557. – [ 10, 11, 16 ]. – (R).

**Kobresia capilliformis Ivanova,** 1939, Bot. Zhurn. SSSR 24: 484. – [ 3, 7 ].

**K. filifolia (Turcz.) C.B. Clarke,** 1883, J. Linn. Soc., Bot. 20: 381. – [ 1, 2, 3, 4, 6, 7, 8, 9, 13 ].

**K. humilis (C.A. Mey. ex Trautv.) Serg.** 1935, Fl. URSS 3: 111. – [ 3, 6, 7, 11, 13 ].

**K. myosuroides (Vill.) Fiori,** 1896, Fl. Italia 1: 125. – *K. bellardii* (All.) Degl. 1807, Fl. Gall. 2: 626. – [ 1, 2, 3, 5, 6, 7, 10, 13, 14 ].

**K. robusta** Maxim. 1883, Bull. Acad. Imp. Sci. St.-Petersbourg, 29: 218. – [ 3 (Chuluutiin gol) ]. – (VU, R, RB, RL).

**K. sibirica (Turcz. ex Ledeb.) Boeck.** 1875, Linnaea 39: 7. – [ 1, 2, 3 ].

# **K. simpliciuscula** subsp. **subgolartctica T.V. Egorova,** 1983, Novosti Sist. Vyssh. Rast. 20: 83. – *K. simpliciuscula* auct. Fl. Mong., non Mackenz. – [ 1, 2, 3, 7, 13, 14 ].

**K. smirnovii Ivanova,** 1939, Bot. Zhurn. SSSR 24: 480. – [ 3, 6, 7 ].

**Mariscus hamulosus (M. Bieb.) S.S. Hooper,** 1972, Kew Bull. 26(3): 578. - *Cyperus hamulosus* M. Bieb. 1808, Flora Taurico-Caucasica 1: 35. - *Dichostylis hamulosa* (M. Bieb.) Nees, 1834, Linnaea 9: 289. – [ 10 ].

# **Schoenoplectus lacustris** subsp. **hippolytii** (V.I. Krecz.) Kukkonen, 1998, in Rechinger, Fl. Iranica (Cyperaceae): 25. – *Sch. tabernaemontani* auct. Fl. Mong., non Palla – *Scirpus hippolyti* V.I. Krecz. 1937, Bot. Mat. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 7: 28. – [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15** ].

# **Sch. supinus** (L.) Palla, 1888, Bot. Jahrb. Syst. 10: 299. - *Scirpus supinus* L. 1753, Sp. Pl. 1: 49. – [ **10** (Khovd gol) ].

# **Sch. triquetter** (L.) Palla, 1888, Bot. Jahrb. Syst. 10(4): 299. - *Scirpus triquetter* L. 1767, Mant. Pl.: 29 . – [ **9** (Ongon els) ].

**Scirpus orientalis** Ohwi, 1932, Acta Phytotax. Geobot. 1: 76. – *S. sylvaticus* auct. Fl. Mong., non L. – [ **2, 3, 4, 5, 9** ].

**S. radicans** Schkuhr, 1793, Ann. Bot. (Usteri) 4: 49. – [ **2+** (Eruugiin khaluun rashaan), (Dulamsuren & Muhlenberg 2003), **3, 4, 5+** (Pistrick *et al.* 2012), **9** ]. – (R).

# **Trichophorum pumilum** (Vahl) Schinz & Thell, 1921, Vierteljahrsschr. Naturf. Ges. Zürich 66:265. - *Baeothryon pumilum* (Vahl) A. et D. Love, 1965, Univ. Colorado Stud., ser. Biol. 17: 14. - *Scirpus pumilus* Vahl, 1805, Enum. Pl. 2: 243. – [ **1, 3, 4, 8, 9, 10+** (Nyambayar 2009), **14** ].

**Citation:** Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch. 2014. *Conspectus of the vascular plants of Mongolia*. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp. (p. 61-79).

### 38. POACEAE BARNHART, 1895 (62/259)

Bull. Torrey Bot. Club 22: 7

**Achnatherum splendens (Trin.) Nevski, 1937**, Trudy Bot. Inst. Akad. Nauk SSSR Ser. 1, Fl. Sist. Vyssh. Rast. 4: 224. - *Stipa splendens* Trin. 1821, Neue Entdeck. Pflanzenk. 2: 54. - [ 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

# **Aeluropus littoralis (Gouan) Parl.** 1848, *Fl. Ital.* 1: 461. - *Ae. micrantherus* Tzvelev, 1968, Rast. Tsentr. Azii 4: 128. - [ 10, 14, 15 ]. - **Subendemic**.

**Notes:** *Ae. micrantherus* Tzvelev was described from Gobi region of Mongolia (LE).

**Agropyron cristatum (L.) Gaertner, 1770**, Novi Comment. Acad. Sci. Imp. Petrop. 14: 540. - *Bromus cristatus* L. 1753, Sp. Pl. 1: 78. - *Agropyron pectinatum* (M. Bieb.) P. Beauv. 1812, Ess. Agrostogr. 102, 146, 180. - [ 1-16 (all regions) ].

**Notes:** *A. erickssonii* (Meld.) Peschkova (*A.cristatum* var. *erickssonii* Meld.) and *A. kazachstanicum* (Tzvelev) Peschkova (*A. cristatum* subsp. *kazachstanicum* Tzvelev) are not pointed in Mongolia. (Flora of Siberia, 1990).

**A. desertorum (Fisch. ex Link) Schult.** 1824, Mant. 2: 412. - *Triticum desertorum* Fisch. ex Link, 1821, Enum. Hort. Berol. Alt. 1: 97. - [ 3, 6+ (Neuffer et al. 2003), 7, 8, 9, 11, 12, 13, 15 ].

**A. fragile (Roth) P. Candargy, 1901**, Arch. Biol. Veg. Pure Appl. 1: 58. - *A. sibiricum* (Willd.) P. Beauv. 1812, Ess. Agrostogr. 102. - [ 6, 8, 9, 11, 12, 14 ].

**A. krylovianum Schischkin, 1928**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 2: 2. - [ 4, 6, 7 ].

**A. michnoi Roshev.** 1929, Izv. Glav. Bot. Sada SSSR 28: 384. - [ 1, 3, 4, 5, 8, 9, 10, 13 ].

**A. pumilum P. Candargy, 1901**, Arch. Biol. Veg. Pure Appl. 1: 29. - [ 6, 10, 14 ].

**Agrostis clavata Trin.** 1821, Neue Entdeck. Pflanzenk. 2: 55. - [ 1, 2, 3, 4, 5, 9 ].

# **A. divaricatissima Mez, 1922**, Repert. Spec. Nov. Regni Veg. 18(504-507): 4. - *A. mongholica* Roshev. 1925, North. Mongol. Prolim. Rep. Exped. 1: 162. - [ 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15 ].

**Notes:** *A. mongholica* Roshev. was described from Northern Mongolia (LE).

**A. gigantea Roth.** 1788, Tent. Fl. Germ. 1: 31. - [ 1, 2, 3, 4, 5, 6, 7, 9, 10, 13, 14 ].

**A. stolonifera L.** 1753, Sp. Pl. 1: 62. - *Agrostis sibirica* Petrov, 1930, *Fl. Iakut.* 1: 175. - [ 1, 3, 4, 7, 8, 9, 10, 14 ].

+ **A. tuvinica** Peschkova, 1990, *Fl. Sibir.* 2: 112. - [ 1+, 2+ (Galanin 2009; Urgamal et al. 2013) ].

# **A. vinealis Schreb.** 1771, Spic. Fl. Lips. 47. - *A. trinii* Turcz. 1856, *Bull. Soc. Imp. Nat. Moscou* 29: 18. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13+ (Neuffer et al. 2012) ].

**Alopecurus aequalis Sobol.** 1799, *Fl. Petrop.* 16. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 ].

**A. arundinaceus Poir.** 1808, *Encycl.* 8: 776. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13 ].

**A. brachystachyus M. Bieb.** 1819, Fl. Taur.-Caucas. 3: 56. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13 ].

**A. pratensis L.** 1753, Sp. Pl. 1: 60. – [ 3, 4, 6, 8, 9+ (Pistrick et al. 2012), 10, 13, 14 ].

**A. turczaninovii O.D. Nikif.** 1988, Bot. Zhurn. (Kiev) 73(11): 1601. – *A. alpinus* auct. Fl. Mong., non Smith. – [ 1, 2, 3, 4+ (Galanin 2009), 6, 7, 8, 13 ].

**Anthoxanthum odoratum L.** 1753, Sp. Pl. 1: 28. – [ 2, 3, 4, 5, 7 ].

**Arctagrostis latifolia (R. Br.) Griseb.** 1852, Fl. Ross. 4(13): 434. - *Colpodium latifolium* R. Br. 1824, Chlor. Melvill. 28. – [ 1, 2, 3 ].

# **Aristida adscensionis L.** 1753, Sp. Pl. 1: 82. – *A. heymannii* Regel, 1881, Trudy Glavn. Bot. Sada 7: 649. – [ 3, 8+ (Neuffer et al. 2012), 9, 10, 11, 12, 13, 15, 16 ].

# **Arundinella hirta (Thunb.) Tanaka,** 1925, Bult. Sci. Fak. Terk. Kjusu Imp. Univ. [BPH 288.07] 1: 196, 2. - *Poa hirta* Thunb. 1784, Fl. Jap. 49. - *Arundinella anomala* Steud. 1854, Syn. Pl. Glumac. 1: 116. – [ 4, 5, 9 ]. – (R).

**Avena fatua L.** 1753, Sp. Pl. 1: 80. – *A. fatua* subsp. *sativa* (L.) Thell. 1911, Vierteljahrsschr. Naturf. Ges. Zurich, 56: 325. – [ 3, 4, 7, 8+ (Sanchir & Mandakh 2008), 10, 11, 13, 14 ].

+ **A. sativa L.** 1753, Sp. Pl. 1: 79. – [ 2+, 3+, 4+ (Galanin 2009), 9+, 11+, 12+ (Grubov 1982; Urgamal et al. 2013) ].

**Beckmannia syzigachne (Steud.) Fern.** 1928, Rhodora 30(350): 27. - *Panicum syzigachne* Steud. 1846, Flora 29: 19. – [ 1, 2, 3, 4, 5, 6, 7+ (German et al. 2003), 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**Brachypodium pinnatum (L.) P. Beauv.** 1812, Ess. Agrostogr. 101, 155. - *Bromus pinnatus* L. 1753, Sp. Pl. 1: 78. – [ 3, 4 ].

# **Bromus inermis Leyss.** 1761, Fl. Halens. 16. - *Bromopsis inermis* (Leysser) Holub, 1973, Folia Geobot. Phytotax. 8(2): 158, 167. – [ 1, 2, 3, 4, 5, 6, 7+ (Tsagduul gol), (German et al. 2009), 8, 9, 10, 12+ (Bayanmunkh & Dariimaa 2006), 13, 14, 15 ].

**B. japonicus Thunb.** 1784, Nat. Hist. 2(13): 315. – [ 6, 7, 10, 12, 14 ].

# **B. korotkiji Drobow,** 1914, Trudy Bot. Muz. Imp. Akad. Nauk 12: 238. – *Bromopsis korotkiji* (Drobow) Holub, 1973, Folia Geobot. et Phytotax. 8(2): 168. – [ 3, 4, 8, 9, 10, 11, 13+ (Neuffer et al. 2012) ].

**B. oxyodon Schrenk,** 1842, Bull. Sci. Acad. Imp. Sci. St-Petersbourg 10: 355. – [ 7, 11, 14 ].

# **B. pumpellianus Scribn.** 1888, Bull. Torrey Bot. Club 15(1): 9–10. – *B. sibiricus* Drobow, 1914, Trudy Bot. Muz. Imp. Akad. Nauk 12: 229. - *Bromopsis alpina* (Malyshev) Peschkova, 1986, Novosti Syst. Vyssh. Rast. 23: 26. – *B. altaica* Peschkova, 1986, Novosti Syst. Vyssh. Rast. 23: 26. – *B. sibirica* (Drobow) Peschkova, 1986, Novosti Syst. Vyssh. Rast. 23: 31. – *B. ubsunurica* Tzvelev, 1991, Bot. Zhurn. (Moscow & Leningrad) 76: 609. – [ 7, 9+ (Pistrick et al. 2012), 10 ].

**Notes:** *Bromus ubsunurica* Tzvelev is described from nearest of Ubs nuur lake in Depression of Great Lake phytogeographical region. (LE, isotype - MW, UBA). Also *B. altaica* Peschkova subsp. *dahurica* Galanin subsp. nov. prov. is collected from river Onon in Mongolian Dauria phytogeographical region of Mongolia (Flora of Dauria 2009).

**B. scoparius L.** 1755, Cent. Pl. I 6. – [ 14 ].

**B. squarrosum L.** 1753, Sp. Pl. 1: 76. – [ 10 ].

# **B. tectorum** L. 1753, Sp. Pl. 1: 77. – *Anisantha tectorum* (L.) Nevski, 1934, Trudy Sredne-Aziatsk. Gosud. Univ., Ser. 8b, Bot. 17: 20, 22. – [ 7, 14+ (Uushigiin us), (Ebel & Rudaya 2002) ].

+ **Calamagrostis angustifolia** subsp. **tenuis** (V.N. Vassil.) Tzvelev, 1965, Novosti Syst. Vyssh. Rast. 2: 37. – *C. tenuis* V.N. Vassil. 1979, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 8: 66. – *C. angustifolia* Kom. 1936, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR 6: 1. – [ 4+ (Onon gol), (Galanin 2009; Urgamal et al. 2013) ].

**C. epigeios** (L.) Roth, 1788, Tent. Fl. Germ. 1: 34. - *Arundo epigeios* L. 1753, Sp. Pl. 1: 81. – *C. macrolepis* Litv. 1921, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR 2: 125. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14 ].

**C. epigeios** subsp. **glomerata** (Boiss. & Butse) Tzvelev, 1965, Novosti Syst. Vyssh. Rast. 1965: 41. – *C. glomerata* Boiss. & Buhse, 1860, Mem. Soc. Imp. Nat. Mosc. 12: 229. – [ 2, 3, 4 ].

**C. epigeios** subsp. **macrolepis** (Litv.) Tzvelev, 1976, Fl. Severo-Vostoka Evr. Casti SSSR 1: 154. – *C. macrolepis* Litv. 1921, Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR 2: 125. – [ 1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 15 ].

# **C. inexpansa** A. Gray, 1834, N. Amer. Gram. 1: 20. – *C. neglecta* subsp. *inexpansa* (A.Gray) Tzvelev, 1976, Zlaki SSSR 310. – [ 2+ (Eruugiin khaluun rashaan), (Dulamsuren et al. 2004), 4, 5, 9 ]. – (R).

+ **C. inexpansa** subsp. **micrantha** (Kearney) Stebbins, 1930, Rhodora 32: 50. - *C. inexpansa* var. *barbulata* Kearney, 1898, Bull. Div. Agrostol. U.S.D.A. 11: 37. – [ 2+ (Eruugiin khaluun rashaan), (Dulamsuren et al. 2004; Urgamal et al. 2013) ].

# **C. korotkyi** Litv. 1922, Sched. Herb. Fl. Ross. 55: 2750. - *Deyeuxia korotkyi* (Litv.) S.M. Phillips & Wen L. Chen, 2003, Novon 13: 321. - *Calamagrostis turczaninovii* Litv. 1921, Bot. Mat. Gerb. Glavn. Bot. Sada SSSR 2: 115. – *C. korotkyi* subsp. *turczaninovii* Tzvelev, 1976, Zlaki SSSR 304. – [ 2, 3, 4, 5 ]. – (R).

+ **C. kuznetzovii** Tzvelev, 1965, Novosti Syst. Vyssh. Rast. 1965: 41. – [ 2+ (Ilchlegiin gol), (Dulamsuren et al. 2004; Urgamal et al. 2013) ].

**C. lapponica** (Wahlenb.) Hartmann, 1820, Gen. Gram. 5. - *Arundo lapponica* Wahlenb. 1812, Fl. Lapp. 27. – [ 1, 2, 3, 4, 6 ].

**C. macilenta** (Griseb.) Litv. 1921, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR 2: 119. – *C. varta* var. *macilenta* Griseb. 1852, Flora Rossica 4(13): 427. – [ 1, 2, 3, 4, 6, 7, 8, 10, 13, 14, 15 ].

**C. obtusata** Trin. 1824, Gram. Unifl. Sesquifl. 225. – [ 2, 3, 4 ].

**C. pavlovii** (Roshev.) Roshev. 1931, Izv. Bot. Sada Akad. Nauk SSSR 30: 295. – [ 3, 4+ (Galanin 2009) ]. – Subendemic.

**C. pseudophragmites** (Haller f.) Koeler, 1802, Descr. Gram. 106. – *Arundo pseudophragmites* Haller f., 1797, Arch. Bot. 1(2): 11. – [ 1, 2, 3, 4, 7, 8, 10, 11 ].

**C. purpurea** (Trin.) Trin. 1824, Gram. Unifl. Sesquifl. 219. - *Arundo purpurea* Trin. 1820, Neue Entdeck. Pflanzenk. 2: 52. – [ 1, 2, 3, 4, 5, 6, 7, 9 ].

**Notes:** *C. lapponica* x *C. purpurea* [*C. teberdensis* Litv.] are rare occur in Khangai phytogeographical region (Tzvelev 1976).

**C. purpurea** subsp. **langsdorffii** (Link) Tzvelev, 1965, Novosti Syst. Vyssh. Rast. 1965: 41. - *Arundo langsdorffii* Link, 1821, Enum. Hort. Berol. Alt. 1: 74. - *Calamagrostis langsdorffii* (Link) Trin. 1824, Gram. Unifl. Sesquifl. 225. - [ 3, 4, 9 ].

**Notes:** *C. langsdorffii* var. *decipitus* Litv. was described from Eastern Khentei of Mongolia.

**C. sajanensis** Malysch. 1961, Bot. Mat. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 21: 452. - [ 2, 3, 4, 10 ]. - **Subendemic**.

**C. salina** Tzvelev, 1965, Novosti Syst. Vyssh. Rast. 1965: 41. - [ 4+ (Galanin 2009), 8, 9, 10, 13 ]. - **Subendemic**.

# **C. stricta** (Timm) Koeler, 1802, Descr. Gramin. 105. - *Arundo neglecta* Ehrh. 1791, Meklenb. Mag. 2: 235. - *Calamagrostis neglecta* (Ehrh.) P. Gaertner, B. Meyer & Scherbiu, 1799, Oekon. Fl. Wetterau 1: 94. - [ 1, 2, 3, 4, 5, 8, 9, 13 ].

**Notes:** *C. dubia* is distributed in Eastern Mongolia (Dashnjam, 1974) and Inner Mongolia of North China (Tzvelev 1976).

**Catabrosa aquatica** (L.) P. Beauv. 1812, Ess. Agrostogr. 97, 149, 157. - *Aira aquatica* L. 1753, Sp. Pl. 1: 64. - [ 2, 3, 4, 7+ (Bayan gol) (German et al. 2009), 8, 9+ (Pistrick et al. 2012), 10, 13 ].

**Chloris virgata** Sw. 1797, Fl. Ind. Occid. 1: 203. - [ 3, 6, 7+ (Dund-Us), (Revushkin et al. 2001), 8, 9, 10, 11, 12, 13, 15, 16 ].

+ **Cinna latifolia** (Trev.) Griseb. 1852, Fl. Ross. 4(13): 435. - [ 2+ (Khuderii gol, Sangastai, Khonin nuga), (Dulamsuren et al. 2003; Kamelin & Dariimaa 2004), 3+, 4+ (Manibazar 2010; Urgamal et al. 2013) ].

**Cleistogenes caespitosa** Keng, 1934, Sinensia 5(1–2): 154–155. - [ 12 ].

# **C. festucacea** Honda, 1936, Rep. First Sci. Exped. Manchoukuo 4: 98. - *C. foliosa* Keng, 1938, J. Wash. Acad. Sci. 28: 298. - [ 4, 12, 13 ].

**C. kitagawai** Honda, 1936, Rep. First Sci. Exped. Manch. 4: 99. - [ 2, 3, 4, 5, 8, 9 ].

**C. songorica** (Roshev.) Ohwi, 1942, J. Jap. Bot. 18(9): 540. - *Diplachne songorica* Roshev. 1934, Flora URSS 2: 752. - [ 4+ (Galanin 2009), 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**C. squarrosa** (Trin.) Keng 1934, Sinensia 5(1–2): 156. - *Molinia squarrosa* Trin. 1829, Fl. Altaic. 1: 105–106. - [ 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 ].

# **Colpodium altaicum** Trin. 1829, Fl. Altaic. 1: 100–101. - *Paracolpodium altaicum* (Trin.) Tzvelev, 1965, Bot. Zhurn. (Moscow & Leningrad) 50: 1320. - [ 1, 7 ].

**Crypsis aculeata** (L.) Aiton, 1789, Hort. Kew. 1: 48. - *Schoenus aculeatus* L. 1753, Sp. Pl. 1: 42. - [ 10, 11, 12, 13, 15 ].

**C. schoenoides** (L.) Lam. 1791, Tabl. Encycl. 1: 166. - *Phleum schoenoides* L. 1753, Sp. Pl. 1: 60. - [ 3, 10, 14 ]. - (R).

+ **Dactylis glomerata** L. 1753, Sp. Pl. 1: 61. - [ 3+, 4+ (Galanin 2009; Urgamal et al. 2013) ].

**Deschampsia cespitosa** (L.) P. Beauv. 1812, Ess. Agrostogr. 149, 160. - *Aira cespitosa* L. 1753, Sp. Pl. 1: 62. - [ 1, 2, 3, 4, 6, 7, 8+ (Sanchir et al. 2004) ].

# **D. cespitosa** subsp. **orientalis** Hulten 1927, Kongl. Svenska Vetensk. Acad. Handl. 5: 109. - *D. sukatschewii* (Popl.) Roshev. 1934, Fl. URSS 2: 246. - *D. pamirica* Roshev. 1934, Fl. URSS, 2: 252. - [ 1, 3 ].

**D. cespitosa** subsp. **pamirica** (Roshev) Tzvelev, 1976, Zlaki SSSR 285. – *D. pamirica* Roshev. 1934, Fl. URSS 2: 252, 750–751. – [ 1, 3 ].

**D. koelerioides** Regel, 1868, Bull. Soc. Imp. Nat. Moscou 41(2): 299. – [ 1, 2, 3, 6, 7 ].

**Echinochloa crus-galli** (L.) P. Beauv. 1812, Ess. Agrostogr. 1: 53, 161, 169. – *Panicum crus-galli* L. 1753, Sp. Pl. 1: 56. – [ 7, 9, 12+ (Hilbig & Tungalag 2006), 13+ (Neuffer et al. 2012) ].

**E. crus-galli** subsp. **spiralis** (Vasing.) Tzvelev, 1976, Zlaki SSSR 662. – *E. spiralis* Vasing. 1934, Flora URSS 2: 739–740. - *E. occidentalis* (Wiegand) Rydb. 1931, Brittonia 1(2): 82. – [ 4 ].

**Notes:** *E. crus-galli* subsp. *caudata* (Roshev.) Tzvelev is not pointed in Mongolia. (Flora of Siberia, 1990, 2: 237).

# **Elymus bungeanus** (Trin.) Melderis, 1978, Bot. J. Linn. Soc. 76(4): 376. - *Triticum geniculatum* Trin. 1829, Fl. Altaic. 1: 117. - *Agropyron geniculatum* (Trin.) K. Koch, 1848, Linnaea 21(4): 425. - *Pseudoroegneria geniculata* (Trin.) A. Love, 1984, Feddes Repert. 95(7–8): 446. - *Elytrigia geniculata* (Trin.) Nevski 1936, Trudy Bot. Inst. Akad. Nauk SSSR Ser. 1, Fl. Sist. Vyssh. Rast. 2: 82. – *E. nevskii* (N.A. Ivanova) N. Ulzij. 1983, Biol. Resursy Prir. Uslav. Mongol. Narod. Respubl. 53. – *E. nevskii* (N.A. Ivanova ex Grubov) N. Ulzij. ex Tzvelev, 2001, Pl. Central Asia 4: 293. – [ 2+ (Khonin nuga), (Dulamsuren et al. 2003), 4, 6+, 7, 12+ (Saruul 2009), 14, 15+ (Gubanov 1996) ].

**Notes:** *Elytrigia nevskii* (N.A. Ivanova) N. Ulzij. was described from Mongolian Altai (endemic) region (LE).

**E. confusus** (Roshev.) Tzvelev, 1968, Rast. Tsentr. Azii 4: 221. - *Agropyron confusus* Roshev. 1924, Botanical Materia Medica 5: 150. – [ 1, 2, 3, 4, 7, 8, 13 ]. – Described from Eastern Siberia and Mongolia (Lectotype - LE).

# **E. dahuricus** Turcz. ex Griseb. 1852, Fl. Ross. 4(13): 331. – *E. excelsus* Turcz. ex Griseb. 1852, Fl. Ross. 4(13): 331. – [ 1, 2, 3, 4, 5+ (Galanin 2009), 6, 7, 8, 9, 10, 13 ]. – (R).

**E. fedtschenkoi** Tzvelev, 1973, Novosti Syst. Vyssh. Rast. (New Delhi) 10: 21. – [ 7 (Indertiin gol) ]. – (R, RB).

**E. gmelinii** (Ledeb.) Tzvelev, 1968, Rast. Tsentr. Azii 4: 216. - *Triticum caninum* var. *gmelinii* Ledeb. 1829, Fl. Altaic. 1: 118. – [ 1, 2, 3, 4, 5, 7, 8, 9, 13 ].

+ **E. karakabinicus** Kotukhov, 1992, Bot. Zhurn. (Moscow & Leningrad) 77(6): 89. – [ 7+ (Olonova et al. 2013; Urgamal et al. 2013) ]. – **Subendemic**.

+ **E. kronokensis** (Kom.) Tzvelev, 1968, Rast. Tsentr. Azii 4: 216. - *Agropyron kronokense* Kom. 1915, Repert. Spec. Nov. Regni Veg. 13: 87. - *Elymus alaskanus* subsp. *kronokensis* (Kom.) Á. Love & D. Love, 1984, Feddes Repert. 95(7–8): 462. - *Roegneria kronokensis* (Kom.) Tzvelev, 1964, Arktic. Fl. SSSR 2: 246. – [ 4+ (Onon gol), (Galanin 2009; Urgamal et al. 2013) ].

**E. kronokensis** subsp. **subalpinus** (L. Neum.) Tzvelev, 1973, Novosti Syst. Vyssh. Rast. (New Delhi) 10: 24. – *Triticum violaceum* f. *subalpinum* L. Neum. 1901, Sver. Fl.: 726. – [ 1, 7 ].

**E. mutabilis** (Drobow) Tzvelev, 1968, Rast. Tsentr. Azii 4: 217. - *Agropyron mutabilis* Drobow, 1916, Trudy Bot. Muz. Imp. Akad. Nauk 16: 88. – [ 1, 2, 3, 4 ].

**E. mutabilis** subsp. **transbaicalensis** (Nevski) Tzvelev, 1973, Novosti Syst. Vyssh. Rast. 10: 22. – *E. transbaicalensis* (Nevski) Tzvelev, 1968, Rast. Tsentr. Azii 4: 219. – [ 1, 3, 4, 6, 7 ].

**E. nutans Griseb.** 1968, Geogr. Verbr. Pfl. Westind. 3: 72. – [ 3, 4, 9, 13 ].

# **E. pendulinus (Nevski) Tzvelev,** 1968, Rast. Tsentr. Azii 4: 218. - *Roegneria pendulina* Nevski, 1934, Flora URSS 2: 616–617. - *Agropyron vernicosum* Nevski ex Grubov, 1955, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 17: 6. - *Elymus brachypodiooides* (Nevski) Peschkova, 1972, Stepn. Fl. Baik. Sibir. 45. – [ 4, 5, 7, 9, 12, 13, 16 ].

**Notes:** *Agropyron vernicosum* Nevski ex Grubov is described from Gobi Altai phytogeographical region (LE).

**E. praecaespitosus (Nevski) Tzvelev,** 1968, Rast. Tsentr. Azii 4: 218. - *Agropyron praecaespitosum* Nevski, 1930, Izv. Glavn. Bot. Sada SSSR 29: 541. – [ 1, 2, 3, 4, 7 ]. – (R).

# **E. reflexiaristatus (Nevski) Melderis,** 1978, Bot. J. Linn. Soc. 76(4): 376. – *Agropyron reflexiaristatum* Nevski, Izv. Bot. Sada Akad. Nauk SSSR 30: 495. – *A. aegilopoides* Drobow, 1914, Trudy Bot. Muz. Imp. Akad. Nauk 12: 46. - *Elymus aegilopoides* (Drobow) Worosch, 1985, Florist. Issl. Razn. Raionakh SSSR 151. - *Elytrigia aegilopoides* (Drobow) Peschkova, 1972, Fl. Evropeiskoi Chasti SSSR 1: 144. - *E. strigosa* subsp. *reflexiaristata* (Nevski) Tzvelev, 1974, Fl. Evropeiskoi Chasti SSSR 1: 144. - *E. gmelinii* (Trin.) Nevski, 1932, Fl. Sibir. 2: 33. – [ 1, 2, 3, 4, 5+ (Saruul 2009), 6, 7, 12+ (Neuffer et al. 2012), 13, 14 ].

# **E. schrenkianus** (Fisch. & C.A. Mey.) Tzvelev, 1960, Bot. Mat. Gerb. Inst. Bot. Akad. Nauk Kazakhsk. SSR 20: 428. - *E. schrenkianus* subsp. *pamiricus* (Tzvelev) Tzvelev, 1972, Novosti Syst. Vyssh. Rast. 9: 62. - *E. pamiricus* Tzvelev, 1960, Bot. Mat. Gerb. Inst. Bot. Akad. Nauk Kazakhsk. SSR 20: 425. – [ 4+ (Galanin 2009), 7 ]. – (R).

**E. sibiricus L.** 1753, Sp. Pl. 1: 83. – *E. krascheninikovii* Roshev, 1932, Izv. Bot. Sada Akad. Nauk SSSR 30: 780. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16 ].

**Notes:** *E. krascheninikovii* Roshev is described from Northern Mongolia (LE).

# **E. uralensis (Nevski) Tzvelev,** 1971, Novosti Syst. Vyssh. Rast. 8: 63. – *Agropyron uralense* Nevski, Izv. Glavn. Bot. Sada SSSR 29: 89. – *A. komarovii* Nevski, 1932, Izv. Bot. Sada Akad. Nauk SSSR 30: 610. - *Elymus komarovii* (Nevski) Tzvelev, 1968, Rast. Tsentr. Azii 4: 216. – [ 2, 3, 4, 6, 13 ].

**E. varius (Keng.) Tzvelev,** 1968, Rast. Tsentr. Azii 4: 219. - *Roegneria varia* Keng, 1959, J. Nanjing Univ., Nat. Sci. (Biol.) 1963(1): 70. – [ 4 ].

**Elytrigia repens (L.) Nevski,** 1933, Trudy Bot. Inst. Akad. Nauk SSSR Ser. 1, Fl. Sist. Vyssh. Rast. 1: 14. - *Triticum repens* L. 1753, Sp. Pl. 1: 86. - *Agropyron repens* (L.) P. Beauv. 1812, Ess. Agrostogr. 102, 146, 180. – [ 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12+, (Saruul 2009), 13, 14, 15 ].

**Enneapogon desvauxii P. Beauv.** 1812, Ess. Agrostogr. 82, 161. – *E. borealis* (Griseb.) Honda, 1936, Rep. Inst. Sci. Res. Manchoukuo 4(4): 101. – [ 3, 4+ (Galanin 2009), 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ].

**Eragrostis ciliaris (Bellardi) Vignolo ex Janch.** 1907, Mitt. Naturwiss. Vereins Univ. Wien, 5: 110. - *Poa ciliaris* All. 1785, Fl. Pedem. 2: 246. – [ 10 ]. – (R).

**E. minor Host,** 1809, Icon. Descr. Gram. Austriac. 4: 15. – [ 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**E. pilosa (L.) P. Beauv.** 1812, Ess. Agrostogr. 71, 162, 175. - *Poa pilosa* L. 1753, Sp. Pl. 1: 68. - *Eragrostis amurensis* Prob. 1981, Bot. Zhurn. (Kiev) 66(11): 1591. – [ 2, 4, 7, 8, 9, 10, 12 ].

**E. pilosa** subsp. *imberbis* (Franch.) Tzvelev, 1967, *Spisok Rast. Gerb. Fl. SSSR Bot. Inst. Vsesojuzn. Akad. Nauk* 11: 45. - *E. pilosa* var. *imberbis* Franch. 1884, *Nouv. Arch. Mus. Hist. Nat.*, ser. 2, 7: 145. - *E. imberbis* (Franch.) Prob. 1985, *Sosud. Rast. Sovetsk. Dal'nego Vostoka* 1: 353. - [ 4 ].

**Eremopoa altaica** (Trin.) Roshev. 1934, *Fl. URSS* 2: 431. - *Aira altaica* Trin. 1835, *Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans* 2: 526. - *Eremopoa songarica* (Schrenk) Roshev. 1934, *Fl. URSS* 2: 431. - [ 6, 7+ (Krasnoborov 2006; German et al. 2009) ].

**Eremopyrum distans** (C. Koch.) Nevski, 1933, *Trudy Bot. Inst. Akad. Nauk SSSR Ser. 1, Fl. Sist. Vyssh. Rast.* 1: 18. - *Agropyron distans* C.Koch. 1848, *Linn.* 21(4): 426. - [ 14 (Baitag Bogd uul) ]. - (R).

**Festuca altaica** Trin. 1829, *Fl. Altaic.* 1: 109–110. - [ 1, 3, 4, 6, 7 ].

**F. brachyphylla** Schult. & Schult. f. 1827, *Mant.* 3(Add. 1): 646. - [ 1, 3, 6, 7, 13 ].

**F. dahurica** (St.-Yves) Krecz. & Bobrov, 1934, *Fl. URSS* 2: 517, 771. - *F. ovina* var. *dahurica* St.-Yves, 1924, *Bull. Soc. Bot. France* 71: 40–41. - [ 2, 4, 5, 9 ]. - Subendemic.

**F. extremiorientalis** Ohwi. 1931, *Bot. Mag. (Tokyo)* 45: 194. - [ 2 ].

**F. hubsugulica** Krivot. 1955, *Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR* 17: 77. - [ 1 ]. - Subendemic. Described from Khubusgul phytogeographical region (LE).

+ **F. jacutica** Drobow, 1935, *Trudy Bot. Muz. Imp. Akad. Nauk* 14: 163. - [ 4+ (Galanin 2009), 9+ (Clayton et al. 2006; Urgamal et al. 2013) ].

**F. komarovii** Krivot. 1955, *Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR* 17: 80. - [ 1, 2 ]. - Subendemic. - (VU, R).

**F. kryloviana** Reverd. 1927, *Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva* 1927(2): 3. - [ 1, 2, 3, 4+ (Galanin 2009), 6, 7, 9, 13 ].

**F. kurtschumica** E. Alexeev, 1976, *Novosti Syst. Vyssh. Rast.* 13: 24. - [ 7 ]. - Described from Russian and Mongolian Altai regions (LE).

**F. lenensis** Drobow, 1915, *Trudy Bot. Muz. Imp. Akad. Nauk* 14: 158. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 15 ].

**F. litvinovii** (Tzvelev) E. Alexeev, 1976, *Novosti Syst. Vyssh. Rast.* 13: 31. - *F. pseudosulcata* var. *litvinovii* Tzvelev, 1968, *Rast. Tsentr. Azii* 4: 170. - [ 9 (Ereentsav) ]. - (R, RB).

**F. ovina** L. 1753, *Sp. Pl.* 1: 73–74. - [ 1, 2, 3, 4, 5, 6, 7, 9, 13 ].

**F. ovina** subsp. *sphagnicola* (B. Keller) Tzvelev, 1971, *Bot. Zhurn. (Kiev)* 56(9): 1255. - *F. sphagnicola* B. Keller, 1928, *Zap. Voronezh. Selsk. Inst.* 11: 78. - [ 3, 7+ (Olonova & Beket 2010) ]. - Subendemic.

**F. rubra** L. 1753, *Sp. Pl.* 1: 74. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 13 ].

**F. sibirica** Hackel ex Boiss, 1884, *Fl. Orient.* 5: 626. - [ 1, 2, 3, 4, 5, 8, 9, 10, 13 ].

+ **F. pseudosulcata** Drobov, 1915, *Trudy Bot. Muz. Imp. Akad. Nauk* 14: 156. - *F. jenissejensis* Reverd. 1936, *Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva* 1926(3): 3. - [ 4+ (Onon gol), (Galanin 2009; Urgamal et al. 2013) ].

**F. tristis** Krylov & Ivanitzk. 1928, *Sist. Zametki Mat. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva* 1: 1. - [ 3, 6, 7 ]. - Subendemic.

**F. tschujensis** Reverd. 1936, *Sist. Zametki Mat. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva* (3): 1. - [ 3, 6, 7, 10 ]. - Subendemic.

**F. valesiaca Schleich. ex Gaudin, 1811**, Agrost. Helv. 1: 242. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13 ].

**F. valesiaca subsp. *hypsofila* (St.-Yves) Tzvelev, 1971**, Bot. Zhurn. (Kiev) 56(9): 1255. – [ 1, 2, 3, 4, 6, 7, 13, 14 ].

**F. venusta St.-Yves, 1929**, Izv. Glavn. Bot. Sada SSSR 28: 383. – / 1, 2+ (Burmiin shar torlog), (Dulamsuren *et al.* 2004), 3, 4+ (Galanin 2009) ]. – **Subendemic**. Described from Khangai phytogeographical region (LE). – (R).

**Notes:** *F. pseudosulcata* Drobow is not pointed in Mongolia (Plant of Russian Far East, 1985).

# **Glyceria arundinacea Kunth, 1829**, Enum. Pl. 1: 367. – *G. triflora* (Korsh.) Kom. 1934, Fl. URSS 2: 459, 758. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14 ].

**G. lithuanica (Gorski) Gorski, 1849**, Icon. Bot. Char. Cyper. Gram. Lith. 20. - *Poa lithuanica* Gorski, 1830, Naturhist. Skizze 117. – [ 3, 5 ].

**G. spiculosa (Fr. Schmidt) Roshev. 1929**, Fl. Zabaik. 1: 85. - *Scolochloa spiculosa* Fr. Schmidt, 1868, Reis. Amur-Land., Bot. 201, 244. – [ 4+ (Galanin 2009), 5, 9 ].

**Helictotrichon dahuricum (Kom.) Kitag. 1939**, Rep. Inst. Sci. Res. Manchoukuo 3(1): 77. - *Avena paniculmis* subsp. *dahurica* Kom. 1927, Fl. Kamtschatka 1: 159. – [ 1, 4, 5 ].

# **H. desertorum (Less.) Pilg. 1938**, Repert. Spec. Nov. Regni Veg. 45: 7. - *Avena desertorum* Less. 1834, Linnaea 9(2): 208. - *Helictotrichon altaicum* Tzvelev, 1868, Rast. Tsentr. Azii 4: 101. – [ 3, 6, 7 ].

**Notes:** *H. altaicum* Tzvelev is described from Northern Mongolia (LE).

# **H. hookeri (Scribn.) Henrard, 1940**, Blumea 3(3): 429. - *Avenastrum asiaticum* Roshev. 1932, Izv. Bot. Sada Akad. Nauk SSSR 30: 772. - *Helictotrichon asiaticum* (Roshev.) Grossh. 1939, Trudy Bot. Inst. Akad. Nauk SSSR Ser. 1, Fl. Sist. Vyssh. Rast. 8(48): 215. - *H. schellianum* (Hack.) Kitag. 1939, Rep. Inst. Sci. Res. Manchoukuo 3(1): 78. - *Avenula hookeri* (Scribn.) Holub, 1990, Fol. Geobot. Phytotax. 11(3): 295. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 13 ].

**H. mongolicum (Roshev.) Henrard, 1940**, Blumea 3(3): 431. - *Avena mongolica* Roshev. 1928, Izv. Bot. Sada Akad. Nauk SSSR 27: 96. - *Avenastrum mongolicum* (Roshev.) Roshev. 1934, Fl. URSS 2: 280. – [ 1, 2, 3, 6, 7, 13 ]. – **Subendemic**. Described from Khovsgol phytogeographical region. (LE).

**H. pubescens (Huds.) Pilg. 1938**, Repert. Spec. Nov. Regni Veg. 45(1131–1137): 6. - *Avena pubescens* Huds. 1762, Fl. Angl. 42. - *Avenula pubescens* (Huds.) Dumort. 1868, Bull. Soc. Bot. Belgique 7(1): 68. – [ 3, 4, 7, 9 ].

**Hierochloe alpina (Sw. ex Willd.) Roem. & Schult. 1817**, Syst. Veg. 2: 515. - *Holcus alpinus* Sw. ex Willd. 1806, Sp. Pl. 4(2): 937. – [ 1, 2, 3, 6, 7, 10 ].

**H. glabra Trin. 1821**, Neue Entdeck. Pflanzenk. 2: 66. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 ].

**Notes:** *H. glabra* subsp. *chakassica* Peschkova is not pointed in Northern Mongolia (Flora of Siberia, 1990).

**H. odorata (L.) P. Beauv. 1812**, Ess. Agrostogr. 62, 164. - *Holcus odoratus* L. 1753, Sp. Pl. 2: 1048. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 14 ].

**Hordeum aegiceras Nees. ex Royle, 1839**, Ill. Bot. Himal. Mts. 1(11): 418. – [ 7 (Bijiin gol) ].

**H. bogdanii Wilensky, 1918**, Trudy Glavn. Bot. Sada 40: 248. – [ 3, 7, 9, 10, 14, 15, 16 ]. – (R).

**H. brevisubulatum (Trin.) Link, 1843**, Linnaea 17(4): 491–492. – *H. secalinum* var. *brevisubulatum* Trin. 1828, Sp. Gram. 1(1): , pl. 4. – [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16+** (Hilbig & Tungalag 2006) ].

**H. brevisubulatum subsp. turkestanicum (Nevski.) Tzvelev, 1971**, Novosti Syst. Vyssh. Rast. 8: 66. – *H. turkestanicum* Nevski, 1934, Trudy Sredne-Aziatsk. Gosud. Univ., ser. 8b, Bot. 17: 45. – [ **7, 8, 9, 11, 12, 15** ].

**Notes:** *H. macilentum* Steud. is not pointed in Mongolia (Flora of Siberia 1990).

**H. distichon L. 1753**, Sp. Pl. 1: 85. – [ **12, 13** ].

**H. roshevitzii Bowden, 1935**, Canad. J. Genet. Cytol. 7: 395. – [ **1, 2+** (Galanin 2009), **4, 8, 9, 10, 11, 13** ].

+ **H. vulgare L. 1753**, Sp. Pl. 1: 85. – [ **1+, 2+, 3+, 4+, 7+, 10+, 11+, 12+, 13+** (Grubov 1982; Urgamal *et al.* 2013) ].

**Koeleria altaica (Domin) Krylov, 1928**, Fl. Zap. Sibir. 2: 261. – *K. eriostachya* var. *altaica* Domin, 1907, Biblioth. Bot. 14(65): 163. – [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13** ].

# **K. asiatica Domin, 1905**, Bull. Herb. Boissier, ser. 2, 5(10): 947–948. – *K. atroviolacea* Domin, 1907, Biblioth. Bot. 14(65): 252. – [ **2, 8** ].

**K. glauca (Sprengel) DC. 1813**, Cat. Pl. Horti Monsp. 116. - *Aira glauca* Spreng. 1801, Bot. Gart. Halle, Erster Nachtr. 1: 10. – [ **4** (Orkon, Selenge and Shariin gol), (Gubanov 1996; Tzvelev 2010) ].

# **K. litvinowii Domin, 1907**, Biblioth. Bot. 14(65): 116. - *Trisetum litwinowii* (Domin) Nevski, 1934, Trudy Sredn.-Aziatsk. Gosud. Univ., ser. 8b, Bot. 17: 1. – [ **1, 3, 7, 13** ].

# **K. macrantha (Ledeb.) Schult. 1824**, Mant. 2: 345. - *Aira macrantha* Ledeb. 1813, Mem. Acad. Imp. Sci. St.-Petersbourg, (Ser. 7) 5: 515. - *Koeleria cristata* subsp. *mongolica* (Domin) Tzvelev, 1970, Novosti Syst. Vyssh. Rast. 7: 71. - *K. cristata* var. *macrantha* (Ledeb.) Griseb. 1852, Fl. Ross. 4(13): 402. – *K. mukdenensis* Domin, 1907, Biblioth. Bot. 14: 171. – [ **1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13** ].

**Notes:** *K. cristata* subsp. *mongolica* (Domin) Tzvelev is described from Mongolia (LE).

**K. thonii Domin, 1907**, Biblioth. Bot. 14: 139. – [ **5** ].

**Leymus angustus (Trin.) Pilger, 1947**, Bot. Jahrb. Syst. 74(1): 6–8. - *Elymus angustus* Trin. 1829, Fl. Altaic. 1: 119. – [ **3, 6, 7, 10, 11, 12, 13, 14, 16** ].

**L. chinensis (Trin.) Tzvelev, 1968**, Rast. Tsentr. Azii 4: 205. - *Triticum chinense* Trin. 1835, Enum. Pl. China Bor. 72. - *Elymus chinensis* (Trin.) Keng. 1941, Sunyatsenia 6(1): 66. – [ **1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14** ].

+ **L. ordensis Peschkova, 1985**, Bot. Zhurn. (Kiev) 70(11): 1554. – [ **1+** (Silantjeva 2005), **15+ (?)**, (Yen *et al.* 2009.) ].

**L. paboanus (Claus) Pilger, 1947**, Bot. Jahrb. Syst. 74(1): 6–7. - *Elymus paboanus* Claus, 1851, Beitr. Pflanzenk. Russ. Reiches 8: 170. – [ **3, 6, 7, 8, 10, 11, 12, 13, 14** ].

**L. racemosus (Lam.) Tzvelev, 1960**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 20: 429. - *Elymus racemosus* Lam. 1792, Tabl. Encycl. 1: 207. – [ **3, 5, 6, 8, 9, 10, 11, 12, 13** ].

**L. ramosus (Trin.) Tzvelev, 1960**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 20: 430. - *Triticum ramosum* Trin. ex Ledeb. 1829, Fl. Altaic. 1: 114. – [ **5, 9** ].

**Notes:** *L. racemosus* subsp. *crassinervius* (Karav. & Kir.) Tzvelev is not pointed in Western Mongolia (Flora of Siberia, 1990).

**# *L. secalinus* (Georgi) Tzvelev, 1968**, Rast. Tsentr. Azii 4: 209. - *Triticum secalinum* Georgi, 1775, Bemerk. Reise Russ. Reich. 1772 1: 198. - *Elymus ovatus* Trin. 1829, Fl. Altaic. 1: 121–122. - *Leymus ovatus* (Trin.) Tzvelev, 1960, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 20: 430. - *L. dasystachys* (Trin.) Pilger, 1990, Bot. Jahrb. Syst. 74: 6. - *L. littoralis* (Griseb.) Peschkova, 1990, Novosti Syst. Vyssh. Rast. 24: 23. - *Elymus secalinus* (Georgi) Bobr. 1960, Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Kazakhsk. SSR 20: 9. - [ **1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16** ].

**Notes:** *L. ramosus* x *L. dasystachys* are not pointed in Northern Mongolia (Flora of Siberia 1990).

**+ *L. secalinus* var. *mongolicus* (Meld.) Tzvelev, 1968**, Rast. Tsentr. Azii 4: 210. - [ **10+** (Borig Deliin els, Bayan nuur) (Gubanov 1999; Dariimaa 2009) ].

***Melica nutans* L. 1753**, Sp. Pl. 1: 66. - [ **1+** (Doronkin 2012), **2, 4** ]. - (**NT, R**).

**+ *M. transsilvanica* Schur, 1866**, Enum. Pl. Transsilv. 764. - [ **7+** (Rashaantiin nuruu, Bayan gol), (German *et al.* 2009) ].

***M. turczaninowiana* Ohwi, 1932**, Acta Phytotax. Geobot. 1(2): 142. - [ **2, 3, 4, 5, 9** ].

***M. virgata* Turcz. ex Trin. 1831**, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 6, Sci. Math. 1(4): 369. - [ **1, 2, 3, 4, 5, 8, 9, 10, 12, 13** ].

**+ *Milium effusum* L. 1753**, Sp. Pl. 1: 61. - *Agrostis effusa* (L.) Lam. 1783, Encycl. 1(1): 59. - *Melica effusa* (L.) Salisb. 1796, Prodr. Stirp. Chap. Allerton 20. - [ **2+** (Sangastai, Khonin nuga), (Dulamsuren *et al.* 2003; Urgamal *et al.* 2013) ].

***Nardus stricta* L. 1753**, Sp. Pl. 1: 53. - [ **3** ].

***Panicum miliaceum* L. 1753**, Sp. Pl. 1: 58. - [ **2, 3, 4, 9, 10, 12, 13** ].

***P. miliaceum* subsp. *ruderale* (Kitag.) Tzvelev, 1968**, Novosti Syst. Vyssh. Rast. 1968: 18. - *P. miliaceum* var. *ruderale* Kitag. 1937, Bot. Mag. (Tokyo) 51: 153. - [ **3, 4** ].

***Pennisetum centrasianicum* Tzvelev, 1968**, Rast. Tsentr. Azii 4: 30. - [ **10, 12** ].

**# *P. glaucum* (L.) R. Br. 1810**, Prodr. 1: 195. - *Panicum glaucum* L. 1753, Sp. Pl. 1: 56. - *Setaria glauca* (L.) P. Beauv. 1812, Ess. Agrostogr. 51, 178. - [ **2, 4, 14, 15** ]. - (**R**).

**# *Phalaris arundinacea* L. 1753**, Sp. Pl. 1: 55. - *Phalaroides arundinacea* (L.) Rausch. 1969, Feddes Repert. 79(6): 409. - *Ph. arundinacea* subsp. *japonica* (Steud.) Tzvelev, 1973, Novosti Syst. Vyssh. Rast. 10: 80. - [ **1, 2, 3, 4, 5, 7, 9, 10, 14** ].

***Phleum alpinum* L. 1753**, Sp. Pl. 1: 59. - [ **7** (Indertiin gol) ]. - (**R**).

***Ph. phleoides* (L.) Karsten, 1880**, Deut. Fl. 374. - *Phalaris phleoides* L. 1753, Sp. Pl. 1: 55. - [ **2, 3, 4, 6, 7, 8, 10** ].

***Phragmites australis* (Cav.) Trin. ex Steud. 1841**, Nomencl. Bot. (ed. 2) 1: 143. - *Arundo australis* Cav. 1799, Anales Hist. Nat. 1(2): 100–101. - *Phragmites communis* Trin. 1820, Fund. Agrost. 134. - [ **1-16** (all regions) ]. - (**R**).

***Piptatherum songaricum* (Trin. & Rupr.) Roshev. ex Nikit. 1950**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 13: 65. - *Uranchne songarica* Trin. & Rupr. 1843, Sp. Gram. Stipac. 15. - [ **7+** (Bayan gol), (German *et al.* 2009), **14** (Baitag Bogd uul) ]. - (**R**).

***Poa alpina* L. 1753**, Sp. Pl. 1: 57. - [ **1, 3, 6, 7, 15+** (Ariunsuren 2006) ].

**# *P. alta* Hitchc. 1930**, Proc. Biol. Soc. Wash. 43: 93. - *P. skvortzovii* Probat. 1973, Novosti Syst. Vyssh. Rast. 10: 72. - *P. mongolica* (Rendle) Keng ex Shan Chen, 1983, Fl. Intramongol. 7: 85. - [ **2** (Ulaan Burgas, Khonin nuga), (Dulamsuren *et al.* 2004) ].

**P. altaica** Trin. 1829, Fl. Altaic. 1: 97. – [ 1, 2, 3, 6, 7, 10, 13 ]. – **Subendemic.**

**P. annua** L. 1753, Sp. Pl. 1: 68. – [ 2, 7, 9 ].

**P. argunensis** Roshev, 1934, Trudy Bot. Inst. Akad. Nauk SSSR Ser. 1, Fl. Sist. Vyssh. Rast. 2: 404, 407. – [ 1+, 2, 3+, 4, 5, 6+, 7, 8, 9, 10, 11+ (Ariunsuren 2006), 13, 15 ].

**P. attenuata** Trin. 1836, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 2: 527. – *P. albertii* Regel, 1881, Trudy Imp. S.-Peterburgsk. Bot. Sada 7: 611. - *P. ruida* var. *mongholica* Litv. ex Pavlov, 1929, Bull. Soc. Imp. Nat. Moscou 38(1-2): 22. - *Sesleria pavlovii* Litv. ex Pavlov, 1929, Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 38: 24. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 13, 14+ (Ariunsuren 2006), 15 ].

**Notes:** *P. ruida* var. *mongholica* Litv. ex Pavlov and *Sesleria pavlovii* Litv. ex Pavlov are Described from Khangai phytogeographical region (LE, MW). Also *A. attenuata* subsp. *gobica* Galanin nov. prov. is collected in Bogd Khan and Gurvan Saikhan uul (Galanin, Belikovich, 2007, 2009).

**P. attenuata** subsp. **botryoides** (Trin. ex Griseb.) Tzvelev, 1974, Novosti Syst. Vyssh. Rast. 11: 31. – *P. attenuata* var. *botryoides* (Griseb.) Tzvelev, 1968, Rast. Tsentral. Azii 4: 142. – *P. serotina* var. *botryoides* Griseb. 1852, Fl. Ross. 4: 375. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 13, 14 ].

**P. attenuata** subsp. **dahurica** (Trin.) Gubanov, 1996, Consp. Fl. Outer Mongolia (vasc. pl.) 22. – *P. dahurica* Trin. 1836, Mem. Acad. Imp. Sci. St.-Petersbourg. Sci. Math., Seconde Pt. Sci. Nat. 4(2): 63. - *P. attenuata* var. *dahurica* (Trin.) Griseb. 1852, Flora Rossica 4(13): 371. – [ 1+ (Ariunsuren 2006), 3, 4+ (Galanin 2009), 5, 6+, 7+, 8, 9, 13+ (Ariunsuren 2006) ].

+ **P. attenuata** subsp. **tshuensis** (Serg.) Olon. 1998, Turczaninowia 1(4): 17. - *P. attenuata* var. *tshuensis* (Serg.) Tzvelev, 1974, Novosti Syst. Vyssh. Rast. 11: 41. – *P. argunensis* var. *tshuensis* Serg. 1961, Fl. Zap. Sib. 12: 3107. – [ 1+, 2+, 3+, 4+, 7+, 8+, 9+, 10+, 11+, 12+, 13+ (Gubanov 1999; Dariimaa 2009) ].

**P. glauca** Vahl. 1790, Fl. Dan. 6(17): 3. – [ 1, 3, 6, 7, 13 ].

+ **P. ircutica** Roshev. 1922, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR 3: 91. – [ 4+ (Onon gol), (Galanin 2009; Urgamal *et al.* 2013) ].

**P. kenteica** Ivanova, 1937, Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Kazahsk. SSR 7: 278. – [ 2 (Khentei Khan uul), 3+ (Ariunsuren 2006) ]. – **Subendemic.** Described from Khentei phytogeographical region (LE). – (R, RB).

**P. krylovii** Reverd. 1963, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 8: 3. – [ 2+, 3, 4+ (Galanin 2009), 7, 8 ].

+ **P. mongolica** (Rendle) Keng, 1957, Claves Gen. Sp. Gram. Prim. Sinic. 166. - *Poa nemoralis* var. *mongolica* Rendle 1904, Linnaea 36(4): 424. – *P. mongolica* (Rendle) Keng & S.L. Chen, 1994, Bull. Bot. Res., Harbin 14(2): 140. – [ 5+ (Ariunsuren 2006; Urgamal *et al.* 2013) ].

**P. nemoralis** L. 1753, Sp. Pl. 1: 69. – [ 1, 2, 3, 4, 5, 8, 9 ].

**P. palustris** L. 1753, Syst. Nat. (ed. 10) 2: 874. – [ 1, 2, 3, 4, 5, 7, 8+ (Sanchir & Mandakh 2008), 9+ (Ariunsuren 2006), 13 ].

# **P. pratensis** L. 1753, Sp. Pl. 1: 67. – *P. turfosa* Litv. 1922, Spisok Rast. Gerb. Russk. Fl. Bot. Muz. Rossiisk. Akad. Nauk 8: 135. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14 ].

**P. pratensis subsp. angustifolia (L.) Lej.** 1828, Comp. Fl. Belg. 82. - *P. angustifolia* L. Sp. Pl. 1: 67. - [ 2, 3, 4, 5, 9 ].

+ **P. pratensis subsp. pruinosa (Korotky) Dickore,** 1995, Staphia 39: 173. - *P. pruinosa* Korotky, 1914, Rep. Spec. Nov. Regni Veg. 13: 291. - [ 2+, 4+ (Ariunsuren 2006; Dariimaa 2009) ].

**P. pratensis subsp. sabulosa (Turcz. ex Roshev.) Tzvelev,** 1974, Novosti Syst. Vyssh. Rast. 11: 27. - *P. pratensis* var. *sabulosa* Turcz. ex Roshev. 1929, Novosti Syst. Vyssh. Rast. 11: 27. - *P. sabulosa* (Turcz. ex Roshev.) Roshev. 1929, Fl. URSS 2: 394. - [ 2, 4 ].

**P. pratensis subsp. sergievkajae (Probat.) Tzvelev,** 1974, Novosti Syst. Vyssh. Rast. 11: 27. - *P. sergievkajae* Probat. 1971, Novosti Syst. Vyssh. Rast. 8: 28, 47. - [ 4+ (Ariunsuren 2006), 5 ].

**P. raduliformis Probat.** 1971, Novosti Syst. Vyssh. Rast. 8: 25, 48. - [ 2+ (Galanin 2009), 7 ].

**P. reverdattoi Roshev.** 1934, Fl. URSS 2: 407. - [ 1+, 3+, 5+, 6, 7+, 8+, 9+, 10+, 13+, 14 (Ariunsuren 2006) ]. - (R).

**P. schischkinii Tzvelev,** 1974, Novosti Syst. Vyssh. Rast. 11: 32. - *Arctopoa schischkinii* (Tzvelev) Probat. 1976, Novosti Syst. Vyssh. Rast. 13: 41. - [ 1+ (Ariunsuren 2006), 7, 8 ].

**P. sibirica Roshev.** 1912, Izv. Imp. S.-Peterburgsk. Bot. Sada 12: 121. - [ 1, 2, 3, 4, 5, 6, 7, 10, 13 ].

**P. smirnovii Roshev.** 1929, Izv. Glavn. Bot. Sada SSSR 28: 381. - *P. mariae* Reverd. 1933, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 3–4: 2–3. - [ 1, 3, 4+ (Ariunsuren 2006), 6, 7 ]. - Subendemic.

**P. subfastigiata Trin.** 1829, Fl. Altaic. 1: 96–97. - *Arctopoa subfastigiata* (Trin.) Probat. 1974, Novosti Syst. Vyssh. Rast. 8: 52. - [ 1, 2, 3, 4, 5, 6, 8, 9, 10, 13 ].

**P. supina Schrader,** 1806, Fl. Germany, 1: 289. - [ 3, 4, 7+ (Yolt uul), (German *et al.* 2009) ]. - (R).

# **P. tianschanica (Regel) Hackel ex O. Fedtsch.** 1903, Trudy Imp. St.-Peterburgsk. Bot. Sada 21: 441. - *P. macrocalix* var. *tianschanica* Regel, 1881, Trudy Imp. St.-Peterburgsk. Bot. Sada 7: 619. - *P. pruinosa* Korotky, 1914, Repert. Spec. Nov. Regni Veg. 13: 291. - [ 1, 2+ (Eruugiin khaluun rashaan), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3, 4, 5, 6, 7, 8+ (Ariunsuren 2006), 9, 10, 13 ].

**P. tibetica Munro ex Stapf,** 1896, Fl. Brit. India 7(22): 339. - *P. ciliatiflora* Roshev. 1926, Severn. Mongol. 163. - [ 1, 3, 6, 7, 8, 10, 11, 12, 13, 14, 15 ].

**Notes:** *P. ciliatiflora* Roshev. was described from Khentei phytogeographical region (LE).

**P. trivialis L.** 1753, Sp. Pl. 1: 67. - [ 1 (Khar-Usiin gol) ].

**P. urssulensis Trin.** 1835, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 2: 527. - [ 2+ (Ulaan Burgas, Khonin nuga), (Dulamsuren *et al.* 2004; Ariunsuren 2006), 3, 5 ].

**P. veresczaginii Tzvelev,** 1974, Novosti Syst. Vyssh. Rast. 11: 34. - [ 7 ]. - Subendemic.

# **P. versicolor Besser,** 1821, Enum. Pl. 41. - *P. ochotensis* Trin. 1830, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 6, Sci. Math. 1: 377. - *P. botryooides* (Trin. ex Griseb.) Kom. 1927, Fl. Kamtschatka 1: 177. - *P. versicolor* subsp. *ochotensis* (Trin.) Tzvelev, 1974, Novosti Syst.

Vyssh. Rast. 11: 32. – *P. attenuata* var. *versicolor* (Besser) Regel, 1881, *Trudy Imp. S.-Peterburgsk. Bot. Sada* 7: 609. – [ 2, 3, 4, 5, 8+ (Ariunsuren 2006), 9, 13 ].

# ***P. versicolor* subsp. *stepposa* (Krylov) Tzvelev, 1972**, *Novosti Syst. Vyssh. Rast.* 9: 51. – *P. attenuata* var. *stepposa* Krylov, 1914, *Fl. Altaic.* 7: 1656. - *P. stepposa* (Krylov) Roshev. 1932, *Fl. Turkm.* 1: 145. – [ 1, 2, 3, 4+ (Galanin 2009), 6, 7, 8+, 11+ (Ariunsuren 2006), 13 ].

**Notes:** *P. subcaerulea* Smith. (*P. humilis* Ehrh. ex Hoffm.) was collected (Galanin 2009) near Onon river (Dadal somon), but the taxon name is not accepted.

**Polypogon maritimus Willd.** 1801, *Ges. Naturf. Freunde Berlin Neue Schriften* 3: 442. – [ 11, 15 ].

***P. monspeliensis* (L.) Desf.** 1798, *Fl. Atlant.* 1: 67. - *Alopecurus monspeliensis* L. 1753, *Sp. Pl.* 1: 61. – [ 7, 10, 11, 13, 15, 16 ].

***Psammochloa villosa* (Trin.) Bor,** 1951, *Kew Bull.* 6: 191. - *Arundo villosa* Trin. 1836, *Sp. Gram.* 3(30): , pl. 352. – [ 3, 9, 10, 11, 12, 13, 16 ]. – **Subendemic.** Described from Eastern Mongolia (LE).

***Psathyrostachys juncea* (Fisch.) Nevski,** 1934, *Fl. URSS* 2: 714. - *Elymus juncea* Fisch. 1806, *Mem. Soc. Imp. Nat. Moscou* 1: 25. – [ 3, 6, 7, 10, 12, 13, 14, 15 ].

***P. lanuginosa* (Trin.) Nevski,** 1934, *Fl. URSS* 2: 714. - *Elymus lanuginosa* Trin. 1829, *Fl. Altaic.* 1: 121. – [ 7, 14 ].

***Puccinellia altaica* Tzvelev,** 1968, *Rast. Tsentr. Azii* 4: 152. – [ 14 (Bodonchiin gol, Khonin-Usnii Gobi) ]. – **Subendemic.**

***P. distans* (Jacq.) Parl.** 1848, *Fl. Ital.* 1: 367. – *Poa distans* Jacq. 1764, *Observ. Bot.* 1: 42. – [ 11, 13, 14 ].

***P. filifolia* (Trin.) Tzvelev,** 1964, *Novosti Syst. Vyssh. Rast.* 1964: 18. - *Colpodium filifolia* Trin. 1836, *Mem.'Acad. Imp. Sci. St.-Petersbourg. Sci. Math. Seconde Pt. Sci. Nat.* 4, 2(1): 70. – [ 8, 12 ]. – **Subendemic.** Described from East Gobi region of Mongolia (LE).

***P. hackeliana* Krecz.** 1934, *Fl. URSS* 2: 484. – [ 7 (Aj Bogd uul) ].

***P. hauptiana* Krecz.** 1934, *Fl. URSS* 2: 485. – [ 3, 4+ (Galanin 2009), 5, 6, 7, 8, 9, 10, 11, 13, 14 ].

***P. macranthera* Krecz.** 1934, *Fl. URSS* 2: 471. – [ 2, 3, 4, 5, 7, 8, 9, 10, 12, 14 ].

# ***P. manchuriensis* Ohwi,** 1935, *Acta Phytotax. Geobot.* 4(1): 31–32. – *P. kulundensis* Serg. 1961, *Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva* 82: 5. – [ 3 ].

***P. nudiflora* (Hack.) Tzvelev,** 1962, *Bot. Mat. (Tashkent)* 17: 75. - *Poa nudiflora* Hack. 1902, *Oesterr. Bot. Z.* 52(11): 453. – [ 7, 13 ].

***P. przewalskyi* Tzvelev,** 1955, *Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR* 17: 63. – [ 10 (Ereen nuur) ]. – **Subendemic.** – (R).

***P. schischkinii* Tzvelev,** 1955, *Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR* 17: 57. – [ 5, 8, 10, 12, 13, 15 ].

# ***P. tenuiflora* (Griseb.) Scribner & Merr.** 1910, *Contr. U.S. Natl. Herb.* 13: 78. - *Atropis tenuiflora* Griseb. 1852, *Fl. Ross.* 4(13): 389. - *Puccinellia kreczetoviczii* Bubnova 1988, *Bot. Zhurn. (Moscow & Leningrad)* 73(9): 1334. – *P. mongolica* (T. Norlindh) Bubnova, 1988, *Bot. Zhurn. (Moscow & Leningrad)* 73(9): 1336. – *P. kalininiae* Bubnova,

1988, Bot. Zhurn. (Moscow & Leningrad) 73(9): 1332. – [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16+** (Hilbig & Tungalag 2006), (all regions) ].

**Schismus arabicus** Nees. **1841**, Fl. Afr. Austral. Ill. 1: 422. – [ **4+** (Galanin 2009), **7, 11, 14** ]. – (R).

# **Schizachne purpurascens** subsp. **callosa** (*Turcz. ex Griseb.*) **T. Koyama & Kawano, 1964**, Canad. J. Bot. 42: 862. - *Avena callosa* Turcz. ex Griseb. 1852, Fl. Rossica 4(13): 416. – *Sch. callosa* (*Turcz. ex Griseb.*) Ohwi, 1933, Acta Phytotax. Geobot. 2(4): 279. – [ **2+** (Khuderiiin gol, Khuderiiin gol), (Dulamsuren *et al.* 2003; Kamelin & Dariimaa 2004), **3, 4+** (Galanin 2009), **5** ]. – (R).

**Scolochloa festucacea** (*Willd.*) **Link, 1827**, Hort. Berol. 1: 136. - *Arundo festucacea* Willd. 1809, Enum. Pl. 1: 126. – [ **4** (Ereennii nuruu) ]. – (R).

+ **Secale cereale** L. **1753**, Sp. Pl. 1: 84. – [ **2+, 3+** (Grubov 1982; Urgamal *et al.* 2013)].

**Setaria pumila** (*Poir.*) **Roem. & Schult. 1824**, Mant. 2: 274. - *Panicum pumilum* Poir. 1816, Encycl. Suppl. 4(1): 273. – [ **7** ].

**S. viridis** (*L.*) **P. Beauv. 1812**, Ess. Agrostogr. 51, 178. - *Panicum viride* L. 1753, Sp. Pl. 1: 84. – [ **2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16** ].

**Notes:** *S. viridis* var. *weinmannii* (Roem. & Schult.) Heynh. is distributed in Mongolia (Gubanov 1982, 1987; Flora of Khangai 1989).

**S. viridis** subsp. **pachystachys** (*Franch. & Savat.*) **Masam. & Yanag. 1941**, - *Panicum pachystachys* Franch. & Savat. 1879, Trans. Nat. Hist. Soc. Taiwan 31: 327. - *Setaria pachystachys* (*Franch. & Savat.*) Matsum. 1897, Bot. Mag. (Tokyo) 11: 443. - *Panicum pachystachys* Franch. & Savat. 1879, Enum. Pl. Jap. 2: 594. – [ **3, 7, 10, 12** ].

**Notes:** *S. viridis* subsp. *pycnocoma* (Steud.) Tzvelev [*S. pycnocoma* (Steud.) Henr. ex Nakai] and *S. italicica* (*L.*) P. Beauv. were not found in the Western Mongolia (Tzvelev 1976).

+ **S. viridis** subsp. **weinmanii** (*Roem. et Schult.*) **Tzvelev, 2000**, Novosti Syst. Vyssh. Rast. 32: 181-185. – [ **10+** (Buyant gol), (Tzvelev 2000; Ebel & Rudaya 2002; Urgamal *et al.* 2013) ].

**Spodiopogon sibiricus** Trin. **1820**, Fund. Agrost. 192. – [ **2, 3, 4, 5, 8+** (Sanchir & Mandakh 2008), **9** ].

**Stipa baicalensis** Roshev. **1929**, Izv. Glavn. Bot. Sada SSSR 28: 380. – [ **1, 2, 3, 4, 5, 7+** (Shavrova & Olonova 2008), **8, 9, 12** ].

**S. breviflora** Griseb. **1868**, Nachr. Ges. Wiss. Gottingen, Math.-Phys. Kl. 3: 82. – [ **7, 8, 9, 12, 13** ].

**S. capillata** L. **1762**, Sp. Pl. 1: 116. – [ **3, 4+** (Galanin 2009), **7, 10, 12+** (Ikh Nart ?) ].

**S. caucasica** Schmalh. **1892**, Ber. Deutsch. Bot. Ges. 10: 293. – [ **7+** (Shavrova & Olonova 2008), **10, 11, 12, 13, 14, 16** ].

**S. caucasica** subsp. **desertorum** (*Roshev.*) **Tzvelev, 1974**, Novosti Syst. Vyssh. Rast. 11: 20. – *S. caucasica* fo. *desertorum* Roshev. 1916, Fl. Aziatsk. Ross. 12: 143. - *S. desertorum* (Roshev.) Ikonn. 1979, Opred. Viss. Rast. Baskirsk ASSR 83. – [ **10** (Ubs nuur) ].

# **S. caucasica** subsp. **glareosa** (*P.A. Smirn.*) **Tzvelev, 1974**, Novosti Syst. Vyssh. Rast. 11: 20. – *S. glareosa* P.A. Smirn. 1829, Bull. Soc. Imp. Nat. Moscou 38: 12. – *S. glareosa* var. *pubescens* (P.A. Smirn. ex Roshev.) Gubanov, 1982, Bull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. 87(1): 124. – [ **3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16** ].

**Notes:** *S. glareosa* var. *pubescens* (P.A. Smirn. ex Roshev.) Gubanov was described from Gobi Altai phytogeographical region (LE).

**S. confusa Litv.** 1929, Izv. Akad. Nauk SSSR Ser. 6 1928: 53. - *Achnatherum confusum* (Litv.) Tzvelev, 1977, *Probl. Ekol. Geobot. Bot. Geogr. Florist.* 140. - [ 2, 3, 4 ].

**S. consanguinea Trin. & Rupr.** 1842, Sp. Gram. Stipac. 78. - [ 2, 7, 10 ]. - (R).

**S. grandis P.A. Smirn.** 1829, Repert. Spec. Nov. Regni Veg. 26: 267. - [ 3, 4, 5, 8, 9 ]. - Described from Khangai phytogeographical region (MW, isotype - LE).

**S. inebrians Hance,** 1876, J. Bot. 14(163): 212. - *Achnatherum inebrians* (Hance) Keng, 1957, Claves Gen. Sp. Gram. Prim. Sinic. 107, 213. - [ 7, 12, 13, 16+ (?) ], (Manibazar 2010) ]. - (R).

**S. kirghisorum P.A. Smirn.** 1925, Repert. Spec. Nov. Regni Veg. 21(581–587): 232–233. - [ 3, 7, 10, 14 ].

**S. krylovii Roshev.** 1929, Izv. Glavn. Bot. Sada SSSR 28: 379. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 ].

# **S. mongholica Turcz. ex Trin.** 1836, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 6, Sci. Math., Seconde Pt. Sci. Nat. 4,2(1): 42. - *Ptilagrostis mongholica* (Turcz. ex Trin.) Griseb. 1852, Flora Rossica 4(13): 447. - [ 1, 2, 3, 4+ (Neuffer *et al.* 2012), 7 ]. - (RL).

**S. mongolorum** Tzvelev, 1968, Rast. Tsentr. Azii 4: 57. - [ 7, 8, 10, 11, 12 ]. - **Subendemic.** Described from East Gobi phytogeographical region (LE).

**S. orientalis** Trin ex Ledeb. 1829, Fl. Altaic. 1: 83. - [ 1, 3, 6, 7, 10, 11, 14 ].

# **S. pelliotii Danguy,** 1912, Notul. Syst. (Paris) 2(6): 167. - *Ptilagrostis pelliotii* (Danquy) Grubov, 1955, Consp. Fl. Outer Mongolia (Vasc. Pl.) 62. 1955. - [ 7+ (Bodonchiin gol), (Revushkin *et al.* 2001), 11, 12, 13, 14, 15, 16 ].

**S. pennata** L. 1753, Sp. Pl. 1: 78. - [ 3, 4 ].

**S. pennata** subsp. **sabulosa** (Pacz.) Tzvelev, 1973, Novosti Syst. Vyssh. Rast. 10: 80. - *S. pennata* f. *sabulosa* Pacz. 1914, Khersonsk. Fl. 1: 112. - [ 10 (Altan Els) ].

# **S. saposhnikowii (Roshev.) Kitag.** 1942, Rep. Inst. Sci. Res. Manchoukuo 6(4): 118. - *Achnatherum saposhnikovii* (Roshev.) Nevski, 1937, Trudy Bot. Inst. Akad. Nauk SSSR Ser. 1, Fl. Sist. Vyssh. Rast. 4: 224. - [ 13, 15 ].

**S. sareptana A. Beck.** 1882, Bull. Soc. Imp. Nat. Moscou 57: 52. - [ 3, 7, 10, 11, 13 ].

+ **S. sczerbakovii Kotuch.** 1998, Turczaninowia 1(1): 7-21. - [ 7+ (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. - **Subendemic.**

**S. sibirica (L.) Lam.** 1791, Tabl. Encycl. 1: 158. - *Avena sibirica* L. 1753, Sp. Pl. 1: 81. - *Achnatherum sibiricum* (L.) Keng. ex Tzvelev, 1977, Prob., Ekol., Geobot., Botanisheskoi. Geogr. i Floristiki 140. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 ].

+ **S. tianschanica Roshev.** 1916, Fl. Aziatsk. Ross. 12: 149. - [ 15+ (Flora of China 2006; Urgamal *et al.* 2013) ].

# **S. tianschanica** subsp. **gobica** (Roshev.) D.F. Cui, 1996, Fl. Xinjiang. 6: 299. - *S. tianschanica* var. *gobica* (Roshev.) P.C. Kuo & Y.H. Sun, 1987, Fl. Reipubl. Popularis Sin. 9(3): 277. - *S. gobica* Roshev. 1924, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR 5: 13. - [ 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ]. - **Subendemic.**

# **S. tianschanica** var. **klemenzii** (Roshev.) Norl. 1949, Fl. Mongol. Steppe & Desert Areas 1: 66. - *S. klemenzii* Roshev. 1924, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR 5: 13. - *S.*

*gobica* var. *klementzii* (Roshev.) Norl. 1949, *Fl. Mongol. Steppe* 1: 66. – [ **3, 4, 6, 7+** (Shavrova & Olonova, 2008), **8, 9, 10, 11, 12, 13** ]. – **Subendemic.** Described from Middle Khalkha phytogeographical region (lectotype - LE).

# **S. zalesskii Wilensky, 1925**, Repert. Spec. Nov. Regni Veg. 21: 232. – *S. pennata* subsp. *zalesskii* (Wilensky) Freitag, 1985, Note. Royal Bot. Gard., Edinburgh 42(3): 443. - *S. rubens* P.A. Smirn. 1925, *Repert. Spec. Nov. Regni Veg. 21: 231* – [ **3, 7, 10** ]. – **(R).**

**Tragus mongolorum Ohwi, 1941**, Acta Phytotax. Geobot. 10(4): 268. – [ **12, 13** ]. – **Subendemic.**

**Tripogon chinensis (Franch.) Hack. 1903**, Bull. Herb. Boissier, ser. 2, 3(6): 503. - *Nardurus filiformis* var. *chinensis* Franch. 1884, Nouv. Arch. Mus. Hist. Nat., ser. 2, 7: 149. – [ **2, 4, 5, 8, 9, 12** ].

**T. purpurascens Duthie, 1901**, Ann. Roy. Bot. Gard. (Calcutta) 9(1): 74. – [ **12, 13, 16** ].

**Trisetum altaicum Roshev. 1922**, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR 3: 85. – [ **1, 2, 3, 6, 7** ].

**T. sibiricum Pupr. 1845**, Beitr. Pflanzenk. Russ. Reiches 2: 65. – [ **1, 2, 3, 4, 5, 7, 8, 9, 10, 13** ].

**T. spicatum subsp. *mongolicum* Hulten, 1959**, Gard. Bull. Singapore 36(1): 135. – *T. mongolicum* (Hulten ex Veldcamp) Peschkova, 1979, Fl. Tsentr. Sibir. 1: 97. – [ **1, 2, 3, 4, 6, 7, 13** ].

+ **Triticum aestivum L. 1753**, Sp. Pl. 1: 85. – [ **2+, 4+, 10+, 11+, 13+, 14+** (Grubov 1982; Urgamal *et al.* 2013) ].

**Zizania latifolia (Griseb.) Turcz. ex Stapf. 1909**, Bull. Misc. Inform. Kew 1909(9): 385. - *Hydropyrum latifolium* Griseb. 1853, Fl. Ross. 4(14): 466. – [ **9** ]. – **(NT, VR, RB).**

**Notes:** The cultivated plants followed in the Poaceae family: *Oryza sativa* L., *Sorghum bicolor* (L.) Moenc, *S. sudanense* (Piper) Starf., *Zea mays* L. (Gubanov 1996; Manibazar 2010; Urgamal *et al.* 2013).

**Citation:** Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch. 2014. *Conspectus of the vascular plants of Mongolia*. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp. (p. 79-90).

**14. CERATOPHYLLALES LINK, 1829**

Handbuch 2: 406

**39. CERATOPHYLLACEAE GRAY, 1822 (1/1)**

Nat. Arr. Brit. Pl. 2: 395, 554

**Ceratophyllum demersum L. 1753**, Sp. Pl. 2: 992. - [ **1+** (Egiin gol), (Dulmaa 2004), **4, 8+** (Sanchir *et al.* 2004), **9+** (Buir nuur), (Dulmaa *et al.* 2011), **10, 14** ].

**15. RANUNCULALES JUSS. EX BERCHT. & J. PRESL, 1820**

Prir. Rostlin 215

**# 40. PAPAVERACEAE JUSS. 1789 (7/29)**

Gen. Pl. 235–236

# [incl. Fumariaceae, Hypocephalaceae]

\* *Corydalis* by T. Munkh-Erdene & M. Urgamal (2013)

**Chelidonium majus L. 1753**, Sp. Pl. 1: 505-506. - [ **2, 3, 4, 5, 7, 9** ]. - (**R**).

\* **Corydalis adunca Maxim. 1878**, Bull. Acad. Imp. Sci. St.-Petersbourg 24: 29. - [ **6+** (Munkh-Erdene 2014), **7, 13, 15** ].

**C. capnoides (L.) Pers. 1806**, Syn. Pl. 2: 270. - *Fumaria capnoides* L. 1753, Sp. Pl. 2: 700. - [ **6+** (Munkh-Erdene, 2014), **7, 9+** (Munkh-Erdene 2011), **14** ].

**C. grubovii Mikhailova, 1981**, Novosti Syst. Vyssh. Rast. 18: 197. - [ **6+** (Munkh-Erdene, 2014), **7** (Olonova & Beket 2010) ]. - **Endemic**. Described from Mongolian Altai phytogeographical region (LE).

# **C. impatiens (Pall.) Fisch. ex DC. 1821**, Syst. Nat. 2: 124. - *Fumaria impatiens* Pall. 1776, - *Corydalis sibirica* var. *impatiens* (Pall.) Regel, 1861, Bull. Soc. Imp. Nat. Moscou 34(1): 143. - *C. sibirica* subsp. *impatiens* (Pall.) Gubanov, 1996, Konsp. Fl. Vneshn. Mong. 52. - [ **1+ 2+, 3+** (Munkh-Erdene 2011), **7** ]. - Described from Mongolian Altai phytogeographical region (MW).

# **C. inconspicua Bunge, 1842**, Fl. Ross. 1: 104. - *C. tenella* Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15(1): 143. - *C. capnoides* subsp. *tenella* (Kar. & Kir.) Kamelin, 1986, Bull. Mosk. Obshch. Isp. Prir., Otd. Biol. 91(6): 91. - [ **1, 2, 7** ].

**C. pauciflora (Stephan ex Willd.) Pers. 1806**, Syn. Pl. 2: 269. - *Fumaria pauciflora* Stephan ex Willd. 1800, Sp. Pl. 3: 861. - [ **1, 2, 6, 13** ].

+ **C. sajanensis Peschkova, 1990**, Bot. Zhurn. (Moscow & Leningrad) 75: 85. - [ **1+** (Munkh-Erdene & Urgamal 2013; Urgamal *et al.* 2013) ].

+ **C. schanginii (Pall.) B. Fedtsch. 1904**, Trudy Imp. St.-Peterburgsk. Bot. Sada 23(2): 372. - *Fumaria schanginii* Pall. 1779, Acta Acad. Sci. Imp. Petrop. 6: 267. - [ **7+** (Mogoin-Ulaan uul), (Smirnov *et al.* 2003), **14+** (Baitag Bogd uul), (Dariimaa 2009; Munkh-Erdene & Urgamal 2013) ].

**C. sibirica** (L. f.) Pers. 1806, *Syn. Pl.* 2: 270. - *Fumaria sibirica* L. f. 1781, *Suppl. Pl.* 314. - [ 1, 2, 3, 4, 7+, 8+ (Munkh-Erdene 2011), 10, 13 ].

# **C. stricta** Stephan ex Fisch. 1821, *Syst. Nat.* 2: 123. - *C. stricta* subsp. *holosepala* Mikhajlova, 1981, *Novosti Syst. Vyssh. Rast.* 18: 193. - *C. stricta* subsp. *spathosepala* Mikhajlova, 1981, *Novosti Syst. Vyssh. Rast.* 18: 194. - [ 6, 7, 13+ (Munkh-Erdene 2014) ].

**Fumaria officinalis** L. 1753, *Sp. Pl.* 2: 700. - [ 7 ].

**F. schleicheri** Soy.-Willem. 1828, *Observ. Pl. France* 17. - [ 7, 14 ].

+ **Glaucium elegans** Fisch. & C.A. Mey. 1835, *Index. Sem. (St.Petersburg)* 1: 29. - [ 14+ (Baitag Bogd uul), (Kechaykin et al. 2014) ].

**G. squamigerum** Kar. & Kit. 1842, *Bull. Soc. Imp. Nat. Moscou* 15: 141. - [ 7, 14 ].

**Hypecoum erectum** L. 1753, *Sp. Pl.* 1: 124. - *Chiazespermum erectum* (L.) Bernh. 1838, *Linnaea* 12: 662–663. - [ 2, 3, 4, 5, 8, 9, 12 ].

**H. lactiflorum** (Kar. & Kir.) Pazij, 1974, *Opred. Rast. Sred. Azii* 4: 8. - *Chiazespermum lactiflorum* Kar. & Kir. 1842, *Bull. Soc. Imp. Nat. Moscou* 15: 142. - [ 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

+ **H. leptocarpum** Hook. f. & Thomson, 1855, *Fl. Ind.* 1: 276. - *H. chinense* Franch. 1884, *Pl. David*. 1: 27. - [ 3+ (Munkh-Erdene, 2011; Urgamal et al. 2013) ].

**Papaver baitagense** Kamelin & Gubanov, 1990, *Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol.* 95, 2: 86. - [ 6, 7, 14 ]. - **Endemic**. Described from Baitag Bogd (MW, isotype – LE, UBA).

# **P. canescens** Tolm. 1931, *Zurn. Russk. Bot. Obac. Akad. Nauk* 16(1): 77. - *P. pseudocanescens* Popov, 1937, *Fl. URSS*, 7: 749. - [ 1, 2, 3, 4+, 5+ (Neuffer et al. 2012), 6, 7, 13 ].

**P. nudicaule** L. 1753, *Sp. Pl.* 1: 507. - *P. croceum* Ledeb. 1830, *Fl. Altaic.* 2: 271. - *P. rubro-aurantiacum* Fisch. ex DC. 1923, *Nom. II* 2: 266. - *P. tenellum* Tolm. 1930, *Svensk Bot. Tidskr.* 24: 40. - [ 1, 2, 3, 4, 5, 6+ (Olonova et al. 2013), 7+ (Neuffer et al. 2012), 9, 13+ (Neuffer et al. 2012) ].

**P. pseudotenellum** Grubov, 1955, *Bot. Mat. (Leningrad)* 17: 14. - [ 7, 10+ (Jargalant Khairkhan uul, Rashaantiin gol), (Kechaykin et al. 2014), 13, 14 ]. - **Endemic**. Described from Gobi Altai region.

**P. rubro-aurantiacum** Lundstr. 1923, *Acta Horti Berg.* 7: 417. - *P. nudicaule* subsp. *rubro-aurantiacum* (Fisch. ex DC.) Fedde, 1909, *Nat. Pflanzenfam.* 4: 381. - [ 1, 2, 3, 4, 5, 7, 8, 9, 10+ (Khovd gol), (Revushkin et al. 2001), 13 ].

**P. rubro-aurantiacum** subsp. *chalchorum* Kamelin, 1990, *Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol.* 95, 2: 88. - [ 8 ]. - **Endemic**. Described from Middle Khalkh phytogeographical region (LE, isotype – MW, UBA).

**P. rubro-aurantiacum** subsp. *changaicum* (Kamelin) Kamelin, 1990, *Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol.* 95, 2: 88. - *P. changaicum* Kamelin, 1990, *Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol.* 95, 2: 87. - [ 3 ]. - **Endemic**. Described from Khangai phytogeographical region (MW, isotype – LE). - (R, RB).

**P. rubro-aurantiacum** subsp. *saichanense* (Grubov) Kamelin & Gubanov, 1990, *Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol.* 95, 2: 89. - *P. saichanense* Grubov, 1955, *Bot. Mat. (Leningrad)* 17: 15. - [ 13 (Gurvan Saikhan uul), (Gubanov 1996; Karsten et al. 2005) ]. - **Endemic**. Described from Gobi Altai phytogeographical region (LE). - (R).

**P. rubro-aurantiacum subsp. smirnovii (Peschkova) Kamelin & Gubanov, 1990,**  
Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 95, 2: 89. - *P. smirnovii* Peschkova, 1977, Novosti Syst. Vyssh. Rast. 14: 239. - [ 4, 9 ].

**P. setosum Peschkova, 1972**, Stepn. Fl. Baikal. Sibiri. 59. - *P. rubro-aurantiacum subsp. setosum* Tolm. 1930, Sv. Bot. Tidskr. 24, 1: 38. - [ 4 ].

+ **Roemeria refracta DC. 1821**, Syst. Nat. 2: 93. - [ 3+ (Sanchir 1970), 14+ (Manibazar 2010) ].

#### 41. MENISPERMACEAE JUSS. 1789 (1/1)

Gen. Pl. 284-285

**Menispermum dauricum DC. 1817**, Syst. Nat. 1: 540. - [ 2, 3, 4, 5 ].

#### 42. BERBERIDACEAE JUSS. 1789 (1/2)

Gen. Pl. 286

**Berberis amurensis Rupr. 1857**, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St-Petersbourg 15: 260. - [ 5 ].

**B. sibirica Pall. 1773**, Reise Russ. Reich. 2(Append.): 737. - [ 1, 2, 3, 4, 6, 7, 10+ (Uguumur uul), (Mikhailova 2001), 13 ].

#### 43. RANUNCULACEAE JUSS. 1789 (21/138)

Gen. Pl. 231-232

# **Aconitum altaicum Steinb. 1937**, Fl. URSS 7: 731. - *A. glandulosum Rapiacs*, 1907, Novenyt. Kozlem. 6: 152. [ 1, 2, 3, 4, 6, 7, 13+ (Neuffer et al. 2012), 14 ].

**A. ambiguum Rchb. 1823**, Monogr. Acon. , pl. 23. - [ 1, 2+, 3+, 4, 10+ (Borodina-Grabovskaya 2001) ].

**A. anthoroideum DC. 1817**, Syst. Nat. 1: 366. - [ 3+ (Borodina-Grabovskaya 2001), 7 ]. - (R).

**A. baicalense Turcz. ex Rapaics, 1907**, Nov. Kozl. 6: 148. - *A. czekanovskyi* Steinb. 1937, Fl. URSS 7: 733. - [ 2, 3, 4, 5, 9 ].

**A. barbatum Pers. 1807**, Syn. Pl. 2: 83. - [ 1, 2, 3, 4, 6, 7, 8+ (Ar Jargalant), 10+ (Uvs nuur), 11+ (Lamiin Gegeen), (Borodina-Grabovskaya 2001), 13 ].

**A. biflorum Fisch. ex DC. 1817**, Syst. Nat. 1: 380. - [ 3, 7+ (Olonova & Beket 2010) ].  
- Subendemic.

+ **A. birobidshanicum Vorosch. 1943**, Ind. Sem. Inst. Exp. pl. Offic URSS 331. - *A. kusnezoffii* subsp. *birobidshanicum* (Vorosch.) Luferov, 1991, Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 96(5): 75. - [ 9+ (Manibazar 2010; Urgamal et al. 2013) ].

**A. chasmanthum Stapf, 1903**, Ann. Roy. Bot. Gard. (Calcutta) 10: 142. - [ 3, 11+ (Dulaankhairkhan, Khan Khushin uul), (Borodina-Grabovskaya 2001), 13 ].

**A. coreanum (Levl.) Rapaics, 1907**, Novenyt. Kozlem. 6: 154. - *A. delavayi* var. *coreanum* Levl. 1902, Bull. Acad. Int. Geogr. Bot. 11(157): 300. - *A. komarovii* Steinb. 1937, Fl. URSS 7: 191. - [ 5 ]. - (R, RB).

**A. decipiens Vorosch. & Anfalov, 1943**, Bot. Zhurn. SSSR. 28: 27. – [ 3, 7 (Tsagaan gol), (Krasnoborov 2006; Olonova & Beket 2010) ]. – **Subendemic**.

**A. gubanovii Luferov & Vorosch. 1991**, Bull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. 96(4): 111. – [ 7 (Borodina-Grabovskaya 2001), 14 ]. – **Endemic**. Described from Mongolian Altai phytogeographical region (MW, iso and paratype - LE).

+ **A. kamelinii Solovjev 1998**, Turczaninowia 1(2): 5. – [ 3+, 13+ (Solovjev 1998; Gubanov 1999) ]. – **Endemic**.

+ **A. khanminthunii A.A. Solovjev & Shmakov, 1999**, Fl. Rastiteln. Altaya 1997(1): 5. – [ 6+, 7+ (Olonova & Beket 2010; Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic**.

**A. kuznezoffii Rchb. 1823**, Ill. Sp. Acon. Gen., pl. 21. – [ 5, 9 (Chono gol) ]. – **(EN, VR, RB)**.

**A. leucostomum Vorosch. 1952**, Bull. Bot. Gard. Acad. Sci. URSS 11: 62. – [ 6, 7, 8+, 10+ (Uvs nuur), (Borodina-Grabovskaya 2001) ].

+ **A. macrorhynchum Turcz. ex Lebed. 1842**, Bull. Soc. Imp. Nat. Moscou 15: 83. – [ 4+ (Munkueva 2003) ].

+ **A. nemorum Popov, 1935**, Bull. Soc. Imp. Nat. Moscou 44(3): 131. – [ 7+ (Gubanov 1999; Dariimaa 2009) ].

**A. paskoi Vorosch. 1943**, Bot. Zhurn. SSSR. 28: 29. – [ 2, 3 ]. – **(R)**.

+ **A. ranunculoides Turcz. 1842**, Bull. Soc. Imp. Nat. Moscou 15: 78. – [ 4+ (Munkueva 2003) ].

+ **A. rubicundum Fisch. ex Steud. 1840**, Nomencl. Bot. ed. 2, 1: 20. – *A. septentrionale* subsp. *rubicundum* (Fisch.) Vorosch. 1991, Byull. Glavn. Bot. Sada 160: 20. – [ 1+ (Munkueva 2003) ].

**A. septentrionale Koelle, 1786**, Spic. Observ. Aconit. 22. - *A. excelsum* Rchb. 1825, Monogr. Acon., pl. 53. – [ 1, 2, 3, 4, 6+, 7+ (Neuffer *et al.* 2003), 8 ].

**A. smirnovii Steinb. 1937**, Fl. URSS 7: 731. – [ 14 ]. – **(R)**.

**A. turczaninowii Vorosch. 1967**, Bull. Glavn. Bot. Sada 64: 36. - *A. baicalense* Turcz. ex Steinb. 1937, Fl. URSS 7: 732. – [ 2, 3, 4, 5, 9 ]. – **(R)**.

**A. volubile Pall. ex Koelle, 1786**, Spicil. Acon. 21. – [ 2+ (Khonin nuga, Ulaan Burgas), (Dulamsuren *et al.* 2004), 3, 7 ].

# **Actaea cimicifuga L. 1753**, Sp. Pl. 1: 504. - *Cimicifuga foetida* L. 1767, Syst. Nat. 2: 659. – [ 1, 2, 3, 4 ].

# **A. dahurica (Turcz. ex Fisch. & C.A.Mey.) Franch. 1859**, Pl. David. 1: 23. - *Actinospora dahurica* Turcz. ex Fisch. & C.A. Mey. 1835, Index Sem. (St. Petersburg) 1: 21. - *Cimicifuga dahurica* (Turcz. ex Fisch. & C.A. Mey.) Maxim. 1859, Prim. Fl. Amur. 28-29. – [ 2+ (Sangastai, Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 5, 9+ (Borodina-Grabovskaya 2001) ]. – **(R)**.

**A. erythrocarpa (Fisch.) Kom. 1903**, Fl. Manschur. 2(1): 237. – [ 1, 2, 3, 4 ].

# **A. simplex (DC.) Wormsk. ex Prantl, 1888**, Bot. Jahrb. Syst. 9(3): 246. – *A. cimicifuga* var. *simplex* DC. 1824, Prodr. Syst. Nat. Regni Veg. 1: 64. - *Cimicifuga simplex* (DC.) Wormsk. ex Turcz. 1842, Bull. Soc. Imp. Nat. Moscou 15(1): 87. – [ 5 (Numrugiin gol) ].

# ***Adonis apennina* L. 1753**, Sp. Pl. 1: 548. – *A. sibirica* Patr. ex Ledeb. 1824, Index Sem. Hort. Dorpat., Suppl. 2: 1. – [ 1, 2, 3, 4+ (Borodina-Grabovskaya 2001), 6, 8 ]. – (NT, R).

***A. mongolica* Simonovicz, 1968**, Novosti Syst. Vyssh. Rast. 1968: 125. – [ 1, 2+ (?)], (Mongolian Red Book, 2013), 3, 4, 8+ (Magsar, 1995; Mongolian Red Book, 2013) ]. – **Endemic.** – (EN, VR, RB, RL). Described from Khangai phytogeographical region (LE).

***Anemone dichotoma* L. 1753**, Sp. Pl. 1: 540. - *Anemonidium dichotomum* (L.) Holub, 1974, Folia Geobot. Phytotax. 9(3): 272. – [ 2, 3, 4, 5, 9 ].

# ***A. narcissiflora* subsp. *crinita* (Juz.) Kitag. 1936**, Lin. Fl. Manshur. 213. – *A. crinita* Juz. 1937, Fl. URSS 7: 739. - *Anemonastrum crinitum* (Juz.) Holub, 1973, *Folia Geobot. Phytotax.* 8: 165. – [ 1, 2, 3, 4, 6+ (Ulaan davaa), (Borodina-Grabovskaya 2001), 7 ].

***A. obtusiloba* D. Don. 1825**, Prodr. Fl. Nepal. 194. – [ 3 (Gubanov, 1996; Borodina-Grabovskaya 2001) ]. – (R, RB).

***A. reflexa* Stephan ex Willd. 1797**, Sp. Pl. 2(2): 1282. - *Anemonoides reflexa* (Stephan) Holub, 1973, *Folia Geobot. Phytotax.* 8: 166. – [ 2, 4 ].

***A. sibirica* L. 1753**, Sp. Pl. 1: 541. - *Anemonastrum sibiricum* (L.) Holub, 1973, *Folia Geobot. Phytotax.* 8: 165. – [ 1, 2, 4 ].

***A. sylvestris* L. 1753**, Sp. Pl. 1: 540. – [ 1, 2, 3, 4, 5, 6, 7, 9 ].

***Aquilegia ganboldii* Kamelin & Gubanov, 1991**, Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 96(6): 113. – [ 5 (Bayan Kheer uul), (Ganbold 2010) ]. – **Endemic.** Described from Foothills of Great Khingan phytogeographical region (LE). – (DD, VR, RB).

***A. glandulosa* Fisch. ex Link, 1822**, Enum. Hort. Berol. Alt. 2(2): 84–85. – [ 1+ (Oyumaa & Paula de Priest 2011), 4, 6, 7 ].

***A. sibirica* Lam. 1783**, Encycl. 1(1): 150. – [ 1, 2, 3, 4, 6, 7 ].

***A. turczaninovii* Kamelin & Gubanov, 1991**, Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 96(6): 114. – [ 2 ].

***A. viridiflora* Pall. 1779**, Acta Acad. Sci. Imp. Petrop. 2: 260. – [ 2, 3, 4, 5+ (Tuvshintogtokh, 2001), 7, 8, 9, 10, 12, 13 ].

**Notes:** It was informed that *Aquilegia parvifolia* Ledeb. is distributed in Eastern Mongolia.

***Batrachium divaricatum* (Schrank) Schur, 1866**, Enum. Pl. Transsilv. 12. - *Ranunculus divaricatus* Schrank, 1789, Baier. Fl. 2: 104. – [ 1+ (Egiin gol), (Dulmaa 2004), 4, 5+ (Neuffer et al. 2012), 6, 7, 8+ (Ogii nuur), (Dulmaa et al. 2011), 9, 11 ].

***B. kauffmannii* (Clerc) Krecz. 1937**, Fl. URSS 7: 343. - *Ranunculus kauffmannii* Clerc, 1878, Trudy Imp. St.-Peterburgsk. Bot. Sada 8: 45. – [ 2 (Tomortiin gol), 7+ (Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006) ]. – (R).

***B. mongolicum* (Serg.) Krecz, 1937**, Fl. URSS 7: 350. – *Ranunculus mongolicus* Serg. 1937, Fl. URSS 7: 734. – [ 3, 6+ (Neuffer et al. 2003), 7+ (Khton gol), (Neuffer et al. 2003; German et al. 2003; Krasnoborov 2006), 10, 11+ (Dzavkhan gol), (Borodina-Grabovskaya 2001) ]. – **Subendemic.** – (R).

***B. trichophyllum* (Chaix ex Vill.) Bosch, 1850**, Prodr. Fl. Bat. 7, 17. – [ 1, 2+ (Borodina-Grabovskaya 2001), 3, 7, 8+ (Ogii nuur), (Borodina-Grabovskaya 2001), 9+ (Pistrick et al. 2012), 10, 11, 14 ].

+ ***Callianthemum angustifolium* Witasek, 1899**, Verh. K. K. Zool.-Bot. Ges. Wien 49: 336. - *C. rutifolium* (L.) C.A. Mey. 1830, Fl. Altaic. 2: 336. - *Ranunculus rutifolius* L. 1853, Sp. Pl. 1: 552. - [ 7+ (?) (Manibazar 2010; Urgamal *et al.* 2013) ].

***C. isopyroides* (DC) Witasek, 1899**, Verh. K. K. Zool.-Bot. Ges. Wien 49: 341. - [ 1, 2, 3 ].

***C. sajanense* (Regel) Witasek, 1899**, Verh. K. K. Zool.-Bot. Ges. Wien 49: 338. - *C. rutaefolium* var. *sajanense* Regel, 1861, Bull. Soc. Imp. Nat. Moscou 34(2): 51. - [ 1, 3, 7 ]. - **Subendemic**. Described from Khovsgol phytogeographical region (LE).

***Caltha natans* Pall. 1776**, Reise Russ. Reich. 3: 284. - [ 1, 2, 3, 4, 5, 8+ (Kherlen gol), (Borodina-Grabovskaya 2001), 10+ (Khar nuur), 11+ (Buuntsagaan nuur), (Dulmaa *et al.* 2011) ].

***C. palustris* L. 1753**, Sp. Pl. 1: 558. - [ 1, 2, 3, 4, 5, 10, 11+ (Buuntsagaan nuur), (Dulmaa *et al.* 2011) ].

# ***Caltha palustris* var. *membranacea* Turcz. 1842**, Bull. Soc. Imp. Naturalistes Moscou 15: 62. - *C. membranacea* (Turcz.) Schipcz. 1921, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR. 2: 168. - [ 1, 2, 3, 4, 5, 9, 10+ (Uvs nuur), (Borodina-Grabovskaya 2001) ].

+ ***Ceratocephala testiculata* (Crantz) Roth, 1827**, Enum. Pl. Phaen. Germ. 1(1): 1014. - *Ranunculus testiculatus* Crantz, 1763, Stirp. Austr. Fasc. 2: 97. - *Ceratocephala orthoceras* DC. 1817, Syst. Nat. 1: 231. - [ 7+ (Rashaantiin nuruu), (Smirnov *et al.* 2003; Kamelin & Ulziykhutag 2005) ].

***Clematis aethusifolia* Turcz. 1832**, Bull. Soc. Imp. Nat. Moscou 5: 181. - [ 9 (Moltsog els), (Borodina-Grabovskaya 2001) ]. - **(R, RB)**.

# ***C. alpina* subsp. *ochotensis* (Pall.) Kuntze, 1885**, Verh. Bot. Vereins Prov. Brandenburg 26: 163. - *Atragene ochotensis* Pall. 1788, Fl. Ross. 1: 69. - *A. alpina* var. *ochotensis* (Pall.) Regel & Tiling 1859, Nouv. Mem. Soc. Nat. Moscou 11: 23. - *Clematis sibirica* var. *ochotensis* (Pall.) S.H. Li & Y. Hui Huang, 1975, Fl. Pl. Herb. Chin. Bor.-Orient. 3: 179. - *C. alpina* var. *ochotensis* (Pall.) S. Watson, 1871, Botany [Fortieth Parallel] 4. - [ 4 (Bayanzurkh uul) ]. - **(R)**.

# ***C. alpina* var. *sibirica* (L.) Kuntze, 1885**, Verh. Bot. Vereins Prov. Brandenburg 26: 162. - *Atragene sibirica* L. 1753, Sp. Pl. 1: 543. - [ 1, 2, 3, 4, 6, 7, 8, 10, 13 ].

***C. brevicaudata* DC. 1817**, Syst. Nat. 1: 138. - [ 5, 9 ].

***C. fruticosa* Turcz. 1832**, Bull. Soc. Imp. Nat. Moscou 5: 180. - [ 11, 12, 13, 15, 16 ].

***C. glauca* Willd. 1796**, Berlin. Baumz. 65, pl. 4. - [ 3, 7, 10, 14, 15+ (Ekhiin gol), (Borodina-Grabovskaya 2001) ]. - **(VU, VR, RB)**.

***C. hexapetala* Pall. 1776**, Reise Russ. Reich. 3: 735. - [ 2, 4, 5, 8, 9 ].

***C. intricata* Bunge, 1833**, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 2: 75. - [ 7+ (Aj Bogd uul), (Borodina-Grabovskaya 2001), 8, 9, 10, 11, 12, 13, 14, 16+ (Hilbig & Tungalag 2006) ].

+ ***C. macropetala* Ledeb. 1829**, Icon. Pl. 1: 5. - *Atragene macropetala* (Ledeb.) Ledeb. 1830, Fl. Altaic. 2: 376. - [ 9+ (Borodina-Grabovskaya 2001) ].

***C. orientalis* L. 1753**, Sp. Pl. 1: 543-544. - [ 15 ].

***C. songarica* Bunge, 1839**, Del. Sem. Hort. Bot. Dorpat. 8. - [ 7, 11, 12, 13, 14, 15, 16 ].

**C. tangutica (Maxim.) Korsh.** 1898, Izv. Imp. Akad. Nauk 9(5): 399. – [ 2, 3, 4, 7, 8, 10, 13, 14, 15 ].

**Notes:** Latest *C. tangutica* subsp. *mongolica* Gray-Wilson is collected from Khentei phytogeographical region (K).

# **Coptidium lapponicum (L.) Tzvelev**, 1994, Bull. Moskovsk. Obač. Isp. Prir. Otd. Biol. 99(5): 64. - *Ranunculus lapponicus* L. 1753, Sp. Pl. 1: 553. – *R. altaicus* Laxm. 1773, Novi Comment. Acad. Sci. Imp. Petrop. 18: 533. – [ 1, 2, 3, 6, 7, 13+ (Neuffer et al. 2012) ].

**Delphinium barlykense Lomon. & Khanm.** 1985, Bot. Zhurn. (Kiev) 70: 111. – [ 6+ (Kharkhiraas, Turgenii uuls), (Olonova & Beket 2010; Olonova et al. 2013), 7 ]. – **Subendemic**.

**D. changaicum N. Friesen**, 1990, Bull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. 95(5): 128. – [ 3, 13 ]. – **Endemic**. Described from Khangai phytogeographical region (MW).

**D. cheilanthes Fisch. ex DC.** 1817, Syst. Nat. 1: 352. – [ 1+ (Borodina-Grabovskaya 2001), 2, 3, 4, 6+ (Mukhar Ulyastain gol), (Borodina-Grabovskaya 2001), 7, 8, 13 ].

**D. crassifolium Schrad. ex Spreng.** 1818, Gesch. Bot. 2: 201. – *D. korshinskyanum* Nevski, 1937, Fl. URSS 7: 724–725. – [ 1, 2+ (Sangastai, Khonin nuga), (Dulamsuren et al. 2004), 3, 5+ (Borodina-Grabovskaya 2001), 6, 7 ].

**D. dissectum Huth.** 1895, Bot. Jahrb. Syst. 20: 403. – [ 1+ (Borodina-Grabovskaya 2001), 3, 4, 8 ].

**D. elatum L.** 1753, Sp. Pl. 1: 531. – [ 1, 3, 6, 7 ].

**D. grandiflorum L.** 1753, Sp. Pl. 1: 531. – [ 1, 2, 3, 4, 5, 9, 13 ].

**D. gubanovii N. Friesen**, 1990, Bull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. 95(5): 130. – [ 7 (Olgoi nuur, Ulaan davaa), (Olonova & Beket 2010) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region (MW).

**D. iliense Huth.** 1895, Bot. Jahrb. Syst. 20(3): 402–403. – [ 14 ].

**D. inconspicatum Serg.** 1930, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kujbyseva (3-4): 6. – [ 3, 6, 7, 14 ]. – **Subendemic**.

+ **D. malyshevii N. Friesen**, 1990, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 95(5): 125. – *D. elatum* var. *sajanensis* M. Popov, 1957, Fl. Middle Sibir. 1: 235. – [ 1+ (Khankh), (Friesen 1990) ]. – **Subendemic**. Described from Khovsgol phytogeographical region (NS).

**D. mirabile Serg.** 1830, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kujbyseva 1930(3-4): 5. – [ 6, 7 ]. – **Subendemic**.

**D. sajanense Jurtz.** 1968, Opred. Vysok. Rast. Yuzhnoi Sibiri 116. – [ 1 (Khankh), (Friesen 1990) ]. – **Subendemic**. Described from Khovsgol phytogeographical region (LE).

**D. triste Fisch.** 1817, Syst. Nat. 1: 362. – [ 1, 2, 3, 4, 8+ (Tsenkheriin gol), (Borodina-Grabovskaya 2001), 13 ].

**D. ukokense Serg.** 1954, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kujbyseva 1954: 9. – [ 6, 7+ (German et al. 2003; Olonova & Beket 2010; Olonova et al. 2013) ]. – **Subendemic**.

**Halerpestes salsuginosa (Pall. ex Georgi) Greene**, 1900, Pittonia 4: 208. - *Ranunculus salsuginosus* Pall. ex Georgi, 1775, Bemerk. Reise Russ. Reich 1772 1: 222. -

*Halerpestes ruthenica* (Jacq.) Ovcz. 1937, Fl. URSS 7: 331. - [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ].

**H. sarmentosa (Adams) Kom.** 1931, Opred. Rast. Dal'nevost. Kraja 1: 550. - *Ranunculus sarmentosus* Adams, 1834, Nouv. Mem. Soc. Imp. Nat. Moscou 9: 244. - [ 3, 4, 6+ (Kharkhiraa), (Borodina-Grabovskaya 2001), 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

# **Isopyrum anemonoides Kar. & Kir.** 1842, Bull. Soc. Imp. Nat. Moscou 15: 135. - *Paropyrum anemonoides* (Kar. & Kir.) O.E. Ulbr. 1925, Notizbl. Bot. Gart. Berlin-Dahlem 9: 218. - [ 7 ].

**Leptopyrum fumariooides (L.) Rchb.** 1828, Consp. Regn. Veg. 192. - *Isopyrum fumariooides* L. 1753, Sp. Pl. 1: 557. - [ 1, 2, 3, 4, 6, 7, 8, 9, 13 ].

**Oxygraphis glacialis (Fisch.) Bunge,** 1836, Verz. Altai Pfl. 46–47. - *Ficaria glacialis* Fisch. ex DC. 1818, Prodr. 1: 44. - [ 1, 2, 3, 6, 7, 13+ (Neuffer et al. 2012) ].

**Paraquilegia anemonoides (Willd.) O.E. Ulbr.** 1822, Repert. Spec. Nov. Regni Veg. Beih. 12: 369. - *Aquilegia anemonoides* Willd. 1811, Ges. Naturf. Freunde Berlin Mag. Neuesten Entdeck. Gesammten Naturk. 5: 401. - [ 1, 6, 7 ].

**Pulsatilla ambigua (Turcz. ex Hayek) Juz.** 1937, Fl. URSS 7: 307. - *Anemone ambigua* Turcz. ex Hayek, 1904, Festschrift zu P. Ascherson's siebzigstem Geburtstage 466. - *Pulsatilla dahurica* (Fisch.) Spreng. 1825, Syst. Veg. 2: 663. - [ 1, 2, 3, 4, 6, 7, 13+ (Neuffer et al. 2012) ].

**P. bungeana C.A. Mey.** 1830, Fl. Altaic. 2: 371. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13 ].

**Notes:** The some data suggest that it is synonymous with *Anemone bungeana* Pritz. Also *P. bungeana* var. *astragalifolia* (Podeb.) Grubov (Khovd, Mongolian Altai regions by Borodina-Grabovskaya 2001; Neuffer et al. 2003), *P. bungeana* var. *bungeana* and *P. bungeana* var. *tenuiloba* (Turcz.) Grubov (Northern Mongolia) are distributed in the Mongolia (Grubov 1982).

**P. campanella Fisch. ex Krylov,** 1831, Fl. Zap. Sibiri 5: 1169. - [ 1, 3, 6+ (Siilkhemii nuruu), 7, 14+ (Bulgan gol), (Borodina-Grabovskaya 2001) ].

# **P. patens subsp. *flavescens* (Zucc.) Zamelis,** 1926, Acta Horti Bot. Univ. Latv. 1: 95. - *Anemone flavescens* Zucc. 1826, Regensb. Zeit. 1: 371. - *Pulsatilla flavescens* (Zucc.) Juz. 1937, Fl. URSS 7: 296. - [ 1, 2, 3, 4, 5, 7 ].

# **P. patens subsp. *multifida* (Pritz.) Zamelis,** 1926, Acta Horti Bot. Univ. Latv. 1: 98. - *Anemone patens* var. *multifida* Pritz. 1841, Linnaea 15: 581. - *Pulsatilla multifida* (Pritz.) Juz. 1937, Fl. URSS 7: 296. - [ 3, 4, 6, 7 ].

**P. tenuiloba (Hayek) Juz.** 1937, Fl. URSS 7: 298. - *Anemone tenuiloba* Hayek, 1904, Festschrift zu P. Ascherson's siebzigstem Geburtstage 472. - [ 2, 3, 4, 7+ (Tavan Bogd uul, Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006), 9 ].

**P. turczaninovii Kryl. & Serg.** 1930, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 5–6: 1. - [ 1, 2, 3, 4, 5, 6, 8+ (Zorgol Khairkhan), (Borodina-Grabovskaya 2001), 9 ].

# **Ranunculus aquatilis L.** 1753, Sp. Pl. 1: 556. - *Batrachium aquatile* (L.) Dumort. 1827, Fl. Belg. 127. - [ 3, 5, 9 ].

+ **R. arschantynicus Kamelin, Schmakov et S. Smirnov,** 2004, Turczaninowia 2004, 7(3) : 5–7. - [ 7+, 14+ (Kamelin et al. 2004; Olonova & Beket 2010; Urgamal et al. 2013) ]. - **Subendemic.** Described from Dzungarian phytogeographical region (LE, isotype - ALTB).

**R. chinensis** Bunge, 1831, Enum. Pl. China Bor.: 3. – [ 2+ (Borodina-Grabovskaya 2001), 3, 4, 6, 10 ].

# **R. circinatus** Sibth. 1794, Fl. Oxon. 175. - *Batrachium circinatum* (Sibth.) Spach, 1829, Hist. Nat. Veg. 7: 201. – [ 3, 4, 5, 9, 10 ].

**R. gmelinii** DC. 1817, Syst. Nat. 1: 303. – [ 1+ (Borodina-Grabovskaya 2001), 2, 4, 5, 9 ].

# **R. grandis** Honda, 1929, Bot. Mag. (Tokyo) 43: 657. - *R. japonicus* Thunb. 1794, Trans. Linn. Soc. London 2: 337. – [ 4, 5, 9 ].

**R. lasiocarpus** C.A. Mey. 1830, *Fl. Altaic.* 2: 323. – [ 1+ (Shegoleva & Ebel, 2005), 3, 6, 7 (Olonova & Bekte 2010) ]. – **Subendemic**.

**R. lingua** L. 1753, Sp. Pl. 1: 549. – [ 14 ].

**R. longicaulis** C.A. Mey. 1830, *Fl. Altaic.* 2: 308-309. – [ 1, 2, 3, 6, 7, 11, 14 ].

**R. monophyllus** Ovcz. 1922, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR. 3: 54. – [ 1, 2, 3, 4, 5, 6+ (Dzuslan gol), (Borodina-Grabovskaya 2001), 7 ].

**R. natans** C.A. Mey. 1830, *Fl. Altaic.* 2: 315-316. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 13, 15 ].

**R. pedatifidus** Smith. 1818, Cycl. 29: 72. – [ 1, 2, 3, 4, 5, 6, 7, 9, 13 ].

+ **R. polyanthemos** L. 1753, Sp. Pl. 1: 554. – [ 6+ (Ulaan davaa), (Gubanov 1999; Borodina-Grabovskaya 2001; Dariimaa 2009) ].

**R. propinquus** C.A. Mey. 1830, *Fl. Altaic.* 2: 332-333. – [ 1, 2, 3, 4, 6, 7, 8, 10 ].

**R. pseudohirculus** Schrenk, 1842, *Enum. Pl. Nov.* 2: 65. - *R. longicaulis* var. *pseudohirculus* (Screnk) Gubanov, 1989, Fl. Khangai 110. – [ 1, 2+ (Borodina-Grabovskaya 2001), 3, 6, 7, 13, 14 ].

+ **R. pulchellus** C.A. Mey. 1830, *Fl. Altaic.* 2: 333. – [ 1+, 2+, 3+, 4+, 5+, 6+, 7+, 8+, 9+, 10+ (Grubov 1982; Borodina-Grabovskaya 2001; Urgamal et al. 2013), 13+ (Ikh Bogd uul), (Borodina-Grabovskaya 2001) ].

**Notes:** This species was not given in Gubanov's conspectus (1996).

**R. radicans** C.A. Mey. 1830, *Fl. Altaic.* 2: 316-318. – [ 1, 2, 3, 4, 5, 6, 7, 8+ (Ulkhiin bulag), (Borodina-Grabovskaya 2001), 10, 13 ].

**R. repens** L. 1753, Sp. Pl. 1: 554. – [ 2, 3, 4, 5, 6, 7, 8, 9 ].

**R. reptans** L. 1753, Sp. Pl. 1: 549. – [ 1, 2, 4, 7, 10 ].

+ **R. rigescens** Turcz. ex Ovcz. 1937, Fl. URSS 7: 389. – [ 14+ (Manibazar 2010; Urgamal et al. 2013) ].

+ **R. sapozhnikovii** Schegoleva, 2006, Bot. 96: 58. – [ 7+ (Tsambagarav uul) (Schegoleva, 2006; Olonova & Bekte 2010; Urgamal et al. 2013) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region (LE, holotype – TK, isotype - NS).

**R. sceleratus** L. 1753, Sp. Pl. 1: 551. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10+ (Ulaangom), (Borodina-Grabovskaya 2001), 11, 13, 14 ].

**R. sulphureus** Sol. 1774, Voy. North Pole 202. – [ 1 ].

**R. tanguticus** (Maxim.) Ovcz. 1937, Fl. URSS 7: 392-393. – *R. affinis* var. *tanguticus* Maxim. 1899, Fl. Tangut. 14. – [ 3, 6 ].

# **R. trichophyllum** subsp. *eradicatus* (Laest.) C.D.K. Cook, 1967, Mitt. Bot. Staats. Menchen 6: 622. – *R. aquatilis* var. *eradicatus* Laest. 1839, Nova Acta Regiae Soc. Sci. Upsal. II,

11: 242. - *Batrachium eradicatum* (Laest.) Fries, 1843, Bot. Not. 1843(8): 114. - [ 2+ (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 5, 6, 7+ (Bulgan gol), (Borodina-Grabovskaya 2001), 8+ (Sanchir *et al.* 2004), 9, 10 ].

+ **R. tuvinicus A. Erst, 2007**, Turczaninowia, 10(2): 5–11. - [ 7+ (Tsagduul gol), (German *et al.* 2009) ].

**Thalictrum alpinum L. 1753**, Sp. Pl. 1: 545. - [ 1, 2, 3, 4, 6, 7, 13 ].

# **Th. aquilegiifolium var. sibiricum Regel & Tiling, 1858**, Fl. Ajan. 23. - *Th. contortum* L. 1753, Sp. Pl. 1: 547. - [ 5, 9 ].

**Th. baicalense Turcz. ex Ledeb. 1838**, Bull. Soc. Imp. Nat. Moscou 11: 85. - [ 2, 5 ].

**Th. foetidum L. 1753**, Sp. Pl. 1: 545. - [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 13, 14 ].

+ **Th. isopyroides C.A. Mey. 1830**, Fl. Altaic. 2: 346–347. - [ 7+ (Rashaantiin nuruu), (Smirnov *et al.* 2003; Kamelin & Ulziykhutag 2005) ]. - **Subendemic**.

**Th. minus L. 1753**, Sp. Pl. 1: 546. - [ 1, 2, 3, 4, 5, 6+ (Ulaan davaa), (Borodina-Grabovskaya 2001), 7, 8, 9, 10, 13, 14 ].

+ **Th. minus subsp. appendiculatum (C.A. Mey.) Gubanov, 1983**, Fl. East. Khangai: 131. - [ 3+ (Urgamal *et al.* 2013) ]. - **Endemic**. Described from Khangai phytogeographical region (LE).

+ **Th. minus subsp. kemense (Fries) Cajander, 1906**, Suom. Kasvio 276. - *Th. kemense* Fries, 1802, Fl. Hall. 95. - [ 3+ (Urgamal *et al.* 2013) ]. - **Subendemic**.

**Th. petaloideum L. 1753**, Sp. Pl. (ed. 2) 1: 771. - [ 1, 2, 3, 4, 5, 9 ].

+ **Th. schischkinii Friesen, 1993**, Fl. Sibir. 6: 205. - *Th. altaicum* (Schischkin) Serg. 1956, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva. 79–80: 5. - non *Th. altaicum* Lecoyer, 1885, Bull. Soc. Roy. Bot. Belg. 24: 248. - *Th. simplex* L. var. *altaicum* Schischkin, 1931, Fl. Zapat. Sibir. 5: 1217. - [ 7+ (Yolt uul), (German *et al.* 2009; Olonova & Beket 2010; Urgamal *et al.* 2013) ]. - **Subendemic**.

**Notes:** Lectotypification of the names of *Thalictrum simplex* L. var. *altaicum* Schischk., described by B.K. Shishkin in the Herbarium of Tomsk State University, and *Thalictrum schischkinii* Friesen, given by N.V. Frisen instead of *Thalictrum altaicum* (Schischk.) Serg., which is a later homonym of *Thalictrum altaicum* Lecoyer, is carried out.

**Th. simplex L. 1755**, Fl. Suec. (ed. 2) 2: 191. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14 ].

**Th. squarrosum Stephan ex Willd. 1799**, Sp. Pl. 2: 1299. - [ 2+ (Minjiin davaa), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004; Neuffer *et al.* 2012), 3, 4, 5, 8, 9, 13+ (Alkh Khoshuunii gobi), (Borodina-Grabovskaya 2001) ].

**Trollius altaicus C.A. Mey. 1831**, Verz. Pfl. Casp. Meer. 200. - [ 6, 7, 14 ]. - **(R)**.

# **T. asiaticus L. 1753**, Sp. Pl. 1: 557. - *T. kytmanovii* Reverd. 1943, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1943(1): 1. - [ 1, 2, 3, 4, 6, 7, 9+ (Borodina-Grabovskaya 2001), 13 ].

+ **T. chinensis Bunge, 1833**, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 6, Sci. Math. 2: 77. - [ 5+ (Gubanov 1999; Dariimaa 2009), 9+ (Borodina-Grabovskaya 2001) ]. - **(R, RB)**.

**T. ledebourii Rchb. 1825**, Iconogr. Bot. Pl. Crit. 3: 63. - [ 2, 3, 4, 5, 9 ].

# **T. lilacinus Bunge, 1836**, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 6, Sci. Math. 2: 33. - *Hegemone lilacina* (Bunge) Bunge ex Ledeb. 1842, Fl. Ross. 1: 51. - [ 1, 2+, 6+ (Siilkhemii nuruu), (Borodina-Grabovskaya 2001), 7 ]. - **(R)**.

- + **T. sajanensis Sipliv. 1972**, Novosti Syst. Vyssh. Rast. 9: 168. – [ 1+ (Urgamal *et al.* 2013) ].  
]. – Subendemic. – (DD, VR, RB).  
? **T. vicarius Sipliv. 1972**, Novosti Syst. Vyssh. Rast. 9: 173. – [ 5 ].

**Citation:** Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch. 2014. *Conspectus of the vascular plants of Mongolia*. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp. (p. 90-121).

## 16. SAXIFRAGALES BERCHT. & J. PRESL, 1820

Prir. Rostlin 259

### 44. PAEONIACEAE RAF. 1815 (1/3)

Anal. Nat. 176

**Paeonia anomala Pall. 1771**, Mant. Pl. 2: 247. – [ **1, 2, 3, 4, 6, 7+** (Grubov 1982) ]. – (**VU, R**).

**P. intermedia C.A. Mey. 1830**, Fl. Altaic. 2: 277. – *P. anomala* var. *intermedia* (C.A. Mey.) O. Fedtsch. & B. Fedtsch. 1906, Beih. Bot. Centralbl. 18(2): 216. – [ **6, 7** (Yoltiin gol) ].

**P. lactiflora Pall. 1776**, Reise Russ. Reich. 3: 286. – *P. albiflora* Pall. 1789, Fl. Ross. 1(2): 92. – [ **2+** (Neuffer *et al.* 2012), **4, 5, 9** ]. – (**EN, VR, RB**).

## 45. GROSSULARIACEAE DC. 1805 (1/13)

Flore Franc. 4(2): 405

# **Ribes aciculare Sm. 1819**, Cycl. 30: 372. - *Grossularia acicularis* (Sm.) Spach, 1838, Hist. Nat. Veg. 6: 173. – [ **2, 3, 4, 6, 7, 8+** (Choiriin Bogd uul), **10+** (Tesiin gol), (Koshevnikov 2007), **13, 14** ]. – (**R**).

**Notes:** This name is an accepted and new combination in the Flora of China (2001).

**R. altissimum Turcz. ex Pojark. 1936**, Trudy Bot. Inst. Akad. Nauk SSSR. Ser. 1, Fl. Sist. Vyssh. Rast. 2: 179. – *R. petraeum* var. *altissimum* (Turcz. ex Pojark.) Jancz. 1907, Mem. Soc. Phys. Hist. Nat. Geneve 35(3): 294. – [ **1, 2, 3, 4, 7, 14** ].

**R. diacanthum Pall. 1776**, Reise Russ. Reich. 3(2): 722–723. – [ **2, 3, 4, 5, 8+** (Munkhkhaan, Ikh Mongol ovoo), (Koshevnikov 2007), **9** ].

**R. fragrans Pall. 1797**, Nova Acta Acad. Sci. Imp. Petrop. Hist. Acad. 10: 377. – [ **1, 2** ]. – (**R**).

**R. graveolens Bunge, 1835**, Mem. Sav. Itr. Acad. St.-Petersbourg 2: 535. – [ **1, 7** (Tsagaan gol), (Koshevnikov 2007; Olonova & Beket 2010) ]. – **Subendemic**. Described from Altai mountain (LE). – (**R**).

**R. heterotrichum C.A. Mey. 1829**, Fl. Altaic. 1: 270–271. – [ **6+** (Ulyastain gol), (Koshevnikov 2007), **7+** (Jargalant Khairkhan uul, Gurvan-Uliasiin gol), **10+** (Khovd gol), (Revushkin *et al.* 2001), **14** (Baitag Bogd uul), (Koshevnikov 2007) ]. – **Subendemic**. – (**R, RB**).

**R. meyeri Maxim. 1874**, Bull. Acad. Imp. Sci. St.-Petersbourg 19: 260. – [ **7, 14** ].

# **R. nigrum L. 1753**, Sp. Pl. 1: 201. – *R. pauciflorum* Turcz. ex Pojark. 1936, Fl. Ross. 2: 200. – [ **1, 2, 3, 5, 6, 7+** (Dayan nuur), (Koshevnikov 2007), **10, 13** ].

# **R. petraeum Wulfen, 1781**, Misc. Austriac. 2: 36. – *R. atropurpureum* C.A. Mey. 1829, Fl. Altaic. 1: 268. – [ **3+, 4+** (Koshevnikov 2007), **7** (Uenchiin gol), **14** ].

**R. procumbens** Pall. 1788, Fl. Ross. 1(2): 35. – [ 1, 3, 7 ].

**R. pulchellum** Turcz. 1832, Bull. Soc. Imp. Nat. Moscou 5: 191. – [ 1, 2, 3, 4, 5, 8, 9, 12+ (Choiriin Bogd uul), (Koshevnikov 2007; Dariimaa *et al.* 2004), 14 ].

**R. rubrum** L. 1753, Sp. Pl. 1: 200. – [ 1, 2, 3, 4, 5, 6, 7, 9, 13 ].

**R. spicatum** Robson, 1796, Arr. Brit. Pl. (ed. 3) 2: 265. – [ 1, 2, 3, 6, 7, 9, 10 ].

#### 46. SAXIFRAGACEAE JUSS. 1789 (5/21)

Gen. Pl. 308

**Bergenia crassifolia** (L.) Fritsch, 1889, Verh. Zool.-Bot. Ges. Wien 39: 587–588. - *Saxifraga crassifolia* L. 1753, Sp. Pl. 1: 401. – [ 2, 3, 4, 7 (Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006) ]. – (R).

**Chrysosplenium nudicaule** Bunge, 1830, Fl. Altaic. 2: 114–115. – [ 6 (Bukh murun), (Koshevnikov 2007) ]. – Subendemic. Described from Altai mountain (LE). – (R).

**Ch. peltatum** Turcz. 1844, Bull. Soc. Imp. Nat. Moscou 17: 273. – [ 1, 3 ].

**Ch. sedakowii** Turcz. 1844, Bull. Soc. Imp. Nat. Moscou 17: 273. – [ 2, 3, 8 ].

# **Ch. serreanum** Hand.-Mazz. 1931, Oesterr. Bot. Z. 80: 341–342. – *Ch. alternifolium* subsp. *sibiricum* (Ser.) Hulten, 1971, Kongl. Svenska Vetensk. Acad. Handl. 13(1): 92. - *Ch. sibiricum* (Ser.) Charkev. 1989, Sosud. Rast. Sovetsk. Dal'nego Vostoka 4: 185. – [ 1, 2, 4 ].

# **Micranthes davurica** (Willd.) Small, 1905, N. Amer. Fl. 22(2): 143. - *Saxifraga davurica* Willd. 1799, Sp. Pl. 2(1): 645. – [ 2 ].

**Mitella nuda** L. 1753, Sp. Pl. 1: 406. – [ 1+ (Oyumaa & Paula de Priest 2011), 2, 4 ]. – (CR, VR, RB).

# **Saxifraga bronchialis** L. 1753, Sp. Pl. 1: 400. – *S. spinulosa* Adams. 1817, Mem. Soc. Imp. Nat. Moscou 5: 96. – [ 1, 2, 3, 4, 8 (Ikh Tuxum nuur), (Koshevnikov 2007) ].

? **S. caulescens** Sipl. 1971, Novosti Syst. Vyssh. Rast. 8: 151. – [ 2, 3, 4, 8 ].

**S. cernua** L. 1753, Sp. Pl. 1: 403-404. – [ 1, 2, 3, 6, 7, 8, 9, 13 ].

**S. foliolosa** R. Br. 1824, Chlor. Melvill. 17. – [ 1, 2 ].

**S. hieraciifolia** Waldst. & Kit ex Willd. 1802, Sp. Pl. 2(1): 641. – [ 1, 2, 3, 6, 7 ].

**S. hirculus** L. 1753, Sp. Pl. 1: 402-403. – [ 1, 2, 3, 4+ (Neuffer *et al.* 2012), 5+ (Koshevnikov 2007), 6, 7, 13 ]. – (EN, VR, RB).

**S. macrocalyx** Tolm. 1859, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR. 19: 177. – [ 1, 6, 7, 13, 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin *et al.* 2014) ].

**S. melaleuca** Fisch. 1815, Cat. Jard. Gorenki: 99. – [ 1, 2, 6, 7 ].

# **S. nelsoniana** subsp. *aestivalis* (Fisch. & C.A. Mey.) D.A. Webb 1964, Feddes Repert. Spec. Nov. Regni Veg. 69: 154. - *S. aestivalis* Fisch. & C.A. Mey. 1835, Index Sem. (St.-Petersburg) 1: 37. – [ 1, 2, 3 ].

**S. nivalis** L. 1753, Sp. Pl. 1: 401. – [ 1 ].

# **S. oppositifolia** L. 1753, Sp. Pl. 1: 402. - *S. asiatica* Hayek, 1905, Denkschr. Kaiserl. Akad. Wiss., Wien. Math.-Naturwiss. Kl. 77: 672. - *S. oppositifolia* subsp. *asiatica* (Hayek) Engl. & Irmsch. 1919, Pflanzenr. 69(IV. 117): 640. – [ 1, 6, 7 ].

**S. setigera** Pursh, 1814, Fl. Amer. Sept. 1: 312. – *S. flagellaris* Willd. 1812, Rev. Saxifrag. 25. – [ 1, 2, 3, 6, 7, 13+ (Ikh Bogd uul), (Koshevnikov 2007) ].

**S. sibirica** L. 1762, Syst. Nat. (ed. 10) 2: 1027. – [ 1, 3, 6, 7, 10, 13, 14 ].

? **S. terekensis** Bunge, 1830, Fl. Altaic. 2: 123. – [ 1, 3, 7 ].

**Notes:** Some with reported *S. moschata* Wulfen is maybe distributed in Mongolia (Koshevnikov 2007).

#### 47. CRASSULACEAE J. ST.-HIL. 1805 (6/19)

Expos. Fam. Nat. 2: 123

# **Crassula aquatica** (L.) Schonland 1891, Nat. Pflanzenfam. 3(2a): 37. - *Tillaea aquatica* L. 1753, Sp. Pl. 1: 128-129. – [ 2, 4, 6, 10 ]. – (R).

# **Hylotelephium pallescens** (Freyn) H. Ohba, 1977, Bot. Mag. (Tokyo) 90: 51. - *Sedum pallescens* Freyn, 1895, Oesterr. Bot. Z. 45: 317. – [ 2, 4 ]. – (NT, VR, RB).

**Orostachys fimbriata** (Turcz.) A. Berger, 1930, Nat. Pflanzenfam. (ed. 2) 18(a): 464. - *Umbilicus fimbriata* Turcz. 1842, Bull. Moskovsk. Obač. Isp. Prir. Otd. Biol. 17: 241. – [ 2, 3, 4+ (Koshevnikov 2007), 5, 6, 8, 9, 10, 11, 12, 13 ].

**O. malacophylla** (Pall.) Fisch. 1809, Mem. Soc. Imp. Nat. Moscou 2: 274. - *Cotyledon macrophyllum* Pall. 1776, Reise Russ. Reich. 3: 729. – [ 1, 2, 3, 4, 5, 8, 9 ].

**O. spinosa** (L.) C. A. Meyer, 1830, Hort. Brit. 225. - *Cotyledon spinosa* L. 1753, Sp. Pl. 1: 429. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15+ (Byalt 2000) ].

**O. thyrsiflora** Fisch. 1809, Mem. Soc. Imp. Nat. Moscou 2: 274. – [ 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15 ].

**Pseudosedum lievenii** (Ledeb.) A. Berger, 1930, Nat. Pflanzenfam. (ed. 2) 18: 465. - *Codyledon lievenii* Ledeb. 1843, Fl. Altaic. 2: 197. – [ 7, 14+ (Uvgud uul), (Smirnov et al. 2003) ].

**Rhodiola algida** (Ledeb.) Fisch. & C.A. Mey. 1841, Enum. Pl. Nov. 70. - *Sedum algidum* Ledeb. 1830, Fl. Altaic. 2: 194. – [ 6, 7 (Tavan Bogd uul, Tsagaan gol, Dayan nuur), (Krasnoborov 2006; Koshevnikov 2007) ]. – **Subendemic.** Described from Altai mountain (LE). – (R, RB).

+ **Rh. coccinea** (Royle) Boriss. 1939, Fl. URSS 9: 41. - *Sedum coccineum* Royle, 1835, Ill. Bot. Himal. Mts. 1: 222–223. – [ 7+ (Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006) ].

**Rh. krylovii** Polozh. & Revjakina, 1979, Novosti Syst. Vyssh. Rast. 16: 127. – [ 7 (German et al. 2003) ]. – **Subendemic.**

**Rh. litvinowii** Boriss. 1939, Fl. URSS 9: 43. – [ 3, 6, 7, 10 ].

**Rh. pinnatifida** Boriss. 1939, Fl. URSS 9(26, 8): 475. – [ 1, 2, 4+, 6+ (Tsagaan gol), (Koshevnikov 2007), 7, 10+ (Khovd, Mankhan), (Kechaykin et al. 2014) ]. – **Subendemic.**

**Rh. quadrifida** (Pall.) Fisch. & C.A. Mey. 1841, Enum. Pl. Nov. 1: 69. - *Sedum quadrifidum* Pall. 1776, Reise Russ. Reich. 3: 730. – [ 1, 2, 3, 6, 7, 13 ].

+ **Rh. subpinnata** (Krasnob.) Krasnob. 2002, Red Book Repub. Khaks.: 159. – *Rh. pinnatifida* subsp. *subpinnata* Krasnob. 1974, Novosti Syst. Vyssh. Rast. 16: 27. – [ 1+ (Sayan), 7+ (Tavan Bogd, Tsagaan gol), (Ohba 2005; Krasnoborov 2006) ]. – **Subendemic.**

**Sedum aizoon** L. 1753, Sp. Pl. 1: 430-431. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, (Ikh Nart ?), 13, 14 ]. – (R).

**S. ewersii** Ledeb. 1830, Fl. Altaic. 2: 191. – [ 6, 7 (Mukhar Ulyastain gol), (Koshevnikov 2007), 14 ].

**S. hybridium** L. 1753, Sp. Pl. 1: 431. – [ 1, 3, 4, 5, 6, 7, 9+ (Erdenetsagaan sum, Dariganga), (Koshevnikov 2007), 12+ (Dariimaa et al. 2004) ].

# **S. roseum** (L.) Scop. 1771, Fl. Carniol. (ed. 2) 1: 326. - **Rhodiola rosea** L. 1753, Sp. Pl. 2: 1035. – [ 1, 2, 3, 4, 5, 6, 7, 8, 13, 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin et al. 2014) ]. – (VU, VR, RB).

**S. telephium** L. 1753, Sp. Pl. 1: 430. – [ 1, 2, 3, 4, 5, 6, 7, 9, 10 ].

#### 48. HALORAGACEAE R. BR. 1814 (1/2)

Voy. Terra Austral. 2: 549

**Myriophyllum spicatum** L. 1753, Sp. Pl. 2: 992. – [ 1, 2+ (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3, 4, 5, 6, 7, 8, 9, 10, 11, 14 ].

**M. verticillatum** L. 1753, Sp. Pl. 2: 992. – [ 1, 2, 3, 4, 5+ (Neuffer et al. 2012), 6, 7, 8, 9, 10, 14 ].

#### 49. CYNOMORIACEAE ENDL. EX LINDL. 1833 (1/1)

Nix. Pl. 23

**Cynomorium songaricum** Rupr. 1869, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7 14(4): 73. – [ 10, 11, 12, 13, 14, 15, 16 ]. – (R, RB).

#### 17. SANTALALES R. BR. EX BERCHT. & J. PRESL, 1829

Prirozenosti Rostlin 234

#### 50. SANTALACEAE R. BR. 1810 (1/5)

Prodr. 305

**Thesium chinense** Turcz. 1837, Bull. Soc. Imp. Nat. Moscou 10(7): 157. – [ 9 ].

**Th. longifolium** Turcz. ex Ledeb. 1850, Bull. Soc. Imp. Nat. Moscou 25(2): 469. – [ 2, 3, 4 ].

**Th. refractum** C.A. Mey. 1841, Bull. Sci. Acad. Imp. Sci. St.-Petersbourg 8: 340. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13 ].

? **Th. repens** Ledeb. 1829, Fl. Altaic. 1: 274. – [ 1, 2, 3, 4 ].

**Th. saxatile** Turcz. ex DC. 1857, Bull. Soc. Imp. Naturalistes Moscou 32: 100. – [ 1, 3, 4, 5, 6, 8, 9, 10 ].

#### 18. CARYOPHYLLALES JUSS. EX BERCHT. & J. PRESL, 1820

Prir. Rostlin 239

#### 51. FRANKENIACEAE DESV. 1817 (1/2)

Dict. Rais. Bot. 188

**Frankenia pulverulenta L.** 1753, Sp. Pl. 1: 332. – [ **10** (Shargiin gobi) ]. – (R).

# **F. tuvinica** Lomon. 1984, Bot. Zurn. (Kiev) 69: 548. - *F. bucharica* subsp. *tuvonica* (Lomonosova) Jager, 1992, Fl. 186: 178. – [ **10** ]. – Subendemic.

## 52. TAMARICACEAE LINK, 1821 (3/13)

Enum. Hort. Berol. Alt. 1: 291

**Myricaria bracteata** Royle, 1835, Ill. Bot. Himal. Mts. 214. – *M. alopecuroides* Schrenk ex Fisch. & C.A. Mey. 1841, Enum. Pl. Nov. 1: 65. – [ **1+** (Oyumaa & Paula de Priest 2011), **7, 11, 12, 13, 14, 16** ].

? **M. longifolia** (Willd.) Ehrenb. 1827, Linnaea 2: 279. – [ **2, 3, 4, 6, 7, 11** ]. – (R).

**Reaumuria soongarica** (Pall.) Maxim. 1889, Fl. Tangut. 1: 97. - *Tamarix soongarica* Pall. 1797, Nova Acta Petrop. 10: 374. – [ **3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16** ]. – (RL).

**Tamarix arceuthoides** Bunge, 1852, Mem. Acad. Imp. Sci. St.-Petersbourg par Divers Savans 7: 295. – [ **10, 14, 15** ].

**T. elongata** Ledeb. 1829, Fl. Altaic. 1: 421–422. – [ **11** (Tsagaan nuur) ].

**T. gracilis** Willd. 1816, Abh. Konigl. Akad. Wiss. Berlin 1812–1813: 81. – [ **13, 15, 16** ].

**T. hispida** Willd. 1816, Abh. Konigl. Akad. Wiss. Berlin 1812–1813: 77. – [ **13** (Khurkh uul) ]. – (R, RB).

**T. karelinii** Bunge, 1852, Tent. Gen. Tamar. 68. – *T. hispida* var. *karelinii* (Bunge) Baum, 1966, Monogr. Rev. Genus Tamarix 58. – [ **10, 14, 15, 16** ].

**T. kasakhorum** Gorschk. 1938, Bot. Math. (Leningrad) 7, 4: 91. – *T. leptostachya* var. *kasakhorum* (Gorschk.) Baum, 1966, Monogr. Rev. Genus Tamarix 59. – [ **15, 16** ].

**T. laxa** Willd. 1816, Abh. Konigl. Akad. Wiss. Berlin 1812–1813: 82. – [ **11, 12, 15** ].

**T. leptostachya** Bunge, 1852, Mem. Savantes Etranges Acad. Petersbourg 7: 293. – [ **10, 13, 14, 15, 16** ].

**T. ramosissima** Ledeb. 1829, Fl. Altaic. 1: 424–426. – *T. pallasii* var. *brachystachys* Bunge, 1852, Tent. Gen. Tamar. 52. – [ **10, 12, 13, 14, 15, 16** ]. – (RL).

# **T. smyrnensis** Bunge, 1852, Tent. Gen. Tamar. 53. – *T. florida* Bunge 1852, Tent. Gen. Tamar. 37. – *T. hohenackeri* Bunge, 1852, Tent. Gen. Tamar. 44. – [ **12, 14+** (Gubanov & Kamelin 1991), **16** ].

## # 53. PLUMBAGINACEAE JUSS. 1789 (4/19)

Gen. Pl. 92

# [incl. Limoniaceae]

# **Armeria maritima** subsp. *sibirica* (Turcz. ex Boiss.) Nyman, 1881, Consp. Fl. Eur. 3: 616. – *A. sibirica* Turcz. 1848, Prodr. 12: 678. – [ **3, 7** ].

**Goniolimon callicomum (C.A. Mey.) Boiss.** 1848, Prodr. 12: 633. - *Statice callicoma* C.A. Mey. 1841, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 4: 212. - [ 7 (Khovd), (Grubov 2007), 14+ (Usik 2005) ]. - (R, RB).

**G. eximium (Schrenk ex Fisch. & C.A. Mey.) Boiss.** 1848, Prodr. 12: 634. - *Statice eximia* Schrenk ex Fisch. & C.A. Mey. 1841, Enum. Pl. Nov. 1: 13. - [ 7 (Khovd gol), (Grubov 2007) ].

**G. speciosum (L.) Boiss.** 1848, Prodr. 12: 634. - *Statice speciosum* L. 1753, Sp. Pl. 1: 275. - [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11+ (Neuffer et al. 2012), 13, 14, 15 ].

# **Limonium aureum (L.) Hill**, 1767, Veg. Syst. 12: 37. - *Statice aurea* L. 1753, Sp. Pl. 1: 276. - *Limonium erythrorrhizum* Ik.-Gal. ex Lincz. 1971, Novosti Syst. Vyssh. Rast. 8: 211. - [ 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16 ]. - (LC, VR, RB).

**L. bicolor (Bunge)** Kuntze, 1891, Revis. Gen. Pl. 2: 395. - *Statice bicolor* Bunge, 1833, Enum. Pl. China Bor. 55. - [ 4, 6, 8, 9, 11, 12, 13 ].

**L. chrysocomum (Kar. & Kir.) Kuntze**, 1891, Revis. Gen. Pl. 2: 395. - *Statice chrysocoma* Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 429. - [ 3, 7, 10, 11, 13, 14, 15 ].

**L. chrysocomum subsp. *semenovii* (Herder) Kamelin**, 1993, Novon 3(3): 261. - *Statice semenovii* Herder, 1868, Bull. Soc. Imp. Nat. Moscou 41 (2): 398. - *Limonium semenovii* (Herd.) Kuntze. 1891, Revis. Gen. Pl. 2: 396. - [ 7, 11, 13 ].

**L. congestum (Ledeb.) Kuntze**, 1891, Revis. Gen. Pl. 2: 395. - *Statice congesta* Ledeb. 1829, Fl. Altaic. 1: 437. - [ 6, 7 (Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006; Olonova & Beket 2010), 10 (Olonova & Beket 2010) ]. - Subendemic.

**L. coralloides (Tausch) Lincz.** 1952, Fl. URSS 17: 451. - *Statice coralloides* Tausch, 1828, Syll. Pl. Nov. 2: 255. - [ 6, 10, 14 ].

**L. flexuosum (L.) Kuntze**, 1891, Revis. Gen. Pl. 2: 395. - *Statice flexuosa* L. 1753, Sp. Pl. 1: 276. - [ 1, 2, 3, 4, 6, 7, 8, 9, 12+ (Dariimaa et al. 2004), 13 ].

**L. gmelinii (Willd.) Kuntze**, 1891, Revis. Gen. Pl. 2: 395. - *Statice gmelinii* Willd. 1798, Sp. Pl. 1(2): 1524. - [ 6, 10, 14 ].

**L. gobicum Ik.-Gal.** 1936, Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyssh. Rast. 2: 260. - [ 12 (Bulagiin Urt), (Grubov 2007) ]. - Endemic. Described from East Gobi phytogeographical region (LE). - (R).

**L. grubovii Lincz.** 1971, Bot. Zhurn. (Moscow & Leningrad) 56: 1635. - [ 9 (Lag nuur) ]. - Endemic. Described from Eastern Mongolia phytogeographical region (LE). - (R, RB).

**L. klementzii Ik.-Gal.** 1936, Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyssh. Rast. 2: 261. - [ 7, 10, 15 ]. - Endemic.

**L. myrianthum (Schrenk) Kuntze**, 1891, Revis. Gen. Pl. 2: 395. - *Statice myriantha* Schrenk, 1841, Enum. Pl. Nov. 1: 14–15. - [ 14 (Baitag Bogd uul) ].

**L. suffruticosum (L.) Kuntze**, 1891, Revis. Gen. Pl. 2: 396. - *Statice suffruticosa* L. 1753, Sp. Pl. 1: 276. - [ 14 (Baitag Bogd uul), (Grubov 2007) ].

**L. tenellum (Turcz.) Kuntze**, 1891, Revis. Gen. Pl. 2: 396. - *Statice tenella* Turcz. 1832, Bull. Soc. Imp. Nat. Moscou 5: 203. - [ 4+ (Neuffer et al. 2012), 8, 9, 11, 12, 13, 15, 16 ]. - Subendemic.

**Plumbagella micrantha (Lebed.) Spach, 1841**, Hist. Nat. Veg. 10: 333. – *Plumbago micrantha* Lebed. 1829, Fl. Altaic. 1: 171–172. – [ 3, 4 ].

**54. POLYGONACEAE LINDL. 1836 (12/66)**

Gen. Pl. 82

**Atrapaxis bracteata Losinsk. 1927**, Izv. Glavn. Bot. Sada SSSR. 26: 43. – [ 3, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16 ]. – **Subendemic.** Described from Mongolia and China (Lectotype - LE).

**A. compacta** Lebed. 1830, Fl. Altaic. 2: 55–56. – [ 14, 15 ]. – **Subendemic.** – (R).

**A. frutescens (L.) C. Koch, 1823**, Dendrologie 2: 360. - *Polygonum frutescens* L. 1753, Sp. Pl. 1: 359. – [ 3, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16 ].

**A. pungens (M. Bieb.) Jaub. & Spach. 1846**, Ill. Pl. Orient. 2: 14. - *Tragopyrum pungens* M. Bieb. 1819, Fl. Taur.-Caucas. 3: 285. – [ 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**A. spinosa** L. 1753, Sp. Pl. 1: 333. – [ 14 (Bodonchiin gol) ]. – (R).

**A. virgata (Regel) Krassn. 1888**, Scripta Soc. Geogr. Ross. 19: 295. – *A. lanceolata* var. *virgata* Regel, 1879, Trudy Imp. St.-Peterburgsk. Bot. Sada 6: 397. – [ 7, 10, 12, 14, 15, 16 ].

**Bistorta elliptica (Willd. ex Spreng.) D.F. Murray & Elven, 2008**, J. Bot. Res. Inst. Texas 2(1): 435–436. - *Polygonum ellipticum* Willd. ex Spreng. 1825, Syst. Veg. 2: 253. – [ 1, 2, 3, 6, 7 ].

**Calligonum ebinuricum Ivanova ex Soskov, 1969**, Izv. Akad. Nauk Turkmensk. SSR, Ser. Biol. Nauk 6: 55. – [ 14, 15 ].

**C. gobicum (Bunge ex Meisn.) Losinsk. 1927**, Izv. Glavn. Bot. Sada SSSR. 26(6): 598. – *C. mongolicum* var. *gobicum* Bunge ex Meisn. 1856, Prodr. 14(1): 29. – [ 14, 15, 16 ]. – **Subendemic.** Described from Gobi region of Mongolia. – (R).

**C. junceum (Fisch. & Mey.) Litv. 1913**, Herb. Fl. Ross. 49. - *Calliphysa juncea* Fisch. & Mey. 1834, Index Sem. (St.-Petersburg) 2: 24. – [ 14, 15 ]. – (R).

**C. litwinowii Drob. 1916**, Trudy Bot. Muz. Imp. Akad. Nauk 16: 140. – [ 14, 15 ].

# **C. mongolicum Turcz. 1832**, Bull. Soc. Imp. Nat. Moscou 5: 204. - *C. pumilum* Losinsk. 1927, Izv. Glavn. Bot. Sada SSSR. 26: 600. – *C. potaninii* Losinsk. 1927, Izv. Glavn. Bot. Sada SSSR. 26: 599. – [ 7, 10, 11, 12, 13, 14, 15, 16 ].

**Fagopyrum esculentum Moench. 1794**, Methodus 290. – *Polygonum fagopyrum* L. 1753, Sp. Pl. 1: 364. - *F. esculentum* subsp. *ancestralis* Ohnishi, 1998, *Fagopyrum* 15: 20. – [ 2, 3, 4, 8, 13 ].

**F. tataricum (L.) Gaertner, 1791**, Fruct. Sem. Pl. 2(1): 182. - *Polygonum tataricum* L. 1753, Sp. Pl. 1: 364. – [ 3, 4, 6, 9+ (Pistrick et al. 2012), 10, 12 ].

**Fallopia convolvulus (L.) A. Love 1970**, Taxon 19(2): 300. - *Polygonum convolvulus* L. 1753, Sp. Pl. 1: 364. – [ 2, 3, 4, 5, 8, 9, 10, 12, 15+ (Hilbig & Tungalag 2006) ].

**F. dumetorum (L.) Holub. 1971**, Folia Geobot. Phytotax. 6(1): 176. - *Polygonum dumetorum* L. 1753, Sp. Pl. (ed. 2) 1: 522. – [ 5 (Khalkhiin gol) ].

**Knorrungia sibirica** (Laxm.) S.P. Hong, 1989, Nordic J. Bot. 9: 354. - *Polygonum sibiricum* Laxm. 1773, Novi Comment. Acad. Sci. Imp. Petrop. 18: 531. - [1-16 (all regions)].

**K. sibirica** subsp. *ubsunurica* Tzvelev, 1993, Novosti Syst. Vyssh. Rast. 29: 56. - [10 (Ubs nuur)]. - **Subendemic.** Described from nearest of Ubs nuur (LE).

**Koenigia islandica** L. 1767, Mant. Pl. 1: 35. - [1, 2, 3, 6, 7, 10, 13].

**Oxyria digyna** (L.) Hill, 1768, Hort. Kew. 158. - *Rumex digynus* L. 1753, Sp. Pl. 1: 337. - [1, 2, 3, 6, 7, 13].

# **Persicaria alpina** (All.) H.Gross, 1913, Bull. Geogr. Bot. 23: 31. - *Polygonum alpinum* All. 1774, Auct. Syn. 42. - [1, 2, 3, 4, 6, 7, 8, 14].

**P. amphibia** (L.) Delarbre, 1800, Fl. Auvergne ed. 2: 519. - *Polygonum amphibium* L. 1753, Sp. Pl. 1: 361. - [1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12+ (Ikh Nart ?), 14].

# **P. bistorta** (L.) Samp. 1913, Herb. Port. 41. - *Polygonum bistorta* L. 1753, Sp. Pl. 1: 360. - *Bistorta major* S.F. Gray, 1821, Nat. Arr. Brit. Pl. 2: 267. - [2].

# **P. bungeana** (Turcz.) Nakai, 1922, Enum. Pl. Corea 131. - *Polygonum bungeanum* Turcz. 1840, Bull. Soc. Imp. Nat. Moscou 13(1): 77-78. - *P. chaneyi* B. Fedtsch. ex Steward, 1930, Contrib. Gray Herb. 88: 110. - [1, 2, 3, 5, 7, 8, 9, 10, 13].

**P. hydropiper** (L.) Delarbre, 1800, Fl. Auvergne ed. 2: 518. - *Polygonum hydropiper* L. 1753, Sp. Pl. 1: 361. - [2, 3, 4, 6, 7, 8, 10, 13+ (Neuffer et al. 2012), 14].

# **P. lapathifolia** (L.) Delarbre, 1800, Fl. Auvergne ed. 2: 519. - *Polygonum lapathifolium* L. 1753, Sp. Pl. 1: 360. - *Persicaria scabra* (Moench) Moldenke, 1966, Phytolog. 12: 479. - [1-16 (all regions)].

**P. minor** (Huds.) Opiz. 1852, Seznam 72. - *Polygonum minus* Huds. 1762, Fl. Angl. 1: 148. - [10, 14].

# **P. sagittata** (L.) H. Gross, 1919, Beih. Bot. Centralbl. 37(2): 113. - *Polygonum sagittatum* L. 1753, Sp. Pl. 363-364. - *Truellum sieboldii* (Miessn.) Sojak, 1974, Preslia 46(2): 149. - [2, 3, 4, 5, 8, 9+ (Pistrick et al. 2012)].

# **P. vivipara** (L.) Ronse Decr. 1988, Bot. J. Linn. Soc. 98(4): 368. - *Polygonum viviparum* L. 1753, Sp. Pl. 1: 360. - *Bistorta vivipara* (L.) S.F. Gray, 1821, Nat. Arr. Brit. Pl. 2: 268. - [1, 2, 3, 4, 6, 7, 8, 10, 13, 14]. - (R).

# **Polygonum abbreviatum** Kom. 1936, Fl. URSS 5: 679, 724. - *Bistorta abbreviatum* Kom. 1936, Fl. URSS 5: 679. - [1, 2, 7].

# **P. alopecuroides** Turcz. ex Besser, 1834, Fl. Beibl. 23. - *Bistorta alopecuroides* (Turcz. ex Besser) Kom. 1926, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR. 6(1): 3. - [1, 2, 3, 4, 5, 6, 8]. - (R).

**P. angustifolium** Pall. 1776, Reise Russ. Reich. 3: 230. - *Aconogonon angustifolium* (Pall.) Hara, 1966, Fl. E. Himalaya 631. - [1, 2, 3, 4, 5, 7, 8, 9, 11, 13].

# **P. arenastrum** Boreau, 1857, Fl. Centre France (ed. 3) 2: 559. - *P. propinquum* Ledeb. 1850, Fl. Ross. 3: 532. - *P. calcatum* Lindm. 1904, Bot. Not. 1904: 139. - [1, 3, 7, 10, 14].

**P. argyrocoleon** Steud. ex G. Kunze, 1847, Linnaea 20(1): 17. - [7, 10, 11, 13, 14, 15].

# **P. aviculare** L. 1753, Sp. Pl. 1: 362-363. – *P. neglectum* Besser, 1821, Enum. Pl. 45. – [ 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12+ (Dariimaa *et al.* 2004), 13, 14, 16+ (Hilbig & Tungalag 2006) ].

**P. cognatum** Meissn. 1826, Monogr. Polyg. 91. – [ 3, 4, 6, 7, 8, 10 ].

**P. divaricatum** L. 1753, Sp. Pl. 1: 363. - *Aconogonon divaricatum* (L.) Nakia ex Mori, 1922, Enum. Pl. Corea 129. – [ 1, 2, 3, 4, 5, 8, 9 ].

# **P. ellipticum** Willd. ex Spreng. 1825, Syst. Veg. 2: 253. - *Bistorta elliptica* (Willd. ex Spreng.) Kom. 1936, Fl. URSS 5: 677. – [ 1, 2, 3, 6, 7 ].

**P. humifusum** Merk. ex K. Koch, 1849, Linnaea 22(2): 205. – [ 3 ].

**P. intramongolicum** Borodina, 1989, Rast. Tsentr. Azii 9: 102. – [ 12, 13 ].

# **P. longisetum** var. **rotundatum** A.J. Li, 1995, Bull. Bot. Res., Harbin 15(4): 418. - *Persicaria sungareensis* Kitag. 1943, J. Jap. Bot. 19(3): 62-63. – [ 2, 4, 8 ].

? **P. novoascanicum** Klokov, 1927, Trudy Sil's'ko-Gosp. Bot. 1(3): 168. – [ 14 ].

# **P. ochreatum** L. 1753, Sp. Pl. 1: 363. - *Aconogonon ocreatum* (L.) Hara, 1966, Fl. E. Himalaya 632. – [ 1 ].

**P. patulum** M. Bieb. 1808, Fl. Taur.-Caucas. 1: 304. – *P. gracilis* (Lebed.) Klokov, 1927, J. Agr. Bot. Ukr. 1(3): 169. – [ 3, 7, 9, 10, 14, 15 ].

**P. polycnemoides** Jaubert & Spach, 1844, Ill. Pl. Orient. 2: 30. – [ 7+ (Indertiin gol), (Revushkin *et al.* 2001; Ebel & Rudaya 2002), 14 ].

# **P. sericeum** Pall. ex Georgi, 1775, Bemerk. Reise Russ. Reich 1: 209. - *Aconogonon sericeum* (Pall. ex Georgi) Hara, 1966, Fl. E. Himalaya 632. – [ 2, 3, 4, 8, 9 ].

? **P. tenuissimum** A.Baran. & B.Skvorts. ex Worosch. 1965, Sov. Bot. 60: 36. – [ 9 ].

# **P. valerii** R. Skvorts. 1972, Bot. Zhurn. 57(5): 494. - *Aconogonon valerii* (R. Skvorts.) Sojak, 1974, Preslia, 46(2): 151. – [ 2, 4, 5, 8 ]. Described from Foothills of Great Khingan phytogeographical region (LE, isotype - MHA).

+ **P. volchovense** Tzvelev, 1989, Vasc. Pl. Russ. Far East. 4: 25-122. – [ 7+ (Munkh Khairkhan uul), (Ebel & Rudaya 2002; Tupitsyna 2011; Urgamal *et al.* 2013) ].

**Rheum compactum** L. 1753, Sp. Pl. (ed. 2) 1: 531. – [ 1, 2, 3, 4, 6, 7, 12, 13, 14 ].

**Rh. nanum** Siev. ex Pall. 1796, Neueste Nord. Beytr. Phys. Geogr. Erd-Velkerbeschreib. 7: 264. – [ 7, 8+ (Neuffer *et al.* 2012), 10, 11, 12, 13, 14, 15, 16 ].

# **Rh. rhabarbarum** L. 1753, Sp. Pl. 1: 372. – *Rh. undulatum* L. 1762, Sp. Pl. 2: 531. – [ 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 14 ].

+ **Rh. uninerve** Maxim. 1880, Bull. Acad. Imp. Sci. Saint-Petersbourg. 26: 503. – [ 13+ (Dund Saikhan uul, Baishint), (Nyambayar *et al.* 2011) ]. – (CR, VR, RB).

**Rumex acetosa** L. 1753, Sp. Pl. 1: 337-338. – [ 1, 2, 3, 6, 7 ].

**R. acetosella** L. 1753, Sp. Pl. 1: 338. – [ 1, 2, 3, 4, 5, 8, 9 ].

**R. aquaticus** L. 1753, Sp. Pl. 1: 336. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14 ].

**R. crispus** L. 1753, Sp. Pl. 1: 335. – [ 1+ (Egiin gol), (Dulmaa 2004), 7, 9+ (Pistrick *et al.* 2012), 10, 14 ].

**R. gmelinii** Turcz. ex Ledeb. 1851, Fl. Ross. 3(2): 508. – [ 2, 3, 4, 5, 8, 9 ].

**R. maritimus** L. 1753, Sp. Pl. 1: 335. – [ 2, 3, 4, 5, 8+ (Sanchir *et al.* 2004), 9, 10, 11, 14 ].

**R. marschallianus Rchb.** 1826, Iconogr. Bot. Pl. Crit. 4: 56. – [ 6, 8, 9, 10, 11 ].

**R. patientia L.** 1753, Sp. Pl. 1: 336. – [ 7, 9, 13, 14 ].

**R. popovii Pachom.** 1967, Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzbeksk. SSR 18: 61. – [ 10, 13 ].

**R. pseudonatronatus (Borb.) Borb. ex Murb.** 1899, Bot. Not. 1899: 16. – *R. domesticus* var. *pseudonatronatus* Borb. 1880, Ertek, Term. Koreb. Mag. Tud. Acad. 11(18): 21. – [ 11, 13 ]. – (R).

**R. similans Rech. f.** 1949, Candollea 12: 133–135. – *R. ucranicus* auct. Fl. Mong., non Fisch. ex Spreng. – [ 2, 3, 4, 6, 7, 10, 11, 12, 14, 15 ]. – Subendemic. Described from Northern Mongolia (Synotype – S, K, BM, LE).

**R. stenophyllus Ledeb.** 1830, Fl. Altaic. 2: 58–59. – [ 2, 3, 4, 6, 7, 9, 10, 14, 15 ].

**R. thrysiflorus Fingerh.** 1829, Linnaea 4(3): 380–383. - *Acetosa tryrsiflora* (Fingerh.) A. & D.Love, 1948, Icel. Univ. Inst. Appl. Aci., Dept. Agric., Rep. B, 3: 107. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 ].

## 55. DROSERACEAE SALISB. 1808 (1/2)

Parad. Lond. 95

**Drosera anglica Huds.** 1778, Fl. Engl. (ed. 2) 135. – [ 2 (Khuderiiin gol) ]. – (EN, VR, RB).

**D. rotundifolia L.** 1753, Sp. Pl. 1: 281. – [ 2 ]. – (EN, VR, RB).

## 56. CARYOPHYLLACEAE JUSS. 1789 (22/97)

Gen. Pl. 299

**Acanthophyllum pungens (Bunge) Boiss.** 1867, Fl. Orient. 1: 561. – [ 6, 7 (Bulgan gol), 14 (Baitag Bogd uul), (Koshevnikov 2007) ]. – (R).

**Agrostemma githago L.** 1753, Sp. Pl. 1: 435. – [ 4 ]. – (R).

**Arenaria serpyllifolia L.** 1753, Sp. Pl. 1: 423. – [ 7, 14 (Maikhan uul), (Koshevnikov 2007) ].

+ **A. serpyllifolia subsp. leptoclados (Rchb.) Nyman**, 1878, Consp. Fl. Eur. 115. – *A. serpyllifolia* var. *leptoclados* Rchb. 1841, Icon. Fl. Germ. Helv. 5: 32. - *A. leptoclados* (Rchb.) Guss. 1844, Fl. Sicul. Syn. 2: 824. – [ 7+ (Tsengel gol), (Krasnoborov 2006) ].

**Cerastium arvense L.** 1753, Sp. Pl. 1: 426. – [ 1, 2, 3, 4, 5, 6, 7, 9, 10, 13, 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin et al. 2014) ].

**C. cerastoides (L.) Britt.** 1894, Torrey Bot. Club 5,10: 150. – [ 1, 2, 3, 4, 5, 6, 7, 10, 14 ].

**C. davuricum Fisch. ex Spreng.** 1815, Pl. Rar. Hort. Monac. t. 75. – [ 2, 4, 7, 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin et al. 2014) ].

# **C. falcatum Bunge ex Fenzl.** 1842, Fl. Ross. 1: 398. – *C. bungeanum* Vved. 1953, Fl. Uzbekist. 2: 353. – [ 14 ].

**C. lithospermifolium Fisch.** 1812, Mem. Soc. Imp. Nat. Moscou 3: 81. – [ 1, 3, 6, 7, 10+ (Khovd, Rashaantiin gol), (Kechaykin et al. 2014), 13+ (Neuffer et al. 2012) ].

+ **C. maximum** L. 1753, Sp. Pl. 1: 439. – *C. revolutum* Meinsh. 1871, - *Dichodon maximum* (L.) A. Love & D. Love, 1876, Bot. Not. 128: 507 – [ 13+ (Baga Bogd uul), (Koshevnikov 2007) ].

**C. pauciflorum** Steven ex Ser. 1824, Prodr. 1: 414. – [ 1, 2, 3, 6, 7 ].

**C. pusillum** Ser. 1824, Prodr. 1: 418. – [ 1, 2, 3, 6, 7 ].

**Notes:** It was informed that *C. glomeratum* Thuill. and *C. vulgatum* L. are distributed in Western (Mongolian and Gobi Altai) Mongolia (Koshevnikov 2007).

# **Dianthus chinensis** L. 1753, Sp. Pl. 1: 411. – *D. versicolor* Fisch ex Link, 1821, Enum. Pl. 1: 420. – *D. chinensis* var. *versicolor* (Fisch. ex Link) Y.C. Ma, 1979, Fl. Intramong. 2: 191. – *D. chinensis* L. subsp. *versicolor* (Fisch. ex Link) Vorosch. 1985, Florist. Issl. Razn. Raionakh SSSR 167. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13 ].

**D. soongaricus** Schischk. 1936, Fl. URSS. 6: 853, 899. - *D. crinitus* subsp. *soongaricus* (Schischk.) Kozhev. 1985, Novosti Syst. Vyssh. Rast. 22: 112. – [ 7+ (Bodonchiin gol), (German et al. 2009), 14 (Ulyastain and Bodonchiin gol), (Koshevnikov 2007) ]. – (R, RB).

**D. ramosissimus** Pall. 1816, Encycl. 4: 130. – [ 10 (Borig Deliin els), (Koshevnikov 2007) ].

**D. superbus** L. 1755, Fl. Suec. (ed. 2) 146. – *D. hoeltzeri* Winkl. 1882, Gartenflora 30: 1. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13+ (Neuffer et al. 2012) ].

**Note:** Sometimes *D. hoeltzeri* Winkl. is spread in (Bus Khairkhan uul) Mongolian Altai phytogeographical region (Mongolian Red Book 2003).

+ **Eremogone androsacea** (Grubov) Ikonn. 1973, Novosti Syst. Vyssh. Rast. 10: 138. - *Arenaria androsacea* Grubov, 1955, Bot. Mater. Gerb. Bot. Inst. Akad. Nauk SSSR 17: 12. – [ 13+ (Nemegt, Tost uul), (Neuffer et al. 2003; Urgamal et al. 2013) ]. – **Subendemic.** – (R).

# **E. asiatica** Ikonn. 1973, Novosti Syst. Vyssh. Rast. 10: 136. - *Arenaria asiatica* Schischk. 1930, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 5-6: 3. – [ 7 (Dayan nuur), (Koshevnikov 2007) ].

# **E. capillaris** (Poir.) Fenzl, 1833, Vers. Darstell. Alsin. 37. - *Arenaria capillaris* Poir. 1804, Encycl. 6(1): 380. – *A. formosa* Fisch. 1824, Prodr. 1: 402. – *A. capillaris* subsp. *formosa* (Fisch. ex DC.) Maguire, 1941, Madroño 6: 24. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12+ (Mandalgobi), (Koshevnikov 2007), 13 ].

# **E. juncea** (M.M. Bieb.) Fenzl, 1833, Vers. Darstell. Alsin. 37. - *Arenaria juncea* M. Bieb. 1819, Fl. Taur.-Caucas. 3: 309. – [ 4, 5, 9 ]. – (R).

# **E. meyeri** (Fenzl) Ikonn. 1973, Novosti Syst. Vyssh. Rast. 10: 139. - *Arenaria meyeri* Fenzl, 1842, Fl. Ross. 1: 368. – [ 2+ (Khan & Ivleva, 2012), 3, 4, 6, 7, 9+ (Gurvanbulag), (Koshevnikov 2007), 10, 12+ (Dariimaa et al. 2004), 13 ].

**E. mongholica** (Schischk.) Ikonn. 1973, Novosti Syst. Vyssh. Rast. 10: 139. - *Arenaria mongolica* Schischk. 1936, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 5-6: 3. – [ 7+ (Tolbo nuur), (Ebel & Rudaya 2002; German et al. 2003) ]. – **Subendemic.**

# **Gastrolychnis brachypetala** (Hornem.) Tolm. & Kozuh. 1971, Fl. SSSR 6: 109. - *Melandrium brachypetala* (Fisch. ex Hornem.) Fenzl, 1842, Fl. Ross. 1: 326. – [ 1, 2, 3, 4, 5, 6, 7, 9, 12+ (Dariimaa et al. 2004), 13 ].

**Gymnocarpos przewalskii** Bunge & Maxim. 1880, Bull. Acad. Imp. Sci. St.-Petersbourg, 26: 502. – [ 12, 14, 16 (Borzongiin gobi), (Koshevnikov 2007) ]. – **Endemic.** Described from South Mongolia (LE). – (VU, VR, RB).

+ **Gypsophila altissima** L. 1753, Sp. Pl. 1: 407. – [ 7+ (Belkin & Shmakov, 2013) ].

# **G. capituliflora** Rupr. 1869, Sert. Tianschan. 4: 40. – *G. dshungarica* Gerniak, 1922, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR. 3(27–30): 130. – [ 7, 13, 14, 15 ].

**G. cephalotes** (Schrenk) Will. 1889, J. Bot. 27: 323. – [ 6, 7 (Bij and Bulgan gol), (Koshevnikov 2007) ]. – (R).

**G. davurica** Turcz. ex Fenzl, 1842, Fl. Ross. 1: 294. – [ 2, 3, 4, 5, 8, 9, 13 ].

**G. desertorum** (Bunge) Fenzl, 1842, Fl. Ross. 1: 292. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 16 ]. – **Subendemic.**

**G. paniculata** L. 1753, Sp. Pl. 1: 407. – [ 3, 4, 7, 10 ].

**G. patrinii** Ser. 1824, Prodr. 1: 353. – [ 1, 3, 4, 6, 7, 8+ (Koshevnikov 2007), 10, 11 ].

**G. perfoliata** L. 1753, Sp. Pl. 1: 408. – *G. trichotoma* Wender. 1837, Linnaea 11: 92. – [ 10 (Uvs nuur), (Koshevnikov 2007) ].

**G. sericea** (Ser.) Krylov, 1931, Fl. Zap. Sibiri 5: 1087. - *Arenaria seracea* Ser. 1824, Prodr. 1: 414. – [ 7 ].

+ **Herniaria caucasica** Rupr. 1869, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7, 15(2): 241. – [ 7+ (Tsagaan, Dzurkh gol), (Gubanov 1999; Dariimaa 2009; Urgamal et al. 2013) ].

**H. glabra** L. 1753, Sp. Pl. 1: 218. – [ 7 (Bulgan, Indertiin gol), (Koshevnikov 2007) ]. – (R, RB).

**Lepyrodiclis holosteoides** (C.A. Mey.) Fenzl ex Fisch. & Mey. 1841, Enum. Pl. Nov. 1: 93. - *Gouffeia holosteoides* C.A. Mey. 1831, Verz. Pfl. Casp. Meer. 217. – [ 3, 10 (Shargiin gobi, Khaliun gol), (Koshevnikov 2007) ].

+ **Lychnis fulgens** Fisch. 1818, Novi Provent. 26. – [ 5+ (Kamelin 1998; Gubanov 1999; Dariimaa 2009) ].

**Minuartia arctica** (Steven ex Ser.) Graetn. 1918, Syn. Mitteleur. Fl. 5(1,10): 772. - *Arenaria arctica* Steven ex Ser. 1824, Prodr. 1: 404. – [ 1, 2, 3, 4, 6, 7 ]. – (R).

**M. biflora** (L.) Schinz & Thell. 1907, Bull. Herb. Boissier, ser. 2, 7(5): 404. - *Stelleria biflora* L. 1753, Sp. Pl. 1: 422-423. – [ 1, 2, 3, 6, 7 ].

**M. laricina** (L.) Mattf. 1921, Bot. Jahrb. Syst. 57(2, Beibl. 126): 33. - *Spergula laricina* L. 1753, Sp. Pl. 1: 441. – [ 4, 5 ].

**M. regeliana** (Trautv.) Mattf. 1921, Bot. Jahrb. Syst. 57(2, Beibl. 126): 29. - *Alsine tenuifolia* var. *regeliana* Trautv. 1866, Bull. Soc. Imp. Nat. Moscou 33(1-2): 156. – [ 3 ]. – (R).

**M. stricta** (Sw.) Hiern. 1899, J. Bot. 37(439): 320. - *Spergula stricta* Sw. 1799, Kongl. Vetensk. Acad. Handl. 20: 229. – [ 1, 2, 3 ]. – (R).

**M. verna** (L.) Hiern. 1899, J. Bot. 37(439): 320. - *Arenaria verna* L. 1753, Mant. Pl. 1: 72. – [ 1, 2, 3, 6, 7, 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin et al. 2014) ].

**Moehringia lateriflora** (L.) Fenzl, 1833, Vers. Darstell. Alsin. 18. - *Arenaria lateriflora* L. 1753, Sp. Pl. 1: 423. – [ 1, 2, 3, 4, 5, 7, 9, 13 ].

**M. umbrosa (Bunge) Fenzl, 1833**, Vers. Darstell. Alsin. 38. - *Arenaria umbrosa* Bunge, 1830, Fl. Altaic. 2: 173–174. – [ 1, 2, 6, 7 ]. – (R).

# **Psammophiliella floribunda (Kar. & Kir.) Ikonn.** 1976, Novosti Syst. Vyssh. Rast. 13: 116. - *Dichoglossis floribunda* Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 165. - *Gypsophila floribunda* (Kar. & Kir.) Turcz. 1842, Fl. Ross. 1: 775. – [ 14 (Bulgan gol), Koshevnikov 2007 ].

**Pseudostellaria rupestris (Turcz.) Pax, 1934**, Nat. Pflanzenfam. (ed. 2), 16(c): 318. – *Krascheninikovia rupestris* Turcz. 1842, Fl. Baical.-Dahur. 1: 238. – [ 1, 2, 3, 4, 7, 13 ].

**Sagina saginoides (L.) H. Karst.** 1882, Deut. Fl. 539. - *Spergula saginoides* L. 1753, Sp. Pl. 1: 441. – [ 7 (Kamelin et al. 1989) ].

**Silene altaica Pers.** 1805, Syn. Pl. 1: 497. – [ 7, 13+ (Gichgeniin nuruu, Bayan-Undur), 14+ (Baitag Bogd uul), (Koshevnikov 2007) ].

# **S. aprica Turcz.** 1835, Sem. Hort. Petrop., Ind. 1 1: 38. - *Melandrium apricum* (Turcz. ex Fisch. & C.A. Mey.) Rohrb. 1868, Monogr. Silene 231. – [ 1, 2, 3, 4, 5, 7+ (Tolbo nuur), (Revushkin et al. 2001; Ebel & Rudaya 2002; German et al. 2009), 8, 9, 10, 12, 13 ].

**S. borysthenica (Gruner) Walters,** 1964, Feddes Repert. Spec. Nov. Regni Veg. 69(1): 47. – [ 3, 10 (Borig deliin els), (Koshevnikov 2007) ].

# **S. bungei Bocquet,** 1967, Candollea 22(1): 15–16. - *Melandrium triste* (Bunge) Fenzl, 1842, Fl. Ross. 1: 326. - *Gastrolychnis tristis* (Bunge) Czer. 1981, Sosud. Rast. SSSR 161. – [ 1, 2, 3, 6+ (Olgoi uul), (Kechaykin et al. 2014) ]. – **Subendemic**.

**S. chamarensis Turcz.** 1842, Bull. Soc. Imp. Nat. Moscou 15: 578. - *Silene tenuis* subsp. *chamarensis* (Turcz.) Ju Kozhevn, 1985, Novosti Syst. Vyssh. Rast. 22: 110. – [ 1, 2, 3, 6+, 7+, 9+, 10+, 12+, 13+ (Koshevnikov 2007) ].

**S. conoidea L.** 1753, Sp. Pl. 1: 418. – [ 7 (Tsakhiriin bulag), (Koshevnikov 2007) ].

+ **S. foliosa Maxim.** 1859, Prim. Fl. Amur. 53. – *S. foliosa* var. *mongolica* Maxim. 1889, Enum. Pl. Mongol. 1: 91. – [ 4+, 12+, 13+ (Urgamal et al. 2013) ].

**S. graminifolia Otth.** 1824, Prodr. 1: 368. – [ 6, 7, 10+ (Khovd, Rashaantiin gol), 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin et al. 2014) ].

**S. gubanovii Lazkov,** 1994, Bull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. 99(3): 94. – [ 6, 7, 13, 14 ].

**S. iche-bogdo Grubov,** 1955, Bot. Math. (Leningrad) 17: 13. – *S. tenuis* subsp. *iche-bogdo* (Grubov) Ju Kozhevn, 1985, Novosti Syst. Vyssh. Rast. 22: 110. – [ 13 (Ikh Bogd uul) ]. – **Endemic**. Described from Gobi Altai phytogeographical region (LE).

+ **S. intramongolica Lazkov,** 1994, Bull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. 99(3): 94. – [ 7+ (Baitag Bogd uul), (Gubanov 1999; Dariimaa 2009) ].

**S. jenisseensis Willd.** 1809, Enum. Pl. 1: 154, 473. – [ 1, 2, 3, 4, 5, 6, 8, 9 ].

# **S. latifolia subsp. alba (Mill.) Greuter & Burdet,** 1982, Willdenowia 12(2): 189. - *Lychnis alba* Mill. 1768, Gard. Dict. (ed. 8) 4. - *Melandrium album* (Mill.) Garcke, 1858, Fl. Deutschland 55. – [ 7 ].

**S. mongolica Maxim.** 1899, Enum. Pl. Mongol. 88. – [ 10, 13 (Tost uul), (Koshevnikov 2007) ]. – **Endemic**. Described from Gobi Altai phytogeographical region (LE). – (R).

+ ***S. quadriloba* Turcz. ex Kar. & Kir. 1842**, Bull. Soc. Imp. Nat. Moscou 15: 167. - *Melandrium quadrilobum* (Turcz. ex Kar. & Kir.) Schischk. 1936, Fl. URSS. 6: 711. - [ 2+ (Vlasova, 2012), 3+, 7+, 10+, 14+ (Manibazar 2010; Urgamal et al. 2013) ].

***S. repens* Patrin, 1805**, Syn. Pl. 1: 500. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12+ (Ikh Nart ?), 13, 14 ].

# ***S. samojedorum (Sambuk) Oxelman, 2001***, Nordic J. Bot. 20: 516. - *Lychnis sibirica* subsp. *samojedorum* Sambuk, 1928, Izv. Akad. Nauk SSSR, Ser. 7 22: 47. - *L. sibirica* L. 1753, Sp. Pl. 1: 437. - [ 1, 2, 3, 4, 5, 9 ].

**Notes:** The *Lychnis sibirica* group has recently been demonstrated to belong to genus of *Silene* by molecular and morphological studies (Oxelman et al. 2001).

+ ***S. sibirica (L.) Pers. 1805***, Syn. Pl. 1: 497. - *Cucubalus sibiricus* L. 1759, Syst. Nat. 2: 1031. - [ 14+ (Baitag Bogd uul), (Kechaykin et al. 2014) ].

+ ***S. sobolevkajae Czerep. 1981***, Sosud. Rast. SSSR 171. - *S. schischkinii* Sobolevsk. 1953, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1953(1-2): 2. - [ 2+ (Mungunmorit), (Fl. Siberia 1993; Sanchir 2014 in press) ].

**Notes:** It was informed that *S. sobolevkajae* Czerep. is a synonyms of *S. graminifolia* Otth. (2000). Also reported *S. orientalimongolica* Koshevni. is shoud be found in Foothills of Great Khingan phytogeographical regions of Mongolia (Koshevnikov 2007).

# ***S. songarica (Fisch., C.A. Mey. & Ave-Lall.) Bocquet, 1967***, Candollea 22(1): 3-4.

- *Lychnis mongolica* Maxim. 1889, Enum. Pl. Mongol. 94. - *Melandrium mongolicum* (Maxim.) Grubov, 1955, Bot. Math. (Leningrad) 17: 13. - [ 2, 3, 4 ]. - **Endemic**. Described from Khangai phytogeographical region (LE). - (R).

***S. suaveolens Turcz. ex Kar. & Kir. 1842***, Bull. Soc. Imp. Nat. Moscou 15: 168. - *Melandrium suaveolens* (Kar. & Kir.) Schischk. 1936, Fl. URSS. 6: 711. - [ 7, 10, 14 ].

# ***S. uralensis* subsp. *apetala* (L.) Bocquet, 1967**, Candollea 22: 26. - *Lychnis apetala* L. 1753, Sp. Pl. 1: 437. - *Melandrium apetalum* (L.) Fenzl, 1842, Fl. Ross. 1(2): 326. - [ 1, 2, 3, 6, 7, 10, 13, 14+ (Baitag Bogd uul, Altan owoo), (Kechaykin et al. 2014) ].

# ***S. viscosa Schleich. 1800***, Cat. Pl. Helv. 33. - *Melandrium viscosum* (L.) Celak. 1868, Lotos 18: 118. - [ 3, 7, 10, 14 ].

# ***S. vulgaris (Moench) Garcke, 1869***, Fl. N. Mitt.-Deutschland 64. - *Behen vulgaris* Moench, 1794, Methodus 709. - *Oberna behen* (L.) Ikonn. 1976, Novosti Syst. Vyssh. Rast. 13: 119. - [ 2, 4, 6, 7 ].

***Spergularia marina (L.) Besser, 1822***, Enum. Pl. 97. - *Arenaria rubra* var. *marina* L. 1753, Sp. Pl. 1: 423. - [ 4, 5+ (Neuffer et al. 2012), 7, 10, 11, 12, 13, 14, 15 ].

# ***S. segetalis* (L.) G. Don. 1831**, Gen. Hist. 1: 425. - *Alsine segetalis* L. 1753, Sp. Pl. 1: 272. - [ 14 (Bulgan gol), (Koshevnikov 2007) ].

? ***Stellaria alatavica Popov, 1938***, Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 47: 86.

- *S. brachypetala* var. *alatavica* (M. Pop.) Yu Kozhevni, 1983, Novosti Syst. Vyssh. Rast. 20: 106. - [ 1, 7 ].

***S. amblyosepala Schrenk, 1842***, Enum. Pl. Nov. 2: 54. - [ 7, 10, 11, 12, 13, 14, 15, 16+ (Khuren Khana uul), (Koshevnikov 2007) ].

***S. brachypetala* Bunge, 1830**, Fl. Altaic. 2: 161. - *S. graminea* var. *brachypetala* (Bunge) Regel, 1862, Bull. Soc. Imp. Nat. Moscou 35(1): 287. - [ 3, 4, 5+ (Khalkhiin gol), (Neuffer et al. 2012), 6, 7, 9, 11, 13, 14 ].

**S. bungeana** Fenzl, 1842, Fl. Ross. 1: 376. – [ 2, 3, 6, 7, 9 ].

**S. cherleriae** (Fisch. ex Ser.) F.N. Williams, 1907, Bull. Herb. Boissier, ser. 2, 7: 830. - *Arenaria cherleriae* Fisch. ex Ser. 1824, Prodr. 1: 409. – [ 1, 2, 3, 4, 5, 6+ (Kharkhiraas), (Koshevnikov 2007), 7, 8, 9, 13 ].

**S. crassifolia** Ehrh. 1784, Hannover. Mag. 8: 116. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14 ].

**S. dahurica** Willd. ex Schlecht. 1816, Ges. Naturf. Freunde Berlin 7: 195. – [ 1, 2, 3, 4, 7, 14 ].

**S. dichotoma** L. 1753, Sp. Pl. 1: 421. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 ]. – (R).

# **S. dichotoma** var. **lanceolata** Bunge, 1836, Fl. Altaic. 34. – *S. gypsophilooides* Fenzl, 1842, Fl. Ross. 1: 380. – [ 3, 7, 8, 9, 11, 12, 13, 15, 16 ]. – **Subendemic**.

**S. discolor** Turcz. 1842, Bull. Soc. Imp. Nat. Moscou 11: 88. – [ 4, 5, 9 ].

+ **S. filicaulis** Makino, 1901, Bot. Mag. (Tokyo) 15: 113. – [ 2+ (Vlasova, 2012), 3+ (Gubanov 1999; Lazkov, 1999; Dariimaa 2009) ].

**S. imbricata** Bunge, 1830, Fl. Altaic. 2: 159–160. – *S. palustris* var. *imbricata* (Bunge) Kryl. 1901. Fl. Altaic. 1: 169. – [ 6+ (Olonova & Beket 2010; Olonova *et al.* 2013), 7, 14 ]. – **Subendemic**.

**S. irrigua** Bunge, 1835, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 2(6): 548. – [ 1, 2, 3, 4, 6+ (Olonova & Beket 2010; Olonova *et al.* 2013), 7, 13 ]. – **Subendemic**.

**S. longifolia** Muehl. ex Willd. 1809, Enum. Pl. 1: 479. – *S. diffusa* Willd. ex Schlecht. 1816, Mag. Neuesten Entdeck. Gesammten Naturk. Ges. Naturf. Freunde Berlin 7(3): 195. – *S. friesiana* Ser. 1824, Prodr. 1: 395. – [ 1, 2, 3, 4, 5, 9 ].

# **S. longipes** Goldie, 1822, Edinburgh Philos. J. 6(12): 327. – *S. peduncularis* Bunge, 1830, Fl. Altaic. 2: 157. – [ 1, 2, 3, 5, 6, 7, 9 ].

+ **S. martjanovii** Krylov, 1902, Trudy Imp. St.-Peterburgsk. Bot. Sada 21: 3. - *Mesostemma martjanovii* (Krylov) Ikonn. 1976, Novosti Syst. Vyssh. Rast. 13: 114. – [ 7+ (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic**.

**S. media** (L.) Cirillo, 1784, Hist. Pl. Dauphine 3(1): 615. - *Alsine media* L. 1753, Sp. Pl. 1: 272. – [ 2, 3 ]. – (R).

**S. palustris** Ehrh ex Retz. 1795, Fl. Scand. Prodr. (ed. 2) 106. – [ 2, 3, 7, 9+ (Pistrick *et al.* 2012) ].

**S. petraea** Bunge, 1830, Fl. Altaic. 2: 160–161. – *S. cherleriae* var. *alpina* (Bunge) Schischk. 1931, Fl. Sibir. Occid. 5: 1003. – [ 1, 2, 3, 4, 6, 7, 13 ].

**S. pulvinata** Grubov, 1972, Bot. Zurn. (Leningrad) 57(12): 1592. – [ 6, 7 (Ikh and Baga Ulaan davaa), (Olonova & Beket 2010) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region (LE). – (R).

**S. radians** L. 1753, Sp. Pl. 1: 422. - *Fimbripetalum radians* (L.) Ikonn. 1977, Novosti Syst. Vyssh. Rast. 14: 79. – [ 5 (Khalkhiin gol), 9 (Koshevnikov 2007) ]. – (R).

**Notes:** *Stellaria soongorica* Roshev. and *S. strongylosepala* Hand.-Mazz. (endemic) these species are shoud be found in Eastern Mongolia (Koshevnikov 2007).

**Tytthostemma alsinoides (Boiss. & Buhse) Nevski, 1937**, Trudy Bot. Inst. Akad. Nauk SSSR. Ser. 1, Fl. Sist. Vyssh. Rast. 4: 305. - *Stellaria alsinoides* Boiss. & Buhse, 1860, Nouv. Mem. Soc. Nat. Moscou 12: 41. - [ 7, 14 ].

**Vaccaria hispanica (Mill.) Rauschert, 1966**, Feddes Repert. 73(1): 52. - *Saponaria hispanica* Mill. 1768, Gard. Dict. 4. - [ 4, 7, 10, 11, 13, 14 ].

# 57. AMARANTHACEAE JUSS. 1789 (28/105)

Gen. Pl. 87-88

# [incl. Chenopodiaceae]

**# Agriophyllum squarrosum (L.) Moq. 1849**, Prodr. 13(2): 139. - *Corispernum squarrosum* L. Sp. Pl. 1: 4. - *C. pungens* Vahl. 1804, Enum. Pl. 1: 117. - *Agriophyllum pungens* (Vahl.) Link ex A.Dietr. 1831, Sp. Pl. 1: 124. - [ 6, 8, 9, 10, 11, 12, 13, 14, 15, 16 ]. - (R).

**Amaranthus albus L. 1753**, Syst. Nat. (ed.10) 2: 1268. - [ 2, 4, 8+ (Pistrick *et al.* 2012) ].

**A. blitoides S. Watson, 1877**, Proc. Amer. Acad. Arts 12: 273-274. - [ 4, 9, 10+ (Khovd gol), (Revushkin *et al.* 2001), 12+ (Hilbig & Tungalag 2006), 14+ (Bulgan gol), (Revushkin *et al.* 2001) ].

**A. cruentus L. 1759**, Syst. Nat. (ed. 10) 2: 1269. - *A. paniculatus* L. 1763, Sp. Pl. (ed. 2) 1406. - [ 2 (Ulaanbaatar), (Gusev, 2007) ].

**A. retroflexus L. 1753**, Sp. Pl. 2: 991. - [ 2, 4, 5, 8, 9, 10, 12, 13, 14+ (Bulgan gol), (Revushkin *et al.* 2001), 15 ].

**Anabasis aphylla L. 1753**, Sp. Pl. 1: 223. - [ 7+ (Bulgan sum), (Ebel & Rudaya 2002), 14 (Altai and Yench sum), (Beket 2009) ]. - (VU, VR, RB).

**A. brevifolia C.A. Mey. 1829**, Icon. Pl. 1: 10. - [ 3, 6, 7, 8+ (Neuffer *et al.* 2012), 10, 11, 12, 13, 14, 15, 16 ].

**A. elatior (C.A. Mey.) Schischk. 1930**, Fl. Sibir. 4: 961. - [ 14 (Ligaa *et al.* 2008) ]. - (R, RB).

**A. eriopoda (Schrenk) Paulsen, 1912**, Bot. Tidsskr. 32: 199. - [ 14 (Bor Tsong, Altai, Yench, and Bulgan sum), (Beket 2009) ]. - (VU, VR, RB).

**A. pelliotii Danguy, 1912**, Notul. Syst. (Paris) 2(6) 164-165. - [ 14 (Bor Tsong, Bulgan sum), (Grubov 1982) ].

**A. salsa (C.A. Mey.) Benth. ex Volkens, 1893**, Nat. Pflanzenfam. 3(1a): 87. - [ 14 ].

**A. truncata (Schrenk) Bunge, 1862**, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7 4(11): 38. - [ 7+ (Indertiin gol), (Ebel & Rudaya 2002), 14 ].

+ **Atriplex altaica Sukhor. 2000**, Feddes Repert. 111(3-4): 176. - [ 7+ (Krasnoborov 2006; Olonova & Beket 2010; Olonova *et al.* 2013) ]. - **Subendemic**.

**A. cana C.A. Mey. 1829**, Icon. Pl. 1: 11. - [ 14 ].

**A. fera (L.) Bunge, 1880**, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7 27(8): 6. - [ 1, 3, 4, 8, 9, 10, 12, 13 ].

**A. laevis C.A. Mey. 1829**, Icon. Pl. 1: 10. - [ 3, 4, 8, 9, 10, 11, 13, 14, 15 ].

**A. sibirica L. 1762**, Sp. Pl. (ed. 2): 1493. - [ 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**A. tatarica** L. 1753, Sp. Pl. 2: 1053. – [ 7, 10, 14 ].

**Axyris amaranthoides** L. 1753, Sp. Pl. 2: 979. – [ 2, 3, 4, 5, 8, 9, 13+ (Neuffer *et al.* 2012) ].

**A. hybrida** L. 1753, Sp. Pl. 2: 980. – [ 2, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14 ].

**A. prostrata** L. 1753, Sp. Pl. 2: 980. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 13, 14 ].

**Bassia dasypylla** (Fisch. & Meyer) O. Kuntze, 1891, Revis. Gen. Pl. 2: 546. - *Kochia dasypylla* Fisch. & C.A. Mey, 1841, Enum. Pl. Nov. 1: 12. – [ 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

# **B. eriophora** (Schrad.) Asch. 1867, Beitr. Fl. Aethiop. 1: 87. - *Kochia eriophora* Schrad. 1809, Neues J. Bot. 3(3-4): 86. - *Londesia eriantha* Fisch. & C.A. Mey. 1835, Index Sem. (St.-Petersburg) 2: 40. – [ 6, 10 ].

**B. hyssopifolia** (Pall.) O. Kuntze, 1891, Revis. Gen. Pl. 2: 547. - *Salsola hyssopifolia* Pall. 1771, Reise Russ. Reich. 1: 491. – [ 6, 7, 10, 11, 12, 13 ].

# **B. prostrata** (L.) Beck, 1909, Icon. Fl. Germ. Helv. 24: 155. - *Salsola prostrata* L. 1753, Sp. Pl. 1: 222. - *Kochia prostrata* (L.) Schrader, 1809, Neues J. Bot. 3: 85. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ].

# **B. scoparia** (L.) A.J. Scott, 1978, Feddes Repert. 81(2-3): 108. - *Chenopodium scoparium* L. 1753, Sp. Pl. 1: 221. - *Kochia scoparia* (L.) Schrader 1809, Neues J. Bot. 3: 85. – *K. densiflora* Turcz. ex Moq. 1840, Mitt. Basler Bot. Ges. 2(1): 13. – *K. sieversiana* auct. Fl. Mong., non C.A. Mey. – [ 2+ (Ulaanbaatar), (Tungalag, 2013), 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14 ].

# **Camphorosma monspeliacana** subsp. **lessingii** (Litv.) Aellen, 1967, Notes Roy. Bot. Gard. Edinburgh 28(1): 31. - *Camphorosma lessingii* Litv. 1905, Trudy Bot. Muz. Imp. Akad. Nauk 2: 96. – [ 6, 10, 14 ].

# **Caroxylon gemmascens** (Pall.) Tzvelev, 1993, Ukrains'k. Bot. Zhurn. 50(1): 81. - *Salsola gemmascens* subsp. *subglabra* Botsch. 1970, Novosti Syst. Vyssh. Rast. 6: 51. – [ 10 ]. – **Subendemic**. Described from nearest Ubs nuur (LE).

**Ceratocarpus arenarius** L. 1753, Sp. Pl. 2: 989. – [ 6, 7, 10, 14 ].

**Chenopodium acuminatum** Willd. 1799, Ges. Naturf. Freunde Berlin Neue Schriften 2: 124. – [ 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16 ].

**Ch. album** L. 1753, Sp. Pl. 1: 219. – [ 1-16 (all regions) ].

# **Ch. chenopodioides** (L.) Aellen, 1933, Ostenia 98. - *Blitum chenopodioides* L. 1771, Mant. Pl. 2: 170. - *Chenopodium botryodes* Smith. 1811, Engl. Bot. 32. – [ 7, 10, 14 ]. – (R).

**Ch. ficifolium** Sm. 1800, Fl. Brit. 1: 276-277. – [ 1, 9, 10, 11, 14 ].

**Ch. foliosum** Ascherson, 1864, Fl. Brandenburg 1: 572. – [ 3, 4, 6, 7, 12+ (Ikh Nart ?), 13, 14, 15 ].

**Ch. frutescens** C.A. Mey. 1829, Fl. Altaic. 1: 408. – [ 6, 7, 10 (Olonova & Beket 2010) ]. – **Subendemic**.

**Ch. glaucum** L. 1753, Sp. Pl. 1: 220. – [ 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

+ **Ch. gubanovii** Sukhor. 1999, Feddes Repert. 110(7-8): 493. – [ 10+ (Morenko, 2005), 14+ (Bulgan gol), (Revushkin *et al.* 2001; Urgamal *et al.* 2013) ]. – **Subendemic**. Described from Dzungarian Gobi (Bulgan gol) phytogeographical region (LE).

**Ch. hybridum L.** 1753, Sp. Pl. 1: 219. – [ 2+ (Songinotiin khyasaa), (Dariimaa *et al.* 2004), 3, 4, 5, 7, 8, 9, 10, 11, 12+ (Dariimaa *et al.* 2004), 13, 14, 15, 16 ].

**Ch. iljinii Golosk.** 1950, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 13: 65. – [ 7+ (Gichgeniin nuruu), (Revushkin *et al.* 2001; Ebel & Rudaya 2002; German *et al.* 2009), 10 (Khyargas nuur) ]. – (R).

# **Ch. karoī (Murr) Aellen,** 1929, Repert. Spec. Nov. Regni Veg. 26(709–717): 149. - *Ch. album* subsp. *karoī* Murr, 1923, Neu. Ubers. Bl.-Pfl. Vorarlberg 1: 97. - *Ch. prostratum* Bunge ex Herder, 1889, Trudy Imp. St.-Peterburgsk. Bot. Sada 10(2): 594. – [ 1, 2+ (Tungalag 2009), 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ].

+ **Ch. novopokrovskyanum (Aellen) Uotila,** 1993, Ann. Bot. Fenn. 30: 192. – *Ch. album* subsp. *novopokrovskyanum* Aellen, 1938, Trudy Rostovsk. Obl. Biol. Obshch. 2: 3. – [ 7+ (Sagsai gol), (Krasnoborov 2006) ].

**Ch. rubrum L.** 1753, Sp. Pl. 1: 218-219. – [ 3, 7, 10, 14, 15 ].

**Ch. strictum Roth,** 1821, Nov. Pl. Sp. 180. – [ 2+ (Eruugiin khaluun rashaan), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 4, 9, 14 ].

**Ch. urbicūm L.** 1753, Sp. Pl. 1: 281. – [ 4, 10 ].

**Ch. vulvaria L.** 1753, Sp. Pl. 1: 220. – [ 3, 6, 7, 8, 9, 10, 13, 14 ].

**Climacoptera affinis (C.A. Mey.) Botsch.** 1956, Akad. Sukachevu Sborn. Rabot 114. – *Salsola affinis* C.A. Mey. 1843, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 1: 360. – [ 14 (Uushigiin us, Bor Tsonj), (Ebel & Rudaya 2002) ].

**C. subcrassā (M. Pop.) Botsch.** 1956, Akad. Sukachevu Sborn. Rabot 112. – *Salsola subcrassā* Popov, 1936, Fl. URSS 6: 875. – [ 14 (Jargalantiin gol) ]. – (R).

**Corispermum chinganicum Iljin,** 1929, Izv. Glavn. Bot. Sada SSSR, 28: 648. – [ 1, 2, 3, 4, 5, 6, 7+ (Bulgan gol), (German *et al.* 2009), 8, 9, 10, 11, 12 ]. – Described from nearest Buir nuur of Eastern Mongolia (lectotype - LE).

**C. declinatum Stephan ex Iljin,** 1928, Trudy Prikl. Bot. 19(2): 69. – [ 3, 4, 8 ].

**C. elongatum Bunge,** 1859, Prim. Fl. Amur. 224. – [ 10, 13 ].

**C. mongolicum Iljin,** 1929, Izv. Glavn. Bot. Sada SSSR, 28: 648. – [ 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ]. – **Subendemic.** It was described Great Lake phytogeographical region (lectotype - LE).

**C. orientale Lam.** 1786, Encycl. 2(1): 111. – [ 3, 8 ].

**C. patelliforme Iljin,** 1929, Izv. Glavn. Bot. Sada SSSR, 28: 648. – [ 10, 13, 16 ]. – **Subendemic.**

**C. tylocarpum Hance,** 1868, J. Bot. 6(62): 47-48. – [ 12 ].

# **Dysphania aristata (L.) Mosyakin & Clemants,** 2002, Ukrains'k. Bot. Zhurn. 59(4): 383. - *Chenopodium aristatum* L. 1753, Sp. Pl. 1: 221-222. – [ 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16 ].

# **D. botrys (L.) Mosyakin & Clemants,** 2002, Ukrains'k. Bot. Zhurn. 59(4): 383. - *Chenopodium botrys* L. 1753, Sp. Pl. 1: 219 . – [ 7, 14, 15 ].

**Halocnemum strobilaceum (Pall.) M. Bieb.** 1819, Fl. Taur.-Caucas. 3: 3. - *Salicornia strobilacea* Pall. 1771, Reise Russ. Reich. 1: 412. – [ 14 ]. – (R).

# ***Halogeton arachnoideus* Moq. 1849**, Prodr. 13(2): 205. - *Micropeplis arachnoides* (Moq.) Bunge, 1852, Reliq. Lehmann 303. - [ **4, 6+** (Ulgii uul), (Ebel & Rudaya 2002), **7, 8, 9, 10, 11, 12, 13, 14, 15, 16** ].

***H. glomeratus* (M. Bieb.) C.A. Mey. 1829**, Icon. Pl. 1: 10. - *Anabasis glomerata* M. Bieb. 1806, Mem. Soc. Imp. Nat. de Moscou 1: 110–111. - [ **7+** (Indertiin gol), (Revushkin et al. 2001; Ebel & Rudaya 2002), **10, 11, 14, 15** ].

+ ***Halostachys caspica* C.A. Mey. 1843**, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 1: 361. - *H. belangeriana* (Moq.) Botsch. 1954, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 16: 84. - *Salicornia caspica* Pall. 1771, Reise Russ. Reich. 1: 480. - [ **14+, 15+** (Urgamal et al. 2013) ].

***Haloxylon ammodendron* (C.A. Mey.) Bunge, 1852**, Fl. Ross. 3: 820. - *H. aphyllum* (Minkw.) Iljin, 1934, Bot. Zhurn. SSSR 19: 171. - [ **7+** (Bulgan sum), (Ebel & Rudaya 2002), **10, 11, 12, 13, 14, 15, 16** ].

***Iljinia regelii* (Bunge) Korov. 1936**, Fl. URSS 6: 309. - *Haloxylon regelii* Bunge, 1879, Bull. Acad. Imp. Sci. St.-Petersbourg 25: 368–369. - [ **14, 15, 16** ]. - (VU, VR, RB, RL).

***Kalidium caspicum* (L.) Ung.-Sternb. 1874**, Atti Congr. Int. Bot. Firenze 317. - *Salicornia caspica* L. 1753, Sp. Pl. 1: 4. - [ **10, 14** ]. - (R).

***K. cuspidatum* (Ung.-Sternb.) Grub.** 1959, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 19: 103. - *K. arabicum* var. *cuspidatum* Ung.-Sternb. 1866, Vers. Syst. Salicorn. 93. - [ **3, 8, 9, 12, 13, 14, 15, 16** ].

***K. foliatum* (Pall.) Moq. 1849**, Prodr. 13(2): 147. - *Salicornia foliata* Pall. 1771, Reise Russ. Reich. 2: 422. - [ **3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16** ].

***K. gracile* Fenzl, 1851**, Fl. Rossica 3(2): 769. - [ **3, 4, 8, 9, 10, 11, 12, 13, 14, 15, 16** ].

***Kochia krylovii* Litv. 1919**, Fl. Altaia Tomskoi Gub. 5: 1121. - [ **6, 7, 10, 11, 12, 13, 14, 15, 16** ]. - Subendemic.

***K. melanoptera* Bunge, 1830**, Trudy Imp. St.-Peterburgsk. Bot. Sada 6(2): 417–418. - [ **3, 6, 7, 10, 11, 12, 13, 14, 15, 16** ]. - Subendemic.

# ***K. stellaris* Moq. 1840**, Chenop. Monogr. Enum. 93. - *K. iranica* Litv. 1908, Bull. Herb. Boissier, ser. 2, 8: 546. - [ **14, 15** ].

***Krascheninnikovia ceratoides* (L.) Gueldenst. 1772**, Novi Comment. Acad. Sci. Imp. Petrop. 16: 548, 555. - *Axyris ceratoides* L. 1753, Sp. Pl. 2: 979. - *Eurotia ceratoides* (L.) C.A. Mey. 1833, Fl. Altaic. 4: 239–240. - *Ceratoides papposa* Botsch. & Ikonn. 1970, Novosti Syst. Vyssh. Rast. 6: 267. - [ **1, 3, 4, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16** ].

***K. ewersmanniana* (Stschegl. ex Losinsk.) Grubov, 1966**, Rast. Tsentr. Azii 2: 38. - *Eurotia ewersmanniana* Stschegl. ex Losinsk. 1930, Izv. Akad. Nauk SSSR ser 7, 9: 993. - *Ceratoides ewersmanniana* (Stschegl. ex Losinsk.) Botsch. & Ikonn. 1970, Novosti Syst. Vyssh. Rast. 6: 267. - [ **7+** (Mogoin gol), (Revushkin et al. 2001; Ebel & Rudaya 2002), **10, 14, 15** ].

+ ***Nanophyton erinaceum* (Pall.) Bunge, 1862**, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7 4(11): 51. - *Polycnemum erinaceum* Pall. 1806, Ill. Pl. Orient. 58. - [ **10+, 14+** (Grubov 1982; Urgamal et al. 2013) ]. - Subendemic.

**Notes:** This species was not given in Gubanov's conspectus (1996).

***N. grubovii* Pratov, 1982**, Bot. Zurn. (Leningrad) 67, 11: 1525. - [ **10** (Ubs nuur) ]. - Endemic.

**N. mongolicum** Pratov, 1982, Bot. Zurn. (Leningrad) 67, 11: 1525. – *N. erinaceum* auct. Fl. Mong., non Bunge, 1830. – [ 7, 14 ]. – **Endemic.**

**Petrosimonia litwinowii** Korch. 1898, Trudy Bot. Sada Akad. Nauk SSSR 43: 235. – [ 10 ].

+ **P. sibirica** (Pall.) Bunge, 1862, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7, 4(11): 60. - *Polycnemum sibiricum* Pall. 1803, Il. Pl. 61. – [ 14+ (Grubov 1982; Urgamal *et al.* 2013) ]. – **(R).**

**Notes:** This species was not given in Gubanov's conspectus (1996).

+ **Salicornia altaica** Lomon. 2005, Bot. Zhurn. (Moscow & Leningrad) 90: 1248. – [ 7+ (Olonova & Beket 2010; Olonova *et al.* 2013) ]. – **Subendemic.**

**S. europaea** L. 1753, Sp. Pl. 1: 3. – *S. herbacea* L. 1762, Sp. Pl. 2: 5. – [ 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**Salsola abrotanoides** Bunge, 1879, Bull. Acad. Imp. Sci. St.-Petersbourg 25: 366. – [ 6, 7, 8, 9, 10, 11, 12+, (Hilbig & Tungalag 2006), 13 ].

**S. arbuscula** Pall. 1771, Reise Russ. Reich. 1: 488. - *Xylosalsola arbuscula* (Pall.) Tzvel, 1993, Ukrains'k. Bot. Zhurn. 50(1): 81. – [ 13, 14, 15, 16 ].

**S. collina** Pall. 1803, Ill. Pl. 34. – [ 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ].

+ **S. foliosa** (L.) Schrad. ex Schult. 1820, Syst. Veg. 6: 235. - *Anabasis foliosa* L. 1753, Sp. Pl. 1: 223. – [ 14+ (Uushigiiin us, Bor Tsonj), (Gubanov 1999; Ebel & Rudaya 2002; Dariimaa 2009) ]. – **Subendemic.**

**S. ikonnikovii** Iljin. 1931, Izv. Bot. Sada Akad. Nauk SSSR 30: 748. – [ 7+ (Barkhan els), (Ebel & Rudaya 2002), 11, 12, 13 ]. – **Subendemic.** Described from Gobi Altai phytogeographical region (LE).

+ **S. jacquemontii** Moq. 1849, Prodr. 13(2): 188. - *S. nepalensis* Grubov, 1961, Bot. Mater. Gerb. Bot. Inst. Komarova Acad. Nauk SSSR 21: 127-128. - *S. paulsenii* subsp. *oreophila* Kinzik. 1962, Trudy Inst. Bot. Dushanbe 18: 270. - *S. sinkiangensis* A.J. Li, 1978, Acta Phytotax. Sin. 16(1): 122-123. – [ 8+, 13+ (Neuffer *et al.* 2012; Urgamal *et al.* 2013) ].

**S. laricifolia** Turcz. ex Litv. 1913, Herb. Fl. Ross. 49: 2443. – [ 12, 13, 16 ].

**S. monoptera** Bunge, 1879, Bull. Acad. Imp. Sci. St.-Petersbourg 25: 364. – [ 3, 6+ (Ulgii sum), (Ebel & Rudaya 2002), 7, 8, 9, 10, 11, 12, 13 ]. – **Subendemic.**

**S. passerina** Bunge, 1843, Linnaea 17: 4. 1843. – [ 8, 10, 13, 12, 13, 15, 16 ]. – **Subendemic.**

**S. paulsenii** Litv. 1905, Izv. Turkestansk. Otd. Imp. Russk. Geogr. Obshch. 4(5): 28. – [ 3, 7, 10, 11, 14 ].

**S. rosacea** L. 1753, Sp. Pl. 1: 222. – [ 7, 14 ].

**S. tragus** L. 1756, Cent. Pl. II 13. – *S. kali* var. *tragus* (L.) Moq. 1849, Prodr. 13(2): 187. - *S. australis* R.Br. 1810, Prodr. 411. – *S. pestifera* Nels. 1909, New Man. Bot. Centr. Rocky Mt. 169. – [ 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

? # **Sarcocornia perennis** (Mill.) A.J. Scott, 1978, Bot. J. Linn. Soc. 75(4): 367. - *Salicornia perennis* Mill. 1768, Gard. Dict. (ed. 8): 2. – [ 6, 7 (?) ].

**Suaeda acuminata** (C.A. Mey.) Moq. 1831, Ann. Sci. Nat. (Paris) 23: 306. - *Schoberia acuminata* C.A. Mey. 1829, Icon. Pl. 1: 11. – [ 6, 7+ (Bodonch, Indertiin gol), (Ebel & Rudaya 2002), 10, 14 ].

**S. corniculata (C.A. Mey.) Bunge, 1879**, Trudy Imp. St.-Peterburgsk. Bot. Sada 6(2): 429. - *Schoberia corniculata* C.A. Mey. 1829, Fl. Altaic. 1: 399–400. – [ **1, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16** ].

+ **S. corniculata subsp. mongolica Lomon. & Freitag, 2008**, Willdenowia 38: 92. – [ **3+** (Arkhangai, Tuvshruulex), **4+** (Khentii, Murungiin gol), **7+** (Bulgan gol), **8+** (Sukhbaatar, Tumentsogt), **9+** (Khulunbuir), **10+** (Khyargas nuur), **11+** (Gobi-Altai, Delgeriin tal), (Lomonosova *et al.* 2008) ].

**S. glauca (Bunge) Bunge, 1879**, Bull. Acad. Imp. Sci. St.-Petersbourg 25: 362. - *Schoberia glauca* Bunge, 1833, Enum. Pl. China Bor. 56. – [ **4, 9, 16** ].

**S. heterophylla Bunge ex Boiss. 1879**, Trudy Imp. St.-Peterburgsk. Bot. Sada 6(2): 429. - *Schoberia heterophylla* Kar. & Kir. 1841, Bull. Soc. Imp. Nat. Moscou 14: 734. – [ **10, 11, 12, 13, 14+** (Uushigin us), (Revushkin *et al.* 2001), **15** ].

**S. kossinskyi Iljin, 1927**, Izv. Glavn. Bot. Sada SSSR 25: 201. – [ **6, 7+** (Tolbo nuur), (Revushkin *et al.* 2001; Ebel & Rudaya 2002), **10, 13+** (Neuffer *et al.* 2012), **16** ].

**S. linifolia Pall. 1803**, Ill. Pl. 47. – [ **10** (Shargiin gobi), **14+** (Uushigin us), (Revushkin *et al.* 2001) ]. – (R).

# **S. maritima (L.) Dumort. 1827**, Fl. Belg. 22. - *Chenopodium maritimum* L. 1753, Sp. Pl. 1: 221. - *Suaeda prostrata* Pall. 1803, Ill. Pl. 55. – [ **6, 9, 10, 11, 12, 13, 16** ].

**S. przewalskii Bunge, 1879**, Bull. Acad. Imp. Sci. St.-Petersbourg 25: 260. – [ **10, 11, 12, 13** ]. – Subendemic.

**S. salsa (L.) Pall. 1803**, Ill. Pl. 46. - *Chenopodium salsum* L. 1753, Sp. Pl. 1: 221. – [ **8, 9, 10, 12, 13, 15, 16** ].

+ **S. sibirica Lomon. & Freitag, 2008**, Willdenowia 38: 104. – [ **3+** (Tamiriin gol), **4+** (Shaamar, Ugtaltsaidam), **8+ (?)**, **9+** (Khulunbuir), **10+** (Uvs nuur), (Lomonosova *et al.* 2008) ].

+ **S. tschujensis Lomon. & Freitag, 2003**, Willdenowia 33: 140. – [ **6+** (Morenko, 2005), **7+** (Lomonosova & Freitag 2003; Olonova & Beket 2010; Olonova *et al.* 2013) ]. – Subendemic.

+ **S. tuvinica Lomon. & Freitag, 2008**, Willdenowia 38: 96. – [ **3+** (Zavkhan, Ulyastai), **6+** (Achit nuur), **10+** (Khyargas nuur), (Lomonosova *et al.* 2008) ].

**Sympagma regelii Bunge, 1879**, Bull. Acad. Imp. Sci. St.-Petersbourg 25: 371. – [ **7, 10, 11, 12, 13, 14, 15, 16** ]. – (RL).

**Notes:** The cultivated plants followed in the Amaranthaceae family: *Beta vulgaris* L., *Spinacia oleracea* L. (Manibazar 2010; Urgamal *et al.* 2013).

## 58. MOLLUGINACEAE BARTL. 1825 (1/1)

Beitr. Bot. 2: 158

**Mollugo cerviana (L.) Ser. 1824**, Prodr. 1: 392. - *Pharnaceum cerviana* L. 1753, Sp. Pl. 1: 272. – [ **12, 14, 15** (Koshevnikov 2007) ].

## \$ 59. MONTIACEAE RAF. 1820 (1/1)

Ann. Gen. Sci. Phys. 5: 349

\$ [incl. genus *Cladonia* from Portulacaceae]

**Claytonia joanneana** Schult. 1819, Syst. Veg. 5: 434. – [ 1, 2, 3, 4, 6, 7 ].

**60. PORTULACACEAE JUSS. 1789 (1/1)**

Gen. Pl. 312

**Portulaca oleracea** L. 1753, Sp. Pl. 1: 445. [ 2, 3 (Koshevnikov 2007) ].

**19. ZYGOPHYLLALES LINK, 1829**

Handbuch 2(4): 228

**61. ZYGOPHYLLACEAE R. BR. 1814 (3/13)**

Voy. Terra Austral. 2: 545

? # **Sarcozygium kaschgaricum** (Boriss.) Y.X. Liou, 1998, Fl. Reipubl. Popularis Sin. 43(1): 142. - *Zygophyllum kaschgaricum* Boriss. 1949, Fl. URSS 14: 728. – [ 13, 14, 15 ]. – (R).

**Tribulus terrestris** L. 1753, Sp. Pl. 1: 387. – [ 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**Zygophyllum brachypterum** Kar. & Kir. 1841, Bull. Soc. Imp. Nat. Moscou 14: 397. – [ 6, 10 ].

**Z. gobicum** Maxim. 1889, Enum. Pl. Mongol. 298. – [ 15 ]. – Subendemic. – (R).

**Z. melongena** Bunge, 1830, Fl. Altaic. 2: 104. – [ 3, 6, 7, 10, 11, 13, 14 ]. – Subendemic.

**Z. mucronatum** Maxim. 1881, Melanges Biol. Bull. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 11: 175. – [ 15, 16 ]. – Subendemic. – (R, RB).

**Z. neglectum** Grubov 1982, Opr. Sosud. Vasc. Pl. Mongol.: 176. – [ 14 (Argalant uul), 16+ (Hilbig & Tungalag 2006) ]. – Endemic. Described from Dzungarian Gobi phytogeographical region (LE). – (R, RB).

**Z. pinnatum** Cham. 1830, Linnaea 5: 48. - *Z. macropterum* C.A. Mey. 1830, Fl. Altaic. 2: 102 - [ 7, 14 ]. – Subendemic. – (R).

**Z. potaninii** Maxim. 1881, Melanges Biol. Bull. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 11: 174. – [ 6+, 7+ (Neuffer et al. 2003), 13, 14, 15, 16 ]. – Subendemic. – (EN, VR, RB).

**Z. pterocarpum** Bunge, 1830, Fl. Altaic. 2: 103. – [ 6, 7, 10, 11, 12, 13, 14, 15, 16 ].

**Z. rosowii** Bunge, 1843, Linnaea 17: 5. – [ 3, 7, 8+ (Neuffer et al. 2012), 10, 11, 12, 13, 14, 15, 16 ].

# **Z. rosowii** var. **latifolium** (Schrenk) Popov, 1925, Bull. Sredne-Aziatsk. Gosud. Univ. 11: 118. - *Z. latifolium* Schrenk, 1844, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 2: 198. – [ 14, 15, 16 ]. – (R).

**Z. xanthoxylon** (Bunge) Maxim. 1889, Fl. Tangut. 103. - *Sarcozygium xanthoxylon* Bunge, 1843, Linnaea 17: 7. – [ 7, 8+ (Neuffer et al. 2012), 10, 11, 12, 13, 14, 15, 16 ]. – (RL).

**20. CELASTRALES LINK, 1829**

Handbuch 2: 115

# 62. CELASTRACEAE R. BR. 1814 (2/3)

Voy. Terra Austral. 2: 554

# [incl. Parnassiaceae]

**Euonymus maackii** Rupr. 1857, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Pétersbourg 15: 358. – [ 5, 9 ].

**Parnassia laxmannii** Pall. ex Schult. 1820, Syst. Veg. 6: 696. – [ 1, 2, 3, 4, 6, 10 ].

**P. palustris** L. 1753, Sp. Pl. 1: 273. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14 ].

21. OXALIDALES BERCHT. & J. PRESL, 1820

Prir. Rostlin 221

63. OXALIDACEAE R. BR. 1818 (1/1)

Narr. Exped. Zaire 433

**Oxalis acetosella** L. 1753, Sp. Pl. 1: 433. – [ 1+ (Oyumaa & Paula de Priest 2011), 2 ]. – (R).

22. MALPIGHIALES JUSS. EX BERCHT. & J. PRESL, 1820

Prir. Rostlin 225

64. EUPHORBIACEAE JUSS. 1789 (1/14)

Gen. Pl. 384-385

**Euphorbia alpina** C.A. Mey. ex Ledeb. 1830, Icon. Pl. 2: 26. – [ 7 (Bzau-Kuli), (Olonova & Beket 2010) ]. – **Subendemic.** – (R, RB).

+ **E. caesia** Kar. & Kir. 1841, Bull. Soc. Imp. Nat. Moscou 14: 743. – [ 7+ (Bodonchiin gol), (Revushkin *et al.* 2001; Urgamal *et al.* 2013) ].

# **E. esula** L. 1753, Sp. Pl. 1: 461. – *E. discolor* Ledeb. 1850, Fl. Ross. 3, 2: 557. - *E. discolor* subsp. *karoi* (Freyn) Bassargin, 1981, Bot. Zhurn. (Leningrad) 66(3): 430. - *E. lunulata* Bunge, 1833, *Enum. Pl. China Bor.* 59. – *E. mandshurica* Maxim. 1883, Bull. Acad. Imp. Sci. St.-Petersbourg 29: 203. – [ 1, 2, 3, 4, 5+, 8+ (Dariimaa *et al.* 2004), 9, 12+ (Dariimaa *et al.* 2004; Neuffer *et al.* 2012) ].

**E. fischeriana** Steud. 1840, Nomencl. Bot. 1: 611. – *E. pallasii* Turcz. 1854, Bull. Soc. Imp. Nat. Moscou 27(1): 358. – [ 4, 5, 9 ].

**E. humifusa** Willd. 1814, *Enum. Pl.* 27. – [ 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**E. kozlovi** Prokh. 1927, Izv. Akad. Nauk SSSR, Ser. 6 20: 1370. – [ 8, 10, 12, 13, 16 ]. – **Subendemic.**

+ **E. macrorrhiza** C.A. Mey. 1830, Icon. Pl. 2: 26. - *Tithymalus macrorrhizus* (C.A. Mey.) Klotzsch & Garcke, 1830, Abh. Konigl. Akad. Wiss. Berlin 2: 26. – [ 6+, 7+ (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic.**

**E. mongolica (Prokh.) Prokh.** 1949, Fl. URSS 14: 342. - *Tithymalus mongolicus* Prokh. 1930, Izv. Glavn. Bot. Sada SSSR 29: 558. - [ 3, 6+ (Olonova & Beket 2010; Olonova et al. 2013), 7, 10, 11, 12+ (Ikh Nart ?), 13 ]. - **Subendemic.**

? + **E. pachyrhiza Kar. et Kir.** 1841, Bull. Soc. Nat. Moscou 14: 745. - *Tithymalus pachyrhizus* (Ledeb.) Klotzsch et Garcke, 1860, Abh. Akad. Wiss. Berlin 1: 69. - [ 7+ (?), (Geltman 2008) ].

? + **E. pilosa L.** 1753, Sp. Pl.: 460. - *Tithymalus pilosus* (L.) Hill, 1768, Hort. Kew.: 172.3. - *Euphorbia lutescens* Ledeb. 1829, Icon. Pl. 1: 5. - [ 7+ (?), (Geltman 2008) ].

**E. potaninii Prokh.** 1926, Izv. Akad. Nauk SSSR, Ser. 6, 6: 210. - [ 3, 6, 7+ (Sutai Khairkhan uul, Shavartiin gol), (Revushkin et al. 2001; Baikov, 2002; Ebel & Rudaya 2002), 10, 13 ]. - **Endemic.**

+ **E. soongarica Boiss.** 1860, Cent. Euphorb.: 32. - *Tithymalus soongaricus* (Boiss.) Prokh. 1933, Consp. Syst. Tithymalus As. Middl.: 103. - [ 7+ (Geltman 2008) ].

**E. subcordata C.A. Mey. ex Ledeb.** 1830, Icon. Pl. 2: 25. - [ 3, 6, 7, 10, 14 ].

**E. tschuiensis (Prokh.) Serg. ex Krylov,** 1936, Fl. W. Sibir. 8: 1880. - *Tithymalus tschuiensis* Prokh. 1933, Sist. Zametki Herb. Tomsk Univ. 3-4: 1. - [ 6, 7, 10 ].

## \$ 65. PHYLLANTHACEAE MARTINOV, 1820 (1/1)

Tekhno-Bot. Slovar. 369

\$ [incl. new genus *Flueggea*, to replaced *Securinega* from Euphorbiaceae]

# **Flueggea suffruticosa (Pall.) Baill.** 1858, Etude Euphorb. 502. - *Pharnaceum suffruticosum* Pall. 1776, Reise Russ. Reich. 3(2): 716. - *Securinega suffruticosa* (Pall.) Rehder, 1932, J. Arnold Arbor. 13(3): 338. - [ 5, 9 ]. - (R).

## 66. SALICACEAE MIRB. 1815 (2/49)

Elem. Physiol. Veg. Bot. 2: 905

# **Populus euphratica Olivier,** 1807, Voy. Emp. Othoman 3: 449. - *P. diversifolia* Schrenk, 1842, Bull. Sci. Acad. Imp. Sci. St.-Petersbourg 10: 253. - *P. euphratica* auct. Fl. Mong., non Oliv. - [ 12+ (Sanjid et al. 2004), 13, 14, 15, 16 ]. - (VU, VR, RB, RL).

**P. laurifolia Ledeb.** 1833, Fl. Altaic. 4: 297–298. - [ 2, 3, 6, 7, 10, 13, 14 ].

**P. pilosa Rehd.** 1927, Amer. Mus. Novit. 1: 292. - [ 2+ (Neuffer et al. 2012), 3, 4, 6, 7, 10, 13, 14 ].

**P. simonii Carriere,** 1867, Rev. Hort. 1867: 360. - [ 9 ].

**P. suaveolens Fisch.** 1841, Allg. Gartenzeitung 9: 404. - [ 1, 2, 3, 4 ].

**P. tremula L.** 1753, Sp. Pl. 2: 1024. - [ 1, 2, 3, 4, 5, 7, 8, 9, 11 ].

**Salix abscondita Laksch.** 1922, Herb. Fl. Ross. 8: 38. - [ 1, 2, 4+ (Onon gol), (Papchenkov et al. 2005), 5, 13 ].

**S. alatavica Kar. & Kir.** 1854, Bull. Soc. Imp. Nat. Moscou 27(1): 196. - [ 6, 7 ].

**S. arctica Pall.** 1778, Fl. Ross. 1(2): 86. - [ 1, 3, 6, 7 ].

**S. bebbiana Sarg.** 1895, Gard. & For. 8(404): 463. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13 ].

# ***S. berberifolia* Pall. 1776**, Reise Russ. Reich. 3: 321. – *S. berberifolia* subsp. *brayi* (Ledeb.) A. Skvortsov, 1961, Bot. Zhurn. (Leningrad) 21: 88. – *S. brayi* Leded. 1833, Fl. Altaic. 4: 289. – [ 1, 2, 3, 6, 7, 13 ].

***S. caprea* L. 1753**, Sp. Pl. 2: 1020-1021. – [ 1, 2, 6, 9 ].

***S. caesia* Vill. 1789**, Hist. Pl. Dauphin, 3: 768. – [ 1, 2, 3, 4, 6, 7, 10, 14 ].

***S. dasyclados* Wimmer, 1849**, Flora 32: 35. – [ 2, 4, 6, 7, 10 ].

***S. divaricata* Pall. 1788**, Fl. Ross. 1(2): 80. – [ 1, 2, 3, 4, 6, 7, 13 ].

***S. glauca* L. 1753**, Sp. Pl. 2: 1019. – [ 1, 2, 3, 6, 7, 13 ].

***S. gordejevii* Chang & A. Skvortsov, 1955**, Ill. Man. Woody Pl. N.-E. Prov. 553. – [ 5, 8, 9 ].

***S. hastata* L. 1753**, Sp. Pl. 2: 1017. – [ 1, 6, 7, 10, 13+ (Neuffer *et al.* 2012) ].

***S. jenisseensis* Flod. 1936**, Bot. Tidskr. 1936, 30: 390. – [ 1, 6, 7 ].

***S. kochiana* Trautv. 1836**, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 3: 632. – [ 1, 2, 3, 4, 5, 7, 10 ].

***S. ledebouriana* Trautv. 1836**, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 1: 132. – [ 1, 2, 3, 4, 6, 7, 9+ (Uldziin gol), (Papchenkov *et al.* 2005) ], 10, 11, 12, 13, 14, 15].

***S. microstachya* Turcz. ex Trautv. 1836**, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 3: 632. – [ 2, 3, 4, 5, 6, 8, 9, 10 ].

***S. miyabeana* Seemen, 1896**, Bot. Jahrb. Syst. 21(4, Beibl. 53): 50. – [ 1, 2, 3, 4, 5, 8, 9 ].

***S. myrtilloides* L. 1753**, Sp. Pl. 2: 1019. – [ 1, 2, 3 ].

? ***S. nasarovii* A. Skvortsov, 1956**, Bull. Soc. Nat. Mosc., Biol. 61, Livr. 1, 76. – [ 1 ].

# ***S. nipponica* Franch. & Sav. 1875**, Enum. Pl. Jap. 1: 495. - *S. triandra* subsp. *nipponica* (Franch. & Savat.) A. Skvortsov, 1968, Willows USSR 100. – [ 9 ].

***S. nummularia* Anderss. 1868**, Prodr. 16(2[2]): 298. – [ 2, 3, 6, 7 ].

# ***S. pentandra* var. *intermedia* Nakai, 1930**, Fl. Sylv. Kor. 18: 80. - *S. pseudopentandra* Flod. 1933, Ark. Bot. 20: 6. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13 ].

***S. polaris* Wahlenb. 1812**, Fl. Lapp. 261–262. – [ 1 ].

***S. pyrolifolia* Ledeb. 1833**, Fl. Altaic. 4: 270–272. – [ 1, 2, 3, 4, 6, 7, 10 ].

***S. rectijulis* Ledeb. ex Trautv. 1832**, Nouv. Mem. Soc. Imp. Nat. Moscou 2: 313–314. – [ 1, 2, 3, 6, 7 ].

? ***S. recurvigemmis* A. Skvortsov, 1957**, Bot. Zhurn. (Leningrad) 18: 37. – [ 1, 3, 6 ].

***S. reticulata* L. 1753**, Sp. Pl. 2: 1018-1019. – [ 1, 3, 6, 7 ].

***S. rhamnifolia* Pall. 1788**, Fl. Ross. 1(2): 84. – [ 1, 2, 3, 4, 5, 6, 9+ (Pistrick *et al.* 2012) ].

***S. rorida* Laksch. 1911**, Herb. Fl. Ross. 7: 131. – [ 2, 3, 4, 5, 9 ].

***S. rosmarinifolia* L. 1753**, Sp. Pl. 2: 1020. – [ 1, 2, 3, 4, 6, 10, 14 ].

# ***S. rosmarinifolia* var. *brachypoda* (Trautv. & C.A. Mey.) Y. L. Chou, 1984**, Fl. Reipubl. Popularis Sin. 20(2): 331. - *S. repens* var. *brachypoda* Trautv. & C.A. Mey. 1856, Midd. Sibir. Reise 2(2): 79. - *S. brachypoda* (Trautv. & C.A. Mey.) Kom. 1923, Trudy Glavn. Bot. Sada 39: 49. – [ 2, 4, 5, 9 ].

***S. sajanensis* Nasarov, 1936**, Fl. URSS 5: 710–711. – [ 1, 6, 7 ]. – Subendemic.

- S. saposhnikovii** A. Skvortsov, **1961**, Feddes Repert. Spec. Nov. Regni Veg. 64(1): 77. – [ 1, 3, 6, 7 ].
- S. saxatilis** Turcz. ex Ledeb. **1850**, Fl. Ross. 3: 621. – [ 1, 2, 3 ].
- S. schwerinii** E. Wolf **1929**, Mitt. Deutsch. Dendrol. Ges. 407. – [ 2, 3, 4, 5, 9 ].
- S. taraikensis** Kimura, **1934**, J. Fac. Agric. Hokkaido Univ. 26(4): 419. – [ 1, 2, 3, 4, 5, 7, 13 ].
- S. tenuijulis** Ledeb. **1833**, Fl. Altaic. 4: 262–263. – [ 3, 7, 14, 15 ].
- S. triandra** L. **1753**, Sp. Pl. 2: 1016. – [ 1, 3, 4, 14 ]. – **Subendemic**.
- S. turanica** Nasarov, **1936**, Fl. URSS 5: 138. – [ 6, 7, 10, 14 ].
- S. turczaninowii** Laksch. **1914**, Herb. Fl. Ross. 50. – [ 1, 2, 6, 7 ].
- S. udensis** Trautv. & C.A. Mey. **1856**, Reise (Fl. Ochot. 81). – [ 9 ].
- S. vestita** Pursh, **1814**, Fl. Amer. Sept. 2: 610. – [ 1, 3, 6, 7 ].
- S. viminalis** L. **1753**, Sp. Pl. 2: 1021. – [ 3, 6, 7, 10, 11, 14 ].

## 67. VIOLACEAE BATSCHE **1802** (1/26)

Tab. Affin. Regni Veg. 57

- Viola acuminata** Ledeb. **1842**, Fl. Ross. 1: 252. – [ 4+ (Kamelin et al. 2011), 5, 9 ]. – (R).
- + **V. alexandrowiana** (W. Becker) Juz. **1949**, Fl. URSS 15: 412. – [ 4+ (Kamelin et al. 2011; Urgamal et al. 2013) ]. – **Subendemic**.
- V. altaica** Ker-Gawl. **1815**, Bot. Reg. 1: 54. – [ 3, 7 ]. – **Subendemic**.
- + **V. arvensis** Murray, **1770**, Prodr. Stirp. Gott. 73. – [ 4+ (Kamelin et al. 2011; Urgamal et al. 2013) ].
- V. biflora** L. **1753**, Sp. Pl. 2: 936. – [ 1, 2, 3, 7+ (Kamelin et al. 2011) ].
- V. brachyceras** Turcz. **1842**, Bull. Soc. Imp. Nat. Moscou 15: 301. – [ 2 ]. – (VU, VR, RB).
- V. collina** Besser, **1815**, Cat. Hort. Cremeneci 151. – [ 5, 7+ (Kamelin et al. 2011) ]. – (R, RB).
- V. dactyloides** Schult. **1819**, Syst. Veg. 5: 361. – [ 2, 3, 4, 5 ].
- + **V. disjuncta** W. Becker, **1906**, Beih. Bot. Centralbl. 20(2): 126. – *V. atroviolacea* W. Becker, 1921, – [ 7+ (Kamelin et al. 2011; Olonova et al. 2013; Urgamal et al. 2013) ]. – **Subendemic**.
- V. dissecta** Ledeb. **1829**, Fl. Altaic. 1: 255. – [ 1, 2, 3, 4, 5, 7+ (Sutai Khairkhan uul, Shavartiin gol), (Revushkin et al. 2001), 9, 13 ]. – **Subendemic**.
- + **V. epipsiloidea** A. Love & D. Love, **1975**, Bot. Not. 128(4): 516. – *V. epipsila* var. *repens* W. Becker, 1935, Beih. Bot. Centralbl. 34(2): 206. – [ 2+, 4+ (Nikitin 2008; Kamelin et al. 2011; Urgamal et al. 2013) ]. – **Subendemic**.
- V. gmeliniana** Roem. & Schult. **1819**, Syst. Veg. 5: 354. – [ 1, 2, 3, 4, 5 ].
- # **V. incisa** Turcz. **1842**, Bull. Soc. Imp. Nat. Moscou 15: 302–303. – *V. fissifolia* Kitag. 1935, Bot. Mag. (Tokyo) 49(580): 226–228. - *V. dissecta* var. *incisa* (Turcz.) Y.S. Chen, 2007, Fl. China 13: 93. – [ 2+ (Kamelin et al. 2011), 4 ]. – **Subendemic**.

## CONSPECTUS OF THE VASCULAR PLANTS OF MONGOLIA (2014)

---

**Notes:** This name is an accepted and new combination by V.V. Nikitin & M.M. Silantjeva (2006).

+ **V. ircutiana** Turcz. **1842**, Bull. Soc. Imp. Nat. Moscou 15: 298. – [ 2+ (Kamelin *et al.* 2011; Urgamal *et al.* 2013) ]. – **Subendemic**.

**V. macroceras** Bunge, **1829**, Fl. Altaic. 1: 256–257. – [ 7 (Nikitin & Silantjeva 2006) ]. – **Subendemic**.

**V. mauritii** Tepl. **1882**, Zap. Ural'sk. Obshch. Lyubit. Estestv. 7(3): 37. – [ 1, 4+, 5+ (Kamelin *et al.* 2011), 7, 9, 13 ].

# **V. mirabilis** L. **1753**, Sp. Pl. 2: 936. – *V. brachysepala* Maxim. 1859, Prim. Fl. Amur. 50. – [ 2+ (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 5+ (Kamelin *et al.* 2011) ].

**Notes:** This name is an accepted and new combination by V.V. Nikitin (2008).

**V. patrinii** Ging. **1824**, Prodr. 1: 293. – [ 2+ (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 5, 7, 9+ (Kamelin *et al.* 2011), 10, 14 ]. – **(R)**.

+ **V. rudolfii** V. Nikitin, **2007**, Bot. Zhurn. 92, 2: 212. – [ 4+, 5+ (Kamelin *et al.* 2011; Urgamal *et al.* 2013) ]. – **Subendemic**.

# **V. rupestris** F.W. Schmidt, **1791**, Neuere Abh. Konigl. Bohm. Ges. Wiss. 1: 60. – *V. arenaria* DC. 1805, Flore Franc. (ed. 3) 5: 806. – [ 2, 3, 4, 6, 7+ (Yoltiin gol), (German *et al.* 2009; Kamelin *et al.* 2011) ].

**Notes:** This name is an accepted and new combination by V.V. Nikitin (2008).

**V. saccharinensis** H. Boissieu, **1910**, Bull. Soc. Bot. France 57: 188. – [ 2, 4, 5+ (Kamelin *et al.* 2011) ].

+ **V. schauloi** V. Nikitin **2007**, Bot. Zhurn. 92, 2: 212-225. – [ 2+, 4+ (Kamelin *et al.* 2011; Urgamal *et al.* 2013) ]. – **Subendemic**.

**V. selkirkii** Pursh ex Goldie, **1822**, Edinburgh Philos. J. 6(12): 324. – [ 2 (Nikitin & Silantjeva 2006) ].

+ **V. tenuicornis** subsp. **trichosepala** W. Becker, **1916**, Beih. Bot. Centralbl. 34(2): 249–250. – *V. trichosepala* (W. Becker) Juz. 1949, Fl. URSS, 15: 416. – [ 4+ (Kamelin *et al.* 2011; Urgamal *et al.* 2013) ].

**V. uniflora** L. **1753**, Sp. Pl. 2: 936. – [ 1, 2, 3, 4, 7+ (Nikitin 2008; Kamelin *et al.* 2011) ].

**V. variegata** Fisch. ex Link, **1821**, Enum. Hort. Berol. Alt. 1: 240. – [ 1, 4, 5 ].

### **68. LINACEAE DC. EX PERLEB 1818 (1/5)**

Vers. Arzneikr. Pfl. 107

**Linum altaicum** Ledeb. ex Juz. **1949**, Fl. URSS 14: 113. – [ 1+ (Svetlova 2007), 6, 7, 8, 9 ].

**L. baicalense** Juz. **1949**, Fl. URSS 14: 715–716. – [ 1, 2, 3, 4, 5, 7, 8, 9, 13 ].

**L. pallescens** Bunge, **1829**, Fl. Altaic. 1: 438–439. – [ 2+, 3+, 4+, 7, 8+, 9+ (Svetlova 2007), 10, 13+ (Svetlova 2007), 14 ]. – **(R)**.

+ **L. perenne** L. 1753, Sp. Pl. 1: 277. – *L. sibiricum* DC. 1824, Prodr. 1: 427. – [ 7+ (Yoltiin gol), 14+ (Baitag Bogd uul), (Svetlova 2007) ].

+ **L. violascens** Bunge, 1829, Fl. Altaic. 1: 439. – *L. sibiricum* var. *parviflorum* Ledeb. 1829, Fl. Altaic. 1: 440. – [ 7+ (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic**.

**Notes:** The *L. usitatissimum* L. is cultivated plant distributed in the Western Mongolia (Grubov 1982; Gubanov 1996; Svetlova 2007).

#### 69. HYPERICACEAE JUSS. 1789 (1/4)

Gen. Pl. 254

**Hypericum ascyron** L. 1753, Sp. Pl. 2: 783-784. – [ 2, 3, 4, 5 ].

# **H. ascyron** subsp. **gebleri** (Ledeb.) N. Robson, 2001, Bull. Nat. Hist. Mus. London, Bot. 31(2): 57–58. – *H. gebleri* Ledeb. 1831, Fl. Altaic. 3: 364. – [ 2 (Ar Minjiin gol) ]. – (R, RB).

**H. attenuatum** Fisch. ex Choisy, 1821, Prodr. Monogr. Hyperic. 47. – [ 2, 3, 4, 5, 9 ].

**H. perforatum** L. 1753, Sp. Pl. 2: 785. – [ 3, 6 ]. – (R).

**Citation:** Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch. 2014. *Conspectus of the vascular plants of Mongolia*. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp. (p. 121-143).

**70. FABACEAE LINDL. 1836 (26/356) \***

Intr. Nat. Syst. Bot. (ed. 2) 148

\* based on N. Ulziykhutag (2003, 2004), genera *Caragana* by Ch. Sanchir (1999, 2000) and *Oxytropis* by V.I. Grubov (2003).

**Alhagi maurorum Medik. 1787**, Vorles. Churpfalz. Phys.-Okon. Ges. 2: 397. – [ **14, 15, 16** ].

+ **A. sparsifolia Shap. ex Keller & Shap.** 1933, Sovetsk. Bot. 3-4: 167. – *A. maurorum* subsp. *sparsifolium* (Shap.) Yakovlev 2003, Bot. Zhurn. (St.-Petersburg) 88: 101-106. – *A. kirghisorum* var. *sparsifolia* Shap. 1933, Sovetsk. Bot. 1933(3-4): 167. – [ **14+, 15+** (Flora of China 2010; Urgamal *et al.* 2013) ].

**Ammopiptanthus mongolicus (Maxim. ex Kom.) S.H. Cheng**, 1859, Bot. Zhurn. (Moscow & Leningrad) 44(10): 1382. - *Piptanthus mongolicus* Maxim. ex Kom. 1920, Trudy Glavn. Bot. Sada 34: 33. – [ **12, 13, 16** ]. – **Subendemic. (EN, VR, RB)**.

**Astragalus adsurgens Pall.** 1800, Sp. Astrag.: 40. – [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13** ].

# **A. agrestis G. Don**, 1832, Gen. Hist. 2: 258. - *A. dasyglossis* DC. 1825, Prodr. 2: 282. – [ **7, 10** ].

+ **A. aksaicus Schischk.** 1932, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva: 7-8. – [ **7+** (Tolbo nuur), (Revushkin *et al.* 2001; Olonova & Beket 2010; Urgamal *et al.* 2013) ]. – **Subendemic.**

**A. alaschanensis H.C. Fu**, 1977, Fl. Chin. Intramong. 3: 288. – *A. scabriasetus* var. *multijugus* Hand.-Mazz. 1939, Oesterr. Bot. Z. 88: 303. – [ **15** ].

**A. alashanus Bunge ex Maxim.** 1877, Bull. Acad. Imp. Sci. St.-Petersbourg 24(1): 31. – [ **13** (Dund Saikhan uul), (Ulziykhutag 2004) ]. – **Subendemic.**

+ **A. albertii Bunge**, 1880, Trudy Glavn. Bot. Sada 7: 375. – [ **10+** (Khar-Us nuur), (Revushkin *et al.* 2001), **11+** (Grubov, 1955) ].

**A. albicans Bong.** 1841, Verz. Saisan-nor Pfl. 21. – [ **14** (Bodonchiin gol), (Ulziykhutag 2004) ].

**A. alpinus L.** 1753. Sp. Pl. 2: 760. – [ **1, 2, 7, 9, 13** ].

**A. altaicola Podl.** 1993, Sendtnera 1: 270. - *A. altaicus* Bunge, 1868, Astragalologia 1: 37; 2: 46. – [ **6, 7** (Uliastai and Bulgan gol), **14+** (Argalant uul), (Ulziykhutag 2004) ]. – **(R)**.

**A. ammodytes Pall.** 1771, Reise Russ. Reich. 2: 742. – [ **10** (Altan els), **14** (Argalant uul), (Ulziykhutag 2004) ].

**A. ankylotus Fisch. & C.A. Mey.** 1835, Index Sem. (St.-Petersburg) 2: 27. – [ **7** (Bayan gol), (Ulziykhutag 2004), **14** ].

+ **A. arcuatus Kar. & Kir.** 1841, Bull. Soc. Imp. Nat. Moscou 14: 407. – [ **14+** (Khovd, Altai sum), (Revushkin *et al.* 2001; Ebel & Rudaya 2002) ].

**A. argutensis** Bunge, 1868, *Astragalologia* 1: 98; 2: 170. – [ 4+, 6, 7, 8+ (Neuffer *et al.* 2012) ]. – **Subendemic**.

**A. arkalyicensis** Bunge, 1868, *Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7* 11(16): 139. – [ 6, 7 (Buyant uul), 14+ (Ebel & Rudaya 2002) ].

**A. austrosibiricus** Schischkin, 1933, *Fl. Sibir.* 7: 1678. – [ 1+, 3+ (Ulziykhutag 2003), 6+ (Tsagaan nuur), (Revushkin *et al.* 2001), 7, 8+ (Ar Unjuul), (Ulziykhutag 2004), 13+ (Ulziykhutag 2003) ].

**A. baitagensis** Sanczir ex N. Ulzij. 1990, *Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol.* 95(1): 109. – [ 14 (Baitag Bogd uul, Ikh Khavtaga uul), (Ulziykhutag 2004) ]. – **Endemic**. Described from Baitag Bogd (Dzungarian gobi phytogeographical region) of Mongolia (LE, isotype - UBA). – (R).

**A. banzragczii** N. Ulzij. 1987, *Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol.* 92(5): 111. – [ 14 (Ereen tolgoi uul) (Ulziykhutag 2004) ]. – **Endemic**. Described from Dzungarian gobi phytogeographical region (MW).

**A. beketowii** (Krassn.) B. Fedtsch. 1905, *Trudy Imp. S.-Peterburgsk. Bot. Sada* 24: 202. - *Oxytropis beketovii* Krassn. 1889, *Script. Hort. Univ. Petrop.* 1: 15. - *Astragalus polychromus* Freyn, 1904, *Bull. Herb. Boissier II*, 4: 454. – [ 6 (Ulaan davaa), (Ulziykhutag 2004) ].

**A. bifidus** Turcz. 1842, *Fl. Ross.* 1: 605. – [ 1, 3 ].

**A. borodinii** Krassn. 1887, *Bot. Zap.* 2(1): 15. - *A. hypogaeus* var. *borodinii* Krasn. 1888, *Zap. Rus. Geogr. Obsch.* 19: 378. - *A. projecturus* Sumn. 1936, *Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva* 9–10: 6. – [ 7 (Bulgan gol), 14 (Khalzan uul), (Ulziykhutag 2004) ].

**A. brachybotrys** Bunge, 1839, *Del. Sem. Dorpat.* 8. – [ 6, 7, 10, 12+ (Delgerkhangai uul), (Ulziykhutag 2004), 13, 14 ]. – **Subendemic**.

**A. brevifolius** Ledeb. 1831, *Fl. Altaic.* 3: 334. – [ 1, 2, 3, 4, 6, 8, 11+ (Ongiin gol), (Ulziykhutag 2004), 12+ (Dariimaa *et al.* 2004), 13 ]. – **Subendemic**.

**A. burtschumensis** Saposhn. ex Sumn. 1933, *Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva* 1933(1–2): 7. – [ 6+ (Olonova *et al.* 2013), 7 (Khasagt Khairkhan uul), 10+ (Khungyin gol), (Ulziykhutag 2004) ].

**A. candidissimus** Ledeb. 1831, *Fl. Altaic.* 3: 309–310. - *A. magdalena* Greene, *Pittonia* 1(10): 162. – [ 7, 14 ].

**A. changaicus** Sanczir ex N. Ulzij. 1989, *Fl. Khangaya* 121. – [ 3, 7+ (Nariin gol), (Ulziykhutag 2003, 2004) ]. – **Endemic**. Described from Central Khangai (UBA, paratype - LE). – (R).

**A. chinensis** L. f. 1762, *Dec. Pl. Horti Upsal.* 1: 5–6. – [ 5, 9 (Dashbalbar), (Ulziykhutag 2004) ].

+ **A. chorinensis** Bunge, 1868, *Astragalologia* 1: 22; 2: 24. – [ 2+, 3+, 4+ (Grubov 1982; Urgamal *et al.* 2013) ]. – **Subendemic**.

**Notes:** This species was not given in Gubanov's conspectus (1996).

**A. chubsugulicus** Gontsch. ex N. Ulzij. 1990, *Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol.* 95(1): 110. – [ 1 (Khovsgol nuur) ]. – **Endemic**. Described from Khovsgol phytogeographical region (LE).

**A. compressus** Ledeb. **1831**, Fl. Altaic. 3: 304. – [ 7 ].

**A. confertus** Benth ex Bunge, **1869**, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7 15(1): 27. – [ 3, 7 (Tamchiin davaa), (Ulziykhutag 2004) ].

+ **A. consanguineus** Bong. **1841**, Verz. Saisang-nor Pfl. 22. – [ 10+ (Khovd, Darvsum), (Revushkin *et al.* 2001; Urgamal *et al.* 2013) ]. – **Subendemic**.

**A. contortuplicatus** L. **1753**, Sp. Pl. 2: 758. – [ 14 (Bulgan gol), (Ulziykhutag 2004) ].

**A. dahuricus** (Pall.) DC. **1825**, Prodr. 2: 285. - *Galega dahurica* Pall. 1776, Reise Russ. Reich. 3: 742. – [ 3, 4, 5, 8+ (Murun and Kherlen gol), (Ulziykhutag 2004), 9, 10, 12 ].

**A. danicus** Retz. **1781**, Observ. Bot. 3: 41. – [ 1, 4+ (Neuffer *et al.* 2012) ]. – **(R)**.

**A. depasperatus** Ledeb. **1831**, Fl. Altaic. 3: 314. – [ 3, 6, 7 ]. – **Subendemic**.

**A. dilutus** Bunge, **1840**, Del. Sem. Hort. Bot. Dorpat. 1840: 7. – [ 3, 6, 7, 10, 12+ (Ulziykhutag 2003), 13, 14 ]. – **Subendemic**.

**A. dshimensis** Gontsch. **1947**, Bot. Mater. Gerb. Bot. Inst. Komarova Acad. Nauk SSSR 10: 30. - *A. hoantchy* subsp. *dschimensis* (Gontsch.) K.T. Fu, 1993, Fl. Reipubl. Popularis Sin. 42(1): 84. – [ 7 (Aj Bogd uul), 14 (Baitag Bogd uul), (Ulziykhutag 2004) ]. – **(VU, R, RL)**.

**A. ellipsoideus** Ledeb. **1831**, Fl. Altaic. 3: 319–321. – *A. transiliensis* Gontsch. 1947, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 10: 41. – [ 7, 15 ]. – **Subendemic**.

**A. follicularis** Pall. **1800**, Species Astrag. 19. – [ 3 (Ogii nuur), (Ulziykhutag 2004) ].

**A. frigidus** (L.) A. Gray, **1864**, Proc. Amer. Acad. Arts 6: 219. - *Phaca frigida* L. 1753, Syst. Nat. (ed. 10) 2: 1173. – [ 1, 2, 3, 6, 7, 13 ].

**A. fruticosus** Pall. **1800**, Sp. Astrag. 21. – [ 2, 3, 4, 9+ (Neuffer *et al.* 2012), 13 ].

**A. galactites** Pall. **1800**, Sp. Astrag. 85. – [ 1+ (Ulziykhutag 2004), 2, 3, 4, 5, 8, 9 ]. – **Subendemic**.

**A. glomeratus** Ledeb. **1831**, Fl. Altaic. 3: 327. – [ 3, 7, 13 ].

**A. gobi-altaicus** N. Ulzij. **1990**, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 95(2): 83. – [ 13 (Gurvan Saikhan, Ikh Bogd and Shinejinst uul), (Ulziykhutag 2004) ]. – **Endemic**. Described from Gobi Altai phytogeographical region (LE, isotype - UBA).

**A. gobicus** Hanelt & Davazamc, **1965**, Feddes Repert. 70: 41. – [ 15 (Taliin Bilgekh bulag, Tsagaan Bogd uul), (Ulziykhutag 2004) ]. – **Endemic**. Described from Trans Altai gobi phytogeographical region (GAT, isotype - UBA).

**A. granitovii** Sanczir ex N. Ulzij. **1990**, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 95(2): 81. – [ 7 (Tamch nuur), 14 (Khavtaga uul), (Ulziykhutag 2004) ]. – **Endemic**. Described from Dzungarian gobi phytogeographical region (UBA). – **(R)**.

**A. gregorii** B. Fedtsch. & Basil. **1930**, Zapiski Mongolij i Urjango Kraj 3(2): 815. – *A. brevifolius* subsp. *gregorii* (B. Fedtsch. & N. Basil.) N. Ulzij. 2003, Fabaceae in Mongol. 195. – [ 7 (Dayan nuur), (Olonova & Beket 2010) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region (LE). – **(R)**.

**A. grubovii** Sanczir, **1974**, Bot. Zhurn. (Moscow & Leningrad) 59(3): 366. – [ 7, 10, 11, 12, 13, 14, 15, 16 ]. – **Subendemic**. Described from Eastern Gobi phytogeographical region (UBA, HIMC, isotype - LE).

+ **A. grum-grshimailei** Palib. **1908**, Bull. Herb. Boiss., ser. 2, 8(3): 158–159. – [ 7+ (Bulgan gol), (Ulziykhutag 2003, 2004; Urgamal *et al.* 2013) ]. – **Subendemic**.

**A. gubanovii N. Ulzij.** 1987, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 92(5): 112. – [ 7 (Sagsai gol), 10 (Uvs nuur), (Ulziykhutag 2004) ]. – **Endemic.** Described from nearest Uvs nuur of Great Lake phytogeographical region (MW, isotype - LE).

+ **A. hamiensis S.B. Ho,** 1983, Bull. Bot. Res., Harbin 3(1): 43–44. – [ 14+ (Burgastiin bulag), (Uliykhutag, 2003, 2004; Urgamal *et al.* 2013) ]. – **Subendemic.**

**A. hsinbaticus P.Y. Fu & Y.A. Chen,** 1976, Fl. Pl. Herb. Chin. Bor.-Ort. 5: 175. – [ 9 (Matad sum), (Ulziykhutag 2004) ]. – **Subendemic.** Described from Eastern Mongolia (Khulunbuir) (PE).

**A. hypogaeus Ledeb.** 1829, Fl. Ross. 1: 23. – [ 3, 6, 7 ].

**A. inopinatus Boriss.** 1947, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 10: 51. – [ 1, 2, 3, 4, 5, 7, 8, 9, 13 ].

**A. junatovii Sanczir,** 1974, Bot. Zhurn. (Moscow & Leningrad) 59(3): 368. – [ 12+ (Choir uul), (Ulziykhutag 2004), 13, 15, 16 ]. – **Subendemic.** Described from Gobi Altai phytogeographical region (UBA, isotype - LE).

**A. kasachstanicus Golosk.** 1957, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 18: 111. – [ 7 (Tonkhil nuur), (Ulziykhutag 2004) ].

**A. kaufmannii Krylov,** 1932, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva: 3. – [ 1 (Ivanova 2003), 3 ].

**A. kenteicus N. Ulzij.** 1990, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 95(1): 111. – [ 2 (Tuul and Eruu gol), (Ulziykhutag 2003) ]. – **Endemic.** Described from Khentii phytogeographical region (LE, isotype - UBA).

**A. klementzii N. Ulzij.** 1989, Fl. Khangaya 123. – [ 3 (Terkhiin Tsagaan nuur), (Ulziykhutag 2003) ]. – **Endemic.** Described from nearest of Terkhiin Tsagaan nuur of Central Khangai (LE, isotype - UBA).

**A. koslovii B. Fedtsch. & Basil. ex N. Ulzij.** 1990, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 95(2): 85. – [ 13 (Ikh Bogd uul), (Ulziykhutag 2004) ]. – **Endemic.** Described from Gobi Altai (Ikh Bogd) phytogeographical region (LE).

**A. kurtschumensis Bunge,** 1868, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7, 11(16): 139. – [ 7, 10 ]. – **Subendemic. – (R).**

**A. laguroides Pall.** 1776, Reise Russ. Reich. 3: 750. – [ 2, 3, 4, 6, 7, 8, 10, 11, 12, 13 ].

**A. lasiopetalus Bunge,** 1839, Index Sem. (Dorpat) 7: 1839. – [ 7+ (Bulgan gol), 14 (Bulgan, Bodonchiin gol), (Ulziykhutag 2004) ]. – **Subendemic.**

**A. lasiophyllus Ledeb.** 1842, Fl. Ross. 1: 627. – [ 14 (Tsagaan Tunge), (Ulziykhutag 2004) ].

+ **A. laxmannii Jacq.** 1776, Hort. Bot. Vindob. 3: 22. – [ 7+, 10+, 14+ (Ulziykhutag 2003; Urgamal *et al.* 2013) ].

**A. lepsensis Bunge,** 1868, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7, 15, 1: 29. – [ 7 (Bulgan gol), (Ulziykhutag 2004) ]. – **Subendemic.**

**A. lupulinus Pall.** 1776, Reise Russ. Reich. 3: 750. – [ 3, 4+ (Ulziykhutag 2004), 7, 11, 12+ (Delgerkhangai uul), (Ulziykhutag 2004), 13, 14, 16 ].

**A. luxurians Bunge,** 1868, Astragalologia 1: 23; 2: 25. – [ 7 (Uliastain gol), (Olonova & Beket 2010) ]. – **Subendemic.**

- A. macrocerus C.A. Mey. 1841**, Verz. Saisang-nor Pfl. 24. - *A. macrolobus* M. Bieb. 1819, Fl. Taur.-Caucas. 3: 493. - [ **7, 10, 11** ].
- A. macropterus DC. 1825**, Prodr. 2: 283. - [ **1** (Sul uul) ].
- A. macrotrichus E. Peter, 1937**, Acta Horti Gothob. 12(3): 67. - [ **7, 10+** (Khovd gol), (Ebel & Rudaya 2002), **12, 14, 15, 16** ].
- A. majevskianus Krylov, 1932**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 1932(3): 1. - [ **7** (Rashaantiin gol), (Ulziykhutag 2004; Olonova & Beket 2010) ]. - **Subendemic**.
- A. megalanthus DC. 1802**, Astragalologia 165. - [ **8** (Khar Tolgoi), **12** (Mandalgobi), (Ulziykhutag 2004) ].
- # **A. melilotoides Pall. 1776**, Reise Russ. Reich. 3: 748. - [ **2, 3, 4, 8+** (Zorgol Khairkhan uul), **9+** (Dariganga), **10+** (Mankhan), (Ulziykhutag 2003, 2004), **11, 12, 13, 16** ].
- A. melilotoides var. tenuis Ledeb. 1842**, Fl. Ross. 1: 618. - *A. tenuis* Turcz. 1842, Bull. Soc. Imp. Nat. Moscou 15: 768. - [ **2+** (Neuffer *et al.* 2012), **3, 5, 8, 9** ].
- A. membranaceus (Fisch.) Bunge, 1868**, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7, 11, 16: 25. - *Phaca membranacea* Fisch. 1825, Prodr. 2: 273. - [ **2, 4** (Ulziykhutag 2004)].
- A. miniatus Bunge, 1868**, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7 11(16): 98. - [ **3, 4, 8, 9, 11, 12, 13** ].
- A. mongholicus Bunge, 1868**, Astragalologia 1: 25, 2: 30. - [ **1, 2, 3, 4, 5+ (?)**, **7, 8, 9, 10+** (Ulyastain gol), (Ulziykhutag 2004), **11, 13** ]. - **Subendemic**. Described from Eastern Mongolia (LE). - (R).
- A. monophyllus Bunge, 1880**, Bull. Acad. Imp. Sci. St.-Petersbourg 26: 473. - [ **6+** (German *et al.* 2003), **7, 8+** (Neuffer *et al.* 2012), **9+** (Ulziykhutag 2003), **10, 11, 12+** (Delgerkhangai uul), (Ulziykhutag 2004), **13, 14+** (Bodonchiin gol), (Ulziykhutag 2004), **15, 16** ]. - **Subendemic**. Described from Eastern Mongolia (LE).
- A. multicaulis Ledeb. 1831**, Fl. Altaic. 3: 295. - [ **3, 6, 7, 13** ]. - **Subendemic**.
- A. norvegicus Weber, 1784**, Pl. Minus Cogn. 13. - *A. oroboides* Hornem. 1810, Nomencl. Fl. Dan. pl. 1396. - [ **1, 2** ].
- + **A. ochrias Bunge, 1877**, Bull. Acad. Imp. Sci. St.-Petersbourg 24: 33. - [ **12+** (Sainshand), **14+** (Baitag Bogd uul), **15+** (Atas Bogd uul), **16+** (Borzongiin gobi), (Ulziykhutag 2003, 2004) ]. - **Subendemic**.
- A. onobrychis L. 1753**, Sp. Pl. 2: 760. - [ **10** (Tesiin gol), (Ulziykhutag 2004) ].
- + **A. ortholobus Bunge, 1868**, Astragalologia 1: 127, 2: 223. - [ **7+** (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. - **Subendemic**.
- + **A. oxyglottis Steven ex M. Bieb. 1808**, Fl. Taur.-Caucas. 2: 192. - *A. oxyglottis* var. *psiloglottis* (DC.) Bunge, 1830. - [ **7+, 14+** (Uvgud uul), (Smirnov *et al.* 2003; Kamelin & Ulziykhutag 2005) ].
- A. pavlovii B. Fedtsch. & Basil. 1929**, Bull. Moskovsk. Obshch. Isp.i Prir. Otd. Biol. 38: 90. - [ **13, 14, 15, 16** ]. - **Endemic**. Described from Alashan Gobi phytogeographical region (MW, isotype - LE).
- + **A. peterae H.T. Tsai & T.T. Yu, 1936**, Bull. Fan Mem. Inst. Biol. : 7(1): 27–28. - *A. brachytropis* f. *giganteus* Lipsky - [ **6+, 10+** (Grubov 1982; Urgamal *et al.* 2013) ]. - **Subendemic**.

**Notes:** This is species was not given in Gubanov's conspectus (1996).

**A. physocarpus** Ledeb. **1831**, Fl. Altaic. 3: 335. – [ **7** (Tavan Bogd uul, Tsagaan gol), (Ulziykhutag 2004) ]. – **Subendemic**. Described from Tavan Bogd uul (LE). – (**R**).

**A. politovii** Krylov, 1932, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 3: 3. – [ **7** (Dayan nuur, Tavan Bogd uul), (Gubanov 1996; Shaulo *et al.* 2002; Ulziykhutag 2004; Olonova & Beket 2010) ]. – **Subendemic**. Described from Tavan Bogd uul (LE).

**A. polozhiae** Timoch. **1980**, Bot. Zhurn. (Kiev) 65: 1796. - *A. squarrosum* Sanczir, 1982, Opr. Sosud. Rast. Vasc. Pl. Mongol. 160. – [ **6** (Ulaan Lonkh uul), **7** (Uench gol), (Ulziykhutag 2004) ]. – (**R**).

**A. potaninii** N. Ulzij. **1990**, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 95(2): 77. – [ **7** (Buyant and Chigertein gol), (Ulziykhutag 2004; Olonova & Beket 2010) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region (LE).

**A. propinquus** Schischkin, 1933, Fl. Eap. Sibir. 7: 1657. – [ **1, 2, 3, 4, 6+** (Ulziykhutag 2003), **7, 10** ].

+ **A. pseudoborodinii** S.B. Ho, 1983, Bull. Bot. Res., Harbin 3(1): 54–55. – *A. baeischinticus* N. Ulzij. 2001, Novosti Syst. Vyssh. Rast. [New Delhi] 33: 144. – [ **14+** (Uushgiin us), (Ulziykhutag 2000; Ebel & Rudaya 2002) ]. – **Subendemic**.

# **A. pseudobrachytropis** Gontsch. **1947**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 10: 31. - *A. abramovii* Gontsch. 1946, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 9: 113. – [ **6** (Ulaan davaa), (Ulziykhutag 2004) ].

**A. pseudochorinensis** N. Ulzij. **1990**, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 95(1): 113. – [ **2, 4** ]. – **Endemic**. Described from Khentii phytogeographical region (LE).

**A. pseudotesticulatus** Sanczir ex N. Ulzij. **1990**, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 95(2): 82. – [ **7** (Bulgan gol, Rashaant uul), (Ulziykhutag 2004; Olonova & Beket 2010) ]. – **Subendemic**. Described from Mongolian Altai phytogeographical region (LE, isotype - UBA).

**A. pseudovulpinus** Sanczir ex N. Ulzij. **1990**, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 95(1): 115. - *A. pseudovulpinus* Sanczir, 1982, Opr. Sosud. Rast. Vasc. Pl. Mongol. 157. – [ **14** (Ikh Khavtaga and Khuren Bogd uul), (Ulziykhutag 2004) ]. – **Endemic**. Described from Dzungarian gobi phytogeographical region (UBA).

**A. puberulus** Ledeb. **1831**, Fl. Altaic. 3: 299. – [ **7, 10, 11, 13, 14** ].

+ **A. roseus** Ledeb. **1831**, Fl. Altaic. 3: 330–331. - *A. dasycephalus* Besser ex Steven, 1832, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 4: 264. – [ **7+, 14+** Neuffer *et al.* 2003; Urgamal *et al.* 2013 ]. – **Subendemic**.

**A. rudolfii** N. Ulzij. **1990**, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 95(2): 80. – [ **7** (Bulgan gol), (Ulziykhutag 2004), **14** ]. – **Subendemic**. Described from Mongolian Altai phytogeographical region (LE, isotype - UBA).

**A. rytidocarpus** Ledeb. **1831**, Fl. Altaic. 3: 315. – [ **2, 3, 7** ].

**A. sabuletorum** Ledeb. **1831**, Fl. Altaic. 3: 321. – [ **7, 14, 15** (Ulziykhutag 2004) ]. – **Subendemic**.

**A. saichanensis** Sanczir, 1974, Bot. Zhurn. (Moscow & Leningrad) 59(3): 366. – [ **7** (Tamchiin davaa), **13** (Baruun Saikhan uul), (Ulziykhutag 2004) ]. – **Endemic**. It was described Gobi Altai phytogeographical region (UBA, isotype - LE).

**A. sanczirii N. Ulzij.** 1990, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 95(1): 114. – *A. patentipilosus* Sanczir, 1982, Opr. Sosud. Vasc. Pl. Mongol.: 159. – [ 7, 14 (Altai sum), (Ulziykhutag 2004) ]. – **Endemic.** Described from Dzungarian gobi phytogeographical region (LE, isotype - UBA).

**A. saraleensis Gontsch.** 1941, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 9: 92. – [ 1 ].

**A. scaberrimus Bunge,** 1833, Enum. Pl. China Bor. 2: 17–18. – [ 2, 3, 4, 8, 9, 12 ].

**A. scabrisetus Bong.** 1841, Verz. Saisang-nor Pfl. 89. – [ 15 (Shar Khulstain bulag), (Ulziykhutag 2004) ]. – (R).

**A. schanginianus Pall.** 1800, Sp. Astrag. 77. – [ 7 (Khovd gol), (Ulziykhutag 2004) ].

+ **A. scleropodius Ledeb.** 1831, Fl. Altaic. 3: 326. – [ 7+ (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic.**

**A. secundus DC.** 1802, Astragalologia 128: 55. – [ 1+ (Ulziykhutag 2004), 3 (Dashdagva uul), 13+ (Ikh Bogd uul), (Ulziykhutag 2004) ].

**A. sphaerocystis Bunge,** 1845, Beitr. Fl. Russl. 97. – [ 7 (Bulgan gol), (Ulziykhutag 2004) ].

+ **A. schrenkianus Fisch. & C.A. Mey.** 1844, Bull. Cl. Phys.-Math. Acad. Imp. Sci. 2: 197. – *A. turlanicus* Bajtenov & Myrz. 1977, Bot. Mater. Gerb. Bot. Inst. Bot. Acad. Nauk Kazakhsk. S.S.R. 10: 29. – [ 7+ (Tamchiin davaa, Tonkhil nuur), (Ulziykhutag 2003, 2004) ].

**A. stenoceras C.A. Mey.** 1841, Verz. Saisang-nor Pfl. 23. – [ 10 (Uvs nuur, Borig Deliin els), (Ulziykhutag 2004) ].

**A. suffruticosus DC.** 1802, Astragalologia 82. – [ 1+ (Ulziykhutag 2004), 2, 3, 4, 7, 8, 13 ].

**A. sulcatus L.** 1753, Sp. Pl. 2: 756. – [ 7, 10, 11 ].

**A. tamiricus N. Ulzij.** 1989, Fl. Khangaya: 124. – [ 3 (Khoid Tamiriin gol) ]. – **Endemic.** Described from Khangai (Khoid tamiriin gol) phytogeographical region (LE, isotype - MW).

+ **A. tephrolobus Bunge,** 1868, Astragalologia 1: 127, 2: 222. – [ 7+ (Tamchiin davaa), (Revushkin *et al.* 2001; Olonova & Beket 2010; Olonova *et al.* 2013) ]. – **Subendemic.**

**A. tibetanus Benth. ex Bunge,** 1868, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7 11(16): 52. – [ 7, 10, 11, 14, 15 ].

**A. tschujensis Bunge,** 1868, Astragalologia 1: 22; 2: 24. – [ 7 (Urtiin Khuren uul), (Ulziykhutag 2004; Olonova & Beket 2010; Urgamal *et al.* 2013) ]. – **Subendemic.**

+ **A. tulinovii B. Fedtsch.** 1903, Fl. Pamir. 27. – [ 7+ (Aj Bogd uul), (Ulziykhutag 2003, 2004) ]. – **Subendemic.**

**A. tuvinicus Timoch.** 1978, Sist. Geogr. Rast. Sibir. 8. – [ 7, 14 (Khalzan uul), (Ulziykhutag 2004) ].

**A. uliginosus L.** 1753, Sp. Pl. 2: 757. – [ 1, 2+ (Ulziykhutag 2004), 3, 4, 5, 8 ].

# **A. ulziykhutagii Sytin,** 1996, in Kew Bull. 51(2): 376. – *A. alexandri* N. Ulzij. 1990, Bull. Moskovsk. Obač. Isp. Prir. Otd. Biol. 95(1): 107. – [ 7 (Bulgan and Khargaitiin gol), (Gubanov 1999; Ulziykhutag 2004; Olonova & Beket 2010) ]. – **Endemic.** Described from Mongolian Altai phytogeographical region (LE).

**A. urungensis N. Ulzij.** 1990, Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 95(2): 75. – [ 14 (Bulgan gol, Ulaan Yzuuriin khudag), (Ulziykhutag 2004) ]. – **Endemic.** Described from Dzungarian gobi phytogeographical region (LE).

**A. vallestris Kamelin,** 1979, Novosti Syst. Vyssh. Rast. 15: 173. – [ 3, 7+ (Tonkhil nuur), 10+ (Khovd gol), (Ulziykhutag 2004), 11, 12, 13, 14 ]. – **Subendemic.**

**A. variabilis Bunge ex Maxim.** 1878, Bull. Acad. Imp. Sci. Saint-Petersbourg 24(1): 33. – [ 7, 11+ (Taatsiin gol), 12, 13+ (Tost and Nemegt uul), (Ulziykhutag 2004), 14, 15, 16 ]. – **Subendemic.**

**A. versicolor Pall.** 1800, Sp. Astrag. 45. – [ 1, 2, 3, 4, 6 ].

**A. viridiflavus N. Ulzij.** 1990, Bull. Moskovsk. Obač. Isp. Prir., Otd. Biol. 95(2): 78. – [ 1, 2, 3, 4 ]. – **Endemic.** Described from Northern Mongolia (LE, isotype - UBA).

+ **A. xanthotrichus Ledeb.** 1831, Fl. Altaic. 3: 326. – [ 7+ (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic.**

+ **A. yumenensis S.B. Ho,** 1994, Cat. Type Spec. Herb. China 419. – [ 14+ (Khavtaga uul), 15+ (Ulziykhutag 2003, 2004; Urgamal *et al.* 2013) ]. – **Subendemic.**

**Notes:** It was informed that this species is not have and maybe for *A. bujan-orschichii* Sanczir is distributed South Mongolia. (Sanchir, 2000).

+ **A. zacharensis Bunge,** 1968, Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7 11(16): 23. – *A. skvortzovii* Bar. & Chu, 1959, Fl. Pl. Herb. Chin. Bor.-Orient. 178. – [ 9+ (Shiliin Bogd), (Ulziykhutag 2003; Urgamal *et al.* 2013) ]. – **Subendemic.**

**A. zaissanensis Sumn.** 1934, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 1934(2-3): 4. – [ 7 (Bulgan gol), (Ulziykhutag 2004; Olonova & Beket 2010) ]. – **Subendemic.**

**Caragana arborescens Lam.** 1785, Encycl. 1(2): 615. – [ 1, 3, 10 ].

**C. brachypoda Pojark.** 1950, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 13: 135. – [ 12, 13, 16 ]. – **Subendemic.** Described from Gobi Altai phytogeographical region. (LE). – **(VU, VR, RB).**

**C. bungei Ledeb.** 1831, Fl. Altaic. 3: 264. – [ 3, 6, 7, 10, 11, 13, 14, 15 ]. – **Subendemic.**

+ **C. davazamcii Sanczir,** 1974, Bot. Zhurn. [Moscow & Leningrad] 59(2): 233. – *C. erenensis* Y.X. Liou, 1984, Acta Phytotax. Sin. 22(3): 210. - *C. korshinskii* var. *davazamcii* (Sanczir) Yakovlev, 1984, Bot. Zhurn. (Kiev) 69: 358. - *C. davazamcii* var. *viridis* Y.X. Liou, 1987, Fl. Des. Reip. Pop. Sin. 2: 224. – [ 9+, 11+, 12+, 13+, 16+ (Sanchir 1999; Urgamal *et al.* 2013) ]. – **Endemic.**

**C. gobica Sanczir,** 1976, Trudy Inst. Bot. (Ulan Bator) 1: 244. – [ 7+ (Bulgan and Ulyastain gol), (Yakovlev 2003), 12, 13 ]. – **Endemic.** Described from Gobi Altai phytogeographical region. (UBA). – **(VU, VR, RB).**

**C. gobica subsp. occidentalis Kamelin & Yakovlev,** 1988, Rast. Tsentr. Azii 8a: 33. – [ 7, 14 (Gubanov, 1996; Yakovlev 2003) ]. – **Endemic.** Described from Mongolian Altai phytogeographical region. (LE).

**C. jubata (Pall.) Poir.** 1811, Encycl., Suppl. 2(1): 89–90. - *Robinia jubata* Pall. 1797, Nova Acta Acad. Sci. Imp. Petrop. Hist. Acad. 10: 370. – [ 1, 2, 3, 7, 13 ]. – **(RL).**

**C. korshinskii** Kom. 1908, Trudy Imp. S.-Peterburgsk. Bot. Sada 29(2): 351–352. - *C. davaczamcii* Sanczir, 1974, Bot. Zhurn. [Moscow & Leningrad] 59(2): 233. - *C. intermedia* Kuang & H.C. Fu, 1977, Fl. Intramong. 3: 287. - *C. korshinskii* var. *davazamcii* (Sanczir) Yakovlev, 1984. Bot. Zhurn. (Kiev) 69: 358. - [ 9, 11, 12, 13, 16 ].

**C. leucophloea** Pojark. 1945, Fl. URSS 11: 399. - *C. pygmaea* subsp. *leucophloea* (Pojark.) Polovinko, 1987. - [ 3, 4, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16 ].

**C. microphylla** Lam. 1785, Encycl. 1(2): 615. - *C. buriatica* Peschkova, 1979, Novosti Syst. Vyssh. Rast. 15: 234. - *C. microphylla* subsp. *buriatica* (Peschkova) Yakovlev, 1984, Bot Zurn. 69, 3: 356. - [ 2, 3, 4, 5+ (Yakovlev 2003), 8, 9 ].

**C. pygmaea (L.) DC.** 1825, Prodr. 2: 268. - *Robinia pygmaea* L. 1753, Sp. Pl. 2: 723. - *Caragana altaica* (Kom.) Pojark. 1945, Fl. URSS 11: 345, 397. - *C. pygmaea* var. *altaica* Kom. 1909, Trudy Imp. St.-Peterburgsk. Bot. Sada 29: 242. - *C. pygmaea* subsp. *altaica* (Kom.) Bondareva, 1994, Bot. Zhurn. 79(6) 86. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14 ].

**C. spinosa (L.) DC.** 1825, Prodr. 2: 269. - *Robinia spinosa* L. 1771, Mant. Pl. 2: 269. - [ 3+ (Yakovlev 2003), 4, 6, 7, 8, 10, 11, 14, 16 ]. - (R).

**C. stenophylla** Pojark. 1945, Fl. URSS 11: 397. - [ 3, 4, 5, 8, 9, 12, 13 ].

**C. tibetica** Kom. 1908, Trudy Imp. St.-Peterburgsk. Bot. Sada 29(2): 282–283. - [ 12, 13, 16 ]. - (EN, VR, RB, RL).

**Notes:** In the book includes data of the genus *Caragana* Lam. by Ch. Sanchir (1999, 2000, 2011). But some data reported (Gubanov 1996; Ulziykhutag 1989, 2003; Dariimaa 2009) following species in the Mongolian flora. Including *Caragana alaschanica* Grubov (from the Alashan Gobi), *C. altaica* (Kom.) Pojark. (from the Khangai, Mongolian Altai and Great Lakes regions), *C. cinerea* (Kom.) Nakai (from the East Mongolia), *C. frutex* (L.) K. Koch. (from the Mongolian Altai), *C. occidentalis* (?), *C. opulens* Kom. (from the Transaltai Gobi).

**Chesneya grubovii** Yakovlev, 1979, Novosti Syst. Vyssh. Rast. 16: 136. - [ 15 (Alag-Undur uul), (Yakovlev 2003) ]. - **Endemic**. Described from Trans Altai phytogeographical region. (LE).

**Ch. mongolica** Maxim. 1881, Bull. Acad. Petersb. 27: 462. - *Chesniella mongolica* (Maxim.) Boriss. 1964, Novosti Syst. Vyssh. Rast. 1964: 184. - [ 10, 11, 12, 13, 15, 16 ]. - **Subendemic**. Described from Alashan Gobi phytogeographical region. (LE). - (NT, VR, RB).

**Notes:** It was some informed that *Chesneya macrantha* S.H. Cheng ex H.C. Fu is accepted and distributed in Southern Mongolia (Flora Intramongolica 1977; The Plants 2013).

**Cicer songaricum Stephan ex DC.** 1845, Prodr. 2: 354. - [ 7 ].

+ **Glycyrrhiza alaschanica** Grankina, 2001, Novosti Syst. Vyssh. Rast. 33: 145. - [ 12+, (Uran nuur, Mandal-Oboo), 15+, 16+ (Alashaa gobi), (Grankina 2001, 2008; Ulziykhutag 2003; Dariimaa 2009) ]. - **Subendemic**. Described from Gobi Altai (Ulaan nuur) phytogeographical region (LE).

**G. aspera** Pall. 1771, Reise Russ. Reich. 1: 499. - [ 10+ (Ulziykhutag 2003), 14 ].

**G. glabra** L. 1753, Sp. Pl. 2: 742. - [ 10, 14, 15 ].

+ **G. gobica** Grankina, 2001, Novosti Syst. Vyssh. Rast. 33: 147. - [ 12+, 13+, 15+, 16+ (Grankina 2001, 2008; Ulziykhutag 2003; Dariimaa 2009) ]. - **Subendemic**. Described from Gobi Altai phytogeographical region (LE).

**G. inflata** Batalin, 1891, Trudy Imperatorskago S.-Peterburgskago Botaničeskago Sada 11: 484. - *Meristotropis pauciflora* (Hance) Kruganova, 1955, Trudy Bot. Inst. Nauk SSSR, 1, 11: 195. - [ 7, 15, 16 ]. - **Endemic**.

**G. pallidiflora** Maxim. 1859, Prim. Fl. Amur. 79–80. - [ 9 (Khalkhiin gol) ].

+ **G. soongorica** Grankina, 2001, Novosti Syst. Vyssh. Rast. 33: 148. - [ 2+, 3+, 4+, 8+, 9+, 12+, 15+, 16+ (Grankina 2001, 2008; Ulziykhutag 2003; Dariimaa 2009) ]. - **Subendemic**. Described from Dzungarian Gobi (Uench gol) phytogeographical region (LE).

**G. squamulosa** Franch. 1884, Nouv. Arch. Mus. Hist. Nat. 2, 5: 245. - [ 12 (Grankina, 2008), 14 ]. - (EN, VR, RB).

**G. uralensis** Fisch. 1825, Prodr. 2: 248. - [ 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16 ]. - (R).

**Gueldenstaedtia monophylla** Fisch. 1823, Mem. Soc. Imp. Nat. Moscou 6: 171. - [ 6, 7, 10, 12, 13, 16 ]. - (VU, VR, RB).

**G. stenophylla** Bunge, 1833, Mem. Acad. Imp. Sci. St.-Petersbourg par Divers Savans 2: 98. - [ 5 (Degee gol) ].

**G. verna** (Georgi) Boriss. 1953, Spisok Rast. Gerb. Fl. SSSR Bot. Inst. Vsesojuzn. Akad. Nauk 12: 122. - *Astragalus verna* Georgi, 1775, Bemerk. Reise Russ. Reich. 1772 1: 226. - [ 1+ (Ivleva 2012), 2, 4, 9 ].

**Halimodendron halodendron** (Pall.) Voss. 1894, Vilm. Blumengärtn. (ed. 3) 1(1): 215. - *Robinia halodendron* Pall. 1770, Reise Russ. Reichs 2(2): 741–742. - [ 7, 10, 14, 15 ]. - (VU, VR, RL).

**Hedysarum alpinum** L. 1753, Sp. Pl. 2: 750. - [ 1, 2, 3, 4, 5, 6, 7+ (Neuffer et al. 2003), 9 ].

+ **H. austrosibiricum** B. Fedtsch. 1949, Bot. Mater. Gerb. Bot. Inst. Komarova Akad.i Nauk SSSR 11: 114. - [ 3+, 6+, 7+ (Ulziykhutag 2003) ]. - **Subendemic**.

+ **H. brachypterum** Bunge, 1835, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 2: 92. - [ 2+ (Ulaanbaatar), 9+ (Yakovlev 2003) ].

+ **H. chalchorum** N. Ulzij. 1989, Fl. Khangaya 126. - *H. collinum* sensu Sanczir. - [ 3+, 4+, 8+ (Ulziykhutag 2003) ]. - **Endemic**. Described from Khangai phytogeographical region (LE).

+ **H. consanguineum** DC. 1825, Prodr. 2: 343. - [ 7+ (Yolt uul), (Neuffer et al. 2003; German et al. 2009; Urgamal et al. 2013) ]. - **Subendemic**.

**H. dahuricum** Turcz. ex B. Fedtsch. 1948, Fl. URSS 13: 290. - *H. gmelinii* var. *dahuricum* (Turcz. ex B. Fedtsch.) R. Sa, 2010, Ann. Bot. Fenn. 47: 57. - [ 1, 3, 4, 5, 6, 7, 8, 9, 10, 13 ]. - **Subendemic**. Described from Mongolian Dauria phytogeographical region. (UBA). - (R).

**H. ferganense** Korsh. 1896, Zap. Imp. Akad. Nauk Fiz.-Mat. Otd. 4(4): 93. - *H. pumilum* (Ledeb.) B. Fedtsch. 1902, Trudy Imp. S.-Peterburgsk. Bot. Sada 19: 309. - [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 16 ].

**H. fruticosum** Pall. 1776, Reise Russ. Reich. 3: 753. - [ 3, 4, 5, 8, 9, 10, 11, 12, 13, 16 ]. - (LC, VR, RB).

+ **H. gmelinii** Ledeb. 1838, Mem. Acad. Imp. Sci. St. Petersbourg Hist. Acad. 5: 551. - *H. gmelinii* var. *lineiforme* H.C. Fu, 1978, Fl. Intramongolica 3: 243–246. - *H. polymorphum*

Ledeb. 1831, Fl. Altaic. 3: 338. – [ **1+, 2+, 3+, 4+, 6+, 7+** (Grubov 1982; Ulziykhutag 2003), **9+** (Ereentsav), (Yakovlev 2003), **10+, 13+** (Grubov 1982; Ulziykhutag 2003) ]. – **Subendemic**.

**Notes:** This species was not given in Gubanov's conspectus (1996).

# **H. hedysaroides subsp. arcticum (B. Fedtsch.) P.W. Ball, 1968**, Feddes Repert. 79(1-2): 47. – *H. arcticum* B. Fedtsch. 1939, Sborn. President. Akad. Nauk V.L. Komarov 735. – [ **1, 3, 6, 7** ].

+ **H. iliense B. Fedtsch. 1937**, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR 7(1): 14. - *H. fedtschenkoanum* Regel, 1882. – [ **7+** (Ulziykhutag 2003; Urgamal *et al.* 2013) ].

**H. inundatum Turcz. 1838**, Bull. Soc. Imp. Nat. Moscou 11: 366. – [ **1, 2, 3, 6, 7, 10+** (Yakovlev 2003), **13** ].

**H. kamelinii N. Ulzij. 1992**, Bull. Mosk. Obshch. Isp. Prir. Otd. Biol. 97(4): 92. – [ **7** (Olonova & Beket 2010) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region. (LE).

**H. krylovii Sumn. 1932**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 4: 2. – [ **7** ].

+ **H. linczevskyi Bajtenov, 1956**, Vestn. Kaz. SSR. – [ **7+, 13+** (Ulziykhutag 2003) ].

**H. neglectum Ledeb. 1831**, Fl. Altaic. 3: 341. – [ **1, 2, 3, 6, 7** ].

**H. roseum Sims, 1807**, Bot. Mag. pl. 996. – *H. turczaninovii* Peschkova, 1979, Fl. Centr. Sibir. – [ **2, 3, 4** ].

**H. sajanicum N. Ulzij. 1992**, Bull. Mosk. Obshch. Isp. Prir. Otd. Biol. 97(4): 94. – [ **1** (Arsai gol, Khatgal sum) ]. – **Subendemic**.

**H. sangilense Krasnob. & Timoch. 1975**, Novosti Syst. Vyssh. Rast. 12: 234. – [ **1, 3** ]. – **(VU, VR, RB)**.

# **H. scoparium Fisch. & C.A. Mey. 1841**, Enum. Pl. Nov. 1: 87. - *H. scoparium* var. *arbuscula* (Maxim.) Yakovlev 1988, Rast. Tsentr. Azii 8a: 62. – *H. arbuscula* Maxim. 1881, Bull. Acad. Imp. Sci. St-Petersbourg 27: 465. – [ **15, 16+** (Yakovlev 2003; Hilbig & Tungalag 2006) ].

**H. setigerum Turcz. ex Fisch. & Meyer, 1835**, Index Sem. (St. Petersburg) 1: 29. – *H. gmelinii* subsp. *setigerum* (Turcz. ex Fisch. & C.A. Mey.) Kurbatski, 1994, Fl. Sibiri 9: 162. – [ **2, 3, 4, 5, 6+** (Ulgii uul), **7+** (Gichgeniin nuruu), (Ebel & Rudaya 2002), **9** ].

+ **H. theinum Krasnob. 1985**, Bot. Zhurn. (Moscow & Leningrad) 70(7): 970. – [ **7+** (Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006; Olonova *et al.* 2013) ]. – **Subendemic**.

**Lathyrus humilis (Ser.) Spreng. 1826**, Syst. Veg. 3: 363. - *Orobus humilis* Ser. 1825, Prodr. 2: 378. – [ **1, 2, 3, 4, 5, 8, 9** ].

+ **L. ledebourii Trautv. 1875**, Trudy Glavn. Bot. Sada 3: 72. – *Orobus ledebourii* (Trautv.) Roldugin, 1961, Fl. Kazakhstana 5: 482. – [ **7+** (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic**.

**L. palustris subsp. pilosus (Cham.) Hulten, 1937**, Fl. Aleut. Isl. 236. – *L. pilosus* Cham. 1831, Linnaea 6(4): 546. - *L. palustris* var. *pilosus* (Cham.) Ledeb. 1843, Fl. Ross. 1(3): 686. – [ **1+** (Vlasova, 2012), **2, 3, 4, 5, 8, 9, 10, 14** ].

**L. pisiformis L. 1753**, Sp. Pl. 2: 734. – [ **5, 9** ].

**L. pratensis L. 1753**, Sp. Pl. 2: 733. – [ **2, 3, 4, 10** ].

- L. quinquenervius (Miq.) Litv. ex Kom. 1925**, Opred. Rast. Dal'nevost. Kraia 2: 683. - [ 3, 4, 5 ]. - (R).  
+ **L. sativus L. 1753**, Sp. Pl. 2: 730. - [ 4+ (Ulziykhutag 2003; Urgamal *et al.* 2013) ].  
**Lespedeza bicolor Turcz. 1840**, Bull. Soc. Imp. Nat. Moscou 13(1): 69. - [ 5 ].  
**L. davurica (Laxm.) Schlinder, 1926**, Trudy Imp. S.-Peterburgsk. Bot. Sada 2: 570-685. - *Trifolium dahurica* Laxm. 1771, Novi Comment. Acad. Sci. Imp. Petrop. 15: 560-562. - [ 2, 3, 4, 5, 8, 9, 11, 12, 13, 16 ].  
**L. juncea (L. f.) Pers. 1807**, Syn. Pl. 2(2): 318. - *Hedysarum junceum* L. f. 1762, Dec. Pl. Horti Upsal. 1: 7. - *Lespedeza hedsaroides* (Pall.) Kitag. 1939, Rep. Inst. Sci. Res. Manchoukuo 3(App. I): 288. - [ 2, 3, 4, 5, 8, 9 ].  
**L. tomentosa (Thunb.) Sieb. ex Maxim. 1873**, Trudy Imp. S.-Peterburgsk. Bot. Sada 2: 376. - *Hedysarum tomentosum* Thunb. 1784, Fl. Japonica 286. - [ 5, 9 ].  
+ **Lotus corniculatus L. 1753**, Sp. Pl. 2: 775-776. - [ 2+ (Yakovlev 2003), 4+ (Ulziykhutag 2003; Urgamal *et al.* 2013) ].  
**L. krylovii Schischkin & Sergievskaja, 1932**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Uni. Kiybyseva 1932(7-8): 5. - [ 7, 9, 10, 12, 14, 15, 16 ].  
**Medicago falcata L. 1753**, Sp. Pl. 2: 779. - *M. schischkinii* Sumn. 1932, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Uni. Kiybyseva 1932(7-8): 7. - [ 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14 ].  
**M. lupulina L. 1753**, Sp. Pl. 2: 779. - [ 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 14 ].  
**M. platycarpa (L.) Trautv. 1841**, Bull. Sci. Acad. Imp. Sci. Saint-Petersbourg 8: 271. - *Trigonella platycarpos* L. 1753, Sp. Pl. 2: 776. - *Medicago platycarpos* (L.) Trautv. 1841, Bull. Sci. Acad. Imp. Sci. Saint-Petersbourg 8: 271. - *Melissitus platycarpos* (L.) Golosk. 1961, Fl. Kazakhstana 5: 29. - *Melilotoides platycarpos* (L.) Sojak, 1982, Sborn. Nar. Muz. v Praze. Rada B, Prir.i Vedy 38: 104. - [ 1, 2, 3, 4, 7, 9 ].  
**M. ruthenica (L.) Ledeb. 1841**, Bull. Sci. Acad. Imp. Sci. Saint-Petersbourg 8: 271. - *Trigonella ruthenica* L. 1753, Sp. Pl. 2: 776. - [ 1, 2, 3, 4, 5, 8, 9, 10, 11, 13, 14 ].  
**M. sativa L. 1753**, Sp. Pl. 2: 778-779. - [ 3, 4, 5, 7, 9, 10, 12 ].  
**Melilotus albus Medik. 1787**, Vorles. Churpfalz. Phys.-Okon. Ges. 2: 382. - [ 4, 8, 14, 15 ]. - (R).  
**M. dentatis (Waldst. & Kit.) Pers. 1807**, Syn. Pl. 2(2): 348. - *Trifolium dentatum* Waldst. & Kit. 1802, Descr. Icon. Pl. Hung. 1: 41. - [ 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 14 ].  
**M. suaveolens Ledeb. 1824**, Index Sem. (Dorpat) 2: 5. - [ 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 ].  
**M. wolgicus Poir. 1814**, Encycl. Suppl. 3(2): 648. - [ 9, 12 ]. - (R).  
+ **Onobrychis arenaria (Kit.) DC. 1825**, Prodr. 2: 345. - *Hedysarum arenarium* Kit. 1814, Oester. Fl. ed. 2 2: 368. - [ 2+, 3+, 4+, 8+ (Ulziykhutag 2003; Urgamal *et al.* 2013) ].  
# **O. arenaria subsp. sibirica (Turcz. ex Besser) P.W. Ball, 1968**, Feddes Repert. 79(1-2): 42. - *O. sibirica* Turcz. ex Besser 1834, Fl. 17(1): Beibl. 10. - [ 2, 3, 4, 13 ].  
+ **Ornithopus perpusillus L. 1753**, Sp. Pl. 2: 743. - [ 4+ (Ulziykhutag 2003) ].  
**Oxytropis acanthacea Jurtzev, 1964**, Novosti Syst. Vyssh. Rast. 203. - [ 6 (Tsagaan Shiveet uul), 7 (Tolbo nuur), (Grubov 2003) ]. - **Subendemic.** - (NT, VR, RB).

**O. aciphylla** Ledeb. 1831, Fl. Altaic. 3: 279–280. – [ 3, 6, 7, 10, 11, 12, 13, 14, 15, 16 ]. – (R).

+ **O. alpestris** Schischk. 1932, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 7–8: 4. – [ 7+ (Olonova & Beket 2010; Olonova *et al.* 2013) ]. – Subendemic.

**O. alpicola** Turcz. 1842, Index Sem. (Dorpat) 1840: 8. – [ 2 ]. – Subendemic.

**O. alpina** Bunge, 1840, Index Sem. (Dorpat) 1840: 8. – [ 1, 2, 3, 6, 7, 13 ]. – Subendemic.

**O. altaica** (Pall.) Pers. 1807, Syn. Pl. 2(2): 333. - *Astragalus altaicus* Pall. 1800, Sp. Astrag. 56. – [ 6, 7 (Dayan nuur), (Grubov 2003) ]. – Subendemic.

**O. ambiqua** (Pall.) DC. 1802, Astragalologia 70. - *Astragalus ambiguus* Pall. 1800, Sp. Astrag. 54. – [ 1+ (Grubov 2003), 2, 3, 4, 7, 13 ].

**O. ampullata** (Pall.) Pers. 1807, Syn. Pl. 2(2): 333. - *Astragalus ampullatus* Pall. 1776, Reise Russ. Reichs 3: 750. – [ 2, 3, 7, 8, 9, 12, 13 ].

**O. baicalia** (Pall.) Pers. 1807, Syn. Pl. 2(2): 333. - *Astragalus baicalius* Pall. 1800, Sp. Astrag. 93. – [ 1, 3, 4 ].

**O. bicolor** Bunge, 1833, Mem. Acad. Imp. Sci. St.-Petersbourg Div. Savans 2: 91. – [ 9 ].

**O. brachycarpa** Vass. 1960, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 20: 243. – [ 7 (Khasagt Khairkhan uul), (Grubov 2003) ].

**O. bungei** Kom. 1914, Repert. Spec. Nov. Regni Veg. 13: 229. – [ 3, 6, 7, 8, 10, 11, 12, 13, 14 ]. – Endemic. Described from Mongolian Altai phytogeographical region. (LE).

**O. caespitosa** (Pall.) Pers. 1807, Syn. Pl. 2(2): 333. - *Astragalus caespitosus* Pall. 1800, Sp. Astrag. 77. – [ 1, 2, 3, 4, 5, 8 ]. – Subendemic.

**O. campanulata** Vass. 1960, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 20: 238. – [ 1, 3 ].

**O. chionophylla** Schrenk, 1841, Enum. Pl. Nov. 1: 77. – [ 3, 6, 7, 13 ]. – Subendemic.

**O. coerulea** (Pall.) DC. 1802, Astragalologia 54. - *Astragalus coeruleus* Pall. 1776, Itin. 3: 293. – [ 1, 2, 4, 5, 9 ].

**O. deflexa** (Pall.) DC. 1802, Astragalologia 96. - *Astragalus deflexus* Pall. 1779, Acta Acad. Sci. Imp. Petrop. 2: 268. – [ 1, 2, 3, 4, 6, 7, 10+ (Ulyastain gol), (Grubov 2003), 13 ].

**O. diantha** Bunge ex Maxim. 1880, Bull. Acad. Imp. Sci. St-Petersbourg 26: 470. – *O. changaica* B. Fedtsch. & Basil. 1929, Bull. Moskovsk. Obsh. Isp. Prir. Odt. Biol. 38(1-2): 94. – [ 1, 3 ]. – Endemic. Described from Khangai phytogeographical region. (LE). – (R).

**O. dubia** Turcz. 1842, Bull. Soc. Imp. Nat. Moscou 15: 752. – [ 2 (Mungunmorit) ].

**O. eriocarpa** Bunge, 1874, Mem. Acad. Imp. Sci. St. Petersbourg, (Ser. 7) 22(1): 122. – *O. komei* Saposhn. 1921, Trans. Tomsk. Branch Russ. Bot. Soc. 1(1-2): 31. – [ 6, 7 (Tsagaan gol), (Grubov 2003) ]. – Subendemic.

**O. falcata** Bunge, 1874, Mem. Acad. Imp. Sci. St. Petersbourg, (Ser. 7) 22(1): 156. – [ 6+ (Khovd gol), 7 (Sagsai gol, Burkhan Buudai uul), (Grubov 2003) ]. – (R).

**O. filiformis** DC. 1802, Astragalologia 80, pl. 4. – [ 1, 2, 3, 4, 5, 7+ (Khan Taishir uul), (Grubov 2003), 8, 9, 10+ (Grubov 2003), 11, 13 ]. – Subendemic.

**O. fragilifolia Ulzij.** 1979, Bot. Zurn. 64, 9: 1234. – [ 7 (Khasagt Khairkhan uul), 13 (Grubov 2003) ]. – **Endemic.** Described from Mongolian Altai phytogeographical region. (LE, isotype - UBA). – **(VU, VR, RB).**

**O. geblerii Fisch. ex Bunge,** 1874, Mem. Acad. Imp. Sci. St. Petersbourg, (Ser. 7) 22(1): 89. – [ 1, 3, 6, 7, 13 ]. – **Subendemic.**

# **O. glabra (Lam.) DC.** 1802, Astragalologia 95, pl. 8. - *Astragalus glabra* Lam. 1785, Encycl. 1(2): 525. - *Oxytropis salina* Vass. 1960, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 20: 234. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

+ **O. glandulosa Turcz.** 1842, Bull. Soc. Imp. Nat. Moscou 15: 754. – [ 1+, 3+ (Ulziykhutag 2003; Urgamal *et al.* 2013) ]. – **Subendemic.**

**O. glareosa Vass.** 1960, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 20: 232. – [ 3, 10 ].

**O. gorbunovii Boriss.** 1936, Trudy Taj. SSR 2: 168. – [ 3, 6, 7 ]. – **(R).**

**O. gracillima Bunge,** 1843, Linnaea 17: 5. - *Oxytropis minutiflora* Jurtz. 1964, Novosti Syst. Vyssh. Rast. 207. – [ 3, 4, 8, 9, 10, 11, 12 ]. – **Subendemic.** Described from Eastern Mongolia phytogeographical region (P).

**O. grandiflora (Pall.) DC.** 1802, Astragalologia 71: 57. - *Astragalus grandiflorus* Pall. 1800, Sp. Astrag. 57. – [ 2, 4, 5, 8+ (Undurkhaan), (Grubov 2003), 9 ]. – **Subendemic.**

**O. hailarensis Kitag.** 1964, Bot. Mag. (Tokyo) 48(575): 907. – [ 5, 9 ]. – **Subendemic.**

**O. heterophylla Bunge,** 1880, Bull. Acad. Imp. Sci. Saint-Petersbourg 26: 470. – [ 6, 7, 10, 13, 14 ]. – **Subendemic.**

+ **O. hirta Bunge,** 1835, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 2: 91. – [ 5+ (Khalkhiin gol), (Grubov 2003) ].

**O. intermedia Bunge,** 1839, Del. Sem. Dorpat. – [ 3, 6, 7 (Grubov 2003) ]. – **Subendemic.**

**O. junatovii Sancz.** 1985, Trudy Inst. Bot. AN MNR 7: 90. – [ 13 (Gurvan Saikhan uul) ]. – **Endemic.** Described from Gobi Altai phytogeographical region. (UBA).

**O. jurtzevii Malyschev,** 1961, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 21: 453. – [ 1 (Rinchinlkhumbe uul) ]. – **Subendemic.**

**O. klementzii Ulzij.** 1971, Bot. Zhurn. ([Moscow](#) & Leningrad) 56(12): 1795. – [ 2, 3, 4, 8 (Choir uul), (Grubov 2003) ]. – **Endemic.** Described from Daurian and Khangai phytogeographical region. (LE, isotype - UBA).

**O. komarovii Vass.** 1960, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 20: 249. – [ 5 (Khalkhiin gol), 9 ]. – **Subendemic.** – **(R).**

**O. kossinskyi Fedtsch. & Basil.** 1927, Izv. Glavn. Bot. Sada SSSR 26: 117. – [ 3, 4, 8, 11, 13 ]. – **Subendemic.** Described from Middle Khalkha phytogeographical region. (LE, isotype - MW).

**O. krylovii Schlpz.** 1920, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR. 1(7): 1. – [ 7 (Khovd gol), (Grubov 2003; Olonova & Beket 2010) ]. – **Subendemic.** Described from Altai mountain (LE). – **(R).**

**O. kusnetzovii Krylov & Steinb.** 1918, Trudy Bot. Muz. Imp. Akad. Nauk 17: 88. – [ 1, 7 (Olonova & Beket 2010) ]. – **Subendemic.**

**O. ladyginii Krylov, 1903**, Trudy Imp. St.-Peterburgsk. Bot. Sada 21: 5. – [ 7 (Shaulo *et al.* 2006; Olonova & Beket 2010) ]. – **Subendemic**. Described from Mongolia (LE). – (R).

**O. lanata (Pall.) DC. 1802**, Astragalologia 89. - *Phaca lanata* Pall. 1776, Reise Russ. Reichs 3: 746. – [ 1, 3, 4, 8, 9 ]. – **Subendemic**.

**O. lanuginosa Kom. 1914**, Repert. Spec. Nov. Regni Veg. 13: 226. – *O. pseudolanuginosa* Jurtz. 1964, Novosti Syst. Vyssh. Rast. 1: 206. – [ 3, 10 ]. – **Subendemic**.

**O. lapponica (Wahlenb.) J. Gay. 1827**, Flora 10(2): 30. – [ 3, 6, 7 ].

**O. lasiopoda Bunge, 1874**, Mem. Acad. Imp. Sci. St. Petersbourg, (Ser. 7) 22(1): 151. – [ 3, 4, 8, 9, 13 ]. – **Subendemic**. Described from Middle Khalkh phytogeographical region of Mongolia (LE).

+ **O. latibracteata Jurtz. 1959**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 19: 269. – [ 3+ (Jargalantiin gol) (Gubanov 1999; Grubov 2003; Dariimaa 2009) ]. – **Subendemic**.

**O. lavrenkoi Ulzij. 1987**, Bull. Moscow Obsh. Ispit. Prir. Odt. Biol. 92, 5: 114. – [ 12 (Khutag uul) ]. – **Endemic**. Described from Khutag uul. (MW, isotype - LE).

**O. leptophylla (Pall.) DC. 1802**, Astragalologia 77. - *Astragalus leptophyllum* Pall. 1776, Reise Russ. Reichs 3: 749. – [ 1, 3, 4, 5, 8, 9, 12 ]. – **Subendemic**.

**O. leucotricha Turcz. 1842**, Bull. Soc. Imp. Nat. Moscou 15: 745. – [ 1, 2, 3, 8 ]. – **Subendemic**.

**O. longirostra DC. 1802**, Astragalologia 80, pl. 5. – [ 1, 2, 3 ].

**O. macrosema Bunge, 1874**, Mem. Acad. Imp. Sci. Saint Petersbourg, ser. 7, 22(1): 101. – [ 6, 7+ (Bulgan gol), (Grubov 2003; Olonova & Beket 2010; Olonova *et al.* 2013) ]. – **Subendemic**. Described from Altai mountain (LE).

**O. martianovii Krylov, 1903**, Trudy Peterb. Bot. Sada 21: 6. – [ 3, 6, 7, 10 ]. – **Subendemic**. Described from Altai mountain (LE).

**O. micrantha Bunge ex Maxim. 1830**, Bull. Acad. Imp. Sci. St-Petersbourg 26: 470. – [ 3, 6, 7, 10, 11 (Grubov 2003) ]. – **Endemic**. Described from Khangai phytogeographical region. (LE).

**O. microphylla (Pall.) DC. 1802**, Astragalologia 83. - *Phaca microphylla* Pall. 1776, Reise Russ. Reichs 3: 744. – [ 3, 6, 7, 10 ].

**O. mixotriche Bunge, 1835**, Mem. Sav. Etr. Petersb. 2: 589. – [ 2, 3, 4, 8 (Jargalantiin gol), (Grubov 2003) ]. – **Subendemic**.

**O. mongolica Kom. 1914**, Repert. Spec. Nov. Regni Veg. 13: 226. – [ 6, 10 (Khyargas nuur), (Grubov 2003) ]. – **Subendemic**. Described from Depression of Great Lake phytogeographical region. (LE). – (EN, R).

**O. monophylla Grubov, 1978**, Bot. Zhurn. (Moscow & Leningrad) 63(3): 364. – [ 12 (Bayanzag), 13 (Gurvan Saikhan uul), (Grubov 2003) ]. – **Endemic**. Described from Eastern Gobi phytogeographical region. (LE).

**O. muricata (Pall.) DC. 1802**, Astragalologia 86. - *Phaca muricata* Pall. 1776, Reise Russ. Reichs 3: 746. – [ 1, 3, 4, 9, 13 ]. – **Subendemic**.

**O. myriophylla (Pall.) DC. 1802**, Astragalologia 87. - *Phaca myriophylla* Pall. 1776, Reise Russ. Reichs 3: 745. – [ 1, 2, 3, 4, 5, 8, 9, 12+ (Gurvansaikhan sum), (Grubov 2003) ].

**O. nitens** Turcz. **1842**, Bull. Soc. Imp. Nat. Moscou 15: 746. – [ **1, 2, 3, 4, 8, 9** ]. – **Subendemic**.

**O. ochrantha** Turcz. **1832**, Bull. Soc. Imp. Nat. Moscou 5: 188. – [ **9** (Shiliin Bogd) ].

**O. oligantha** Bunge, **1835**, Bull. Soc. Imp. Nat. Moscou 39(2): 18. – [ **3, 6, 7, 10, 13** ]. – **Subendemic**.

**O. oxyphylla** (Pall.) DC. **1802**, Astragalologia 84. - *Astragalus oxyphyllus* Pall. 1800, Reise Russ. Reichs 3: 743. – [ **1, 2, 3, 4, 5, 8, 9, 12+** (Dariimaa *et al.* 2004) ]. – **Subendemic**.

**O. pauciflora** Bunge, **1852**, Arbeiten Naturf. Vereins Riga 1: 227. – [ **1, 6+** (Oigur nuur), (Grubov 2003), **7, 13** ].

**O. pavlovii** B. Fedtsch. & Basil. **1929**, Bull. Soc. Imp. Nat. Moscou 38: 96. – [ **3, 8, 11, 12, 13** ]. – **Endemic**. Described from Valley of Lakes phytogeographical region. (MW, isotype - LE).

+ **O. physocarpa** Lebed. **1831**, Fl. Altaic. 3: 272. – [ **7+** (Jargalant Khairkhan uul), (Revushkin *et al.* 2001) ]. – **Subendemic**.

**O. potaninii** Bunge ex Palub. **1908**, Bull. Herb. Boissier, ser. 2, 8(3): 160. – [ **7, 10** (Grubov 2003; Olonova & Beket 2010) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region. (LE).

**O. prostrata** (Pall.) DC. **1802**, Astragalologia 85. - *Phaca prostrata* Pall. 1776, Reise Russ. Reichs 3: 744. – [ **4, 8, 9** ]. – **Subendemic**. Described from Daurian phytogeographical region. (MW, isotype - LE).

**O. pseudoglandulosa** Gontsch. ex Grubov, **1955**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 17: 18. – [ **1, 2, 3, 4, 8, 9, 12, 13** ]. – **Endemic**. Described from Khangai phytogeographical region. (LE).

**O. puberula** Boriss. **1936**, Trudy Kadzhikistansk. Bazy 2: 169. – [ **7, 13, 14** ].

**O. pumila** Fisch ex DC. **1825**, Prodr. 2: 279. – [ **3, 6, 7, 8, 10, 11, 13** ]. – **Subendemic**.

# **O. racemosa** Turcz. **1832**, Bull. Soc. Imp. Nat. Moscou 5: 187. – *O. psammocharis* Hance, 1873, J. Linn. Soc., Bot. 13: 78. – [ **3, 6, 9, 10, 12** ]. **Subendemic**. Described from Eastern Gobi phytogeographical region. (LE).

**O. recognita** Bunge, **1874**, Mem. Acad. Imp. Sci. St. Petersbourg, (Ser. 7) 22(1): 79. – [ **6, 7** ].

**O. reverdattoi** Jurtzev, **1964**, Novosti Syst. Vyssh. Rast. 213. – [ **2, 3, 4** (Grubov 2003) ]. – **Subendemic**.

**O. rhizantha** Palib. **1908**, Bull. Herb. Boissier, ser. 2, 8(3): 159. – [ **6, 7** (Buyant gol), **10** (Grubov 2003) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region. (LE).

**O. rhynchophysa** Schrenk, **1844**, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 2(13): 196. – [ **6, 7** (Tsagaan gol), (Grubov 2003) ].

**O. sacciformis** H.C. Fu, **1982**, Acta Phytotax. Sin. 20(3): 311–313. – [ **12** (Sainshand, Khutag uul), (Grubov 2003) ]. – **Endemic**. Described from Khutag uul. (LE, UBA).

**O. sajanensis** Jurtzev, **1961**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 21: 260. – [ **1, 3** ]. – **Subendemic**.

**O. saposnikovii Krylov, 1903**, Trudy Imp. S.-Peterburgsk. Bot. Sada 21: 4. – [ 7 (German *et al.* 2003; Olonova & Beket 2010), 10+ (Tsagaan nuur), (Revushkin *et al.* 2001) ]. – **Subendemic**. Described from Altai mountain (LE). – (R).

**O. selengensis Bunge, 1874**, Mem. Acad. Imp. Sci. Saint Petersbourg, Ser. 7 22(1): 143. – [ 2, 3, 4, 8, 9 ]. – **Subendemic**.

**O. setosa (Pall.) DC. 1802**, Astragalologia 71. - *Astragalus setosus* Pall. 1800, Sp. Astrag. 55. – [ 3, 6 (Siilkhemii nuruu), (Grubov 2003; Olonova & Beket 2010) ]. – **Subendemic**.

**O. songorica (Pall.) DC. 1802**, Astragalologia 73. - *Astragalus songoricus* Pall. 1800, Sp. Astrag. 63. – [ 7 (Bulgan gol), (Grubov 2003) ].

**O. sordida (Willd.) Pers. 1807**, Syn. Pl. 2(2): 332. - *Astragalus sordidus* Willd. 1802, Sp. Pl. 3(2): 131. – [ 1 (Khankh sum) ].

**O. squammulosa DC. 1802**, Astragalologia 79. – [ 2, 3, 4, 6, 7, 8, 9, 10, 12, 13 ].

**O. stenophylla Bunge, 1835**, Mem. Sav. Etr. Petersb. 2: 587. – [ 3, 13 ]. – **Subendemic**.

**O. strobilacea Bunge, 1874**, Mem. Acad. Imp. Sci. Saint Petersbourg, Ser. 7 22(1): 103. – [ 1, 2, 3, 4, 6, 7, 13 ].

**O. stukovii Palib. 1910**, Bull. Soc. Bot. Geneve, Ser. 2 2: 19. – [ 3, 9 ]. – **Subendemic**.

+ **O. sulphurea (DC.) Ledeb. 1831**, Fl. Altaic. 3: 285. – [ 7+ (Olonova *et al.* 2013) ]. – **Subendemic**.

**O. sutaica Ulzij. 1979**, Bot. Zhurn. 64, 9: 1233. – [ 3, 7 (Sutai and Tsast uul), (Grubov 2003; Olonova & Beket 2010) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region. (LE). – (R, RB).

**O. tenuis Palib. 1908**, Bull. Herb. Boissier, ser. 2, 8(3): 160–161. – [ 6, 7 (Grubov 2003; Olonova & Beket 2010) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region. (LE). – (R).

+ **O. teres DC. 1802**, Astragalologia 92. – [ 7+ (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic**.

**O. tragacanthoides Fisch. 1825**, Prodr. 2: 280. – *O. paratragacanthoides* Vass. 1970, Novosti Syst. Vyssh. Rast. 6: 153. – [ 1, 3, 6, 7, 8, 10, 11, 13, 14, 15 ].

**O. trichophysa Bunge, 1874**, Mem. Acad. Imp. Sci. St. Petersbourg, (Ser. 7) 22(1): 158. – [ 3, 6, 7, 10, 11+ (Baidragiin gol), (Grubov 2003), 13, 14 ].

**O. tschujae Bunge, 1874**, Mem. Acad. Imp. Sci. St. Petersbourg, 7, 22(1): 86. – [ 1+ (Ulziykhutag 2003), 7 ]. – **Subendemic**. Described from Altai mountain (P).

**O. turczaninovii Jurtzev, 1964**, Novosti Syst. Vyssh. Rast. 211. – [ 1, 3, 4 ]. – **Subendemic**.

**O. ulzijchutagii Sanczir, 1989**, Trudy Inst. Bot. AN MNR 7: 93. – [ 6+ (Khoit Khetsuu Ulaan uul), (Grubov 2003), 7 (Khar-Azargiin nuruu, Tsakhir Khaalganii nuruu), (Grubov 2003; Olonova & Beket 2010) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region. (UBA).

**O. varlakovii Serg. 1933**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 1–2: 9. – [ 4, 9 ].

**O. viridiflava** Kom. 1914, Repert. Spec. Nov. Regni Veg. 13: 227. - [ 1, 2, 3, 4, 7+ (Jargalant Khairkhan uul), (Ebel & Rudaya 2002), 8, 9, 11, 13 ]. - **Endemic.** Described from Khangai phytogeographical region. (LE).

+ **Pisum arvense** L. 1753, Sp. Pl. 2: 727. - *P. sativum* subsp. *arvense* (L.) Tzvelev, 2000, Novosti Syst. Vyssh. Rast. 32: 185. - [ 4+ (Ulziykhutag 2003) ].

# **Sophora alopecuroides** L. 1753, Sp. Pl. 1: 373. - *Pseudosophora alopecuroides* (L.) Sweet 1830, Hort. Brit. ed. 2 122. - [ 12, 13, 14, 15, 16 (Yakovlev 2003) ]. - (R).

**S. flavesrens** Solander, 1789, Hort. Kew. 2: 43. - [ 5+ (Munkhjargal 2008), 9 ]. - (EN, VR, RB).

**Sphaerophysa salsula** (Pall.) DC. 1825, Prodr. 2: 271. - *Phaca salsula* Pall. 1776, Reise Russ. Reichs 3: 747. - [ 4+ (Yakovlev 2003), 5, 7, 9, 10, 11, 12, 13, 14, 15, 16 ].

**Spongiocarpella grubovii** (N. Ulzij.) Yakovlev, 1987, Bot. Zhurn. (Moscow & Leningrad) 72(2): 258–259. - *Oxytropis grubovii* N. Ulzij. 1971, Bot. Zhurn. (Moscow & Leningrad) 56(8): 1149–1150. - [ 12+ (Khatanbulag), (Yakovlev 2003), 15, 16 ]. - **Subendemic.** Described from Alashan Gobi phytogeographical region. (LE, isotype - UBA). - (EN, VR, RB, RL).

**Thermopsis alpina** (Pall.) Ledeb. 1830, Fl. Altaic. 2: 112–113. - *Sophora alpina* Pall. 1800, Sp. Astrag. 121. - [ 1, 2 (Yakovlev 2003) ].

+ **Th. dahurica** Czebr. 1976, Novosti Syst. Vyssh. Rast. 13: 182. - [ 2+, 4+, 5+, 9+, 12+ (Dariimaa 2009; Urgamal *et al.* 2013) ].

# **Th. lanceolata** R. Br. 1811, Hort. Kew. (ed. 2) 3: 3. - *Th. lanceolata* subsp. *glabra* (Czebr.) Kurbatski, 1991, Hort. Kew. (ed. 2) 3: 3. - [ 1, 2, 3, 4, 5, 8, 9, 11, 13 ].

+ **Th. lanceolata** var. **glabra** (Czebr.) Yakovlev, 1979, Novosti Syst. Vyssh. Rast. 15: 171. - *Th. glabra* Czebr. 1976, Novosti Syst. Vyssh. Rast. 13: 180. - [ 9+ (Urgamal *et al.* 2013) ].

+ **Th. lanceolata** var. **lanceolata** R. Br. 1811, Hort. Kew. (ed. 2) 3: 3. - *Th. sibirica* Czebr. 1976, Novosti Syst. Vyssh. Rast. 13: 180. - [ 1+, 2+, 3+, 4+, 8+ (Urgamal *et al.* 2013) ].

+ **Th. longicarpa** N. Ulzij. 1987, Bull. Acad. MNR, 2: 92. - [ 6+, 10+ (Ulziykhutag 2003; Dariimaa 2009) ].

**Th. mongolica** Czebr. 1954, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 16: 213. - *Th. grubovii* Czebr. 1976, Novosti Syst. Vyssh. Rast. 13: 178. - *Th. hirsutissima* Czebr. 1970, Novosti Syst. Vyssh. Rast. 7: 215. - *Th. junatovii* Czebr. 1976, Novosti Syst. Vyssh. Rast. 13: 178. - *Th. schischkinii* Czebr. 1976, Novosti Syst. Vyssh. Rast. 13: 174. - [ 6+ (Uureg nuur), 7+ (Yakovlev 2003), 10, 11, 12+ (Urgun sum), 13, 16+ (Yakovlev 2003) ]. - **Subendemic.** - (R, RB).

**Th. przewalskii** Czebr. 1954, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 16: 210. - [ 9, 13 ]. - **Subendemic.**

**Notes:** The some reported *Th. inflata* Cambess. is distributed in the Trans Altai gobi region of Mongolia.

**Trifolium eximum** Stephan ex DC. 1825, Prodr. 2: 203–204. - [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13 ].

**T. lupinaster** L. 1753, Sp. Pl. 2: 766. - *T. baicalense* Belaeva & Sipliv. 1975, Bot. Zhurn. (Moscow & Leningrad) 60(6): 819. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9 ].

- T. popovii (Roskov) Gubanov & R.Kam.** 1992, Bull. Moscow Obsh. Ispit. Prir. Odt. Biol. 97, 5: 64. - *Lupinaster popovii* Roskov 1990, Bot. Zurn. 75, 5: 717. - [ **1, 3, 4** ].
- T. pratense L.** 1753, Sp. Pl. 2: 768. - [ **1, 4** ].
- T. repens L.** 1753, Sp. Pl. 2: 767. - [ **2, 7+** (Bayan gol), (German *et al.* 2009) ]. - (**R**).  
**Trigonella arcuata C.A. Mey.** 1871, Verz. Pfl. Casp. Meer. 136. - [ **7, 14** ].
- T. caerulea (Desr.) Ser.** 1825, Prodr. 2: 181. - [ **4** (Dzunkharaa) ].
- T. cancellata Desf.** 1800, Tabl. Ecole Bot. 3: 218. - [ **7, 14** (Baitag Bogd uul), (Yakovlev 2003) ].
- T. geminiflora Bunge,** 1847, Arbeiten Naturf. Vereins Riga 1: 219. - [ **7** (Ur Mogoitiin gol) ].
- Vicia amoena Fisch.** 1825, Prodr. 2: 355. - [ **1, 2, 3, 4, 5, 7, 8, 9** ].
- V. amoena subsp. sericea (Kitag.) Kamelin & Gubanov,** 1992, Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 97(5): 64. - *V. amoena* var. *sericea* Kitag. 1940, Rep. Inst. Sci. Res. Manchoukuo 4: 83. - [ **9** ].
- V. amurensis Oett.** 1906, Trudy Bot. Sada Imp. Yur'evsk. Univ. 6: 143. - [ **4, 5, 9+** (Pistrick *et al.* 2012) ].
- V. angustifolia L.** 1753, Amoen. Acad. 4: 105. - [ **11** (Gobi Altai, Biger sum) ].
- V. costata Ledeb.** 1836, Icon. Pl. 2: 7. - [ **2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16** ].
- V. cracca L.** 1753, Sp. Pl. 2: 735. - [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14** ].  
+ **V. faba L.** 1753, Sp. Pl. 2: 737. - *Faba faba* (L.) House, 1924, New York State Mus. Bull. 254: 457. - [ **4+** (Ulziykhutag 2003) ].
- V. geminiflora Trautv.** 1875, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(1): 42. - [ **3, 4, 5** ]. - **Subendemic.** - (**R**).  
# **V. japonica A. Gray,** 1858, Mem. Amer. Acad. Arts, 6(2): 385. - *V. japonica* subsp. *pallida* (Turcz.) Worosch. 1985, Fl. Region SSSR 179. - [ **2+** (Minjiin gol), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), **5** ]. - (**R**).
- V. macrantha Jurtzev,** 1965, Novosti Syst. Vyssh. Rast. 1965: 319. - [ **1, 2, 3** ].
- V. macrantha subsp. olchonensis Peschkova,** 1979, Fl. Tsentr. Sibir. 2: 634. - [ **1, 4** ].
- V. megalotropis Ledeb.** 1831, Fl. Altaic. 3: 344. - [ **1, 2, 3, 4, 5, 8, 9** ].
- V. multicaulis Ledeb.** 1831, Fl. Altaic. 3: 345–346. - [ **1, 2, 3, 4, 5, 6, 8, 13** ].  
+ **V. nervata Sipliv.** 1966, Novosti Syst. Vyssh. Rast. 1966. 287. - *V. megalotropis* var. *intermedia* Krylov, 1935. - [ **1+, 2+, 3+, 4+** (Vlasova 2012) ].
- V. pseudorobus** Fisch. & C.A. Mey. 1835, Index Sem. (St. Petersburg) 1: 41. - [ **5, 9+** (Pistrick *et al.* 2012) ].  
+ **V. ramuliflora (Maxim.) Ohwi** 1936, J. Jap. Bot. 12(5): 331. - *Orobus ramuliflorus* Maxim. 1859, Prim. Fl. Amur. 83–84. - [ **2+, 3+, 4+, 5+** (Ulziykhutag 2003; Dariimaa 2009) ].
- V. sativa L.** 1753, Sp. Pl. 2: 736. - [ **3, 4** ].
- V. semenovii (Regel & Herd.) B. Fedtsch.** 1905, Trudy Glavn. Bot. Sada, 24: 245. - [ **3, 13** ]. - (**R**).  
**V. sepium L.** 1753, Sp. Pl. 2: 737. - [ **4** (Ereenii nuruu) ].

**V. tenuifolia** Roth, 1788, Tent. Fl. Germ. 1: 309. – [ 3, 6, 7 ].

**V. tsydenii** Malysch. 1979, Novosti Syst. Vyssh. Rast. 15: 183. – [ 4 (Selenge, Orkhon gol, Shaamar) ]. – Subendemic. – (VU, VR, RB).

**V. unijuga** A. Br. 1854, Index Sem. (Berlin) 1853: 22. – [ 1, 2, 3, 4, 5, 6, 7, 8 ].

**V. venosa** (Willd. ex Link) Maxim. 1873, Bull. Acad. Imp. Sci. St.-Petersbourg 18(4): 395. - *Orobus venosus* Willd. ex Link, 1822, Enum. Hort. Berol. Alt. 2: 236. – *V. baicalensis* (Turcz.) B. Fedtsch. 1948, Fl. URSS 13: 424. – [ 1, 2, 3, 4, 5, 8 ].

**Notes:** The cultivated plants followed in the Fabaceae family: *Arachis hypogaea* L., *Faba bona* Medik., *Glycine max* (L.) Merr., *Lens culinaris* Medik., *Lupinus angustifolius* L., *L. luteus* L., *L. polyphyllus* Lindl., *Ornithopus sativus* Broth., *Phaseolus vulgaris* L., *Pisum sativum* L. (Ulziykhutag 2003, 2004; Manibazar 2010; Urgamal *et al.* 2013).

**Citation:** Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch. 2014. *Conspectus of the vascular plants of Mongolia*. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp. (p. 143-158).

**71. POLYGALACEAE HOFFMANNS. & LINK 1809 (1/3)**

Fl. Portug. 1: 62

# **Polygala comosa Schkuhr, 1796**, Bot. Handb. 2: 324. - *P. hybrida* DC. 1824, Prodr. 1: 325. - [ 1, 2, 3, 4, 6, 7 ].

**P. sibirica** L. 1753, Sp. Pl. 2: 702. - [ 1, 2, 3, 4, 5, 9 ].

**P. tenuifolia** Willd. 1802, Sp. Pl. 3(2): 879. - [ 1, 2, 3, 4, 5, 8, 9, 12, 13 ].

**24. FAGALES ENGL. 1892**

Syllabus 94

**72. BETULACEAE GRAY, 1822 (2/10)**

Nat. Arr. Brit. Pl. 2: 222

**Alnus viridis** subsp. **fruticosa** (Rupr.) Nyman, 1881, Consp. Fl. Eur. 3: 672. - *A. fruticosa* Rupr. 1845. Beitr. Pflanzenk. Russ. Reiches 2: 53. - *Duschekia fruticosa* Pouzar 1964, Preslia 36: 339. - [ 1, 2, 4, 9 ].

**Betula fruticosa** Pall. 1776, Reise Russ. Reich. 3(2): 758. - *B. mongolica* V. Vassil. 1959, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 19: 92. - [ 1, 2, 3, 4, 5, 6 ].

**B. mandshurica** subsp. **tauschii** (Regel) Kamelin. 1996, Consp. Vasc. Pl. Outer Mongolia: 36. - *B. alba* subsp. *tauschii* Regel, 1865, Bull. Soc. Imp. Nat. Moscou 38(2): 399. - *B. tauschii* (Regel) Koidz. 1930, Fl. Symb. Or. As.: 35. - [ 4, 5 ].

**B. microphylla** Bunge, 1835, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 2: 506. - *B. tessungolica* P.A. Baranov, 1934, Trudy Mongol'sk. Komiss. 14: 1-45. - *B. rezniczenkoana* (Litv.) Schischk. 1930, Fl. Zap. Sibiri 4: 793. - *B. microphylla* var. *rezniczenkoana* Litv. 1914, Trudy Bot. Muz. Imp. Akad. Nauk 12: 97. - *B. turanica* P.A. Baranov, 1934, Trudy Mongol'sk. Komiss. 14: 1-45. - *B. baranovii* Sukaczev, 1934, Trudy Mongol'sk. Komiss. 14: 1-45. - *B. derbetica* P.A. Baranov, 1934, Trudy Mongol'sk. Komiss. 14: 1-45. - *B. gordiaginii* P.A. Baranov, 1934, Trudy Mongol'sk. Komiss. 14: 1-45. - *B. pavlovii* P.A. Baranov, 1934, Trudy Mongol'sk. Komiss. 14: 1-45. - [ 1, 2, 3, 4, 6, 7, 8, 10, 13, 14 ].

# **B. nana** subsp. **exilis** (Sukacz.) Hulten, 1944, Fl. Alaska Yukon 4: 579. - *B. exilis* Sukacz. 1911, Trudy Bot. Muz. Imp. Akad. Nauk 8: 213. - [ 2, 3 ].

# **B. nana** subsp. **rotundifolia** (Spach) Malyshev, 1965, Vysokogorn. Fl. Vost. Sayan 110. - *B. rotundifolia* Spach, 1841, Ann. Sci. Nat. Bot., ser. 2, 15: 194. - [ 1, 2, 3, 6, 7 ].

# **B. ovalifolia** Rupr. 1857, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 15: 378. - *B. fusca* Pall. ex Georgi, 1775, Reise Russ. Reichs 3: 173. - *B. gmelinii* Bunge, 1835, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 2: 607. - [ 1, 2, 3, 4, 5, 7, 8, 13 ].

# **B. pendula** Roth, 1788, Tent. Fl. Germ. 1: 405. - *B. hippolyti* Sukacz. 1926, Severn. Mongoliya 1: 161. - [ 2, 3, 4 ].

# **B. platyphylla** subsp. **mandshurica** (Regel) Kitag. 1939, Rep. Inst. Sci. Res. Manchoukuo 3(1): 132. - *B. alba* subsp. *mandshurica* Regel, 1865, Bull. Soc. Imp. Nat. Moscou 38(2): 399. - *B. mandshurica* (Regel) Nakai, 1915, Bot. Mag. (Tokyo) 29(340): 42. - [ 4, 5 ].

**B. platyphylla** Sukacz. 1911, Trudy Bot. Muz. Imp. Akad. Nauk 8: 220. - *B. vladimirii* V. Vassil. 1958, Trudy Inst. For. Acad. Sci. URSS 37: 125. - [ 1, 2, 3, 4, 5, 8, 13+ (Neuffer et al. 2012) ].

25. ROSALES BERCHT. & J. PRESL, 1820

Prir. Rostlin 231

73. ROSACEAE JUSS. 1789 (28/161)

Gen. Pl. 334

# **Agrimonia pilosa** Ledeb. 1823, Ind. Sem. Hort. Dorpat. Suppl. 1. - *A. pilosa* subsp. *dahurica* (Willd. ex Ser.) Kamelin. 1986, Bull. Moscow Obsh. Ispit. Prir. Odt. Biol. 91, 6: 92. - [ 1, 2, 3, 4, 5, 6, 9 ].

? **Alchemilla argutiserrata** H. Lindb. f. ex Juz. 1932, Syst. Herb. Univ. Tomsk. Nos.: 5-6. - [ 7 (Sanginin gol) ]. - Described from Mongolian Altai phytogeographical region. (MW).

**A. changaica** V. Tichomirov, 1983, Bull. Moscow Obsh. Ispit. Prir. Odt. Biol. 88, 5: 98. - [ 3 ].

- **Endemic.** Described from Khangai phytogeographical region. (MW, isotype - LE). - (R, RB).

**A. circularis** Juz. 1954, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR. 16: 148. - [ 7 (Yoltiin gol) ]. - **Subendemic.** Described from Mongolian Altai phytogeographical region. (MW).

? **A. cyrtopleura** Juz. 1941, Fl. URSS: 342. - [ 3, 7 ]. - (R).

**A. gracilis** Opiz. 1838, Oekon.-techn. Fl. Böhm. 2(1): 14. - [ 3 (Khan Khukhii uul) ]. - Described from Khangai phytogeographical region. (MW).

**A. gubanovii** V. Tichomirov, 1983, Bull. Moscow Obsh. Ispit. Prir. Odt. Biol. 88, 5: 100. - [ 2+ (Sangastai, Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3 ]. - **Endemic.** Described from Khangai phytogeographical region. (MW, isotype - LE).

? **A. hebescens** Juz. 1932, Syst. Herb. Univ. Tomsk. Nos.: 5-6. - [ 2, 3 ]. - (R).

**A. krylovii** Juz. 1932, Syst. Herb. Univ. Tomsk. Nos.: 5-6. - [ 7 ]. - **Subendemic.** - (R).

**A. murbeckiana** Buser, 1906, Bot. Not.: 142. - [ 7 ]. - Described from Mongolian Altai phytogeographical region. (MW).

**A. pavlovii** Juz. 1929, Bull. Soc. Nat. Mosc., Sect. Biol. 38: 85. - [ 2+ (Sangastai, Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3 ]. - **Endemic.** - (R, RB).

**Amygdalus mongolica** (Maxim.) Ricker, 1917, Proc. Biol. Soc. Wash. 30: 17. - *Prunus mongolica* Maxim. 1879, Bull. Soc. Imp. Nat. Moscou 54: 16. - [ 12, 13, 16 ]. - **Subendemic. (EN).** Described from Eastern Gobi phytogeographical region of Mongolia. (LE). - (R, RB).

+ **A. pedunculata** Pall. 1789, Nova Acta Acad. Sci. Imp. Petrop. Hist. Acad. 7: 353. - *Prunus pedunculata* (Pall.) Maxim. 1883, Bull. Acad. Imp. Sci. St-Petersbourg 29(1): 78-79. - *Amygdalus pilosa* Turcz. 1832, Bull. Soc. Imp. Nat. Moscou 5: 189. - *Prunus pilosa* (Turcz.) Maxim. 1832, Bull. Acad. Imp. Sci. St-Petersbourg 29(1): 79. - [ 2+, 3+, 4+, 6+, 7+, 8+, 9+, 10+, 11+, 12+, 13+, 16+ (Grubov 1982; Urgamal *et al.* 2013) ].

**Notes:** This species was not given in Gubanov's conspectus (1996).

**Armeniaca sibirica** (L.) Lam. 1783, Encycl. 1(1): 3. - *Prunus sibirica* L. 1753, Sp. Pl. 1: 474. - [ 2, 3, 4, 5, 9 ].

# **Aruncus sylvester** Kostel. ex Maxim. 1879, Trudy Imp. S.-Peterburgsk. Bot. Sada 6(1): 169-170. - *A. asiaticus* Pojark. 1939, Flora URSS 9: 491-492. - [ 5 ].

**Chamaerhodos altaica** (Laxm.) Bunge, 1829, Fl. Altaic. 1: 429. - *Sibbaldia altaica* Laxm. 1774, Novi Comment. Acad. Sci. Imp. Petrop. 18: 527. - [ 1, 2, 3, 4, 6, 7, 8, 10, 11, 13 ].

? **Ch. corymbosa** Murav. 1928, Izv. Glavn. Bot. Sada SSSR. 27: 38. - [ 5, 9 ].

**Ch. erecta** (L.) Bunge, 1829, Fl. Altaic. 1: 430. - *Sibbaldia erecta* L. 1753, Sp. Pl. 1: 284. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 ].

- Ch. grandiflora (Pall. ex Schult.) Bunge, 1829**, Fl. Altaic. 1: 431. - *Sibbaldia grandiflora* Pall. ex Schult. 1820, Sys. Veg. 6: 770. - [ 5 ].
- Ch. sabulosa Bunge, 1829**, Fl. Altaic. 1: 432. - [ 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].
- Ch. trifida Ledeb. 1844**, Fl. Ross. 2, 1: 34. - [ 4, 5, 8, 9, 12, 13 ].
- Coluria geoides Ledeb. 1830**, Fl. Altaic. 2: 263. - [ 3, 6 (Olonova & Beket 2010) ]. - Subendemic.
- Comarum palustre L. 1753**, Sp. Pl. 1: 502. - [ 1, 2, 3, 4, 6 ].
- + **C. salesovianum (Stephan) Asch. & Graebn. 1904**, Syn. Mitteleur. Fl. 6: 663. - *Potentilla salesoviana* Stephan, 1808, Mem. Soc. Imp. Nat. Mosc. 2: 6. - [ 6, 7, 10, 13+ (Urgamal *et al.* 2013), 14 ].
- Cotoneaster megalocarpus Popov, 1935**, Bull. Moskow. Obsh. Ispit. Prir. Otd. Biol. 19: 128. - [ 7 ].
- C. melanocarpus Lodd., G. Lodd. & W. Lodd. 1829**, Fam. Nat. Syn. Monogr. 3: 223. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14 ].
- C. mongolicus Pojark. 1955**, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR. 17: 196. - [ 2, 3, 4, 5, 7, 8, 9, 12+ (Dariimaa *et al.* 2004), 13 ]. - Subendemic. Described from Eastern Mongolia. (LE).
- C. neopopovii Czer. 1981**, Sosud. Rast. SSSR 433. - *C. popovii* Peschkova, 1979, Novosti Syst. Vyssh. Rast. 15: 231. - [ 4 ].
- C. uniflorus Bunge, 1830**, Fl. Altaic. 2: 220. - [ 1, 2, 3, 7, 8+ (Neuffer *et al.* 2012), 13 ].
- Crataegus dahurica Koehne ex Schneider, 1906**, Ill. Handb. Laubholzk. 1: 773. - [ 2, 4, 5, 9 ].
- C. maximoviczii Schneider, 1906**, Ill. Handb. Laubholzk. 1: 771. - [ 5 ].
- C. sanguinea Pall. 1784**, Fl. Ross. 1(1): 25. - [ 2, 3, 4, 5, 9 ]. - (R).
- ? **Dryas grandis Juz. 1919**, Bull. Jard. Bot. Princ. URSS, 28: 312. - [ 1 ]. - (R).
- D. incisa Juz. 1929**, Izv. Glavn. Bot. Sada SSSR 28: 312, 323. - [ 1 ]. - (R).
- D. oxyodonta Juz. 1929**, Izv. Glavn. Bot. Sada SSSR 28: 313. - [ 1, 2, 3, 4, 6, 7 ].
- D. punctata Juz. 1929**, Izv. Glavn. Bot. Sada SSSR 28: 320-323. - [ 1, 3 ].
- ? **D. sumneviczii Serg. 1957**, Syst. Herb. Univ. Tomsk. 81: 4. - [ 1 ]. - (R).
- Filipendula angustiloba (Turcz.) Maxim. 1879**, Trudy Imp. S.-Peterburgsk. Bot. Sada 6(1): 250-251. - *Spiraea angustiloba* Turcz. 1841, Index Sem. (St.-Petersburg) 8: 72. - [ 5, 9 ].
- F. palmata (Pall.) Maxim. 1879**, Trudy Imp. S.-Peterburgsk. Bot. Sada 6(1): 250. - *Spiraea palmata* Pall. 1776, Reise Russ. Reichs 3: 735. - [ 2, 3, 4, 5, 9 ].
- F. ulmaria (L.) Maxim. 1879**, Trudy Imp. S.-Peterburgsk. Bot. Sada 6(1): 251. - *Spiraea ulmaria* L. 1753, Sp. Pl. 1: 490. - [ 2+ (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3, 4 ].
- Fragaria orientalis Losinsk. 1926**, Izv. Glavn. Bot. Sada SSSR 25: 70. - [ 2, 3, 4, 5 ].
- ? **F. viridis Duch 1766**, Hist. Nat. Frais. 135. - [ 2 ]. - Described from Northern Mongolia. (LE, MW).
- Geum aleppicum Jacq. 1786**, Icon. Pl. Rar. 1: 10. - [ 2, 3, 4, 5, 9 ].
- + **G. rivale L. 1753**, Sp. Pl. 1: 501. - [ 7+ (Yolt uul, Yoltiin gol), (German *et al.* 2009)].
- Malus baccata (L.) Borkh. 1803**, Theor. Prakt. Handb. Forstbot. 2: 1280. - *Pyrus baccata* L. 1767, Mant. Pl. 1: 75. - *Malus pallasiana* Juz. 1939, Fl. URSS 9: 370. - [ 2, 3, 4, 5, 8, 9 ]. - (R).
- # **Padus avium var. asiatica (Kom.) T.C. Ku & B.M. Barthol. 2003**, Fl. China 9: 423. - *P. asiatica* Kom. 1941, Fl. URSS 10: 578-579. - [ 1+ (Doronkin 2012), 2, 3, 4, 5, 9 ].

# **Pentaphylloides parvifolia Sojak, 1969**, Folia Geobot. Phytotax. 4: 208. - *Dasiphora parvifolia* (Fisch. ex Lehm.) Juz. 1941, Fl. URSS 10: 71-72. - [ 2, 3, 4, 6, 8 ].

# **Pentaphyllum pensylvanicum (L.) Lunell, 1916**, Amer. Midl. Naturalist 4(9): 416.. - *Potentilla pensylvanica* L. 1767, Mant. Pl. 1: 76. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14 ].

**Potaninia mongolica Maxim. 1881**, Bull. Acad. Imp. Sci. St.-Petersbourg 27(4): 466. - [ 11, 12, 13, 16 ]. - **Endemic.** - (NT, VR, RB, RL).

**Potentilla acaulis L. 1753**, Sp. Pl. 1: 500. - *P. subacaulis* L. 1758, Syst. Nat. (ed. 10) 1065. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13+ (Neuffer et al. 2012) ].

+ **P. angustiloba T.T. Yu & C.L. Li, 1980**, Acta Phytotax. Sin. 18(1): 12-13. - [ 7+ (Bayan gol), (Kurbatsky 1999; Kechaykin & Shmakov 2013; Kechaykin et al. 2014), 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin et al. 2014) ].

**P. anserina L. 1753**, Sp. Pl. 1: 495. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15 ].

**P. aphanae Sojak, 1986**, Willdenovia, 16: 131. - [ 3, 6, 7, 10, 13, 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin et al. 2014) ]. - **Subendemic.** Described from Gobi Altai phytogeographical region. (PR, isotype - HAL).

**P. astragalifolia Bunge, 1830**, Fl. Altaic. 2: 246. - [ 3, 6, 7, 10, 11 ]. - **Subendemic.**

# **P. betonicifolia Poir. 1804**, Encycl. 5, 1: 601. - *P. leucophylla* Pall. 1776, Reise Russ. Reich. 3: 194. - *P. coriacea* Sojak, 1970, Folia Geobot. Phytotax. 5, 1: 108. - [ 2, 3, 4, 5, 8, 9 ].

**P. biflora Willd. ex Schlecht. 1816**, Mag. Neuesten Entdeck. Gesammten Naturk. Ges. Naturf. Freunde Berlin 7: 297. - [ 1, 3, 6 ].

**P. bifurca L. 1753**, Sp. Pl. 1: 497. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 ].

**Notes:** It was informed that this name is a synonym of *Sibbaldianthe bifurca* (L.) Kurtto & T. Erikss. 2003 (Kechaykin et al. 2014).

# **P. bifurca var. major Ledeb. 1843**, Fl. Ross. 2: 43. - *P. bifurca* subsp. *orientalis* (Juz.) Sojak, 1970, Folia Geobot. Phytotax. 5, 1: 113. - *P. semiglabra* Juz. 1934, Weeds URSS 3: 124. - *P. orientalis* Juz. 1941, Fl. URSS 10: 82-83. - [ 7+ (Bodonchiin gol), 8, 9, 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin et al. 2014) ].

+ **P. chamaeleo Sojak, 1986**, Willdenovia, 16: 132. - [ 6+ (Bayan-Ulgii, Bayan-Ulgii, Uvurtiin davaa), (Kechaykin et al. 2014), 7+ (Jargalant Khairkhan uul), (Ebel & Rudaya 2002; Urgamal et al. 2013), 14+ (Baitag Bogd uul), (Kechaykin et al. 2014) ].

**P. chalchorum Sojak, 1970**, Folia Geobot. Phytotax. 5, 1: 104. - [ 2, 3, 7, 9 ]. - **Subendemic.** Described from Khentei phytogeographical region. (PR, isotype BM, E, K).

**P. chenteica Sojak, 1970**, Folia Geobot. Phytotax. 5, 1: 104. - [ 2, 3 ]. - **Endemic.** Described from Khentei phytogeographical region. (PR).

**P. chinensis Ser. 1825**, Prodr. 2: 581. - [ 4, 5, 9 ].

**P. chionea Sojak, 1970**, Folia Geobot. Phytotax. 5, 1: 104. - [ 1, 2, 3, 4+ (Gundegmaa 2002), 10+ (Dzun Jargalant, Rashaantiin gol), (Kechaykin et al. 2014), 13+ (Mesihcek et Sojak 1992), 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin et al. 2014) ]. - **Subendemic.** Described from Khovsgol phytogeographical region. (PR, isotype K, OSBU, ALTB).

**P. chrysantha Trev. 1818**, Index Semin. Hort. Vratislav. 1818: 5. - *P. asiatica* (Th. Wolf) Juz. ex Kom. 1841, Fl. URSS 10: 182. - *P. chrysantha* var. *asiatica* Th. Wolf, Biblioth. Bot. 16(Heft 71): 462. - [ 7, 14 ]. - (R, RB).

**P. conferta Bunge, 1830**, Fl. Altaic. 2: 240-241. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 14 ].

+ **P. conferta var. conferta Kuntze, 1891**, Revis. Gen. Pl. 1: 219. - *P. approximata* Bunge, 1830, Fl. Altaic. 2: 241-242. - *P. pensylvanica* var. *conferta* (Bunge) Ledeb. 1844, Fl. Ross. 2: 40. - *P. sibirica* var. *longipila* Th. Wolf, 1908, Biblioth. Bot. 71: 191. 1908. - [ 6+ (Bayan-Ulgii, Uvurtiin

davaa), **7+** (Kechaykin & 2013; Kechaykin & Shmakov 2013; Urgamal *et al.* 2013), **10+** (Dzun Jargalant, Rashaantiin gol), **14+** (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin & 2013) ].

+ **P. crantzii (Crantz) Beck ex Fritsch, 1897**, Excursionsfl. Oesterreich 295. – *Fragaria crantzii* Crantz, 1766, *Inst. Rei Herb.* 2: 178. – [ **7+** (Tsagaan uul) (Sojak 2006; Kechaykin & Shmakov 2013) ].

**P. desertorum Bunge, 1830**, Fl. Altaic. 2: 257-258. – [ **1+, 6+** (Gundegmaa 2002), **7, 9+, 12+** (Gundegmaa 2002), **13, 14** ]. – **Subendemic**.

**P. drymeja Sojak, 1970**, Folia Geobot. Phytotax. 5, 1: 104. – [ **2, 3, 13+** (Kechaykin & Shmakov 2013) ]. – **Endemic**. Described from Ikh Bogd uul. (PR).

**P. elegans Cham. & Schlecht. 1827**, Linnaea 2(1): 22-24. – [ **1** ].

**P. evestita Th. Wolf. 1908**, Biblioth. Bot. 16(Heft 71): 248. – [ **1, 2, 3, 4, 6, 7, 13, 14+** (Baitag Bogd uul, Altan ovoo), (Gundegmaa 2002; Kechaykin *et al.* 2014) ].

**P. exuta Sojak, 1986**, Willdenovia, 16: 131. – [ **3, 7, 13, 14+** (Baitag Bogd uul, Altan ovoo), (Kechaykin *et al.* 2014) ]. – **Subendemic**. Described from Khangai phytogeographical region. (LE, paratype - LE, HAL, PR).

**P. flagellaris Willd. ex Schlecht. 1816**, Mag. Neuesten Entdeck. Gesammten Naturk. Ges. Naturf. Freunde Berlin 7: 297. – [ **2, 3, 4, 5, 9** ].

**P. fragariooides L. 1753**, Sp. Pl. 1: 496. – [ **2, 3, 4, 5, 7** ].

**P. fruticosa L. 1753**, Sp. Pl. 1: 495. - *Dasiphora fruticosa* (L.) Rydb. 1898, Monogr. N. Amer. Potentilleae 188. - *Pentaphylloides fruticosa* (L.) O. Schwarz, 1949, Mitt. Thering. Bot. Ges. 1: 105. – [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13** ].

# **P. gelida C.A. Mey. 1831**, Verz. Pfl. Casp. Meer. 167. – *P. gelida* subsp. *boreo-asiatica* Jurtz. et Kamelin, 1984, Arctic Fl. URSS 9, 1: 320, 220. – [ **1, 2, 3, 6, 7, 9+** (Gundegmaa 2002), **13, 14+** (Baitag Bogd uul, Altan ovoo), (Kechaykin *et al.* 2014) ].

+ **P. gobica Sojak, 2006**, Willdenowia, 36, 2: 867-869. – [ **7+** (Baitag Bogd uul), (Sojak 2006; Urgamal *et al.* 2013) ]. – **Endemic**. Described from Mongolian Altai (Baitag Bogd uul) phytogeographical region (HAL).

**P. gracillima Kamelin, 1977**, Acta Phytotax. Sin. 18(1): 9. – [ **3, 10+** (Gundegmaa 2002) ]. – **Subendemic**. Described from Khan Khukhii uul. (LE).

**P. hilbigii Sojak, 1986**, Willdenovia, 16: 135. – [ **3** (Sojak 1986) ]. – **Endemic**. Described from Khangai phytogeographical region. (HAL, isotype - LE, PR).

+ **P. hubsugulica Sojak, 1986**, Willdenovia, 16: 135. – [ **1+** (Sojak 1986; Urgamal *et al.* 2013) ]. – **Endemic**. Described from Khovsgol phytogeographical region. (HAL, LE).

**P. ikonnikovii Juz. 1955**, Bot. Math. (Leningrad) 17: 225. – [ **13** (Gobi Gurvan Saikhan), (Karsten *et al.* 2005) ]. – **Endemic**. Described from Gobi Altai phytogeographical region. (LE). – (R, RB).

**P. imbricata Kar. & Kir. 1841**, Bull. Soc. Imp. Nat. Moscou 14: 416. – [ **7, 10** ]. – (R).

**P. inopinata Sojak, 1986**, Willdenovia, 16: 130. – [ **6** (Olonova & Beket 2010) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region. (LE).

+ **P. jenissejensis Polozh. et W. Smirn. 1975**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 85(27): 19. - *P. soongarica* var. *multicaulis* (Bunge) Th. Wolf, 1908, Biblioth. Bot. 16(Heft 71): 156. - *P. multicaulis* auct. non Bunge, 1933, Mem. Acad. Imp. Sci. St.-Petersbourg. Ser. 6 Scie Math 2: 99. – [ **6+** (Kechaykin & Shmakov 2013; Urgamal *et al.* 2013), **7+** (Bayan gol), (Kechaykin *et al.* 2014), **10+** (Khyargas nuur), (Sojak 2012; Kechaykin & Shmakov 2013; Urgamal *et al.* 2013) ]. – **Subendemic**.

+ **P. junatovii Rudaya et A.L. Ebel, 2002**, Turczaninowia 5(2) : 5–10. – [ 7+ (Bulgan and Indertiin gol), (Rudaya & Ebel 2002; Urgamal *et al.* 2013) ]. – **Subendemic**. Described from Mongolian Altai phytogeographical region (TK).

**P. kryloviana Th. Wolf, 1908**, Biblioth. Bot. 16(Heft 71): 322. – [ 3, 7+ (Olonova & Beket 2010), 14+ (Baitag Bogd uul, Altan ovoo), (Kechaykin *et al.* 2014) ]. – **Subendemic**.

**P. laevipes Sojak, 1986**, Willdenovia, 16: 125. – [ 7 (Duruu nuur), (Ebel & Rudaya 2002; Olonova & Beket 2010) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region. (LE).

**P. laevissima Kamelin, 1995**, Bull. Moskow. Obsh. Ispit. Prir. Otd. Biol. 100, 1: 87. – [ 7 (Olonova & Beket 2010) ]. – **Endemic**. Described from Mongolian Altai phytogeographical region. (LE).

**P. longifolia Willd. ex Schlecht. 1816**, Mag. Neuesten Entdeck. Gesammten Naturk. Ges. Naturf. Freunde Berlin 7: 297. – *P. viscosa* Donn. ex Lehm. 1856, Revis. Potent.: 57. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12+ (Dariimaa *et al.* 2004), 13 ].

+ **P. lydiae Kurbatsky, 1988**, Fl. Sibir. 8: 38. – [ 7+ (Yolt uul, Yoltiin gol), (German *et al.* 2009; Urgamal *et al.* 2013) ].

**P. mongolica Krasch. 1926**, North Mongolia 1: 161. – [ 3 ]. – **Endemic**. Described from Khangai phytogeographical region. (LE).

**P. multicaulis Bunge, 1833**, Mem. Acad. Imp. Sci. St.-Petersbourg. Ser. 6 Scie Math 2: 99. – [ 1, 3 ].

**P. multifida L. 1753**, Sp. Pl. 1: 496. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 ].

# **P. multifida var. ornithopoda (Tausch) Th. Wolf, 1908**, Biblioth. Bot. 16(Heft 71): 156. – *P. ornithopoda* Tausch. 1823, Hortus Canal., pl. 10. – [ 1+, 2+ (Gundegmaa 2002), 3, 4, 6, 7+ (Gundegmaa 2002; Kechaykin & Shmakov 2013), 10, 14 ].

**P. nivea L. 1753**, Sp. Pl. 1: 499. – [ 1, 2, 3, 4, 6, 7, 13, 14+ (Baitag Bogd uul, Altan ovoo), (Kechaykin *et al.* 2014) ].

+ **P. nivea subsp. arenosa (Turcz.) Kuvaev, 2006**, - *P. nivea* var. *arenosa* Turcz. 1843, Bull. Soc. Imp. Nat. Moscou 16(4): 607 - *P. arenosa* (Turcz.) Juz. 1941, Fl. URSS 10: 137. – [ 2+ (Kechaykin & Shmakov 2013), 3+ (Gundegmaa 2002), 4+ (Kechaykin & Shmakov 2013; Urgamal *et al.* 2013), 6+ (Bayan-Ulgii, Uvurtiin davaa), (Kechaykin *et al.* 2014) ]. – **(R)**.

# **P. nivea var. elongata Th. Wolf, 1908**, Biblioth. Bot. 16(Heft 71): 237. – *P. crebridens* Juz. 1955, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 17: 218–222. – [ 1, 2, 3, 10+ (Dzun Jargalant, Rashaantiin gol), (Kechaykin *et al.* 2014) ].

**P. norvegica L. 1753**, Sp. Pl. 1: 499. – [ 1+ (Oyumaa & Paula de Priest 2011), 2, 3, 4]. – **(R)**.

**P. ozjorensis Peschkova, 1972**, Fl. Baikal. Sibir.: 66. – [ 1, 3, 4+ (Ulaanbaatar ?), 7+ (Bodonchiin gol), (Kechaykin *et al.* 2014) ].

+ **P. pamirica Th. Wolf, 1915**, Trudy Imp. Bot. Sada Petra Velikago 31(3): 489. – [ 6+ (Khovd, Uvurtiin davaa), 7+ (Bodonchiin gol), 10+ (Dzun Jargalant, Rashaantiin gol), 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin *et al.* 2014) ].

+ **P. pamiroalaica Juz. 1934**, Fl. URSS 10: 609–610. – [ 14+ (Baitag Bogd uul, Altan ovoo), (Kechaykin *et al.* 2014) ].

**P. parvifolia Fisch. ex Lehm. 1831**, Nov. Stirp. Pug. 3: 6. - *Dasiphora parvifolia* (Fisch. ex Lehm.) Juz. 1941, Fl. URSS 10: 71–72. - *Potentilla fruticosa* var. *parvifolia* (Fisch. ex Lehm.) Th. Wolf 1908, Biblioth. Bot. 16(Heft 71): 58. – [ 2, 3, 4, 6, 8 ].

**P. rhipidophylla Sojak, 1986**, Bot. Jahrb, 106, 2: 196. – [ 7 ]. – **Endemic**.

**P. rigidula Th.Wolf, 1908**, Biblioth. Bot. 16(Heft 71): 328. – [ 6, 10+ (Khar-Us nuur), (Kechaykin 2013) ].

**P. sanguisorba Willd. ex Schlecht.** 1816, Mag. Neuesten Entdeck. Gesammten Naturk. Ges. Naturf. Freunde Berlin 7: 286. – [ 1, 2, 3, 4, 12+ (Dariimaa et al. 2004), 13 ].

**P. sergievkajae Peschkova,** 1969, Novosti Syst. Vyssh. Rast. 6: 286. – [ 5, 8 ].

**P. sericea L.** 1753, Sp. Pl. 1: 495-496. – *P. dasypylla* Bunge, 1830, Fl. Altaic. 2: 243-244. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10+, 11+ (Gundegmaa 2002), 12+ (Gundegmaa 2002; Dariimaa et. al., 2004), 13+ (Gundegmaa 2002; Neuffer et al. 2012), 15 ].

**P. serrata Sojak,** 1986, Willdenovia, 16: 133. – [ 3 ]. – **Endemic.** Described from Khangai phytogeographical region. (LE, isotype S).

**P. sischanensis Bunge ex Lehm.** 1851, Nov. Stirp. Pug. 9: 3. – *P. songarica* var. *chinensis* Bunge, 1831, Enum. Pl. China Bor. 25. – [ 9 ]. – **Subendemic.** Described from Mongolia. (LE, MW).

**P. songarica Bunge,** 1830, Fl. Altaic. 2: 244. – [ 10+ (Gundegmaa 2002), 14 ].

+ **P. stepposa Sojak,** 1993, Preslia 64(3): 218. – [ 7+ (Dartsagtiin Khuren nuruu), 10+ (Khovd, Khetel-Us), (Kechaykin et al. 2014) ].

+ **P. strigosa Pall. ex Pursh** 1814, Fl. Amer. Sept. 1: 356. - *P. pensylvanica* var. *strigosa* (Pall. ex Pursh) Lehm. 1820, Monogr. Potentilla 55. - *P. sibirica* Th. Wolf, 1908, Biblioth. Bot. 16 (Heft 71, 2): 188-192. – [ 12+ (Dariimaa et. al., 2004; Urgamal et al. 2013)].

+ **P. subdigitata T.T. Yu & C.L. Li,** 1980, Acta Phytotax. Sin. 18(1): 12-13. – [ 7+ Kechaykin & Shmakov 2013; Urgamal et al. 2013 ]. – **Subendemic.**

**P. supina L.** 1753, Sp. Pl. 1: 497. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16+ (Hilbig & Tungalag 2006) ].

+ **P. supina var. supina**, - *P. fauriei* H. Lev. 1909, Repert. Spec. Nov. Regni Veg. 7(143-145): 198. – *P. paradoxa* Nutt. 1840, Fl. North Amer. 1(3): 437. – *P. supina* subsp. *paradoxa* (Nutt.) Sojak, 1969, Folia Geobot. Phytotax. 4(2): 207. – *P. supina* var. *egibbosa* Th. Wolf, 1908, Biblioth. Bot. 16(Heft 71[3]): 392. – *P. supina* var. *paradoxa* (Nutt.) Th. Wolf, 1908, Biblioth. Bot. 16(Heft 71[3]): 393. – [ 4+, 5+ (Kechaykin & Shmakov 2013; Urgamal et al. 2013) ].

# **P. tanacetifolia Willd. ex Schlecht.** 1816, Mag. Neuesten Entdeck. Gesammten Naturk. Ges. Naturf. Freunde Berlin 7: 297. – *P. nudicaulis* Willd. ex Schltdl. 1816, *Ges. Naturf. Freunde Berlin Mag. Neuesten Entdeck. Gesammten Naturk.* 7: 286. - *P. acervata* Sojak, 1986, Folia Geobot. Phytotax. 5: 99. – [ 2, 3, 4, 5, 6+, 7+ (Neuffer et al. 2003), 8, 9, 12, 13+ (Neuffer et al. 2012) ].

**P. tenella Turcz.** 1843, Bull. Soc. Nat. Moscow 13: 620. – [ 7 ]. – **Subendemic.** Described from Mongolia.

**P. tergemina Sojak,** 1964, Preslia 36: 26. – [ 2, 3, 4, 5, 9 ]. – Described from nearest Ulaanbaatar region. (PR).

**P. turkestanica Sojak,** 1987, Bot. Jahrb. Syst. (Stuttgart) 109, 1: 26. – [ 7, 14+ (Baitag Bogd uul, Altan ovoo), (Kechaykin et al. 2014) ]. – **Subendemic.** (LE).

**P. verticillaris Stephan ex Willd.** 1799, Sp. Pl. 2(2): 1096. – [ 2, 3, 4, 5, 8, 9 ].

**P. virgata Lehm.** 1820, Monogr. Potentilla 75. – *P. dealbata* Bunge, 1830, Fl. Altaic. 2: 250-251. – [ 1+ (Gundegmaa 2002), 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ].

+ **P. virgata var. pinnatifida (Lehm.) T.T. Yu & C.L. Li,** 1985, Fl. Reipubl. Popularis Sin. 37: 304. - *P. nivea* var. *pinnatifida* Lehm. 1851, Nov. Stirp. Pug. 9: 67. - *P. altaica* Bunge, 1830, Fl. Altaic. 2: 252. – [ 7+ (Kechaykin & Shmakov 2013; Urgamal et al. 2013) ]. – **Subendemic.**

**Notes:** It was informed that *P. regelianiana* Th. Wolf (unresolved name) and *P. turczaninowiana* Stschgel. are distributed in Western Mongolia (Kechaykin et al. 2014).

**Rosa acicularis Lindl.** 1820, Ros. Monogr. 44-45. – [ 1, 2, 3, 4, 5, 6, 7+ (Neuffer et al. 2003; German et al. 2003), 8, 9, 13 ].

**R. albertii Regel,** 1883, Trudy Imp. S.-Peterburgsk. Bot. Sada 8(1): 278. – [ 7 ]. – **(R, RB).**

- R. baitagensis Kamelin & Gubanov, 1988**, Bull. Moscow Obsh. Ispit. Prir. Odt. Biol. 93, 5: 110. – [ 14 ]. – **Endemic**. Described from Baitag Bogd uul. (MW, isotype - LE).
- R. beggeriana Schrenk, 1841**, Enum. Pl. Nov. 1: 73. – [ 14 ]. – **(R, RB)**.
- R. davurica Pall. 1788**, Fl. Ross. 1(2): 61. – [ 2, 4, 5, 9 ].
- ? **R. kaschgarica Rupr. 1869**, In Ost.-Sack. et Rupr. Sert. Tianschan.: 46. – [ 14, 15 ].
- R. kokanica (Regel) Juz. 1941**, Fl. URSS 10: 476. - *R. platyacantha* var. *kokaniaca* Regel, 1878, Trudy Imp. S.-Peterburgsk. Bot. Sada 5(2): 313. – [ 7 ]. – **(VU, VR, RB)**.
- R. laxa Retz. 1813**, Phytogr. Bl. 39. – [ 6, 7, 13, 14, 15+ (Urgamal 2005) ]. – **(NT, VR, RB)**.
- R. oxyacantha M. Bieb. 1819**, Fl. Taurico-Caucasica 3: 338. – [ 1, 2, 3, 7 ].
- R. platyacantha Schrenk, 1842**, Bull. Sci. Acad. Imp. Sci. Saint-Petersbourg 10: 252. – [ 14 ]. – **(R, RB)**.
- # **R. spinosissima L. 1753**, Sp. Pl. 1: 491. - *R. pimpinellifolia* L. 1759, Syst. Nat. (ed. 10) 2: 1062. – [ 3, 7, 14 ].
- + **R. xanthina Lindl. 1820**, Ros. Monogr. 132. - *R. xanthinoides* Nakai, 1918, Bot. Mag. (Tokyo) 32(382): 218. – [ 9+ (Sanchir & Tserennadmid 2000; Urgamal *et al.* 2013) ].
- Rubus arcticus L. 1753**, Sp. Pl. Sp. Pl. 1: 494. – [ 1, 2, 3, 4 ].
- + **R. chamaemorus L. 1753**, Sp. Pl. 1: 494. – [ 2+ (Kamelin & Ulziykhutag 2005; Urgamal *et al.* 2013) ].
- R. humilifolius C.A. Mey. 1848**, Beitr. Pflanzenk. Russ. Reiches 5: 57. – [ 1, 2 ].
- R. sachalinensis Lev. 1909**, Repert. Spec. Nov. Regni Veg. 6(125–130): 332. - *R. melanolasium* auct. Fl. Mong., non Focke. – [ 1, 2, 3, 4, 7, 8 ].
- R. saxatilis L. 1753**, Sp. Pl. 1: 494. – [ 1, 2, 3, 4, 5, 9 ].
- Sanguisorba alpina Bunge, 1829**, Fl. Altaic. 1: 142. – [ 3, 6, 7 ]. – **(VU, VR, RB)**.
- S. officinalis L. 1753**, Sp. Pl. 1: 116. - *S. officinalis* var. *glandulosa* (Kom.) Vorosch. 1966, Fl. Far East URSS 265. - *S. glandulosa* Kom. 1926, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR. 6: 10. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 ].
- # **S. tenuifolia Fisch. ex Link, 1821**, Enum. Hort. Berol. Alt. 1: 144. – [ 9 ].
- # **S. tenuifolia var. alba Trautv. & C.A. Mey. 1856**, Reise Sibir. 1(3): 35. - *S. tenuifolia* var. *parviflora* Maxim. 1859, Prim. Fl. Amur. 94. - *S. parviflora* (Maxim.) Takeda, 1914, J. Linn. Soc. Bot. 42(287): 462. – [ 4, 9 ].
- + **Sibraea laevigata (L.) Maxim. 1879**, Trudy Imp. St.-Peterburgsk. Bot. Sada 6(1): 215–216. - *Spiraea laevigata* L. 1771, Mant. Pl. 2: 244–245. - *Sibraea altaiensis* (Laxm.) C.K. Schneid. 1905, Ill. Hand. Laubholzk. 1: 485–486. – [ 7+ (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic**.
- # **Sibbaldia adpressa Bunge, 1829**, Fl. Altaic. 1: 428–429. - *Potentilla adpressa* (Bunge) Cardot, 1916, Bull. Mus. Natl. Hist. Nat. 22: 408. – *P. bifurca* var. *unijuga* Th. Wolf, 1908, Biblioth. Bot. 71: 65. – *P. lindenbergii* Lehm. 1851, Gart. Blumenz. 7: 339. - *Sibbaldia minutissima* Kitam. 1952, Faun. & Fl. Nepal Himal. 158. - *Sibbaldianthe adpressa* (Bunge) Juz. 1941, Fl. URSS 10: 230. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16 ].
- S. procumbens L. 1753**, Sp. Pl. 1: 284. – *S. macrophylla* Turcz. ex Juz. 1941, Fl. URSS, ed. Komarov x. 225. – *S. procumbens* var. *macrophylla* (Turcz. ex Juz.) Gubanov, 1996, Conspl. Vas. Pl. Outer Mongolia: 63. – [ 2, 7 ].
- # **S. sericea (Grubov) Sojak, 1969**, Folia Geobot. Phytotax. 4: 79. - *Sibbaldianthe sericea* Grubov, 1955, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR. 17: 16–18. - *Potentilla adpressa* var. *sericea*

## CONSPECTUS OF THE VASCULAR PLANTS OF MONGOLIA (2014)

---

Cardot, 1914, Notul. Syst. (Paris) 3: 242. – [ 7, 8, 12, 13 ]. – **Subendemic.** Described from Gobi Altai phytogeographical region. (LE).

# **S. tetrandra Bunge, 1832**, Verz. Altai Pfl. 17. - *Dryadanthe tetrandra* (Bunge) Juz. 1941, Fl. URSS 10: 229. - *Potentilla tetrandra* (Bunge) Hook. f. 1878, Fl. Brit. India 2(5): 346. - *Dryadanthe bungeana* Ledeb. 1844, Fl. Ross. 2: 33. 1844. – [ 1, 3, 6, 7 ].

**Sorbaria sorbifolia** (L.) A. Braun, 1860, Fl. Brandenburg 1(1): 177. - *Spiraea sorbifolia* L. 1753, 1: 490. – [ 4, 5 ]. – (VU, VR, RB).

**Sorbus sibirica** Hedl. 1901, Kongl. Svenska Vetensk. Acad. Handl. 35(1): 44. – [ 1+ (Oyumaa & Paula de Priest 2011), 2, 3, 4, 5 ].

**Spiraea alpina** Pall. 1784, Fl. Ross. 1: 35. – [ 1, 2, 3, 6, 7 ].

**S. aquilegiifolia** Pall. 1776, Reise Russ. Reich. 3: 734. – [ 1+ (Oyumaa & Paula de Priest 2011), 2, 3, 4, 5, 8, 9, 12, 13 ].

# **S. chamaedryfolia** L. 1753, Sp. Pl. 1: 489. - *S. ussuriensis* Pojark. 1939, Fl. URSS 9: 489. – [ 5 ].

+ **S. dahurica** (Rupr.) Maxim. 1879, Trudy Imp. S.-Peterburgsk. Bot. Sada 6(1): 190–192. - *S. alpina* var. *dahurica* Rupr. 1857, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 15: 362. – [ 2+ (Eruugiin khaluun rashaan, Songintiin khyasaa), (Dulamsuren *et al.* 2004), 4+ (Grubov 1982; Gundegmaa 2014 in press) ].

**S. elegans** Pojark. 1939, Fl. URSS 9: 490. – [ 4 ].

**S. flexuosa** Fisch. ex Cambess. 1824, Ann. Sci. Nat., Bot. 1: 365. – [ 1, 2, 3, 4, 5, 6, 8, 9, 13 ].

**S. hypericifolia** L. 1753, Sp. Pl. 1: 489. – [ 2, 3, 4, 6, 7, 9, 10, 12+ (Dariimaa *et al.* 2004), 14 ].

**S. media** Schmidt, 1792, Oesterr. Allg. Baumz. 1: 53. – [ 1, 2, 3, 4, 5, 6, 7, 8+ (Neuffer *et al.* 2012), 13 ].

**S. pubescens** Turcz. 1832, Bull. Soc. Imp. Nat. Moscou 5: 190. – [ 4, 5, 9 ].

**S. salicifolia** L. 1753, Sp. Pl. 1: 489. – [ 2, 3, 4, 5, 9 ].

**S. sericea** Turcz. 1842, Bull. Soc. Imp. Nat. Moscou 16: 591. – [ 1, 3, 4, 8 ].

**Note:** The *Dasiphora lactiflora* (L.) Rydb. is located in Zaraa uul in Foothills of Great Khingan phytogeographical region of Mongolia (Mongolian Red Book 2013).

### 74. ELAEAGNACEAE JUSS. 1789 (2/3)

Gen. Pl. 74–75

# **Elaeagnus angustifolia** L. 1753, Sp. Pl. 1: 121. – *E. moorcroftii* Wall. ex Schltld. 1860, Prodr. 14: 610. – *E. argentea* Moench, 1794, Methodus 638. – [ 15, 16 ]. – (CR, VR, RB, RL).

# **Hippophae rhamnoides** subsp. **mongolica** Rousi, 1971, Ann. Bot. Fenn. 8: 210. – *H. rhamnoides* L. 1753, Sp. Pl. 2: 1023. – [ 3, 4, 6, 7, 10, 11, 13 ]. – (RL).

+ **H. rhamnoides** subsp. **turkestanica** Rousi, 1971, Ann. Bot. Fenn. 8: 208. – [ 14+ (Flora of China 2007) ]. – (RL).

### 75. RHAMNACEAE JUSS. 1789 (1/5)

Gen. Pl. 376–377

+ **Rhamnus davurica** Pall. 1776, Reise Russ. Reich. 3: 734. – [ 2+, 4+ (Gubanov 1999; Dariimaa 2009) ].

**Rh. erythroxylon** Pall. 1776, Reise Russ. Reich. 3: 734. – [ 2+ (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3, 4, 8, 9, 12, 13 ].

## CONSPECTUS OF THE VASCULAR PLANTS OF MONGOLIA (2014)

---

**Rh. maximovicziana J.J. Vassil.** 1940, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 8: 126. – [ 13, 16 ].

**Rh. parvifolia Bunge,** 1831, Enum. Pl. China Bor. 14. – [ 2, 4, 5, 9 ]. – (VU, VR, RB).

**Rh. ussuriensis J.J. Vassil.** 1940, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 8: 115. – [ 4, 5, 9 ]. – (NT, VR, RB).

### 76. ULMACEAE MIRB. 1815 (1/3)

Elem. Physiol. Veg. Bot. 2: 905

# **Ulmus davidiana var. japonica (Rehder) Nakai,** 1932, Fl. Sylv. Kor. 19: 26. - *U. campestris* var. *japonica* Rehd. 1902, Cycl. Amer. Hort. 4: 1882. - *U. japonica* (Rehd.) Sarg. 1907, Trees and Shrubs 2(1): 1. – [ 4, 5, 8 ].

**U. macrocarpa Hance,** 1868, J. Bot. 6(71): 332–333. – [ 2, 4, 5, 8, 9, 12 ].

**U. pumila L.** 1753, Sp. Pl. 1: 226. – [ 2, 3, 4, 5, 7, 8, 9, 11, 13, 16 ]. – (RL).

### 77. CANNABACEAE MARTINOV, 1820 (1/1)

Tekhno-Bot. Slovar: 99

**Cannabis sativa L.** 1753, Sp. Pl. 2: 1027. - *C. ruderalis* Janisch. 1924, Trudy Glavn. Bot. Sada 43: 84. – [ 2, 3, 4, 6, 8, 9, 10, 12 ].

### 78. URTICACEAE JUSS. 1789 (2/4)

Gen. Pl. 400

# **Parietaria debilis G. Forst.** 1786, Fl. Ins. Austr. 73. – *P. micrantha* Ledeb. 1829, Icon. Pl. 1: 7. – [ 2, 3, 4, 6, 9, 10 ].

**Urtica angustifolia Fisch. ex Homem.** 1819, Suppl. Hort. Bot. Hafn. 107. – *U. dioica* var. *angustifolia* Schltdl. 1832, Linnaea 7: 141. - *U. dioica* var. *angustifolia* (Fisch. ex Hornem.) Ledeb. 1833, Fl. Altaic. 4: 241. – [ 1, 2, 3, 4, 5, 7, 9, 10 ].

**U. cannabina L.** 1753, Sp. Pl. 2: 984. – [ 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14 ].

**U. sondenii (Simm.) Avr. ex Geltm.** 1988, Novosti Syst. Vyssh. Rast. (New Delhi) 25: 76. - *U. dioica* var. *sondenii* Simm. 1910, Fl. och vegetationen i Kiruna/Vetensk. prakt. unders. Lappland anordn. Luossavaara-Kirunavaara 1: 78. – [ 7, 14+ (Bulgan gol), (Revushkin *et al.* 2001) ].

### 26. GERANIALES JUSS. EX BERCHT. & J. PRESL, 1820

Prir. Rostlin 221

### 79. GERANIACEAE JUSS. 1789 (2/14)

Gen. Pl. 268

**Erodium cicutarium (L.) L'Her.** 1789, in Ait. Hort. Kew. 2: 414. – [ 2, 4, 12+ (Novoselova 1996; Dariimaa *et al.* 2004) ].

**E. stephanianum Willd.** 1800, Sp. Pl. 3(1): 625. – [ 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16+ (Novoselova 1996) ].

**E. tibetanum Edgew. & Hook. f.** 1874, Fl. Brit. India 1: 434. – [ 4+ (Neuffer *et al.* 2012), 6, 7, 8+ (Neuffer *et al.* 2012), 10, 11, 12, 13, 14, 15, 16 ].

**Geranium affine Ledeb.** 1833, Ic. Pl. Fl. Ross. 4: 20. – [ 6, 7, 14+ (Novoselova 1996)].

**G. albiflorum Ledeb.** 1829, Ic. Pl. Fl. Ross. 1: 6. – [ 2, 3, 6, 7 ].

**G. collinum Stephan ex Willd. 1800**, Sp. Pl. 3(1): 705. – [ 7, 10, 14, 15, 16+ (Novoselova 1996) ].

**G. dahuricum DC. 1824**, Prodr. 1: 642. – [ 1, 5, 6+, 9+, 10+, 12+ (Novoselova 1996) ].

+ **G. krylovii Tzvelev, 1993**, Novosti Syst. Vyssh. Rast. 29: 95. – [ 2+ (Eruu gol), (Gubanov 1999; Urgamal et al. 2013) ].

# **G. platyanthum Duthie, 1906**, Gard. Chron., ser. 3, 39: 52. - *G. eriostemon* Fisch. ex DC. 1824, Prodr. 1: 641. – [ 2, 3, 4, 5, 9+, 12+ (Novoselova 1996) ].

**G. pratense L. 1753**, Sp. Pl. 2: 681. – [ 1, 2, 3, 4, 6+ (Novoselova 1996), 7, 8+, 9+, 12+ (Novoselova 1996), 13 ].

**G. pseudosibiricum J. Mayer, 1786**, Abh. Bohm. Ges. Wiss. 238. – [ 1, 2, 3, 4, 5, 6+ (Novoselova 1996), 7, 8+ (Novoselova 1996), 10 ].

**G. sibiricum L. 1753**, Sp. Pl. 2: 683. – [ 1, 2, 3, 4, 5, 7, 8, 9, 10, 12+ (Novoselova 1996), 13, 14+ (Bulgan gol), (Revushkin et al. 2001), 16+ (Novoselova 1996) ].

# **G. transbaicalicum Serg. 1934**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1: 4. – *G. pratense* subsp. *transbaicalicum* (Serg.) Gubanov, 1983, Fl. Vost. Khangaya 141. – [ 2, 3, 4, 5, 6+ (Novoselova 1996; Artemov et al. 2000), 9 ]. – **Subendemic**.

**G. wlassovianum Fisch. ex Link, 1822**, Enum. Berol. Alt. 2: 197. – [ 1, 2, 3, 4, 5, 9 ].

## 27. MYRTALES JUSS. EX BERCHT. & J. PRESL, 1820

Prir. Rostlin 233

### 80. LYTHRACEAE J. ST.-HIL. 1805 (2/3)

Expos. Fam. Nat. 2: 175

+ **Lythrum salicaria L. 1753**, Sp. Pl. 1: 446. – *L. intermedium* Ledeb. ex Colla, 1834, Herb. Pedem. 2: 399. – *L. salicaria* subsp. *intermedium* Hara, *L. salicaria* var. *intermedium* (Ledeb. ex Colla) Koehne, 1880, Bot. Jahrbcher 1. – [ 4+ (Gubanov 1999; Dariimaa 2009) ].

+ **L. virgatum L. 1753**, Sp. Pl. 1: 447. – [ 6+, 14+ (Gubanov 1999; Dariimaa 2009; Oyunsetseg et al. 2013) ].

**Middendorfia borysthenica Trautv. 1842**, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans, 4: 490. - *Peplis borysthenica* M. Bieb. ex Schrank, 1822, Fl. 5: 643. 1822. - *Lythrum borysthenicum* (Schrank) Litv. 1917, Fl. Sredn. Rossii (Maevski), ed. 5: 209. – [ 10 ].

**Notes:** It was informed that this name is a synonym of *Lythrum borysthenicum* (M. Bieb. ex Schrank) Litv.

### 81. ONAGRACEAE JUSS. 1789 (2/11)

Gen. Pl. 317–318

**Circaeа alpina L. 1753**, Sp. Pl. 1: 9. – [ 2, 3, 4, 5 ].

# **C. alpina** subsp. **caulescens (Kom.) Tatew. 1940**, Veg. Shikotan Is. 44. 1940. – *C. alpina* var. *caulescens* Kom. 1905, Fl. Manschur. 3: 99. - *C. caulescens* (Kom.) Nakai, 1934, J. Jap. Bot. 10(9): 588–589. – [ 3 ].

+ **Epilobium alpinum L. 1753**, Sp. Pl. 1: 348. – [ 7+ (Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006) ].

**Notes:** It was informed that *E. alpinum* L. is a synonyms of *E. palustre* L. and *E. anagallidifolium* Lam. (Kartesz 2000).

# **E. angustifolium L. 1753**, Sp. Pl. 1: 347. - *Chamaenerion angustifolium* (L.) Schur, 1866, Enum. Pl. Transsilv. 213. – *Ch. angustifolium* (L.) Scop. 1771, Folia Geobot. Phytotax. 7(1): 86. -

*Chamerion angustifolium* (L.) Holub. 1972, Folia Geobot. Phytotax. 7(1): 86. – [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 14** ].

+ **E. ciliatum** Raf. **1808**, Med. Repos. 2(5): 361. – [ **2+** (*Khuderiiin gol*), (Doronkin et al. 2012; Urgamal et al. 2013) ].

**E. davuricum** Fisch. ex Hornem. **1819**, Hort. Hafn. Suppl. 44. – [ **2, 3, 4, 11+** (Neuffer et al. 2012) ]. – (R).

**E. fastigiatoramosum** Nakai. **1919**, Bot. Mag. (Tokyo) 33(385): 9. – [ **3, 4, 9** ].

**E. hirsutum** L. **1753**, Sp. Pl. 1: 347-348. – [ **3, 6** ]. – (R).

# **E. latifolium** L. **1753**, Sp. Pl. 1: 347. - *Chamaenerion latifolium* (L.) Sweet 1830, Hort. Brit. (ed. 2) 198. - *Chamerion latifolium* (L.) Th. Fries & Lange, 1877, Fl. Dan. 49, 17: 7. - *Ch. latifolium* (L.) Holub. 1972, Folia Geobot. Phytotax. 7(1): 86. - *Epilobium changaicum* Grubov, 1955, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR, 17: 20. – [ **1, 2, 3, 6, 7, 13, 14** ].

**E. minutiflorum** Hausskn. **1879**, Oesterr. Bot. Z. 29(2): 55. – [ **7, 10, 15** ].

**E. palustre** L. **1753**, Sp. Pl. 1: 348. – [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15** ].

**Citation:** Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch. 2014. *Conspectus of the vascular plants of Mongolia*. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp. (p. 158-187).

**28. BRASSICALES BROMHEAD, 1838**

Edinburgh New Philos. J. 24: 416

**§ 82. CLEOMACEAE BERCHT. & J. PRESL 1825 (1/1)**

Prir. Rostlin 2(64): 253

[incl. Capparaceae absent]

**Cleome gobica Grubov 1982**, Opred. Sosud. Rast. Mongolii: 118. – [ **15** (Nominguin gobi), (Grubov 1982) ]. – **Endemic**. Described from Nominguin Gobi in Mongolia. (LE). – (**R**).

**83. BRASSICACEAE BURNETT, 1835 (61/160) \***

Outlines of Bot. 854, 1093, 1123

\* based on D.A. German & B. Oyuntsetseg (2008, 2012)

**Alyssum desertorum Stapf, 1886**, Akad. Wiss. Wien, Math.-Naturwiss. Kl., Denkschr. 51: 302. – [ **3, 6, 7** ].

**A. lenense Adams. 1817**, Mem. Soc. Imp. Nat. Moscou 5: 110. – [ **1, 2, 3, 4, 5, 7, 8, 9** ].

+ **A. linifolium Stephan ex Willd. 1800**, Sp. Pl. 3(1): 467–468. - *Meniocus linifolius* (Steph. ex Willd.) DC. 1821, Syst. Nat. 2: 325. – [ **3+** (Grubov 1982), **7+** (Bayan gol), (German et al. 2009; Urgamal et al. 2013) ]. – (**R**).

**Notes:** This is species was not given in Cubanov's conspectus (1996).

**A. obovatum (C.A. Mey.) Turcz. 1837**, Bull. Soc. Imp. Nat. Moscou 10: 57. - *Odontarrhena obovata* C.A. Mey. 1831, Fl. Altaic. 3: 61–63. – [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10** ].

# **A. tenuifolium Steph. 1800**, Sp. Pl. 3: 460. - *Ptilotrichum tenuifolium* (Steph.) C.A. Mey. 1831, , Fl. Altaic. 3: 67. – *P. canescens* subsp. *tenuifolium* (Steph.) Hanelt & Davamzac, 1965, – [ **2, 3, 4, 5, 6, 7+** (Tonkhil nuur, Gurvan-Uliasiin gol), (Revushkin et al. 2001), **8, 9, 10+** (Khovd gol), (Revushkin et al. 2001), **12, 13, 14, 15** ].

**Aphragmus involucratus (Bunge) E. Schutz, 1924**, Pflanzenr. IV. 105(Heft 86): 198. - *Platypetalum involucratum* Bunge, 1836, Verz. Suppl. Fl. Altaic. 77. – [ **6, 7, 13** ].

# **Arabidopsis thaliana (L.) Heynh. 1842**, Fl. Sachsen 1: 538. - *Arabis thaliana* L. 1753, Sp. Pl. 2: 665. – [ **6, 7** ].

+ **Arabis amplexicaulis Edgew. 1851**, Trans. Linn. Soc. London 20(1): 31–32. - *Erysimum amplexicaule* (Edgew.) Kuntze, 1891, Revis. Gen. Pl. 2: 933. – [ **5+** (Neuffer et al. 2012; Urgamal et al. 2013) ].

**A. sagittata (Bertol.) DC. 1815**, Fl. Franc. (ed. 3) 6: 592. - *Turritis sagittata* Bertol. 1804, Pl. Genuensis ed. 1 185. - *Arabis hirsuta* auct. Fl. Mong., non Scop., - *A. borealis* Andrz. 1831, Fl. Altaic. 3: 25. – [ **2, 3, 4, 5, 7, 9** ].

**Barbarea orthoceras Ledeb. 1824**, Index Sem. (Dorpat) 2. – [ **3, 4, 5, 9** ].

**B. stricta Andrz. 1822**, Enum. Pl.: 72. – [ **5** (Khalkhiin gol) ].

# ***B. vulgaris* W.T. Aiton, 1812**, Hort. Kew. (ed. 2) 4: 109. – *B. arcuata* (Opiz x J. Presl & C. Presl) Rchb. 1822, Fl. 5(1): 296. - *Erysimum arcuatum* Opiz. ex J. Presl & C. Presl, 1819, Fl. Čechica 138. – [ 2, 3, 4, 5, 7 ].

+ ***Berteroia incana* (L.) DC. 1821**, Syst. Nat. 2: 291. – [ 2+ (Doronkin *et al.* 2012), 4+ (Neuffer *et al.* 2012; Urgamal *et al.* 2013) ].

***Brassica juncea* (L.) Czem. 1859**, Consp. Pl. Charc. 8. - *Sinaps juncea* L. 1753, Sp. Pl. 2: 668-669. – [ 3, 4, 7, 9, 10, 11, 13, 14, 15+ (Hilbig & Tungalag 2006) ].

# ***B. rapa* L. 1753**, Sp. Pl. 2: 666-667. – *B. campestris* L. 1753, Sp. Pl. 2: 666. – [ 2, 3, 4, 6, 7, 8+ (Pistrick *et al.* 2012), 11 ].

# ***Braya glabella* Richardson, 1823**, Narr. Journey Polar Sea 743. – *B. siliquosa* Bunge, 1839, Del. Sem. Hort. Dorpat. 7. – [ 1 ]. – (R).

# ***B. humilis* (C.A. Mey.) B.L. Rob. 1895**, Syn. Fl. N. Amer. 1(1[1]): 141. - *Sisymbrium humile* C.A. Mey. 1830, Icon. Pl. 2: 16. - *Neotorularia humilis* (C.A. Mey.) Hedge & J. Leonard, 1986, Bull. Jard. Bot. Belg. 56(3-4): 394. – *N. maximowiczii* (Botsch.) Botsch. 1988, Bot. Zhurn. (Moscow & Leningrad) 73(8): 1188. - *Torularia humilis* (C.A. Mey.) O.E. Schulz, 1922, Pflanzenr. 4, 105(Heft 86): 223. – [ 1, 3, 4, 6, 7, 8 ].

***B. rosea* (Turcz.) Bunge 1839**, Del. Sem. Hort. Dorpat. 7. – [ 1, 3, 6, 7 ].

***Bunias cochlearioides* Murr. 1778**, Novi Comment. Soc. Reg. Sci. Gott. 8: 42. – [ 1 ]. – (R).

***B. orientalis* L. 1753**, Sp. Pl. 2: 670. – [ 9 ].

***Camelina microcarpa* Andrz. 1821**, Syst. Nat. 2: 517. – [ 4, 6, 14+ (German, 2009) ]. – (R).

***C. sativa* (L.) Crantz, 1762**, Strp. Austr. Fasc. 1: 18. - *Myagrum sativum* L. 1753, Sp. Pl. 2: 641. – [ 4 ].

***Capsella bursa-pastoris* (L.) Medic. 1792**, Pfl.-Gatt. 85. - *Thlaspi bursa-pastoris* L. 1753, Sp. Pl. 2: 647. – [ 2+ (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3, 4, 6, 7, 10, 14 ].

+ ***C. orientalis* Klokov, 1922**, Bull. Obshch. Estestvoisp. Voronezhsk. Gosud. Univ. 1: 122. - *C. bursa-pastoris* subsp. *orientalis* (Klokov) Tzvelev, 2000, Novosti Syst. Vyssh. Rast. 32: 184. – [ 7+ (Neuffer *et al.* 2013; Urgamal *et al.* 2013) ].

***Cardamine bellidifolia* L. 1753**, Sp. Pl. 2: 654. – [ 1, 2, 3, 7 ].

+ ***C. impatiens* L. 1753**, Sp. Pl. 2: 655. – [ 6+ (German & Oyuntsetseg 2008; German 2009) ].

***C. leucantha* (Tausch) O.E. Schulz, 1903**, Bot. Jahrb. Syst. 32(2-3): 403-405. - *Dentaria leucantha* Tausch, 1836, Fl. 19(2): 404. – [ 5 ]. – (R, RB).

***C. macrophylla* Willd. 1800**, Sp. Pl. 3(1): 484-485. – [ 1, 2+ (Khan 2012), 6, 7 ]. – (R).

***C. parviflora* L. 1753**, Syst. Nat. (ed. 10) 2: 1131. – [ 2, 3 ]. – (EN, VR, RB).

***C. pratensis* L. 1753**, Sp. Pl. 2: 656. – [ 1, 2, 3, 4, 5, 7, 9 ].

***C. prorepens* Fisch ex DC. 1821**, Syst. Nat. 2: 256. – [ 5 ].

**C. trifida (Lam. ex Poir.) B.M.G. Jones, 1965**, Feddes Repert. Spec. Nov. Regni Veg. 69: 57. - *Dentaria trifida* Poir. 1812, Encycl., Suppl. 2: 465. - *Sphaerotorrhiza trifida* (Poir.) Khokhr. 1985, Fl. Magadan. obl.: 235. - [ 5 ]. - (R).

**Cardaria pubescens (C.A. Mey.) Jarm, 1934**, Weeds of USSR 3: 29. - *Hymenophysa pubescens* C.A. Mey. 1830, Icon. Pl. 2: 20. - [ 7, 10, 11, 14, 15, 16 ].

# **Catolobus pendulus (L.) Al-Shehbaz, 2005**, Novon 15: 521. - *Arabis pendula* L. 1753, Sp. Pl. 2: 665. - [ 1, 2, 3, 4, 5, 6, 8+ (Neuffer et al. 2012), 9, 12, 13 ].

**Chorispora bungeana Fisch. & C.A. Mey. 1841**, Enum. Pl. Nov. 1: 96. - [ 6, 7, 13, 14 ]. - (R, RB).

**Ch. sibirica (L.) DC. 1821**, Syst. Nat. 2: 437. - *Raphanus sibirica* L. 1753, Sp. Pl. 2: 669. - [ 7, 13 ].

**Ch. tenella (Pall.) DC. 1821**, Syst. Nat. 2: 435. - *Raphanus tenella* Pall. 1776, Reise Russ. Reichs 3: 741. - [ 7, 14 ].

**Clausia aprica (Stephan) Korn.-Trotzky. 1834**, Index Sem. Kasan. - *Cheiranthus apicus* Stephan, 1800, Sp. Pl. 3, 1: 518. - [ 1, 2, 3, 4, 6, 7, 9 ].

**C. trichosephala (Turcz.) Dovark, 1966**, Phyton(Horn) 11: 200. - *Hesperis trichosephala* Turcz. 1832, Bull. Soc. Imp. Nat. Moscou 5: 180. - [ 4 ].

**Conringia planisiliqua Fisch. & C.A. Mey. 1837**, Index Sem. (St. Petersburg) 3: 32. - [ 6, 14 ].

# **Cruciimalaya mollissima (C.A. Mey.) Al-Shehbaz, O'Kane & R.A. Price, 1999**, Novon 9(3): 299. - *Sisymbrium mollissimum* C.A. Mey. 1831, Fl. Altaic. 3: 140-142. - *Arabidopsis mollissima* O.E. Schulz, 1924, Fl. Sibir. et Orient. Extr. 1: 136. - [ 6, 7, 13, 14 ].

# **C. rupicola (Krylov) A.L. Ebel & D.A. German, 2005**, Turczaninowia 8(3): 8. - *Arabis rupicola* Krylov, 1903, Trudy Imp. St.-Peterburgsk. Bot. Sada 21: 3. - *A. mongolica* Botsch. 1975, Bot. Zhurn. 60, 7: 947. - *Arabidopsis mongolica* (Botsch.) Mesicek & Sojok, 1995, Folia Geobot. Phytotax. 30: 448. - *A. rupicola* (Krylov) A.L. Ebel, 2000, Turczaninowia 3(3): 19. - [ 6+ (German & Oyuntsetseg 2008; German 2009), 13 (Neuffer et al. 2012) ]. - **Endemic**. Described from Gobi Altai phytogeographical region (LE).

# **Dendroarabis fruticulosa (C.A. Mey.) D.A. German & Al-Shehbaz, 2008**, Harvard Pap. Bot. 13(2): 290. - *Arabis fruticulosa* C.A. Mey. 1831, Fl. Altaic. 3: 19. - [ 6, 7 ]. - **Subendemic**.

**Descurainia sophia (L.) Webb ex Prantl, 1891**, Nat. Pflanzenfam. 3(2[4]): 192. - *Sisymbrium sophia* L. 1753, Sp. Pl. 2: 659. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14 ].

**Dontostemon crassifolius (Bunge) Maxim. 1858**, Prim. Fl. Amur. 46. - [ 7, 10, 11, 12, 13, 14, 15, 16 ]. - **Subendemic**. Described from Eastern Gobi phytogeographical region (LE).

+ **D. dentatus (Bunge) Ledeb. 1842**, Fl. Ross. 1: 175. - *Andreoskia dentata* Bunge, 1833, Enum. Pl. China Bor. 6. - *Dontostemon oblongifolius* Ledeb. 1841, Fl. Ross. 1: 175. - [ 5+ (Zaraa uul), (Gubanov 1999; Dariimaa 2009) ]. - (typus - MW).

**D. elegans Maxim. 1889**, Enum. Pl. Mongol. 57. - [ 6, 7, 10, 11, 13, 14, 15, 16 ]. - **Subendemic**. Described from Transaltai Gobi phytogeographical region (LE).

**D. integrifolius (L.) C.A. Mey. 1831**, Fl. Altaic. 3: 120. - *Sisymbrium integrifolium* L. 1753, Sp. Pl. 2: 660. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16 ].

**D. micranthus C.A. Mey. 1831**, Fl. Altaic. 3: 120. – [ **1, 2, 3, 4, 5+** (German 2009; Neuffer *et al.* 2012), **8, 9, 13** ]. – **Subendemic**.

**D. perennis C.A. Mey. 1831**, Fl. Altaic. 3: 121. – [ **3, 5, 6, 7, 8, 10, 11, 12, 13, 15** ]. – **Subendemic**.

# **D. pinnatifidus (Willd.) Al-Shehbaz & H. Ohba, 2000**, Novon 10(2): 96–97. - *Cheiranthus pinnatifidus* Willd. 1800, Sp. Pl. 3: 523. - *Dontostemon pectinatus* (DC.) Ledeb. 1841, Fl. Ross. 1: 175. - *Dimorphostemon pectinatus* (DC.) Golubkova, 1974, Bot. Zhurn. (Moscow & Leningrad) 59: 1453. - *D. pinnatus* (Pers.) Kitag. 1979, Neo-Lineam. Fl. Manshur. 332. - *Sisymbrium pectinatus* DC. 1821, Reg. Veg. Syst. Nat. 2: 485. – [ **1, 3+** (Neuffer *et al.* 2012), **4, 8, 13** ].

**D. senilis Maxim. 1880**, Bull. Acad. Imp. Sci. St.-Petersbourg 26: 421. – [ **6, 7, 8+** (Neuffer *et al.* 2012), **10, 11, 12, 13, 14, 15, 16** ]. – **Subendemic**.

+ **D. senilis subsp. gubanovii D.A. German, 2007**, Novon 17(2): 172-175. – [ **6+, 7+, 10+** (German, 2007, 2009; German & Oyunsetseg 2008) ]. – **Subendemic**. Described from Mongolian Altai phytogeographical region (paratype - ALTB).

**Draba altaica (C.A. Mey.) Bunge, 1841**, Del. Sem. Hort. Bot. Dorpat. 8. – *D. rupestris* var. *altaica* C.A. Mey. 1831, Fl. Altaic. 3: 71. – [ **6, 7, 10+** (German & Oyunsetseg 2008; German 2009) ]. – **Subendemic**. – (R).

**D. baicalensis Tolm. 1939**, Fl. URSS 8: 650. – [ **3, 6+** (Ebel 2002; Ebel & Rudaya 2002), **7** ].

? **D. cana Rydb. 1902**, Bull. Torrey Bot. Club 29(4): 241. – [ **1, 2, 3, 4, 6, 7, 13** ].

+ **D. cazuensis Revuschkin & A.L. Ebel, 1998**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 90: 4. – [ **3+** (Khan Khukhii), (Ebel 2002), **6+** (Nogoonuur), (Ebel & Rudaya 2002), **7+** (Tamchiin davaa, Dayan nuur), (Ebel 2002; Olonova & Beket 2010; Olonova *et al.* 2013), **10+** (Uvs, Naranbulag), (Ebel 2002) ]. – **Subendemic**.

**D. eriopoda Turcz. 1841**, Bull. Soc. Imp. Nat. Moscou 15: 260. – [ **1, 2, 3, 6** ].

**D. fladnizensis Wulfen, 1779**, Misc. Austriac. 1: 147–148. – [ **1, 2, 3, 6, 7, 13** ].

**D. hirta L. 1753**, Syst. Nat. (ed. 10) 2: 1127. – [ **1, 2, 3, 6, 7, 13** ].

**D. kusnetzowii (Turcz. ex Ledeb.) Hayek, 1911**, Beih. Bot. Centrabl. 27(1): 1726. - *Halorgium kusnetsovii* Turcz ex Ledeb. 1841, Fl. Ross. 1: 156. – [ **1, 3, 6, 7, 13** ].

+ **D. lanceolata Royel, 1839**, Ill. Bot. Himal. Mts. 1: 72. – *D. denserosulata* Pobed. 1935, Trudy Mongol'sk. Komiss. 19: 55. – [ **1+, 2+, 3+, 4+, 6+** (Neuffer *et al.* 2003), **7+, 13+** (Grubov 1982; Urgamal *et al.* 2013) ].

**Notes:** This is species was not given in Gubanov's conspectus (1996).

**D. mongolica Turcz. 1842**, Bull. Soc. Imp. Nat. Moscou 15: 256. – [ **1, 3, 6, 7** ]. – **Subendemic**.

**D. nemorosa L. 1753**, Sp. Pl. 2: 643. – [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13** ].

**D. ochroleuca Bunge, 1835**, Verz. Altai Pfl. 69. – [ **1, 3, 6, 7, 13** ].

**D. oreades Schrenk, 1842**, Enum. Pl. Nov. 2: 56. – [ **1, 3, 6, 7, 13+** (German & Oyunsetseg 2008; German 2009) ].

**D. pygmaea Turcz. ex N. Busch, 1918**, Fl. Sibir. Orient. Extr. Crucif.: 339. – [ **1, 3, 6+** (Smirnov *et al.* 2003; German & Oyunsetseg 2008) ]. – **Subendemic**.

**D. sibirica** (Pall.) Thell. 1906, Neue Denkschr. Schweiz. Naturf. Ges. 41: 318. - *Lepidium sibiricum* Pall. 1776, Reise Russ. Reichs 3: 34. - [ 3, 7 ]. - (R).

+ **D. stenocarpa** Hook. f. & Thomson, 1861, J. Proc. Linn. Soc. 5: 153. - [ 7+ (Indert, Khargaitiin gol), (German 2001; Ebel 2002; Ebel & Rudaya 2002; German et al. 2009) ].

**D. subamplexicaulis** C.A. Mey. 1831, Fl. Altaic. 3: 77–79. - [ 1, 2, 3, 6, 7, 13 ]. - Subendemic.

**D. turczaninowii** Pohle & N. Busch, 1918, Izv. Rossiisk. Akad. Nauk 15: 1633. - [ 1+ (German & Oyuntsetseg 2008; German 2009), 6+ (Uiguriin gol), (Smirnov et al. 2003), 7, 13+ (German & Oyuntsetseg 2008; German 2009) ].

# **Eruca vesicaria** (L.) Cav. 1802, Descr. Pl. 426–427. - *Brassica vesicaria* L. Sp. Pl. 2: 668. - *Eruca sativa* Mill. 1768, Gard. Dict. ed. 8: 1. - [ 4, 6, 7, 11, 14 ].

**Erucastrum armoracioides** (Czern. ex Turcz.) Cruchet, 1902, Bull. Soc. Vaud. Sci. Nat. 1902: 333. - *Brassica elongata* subsp. *integrifolia* (Boiss.) Breistr. 1944, Bull. Soc. Sci. Dauphine 60: 139. *B. armoracioides* Czern. ex Turcz. 1854, Bull. Soc. Imp. Nat. Moscou 27(2): 311. - [ 4, 9 ].

**Erysimum canescens** Roth. 1797, Nouv. Fl. Pelop. 45. - [ 2, 3, 4, 7, 8, 9, 10, 13 ].

**E. cheiranthoides** L. 1753, Sp. Pl. 2: 652. - [ 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 14 ].

+ **E. flavum** subsp. *altaicum* (C.A. Mey.) Polozh. 1979, Animadv. Herb. Univ. Tomsk, 86: 3. - *E. altaicum* C.A. Mey. 1831, Fl. Altaic. 3: 153. - *E. humillimum* (C.A. Mey.) N. Busch, 1939, Fl. USSR, 8: 106, 638. - *E. altaicum* var. *humillimum* C.A. Mey. 1831, Fl. Altaic. 3 : 153. - *E. flavum* subsp. *humillimum* (C.A. Mey.) A.L. Ebel 2000, Turczaninowia 3(3): 27. - [ 3+, 6+, 7+, 10+ (German & Oyuntsetseg 2008; Urgamal et al. 2013) ].

**E. hieraciifolium** L. f. 1755, Cent. Pl. 18–19. - [ 2, 3, 4, 6, 7, 10, 13, 14 ].

+ **E. ledebourii** (C.A. Mey.) D.A. German, 2004, Turczaninowia 7(2): 16. - *E. altaicum* var. *viride* C.A. Mey. 1831, Fl. Altaic. 3: 153. - *E. flavum* subsp. *viride* (C.A. Mey.) A.L. Ebel, 1997, Bot. Issled. Sibiri Kazakhstana 3: 35. - [ 7+ (Olonova et al. 2013; Urgamal et al. 2013) ]. - Subendemic.

+ **E. mongolicum** D. German, 2005, Willdenowia 35: 307. - [ 7+ (Bodonchiin gol), 14+ (German 2005; German & Oyuntsetseg 2008) ]. - Subendemic. Described from Mongolian Altai phytogeographical region (ALTB, isotype - B, LE).

+ **E. quadrangulum** (L'Her.) Desf. 1804, Tabl. Ecole Bot. 129. - *E. kotuchovii* D.A. German, 2004, Turczaninowia 7(2): 14. - [ 7+ (Olonova & Beket 2010; Olonova et al. 2013) ]. - Subendemic.

**E. sisymbrioides** C.A. Mey. 1831, Fl. Alt. 3: 150–152. - [ 6, 7, 15 ].

+ **E. vassilczenkoi** Polatschek, 1994, Phyton. (Horn) 34(2): 201. - *Syrenia macrocarpa* Vass. 1939, Fl. URSS 8: 640. - [ 7+, 14+ (German 2005; Urgamal et al. 2013) ].

+ **E. virgatum** Roth, 1797, Catal. Bot. 1: 75. - *E. cheiranthoides* subsp. *transiliense* (Popov) D.A. German, 2006, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 97: 26. - [ 7+ (German 2006; German & Oyuntsetseg 2008) ].

# **Eutrema altaicum** (C.A.Mey.) Al-Shehbaz & Warwick, 2005, Harvard Pap. Bot. 10: 132. - *Taphrospermum altaicum* C.A. Mey. 1831, Fl. Altaic. 3: 173–175. - [ 1, 6+, 7+ (Neuffer et al. 2003) ]. - Subendemic.

**E. edwardsii** R. Br. 1823, Chlor. Melvill. 9–10. - [ 1, 2, 3, 6, 7, 13 ]. - Subendemic.

+ **E. heterophyllum (W.W. Sm.) H. Hara**, 1973, J. Jap. Bot. 48(4): 97. - *Braya heterophylla* W.W. Sm. 1919, Notes Roy. Bot. Gard. Edinburgh 11(55): 201–202. - *Eutrema edwardsii* var. *heterophyllum* (W.W. Sm.) W.T. Wang, 1987, Acta Bot. Yunnan. 9(1): 18–19. - *E. edwardsii* subsp. *compactum* (O.E. Schulz) A.L. Ebel, 2000, Turczaninowia 3(3): 30. - [ 7+ (Dayan nuur, Ulyastain gol), (German 2001; Urgamal *et al.* 2013) ].

# **E. salsugineum (Pall.) Al-Shehbaz & Warwick**, 2005, Harvard Pap. Bot. 10: 134. - *Sisymbrium salsugineum* Pall. 1773, Reise Russ. Reichs 2: 466. - *Thellungiella salsuginea* (Pall.) O.E. Schulz, 1924, in Engler, Pflanzenreich, 86 (4, 105): 251, 252. - [ 3, 4, 6+ (Neuffer *et al.* 2003), 7, 8, 9, 10 ].

**Galitzkya macrocarpa (Ikonn.-Gal.) V.V. Botschantz.** 1979, Bot. Zurn. 64: 1442. - *Berteroa macrocarpa* Ikonn.-Gal. 1936, Trudy Bot. Inst. Akad. Nauk SSSR. Ser. 1, Fl. Sist. Vyssh. Rast. Moscow & Leningrad 3: 189. - [ 13 (Gobi Gurvan Saikhan), (Karsten *et al.* 2005; Wesche *et al.* 2006), 15 ]. - **Endemic.** Described from Gobi Altai phytogeographical region (LE). - (R).

**G. potaninii (Maxim.) V.V. Botschantz.** 1979, Bot. Zurn. 64: 1442. - *Berteroa potaninii* Maxim. 1880, Bull. Acad. Imp. Sci. St.-Petersbourg 26(3): 422. - [ 7, 14, 15 (Atas Bogd uul), (Wesche *et al.* 2006) ]. - **Endemic.**

**Goldbachia ikonnikovii Vass.** 1936, Trudy Bot. Inst. Akad. Nauk SSSR. Ser. 1, Fl. Sist. Vyssh. Rast. Moscow & Leningrad 1(2): 151–152. - [ 6+ (Smirnov *et al.* 2003), 7+ (Khoid Tsenkheriin gol), (Revushkin *et al.* 2001), 8+, 9, 10+, 11, 13, 14+ (German 2009) ]. - **Subendemic.** Described from Gobi Altai phytogeographical region (LE). - (R).

**G. laevigata (M. Bieb.) DC.** 1821, Syst. Nat. 2: 577. - *Raphanus laevigatus* M. Bieb. 1808, Fl. Taur.-Caucas. 2: 129. - [ 6+, 7+ (German 2001), 10, 11, 14 ]. - (R).

+ **G. pendula Botsch.** 1963, Bot. Mater. Gerb. Bot. Inst. V. L. Komarova Akad. Nauk SSSR 22: 140. - [ 7+ (Bulgan gol), (German 2001), 14+ (Kamelin & Ulziykhutag 2005) ]. - **Subendemic.**

# **Hesperis flava Georgi**, 1775, Reise Russ. Reichs 1: 225. - *Erysimum flavum* (Georgi) Bobr. 1960, Bot. Mater. Gerb. Bot. Inst. V. L. Komarova Akad. Nauk SSSR 20: 15. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12+ (Dariimaa *et al.* 2004), 13 ].

# **H. matronalis L.** 1753, Sp. Pl. 2: 663. - *H. sibirica* L. 1753, Sp. Pl. 2: 663. - [ 1, 2, 3, 4, 7 ].

# **Hornungia procumbens (L.) Hayek**, 1925, Repert. Spec. Nov. Regni Veg. Beih. 30: 480. - *Lepidium procumbens* L. 1753, Sp. Pl. 2: 643–644. - *Hymenolobus procumbens* (L.) Nutt. 1838, Fl. N. Amer. 1: 117. - [ 3, 6+ (Khovd gol), (Smirnov *et al.* 2003), 7, 10, 11, 14 ].

**Isatis costata C.A. Mey.** 1831, Fl. Altaic. 3: 204. - [ 2, 3, 4, 6+ (German 2009), 7, 8, 9, 11, 12, 13, 14 ].

**I. oblongata DC.** 1821, Syst. Nat. 2: 571–572. - [ 1, 3, 4, 6, 7, 8, 9, 13 ]. - **Subendemic.**

**I. tinctoria L.** 1753, Sp. Pl. 2: 670. - [ 14 (Baitag Bogd uul), (Smirnov *et al.* 2003) ]. - (R).

**Leiospora exscapa (C.A. Mey.) Dovark**, 1968, Spisy Pyir. Fak. Univ. Brne 497: 357. - *Parrya exscapa* C.A. Mey. 1831, Fl. Altaic. 3: 28. - [ 1, 6, 7 ].

**Lepidium affine Lebed.** 1821, Index Sem. (Dorpat) 1: 22. - [ 4, 9, 14 ].

**L. amplexicaule** Willd. **1800**, Sp. Pl. 3: 436. – [ **3, 7, 8, 9+** (Neuffer *et al.* 2012), **10, 11, 14, 15** ].

+ **Lepidium apetalum** Willd. **1800**, Sp. Pl. 3: 439. – *L. densiflorum* auct. Fl. Mong., non Schrad. – [ **7+** (German & Oyuntsetseg 2008; German 2009) ].

**Notes:** Throughout Mongolia (Grubov 1955; Maximowicz 1889, as *L. ruderale* L. var. *micranthum* (Ledeb.) Glehn ex Maxim.; Thellung, 1906; Zhou *et al.* 2001). Ebel (2001) demonstrated that by the end of XX century, the name *L. densiflorum* was widely misapplied to the plants of *L. apetalum* in N Asia. All collections of "*L. densiflorum*" seen by the present authors from Mongolia represent *L. apetalum*.

# **L. cartilagineum** (J. Mayer) Thell. **1913**, Vierteljahrsschr. Naturf. Ges. Zürich 51: 178. - *Thlaspi cartilagineum* J. Mayer, 1786, Abh. Bohm. Ges. Wiss. 235. - *Lepidium crassifolium* Waldst. et Kit. 1799, Descr. Icon. Pl. Hung. 1: 4. – [ **5, 6+, 7+** (Bodonchiin gol), (Revushkin *et al.* 2001; Neuffer *et al.* 2003), **8, 10, 12, 14+** (Uushigii us), (Revushkin *et al.* 2001) ].

**L. cordatum** Willd. ex Steven, **1821**, Syst. Nat. 2: 554. – [ **6, 7, 8, 9, 10, 11, 13, 14, 15, 16** ].

**L. densiflorum** Schrad. **1832**, Index Sem. (Gottingen) 4. – [ **1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15** ].

**L. lacerum** C.A. Mey. **1830**, Fl. Altaic. 3: 191. – [ **7+** (Uliastai, Bodonchiin gol), (Revushkin *et al.* 2001; Smirnov *et al.* 2003; German & Oyuntsetseg 2008), **14** (Bulgan gol) ]. – **Subendemic**.

**L. latifolium** L. **1753**, Sp. Pl. 2: 644. – *L. latifolium* subsp. *sibiricum* (Schweigg.) Thell. 1906, Neue Denkschr. Schweiz. Naturf. Ges. 41: 161. – [ **4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15** ].

**L. obtusum** Basin. **1844**, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Peterbourg. 2: 203. – [ **6, 7, 10, 14, 15** ].

+ **L. ruderale** L. **1753**, Sp. Pl. 2: 645. – [ **1+, 2+, 3+, 4+, 5+, 7+, 8+, 11+, 13+** (Grubov 1982; Manibazar 2010; Urgamal *et al.* 2013) ].

**Notes:** This species was not given in Gubanov's conspectus (1996).

+ **L. songaricum** Schrenk, **1841**, Enum. Pl. Nov. 1: 98. – [ **7+** (Indert, Bodonchiin gol), (Revushkin *et al.* 2001; Ebel & Rudaya 2002; German & Tschernova 2008) ].

+ **Litwinowia tenuissima** (Pall.) Woronow ex Pavlov, **1935**, Fl. Centr. Kazakh. 2: 302. - *Vella tenuissima* Pall. 1776, Reise Russ. Reich. 3: 740. – *Euclidium tenuissimum* (Pall.) B. Fedtsch. 1904, Bull. Herb. Boissier 2, 4: 915. – [ **14+** (Uvgud uul), (Smirnov *et al.* 2003; German & Oyuntsetseg 2008) ].

**Macropodium nivale** (Pall.) R. Br. **1812**, Hort. Kew. (ed. 2) 4: 108. - *Cardamine nivalis* Pall. 1777, Reise 2. 2: Suppl. 45. – [ **1, 7** ].

# **Malcolmia africana** (L.) W.T. Aiton, **1812**, Hort. Kew. (ed. 2) 4: 121. - *Hesperis africana* L. 1753, Sp. Pl. 2: 663. - *Strigosella africana* (L.) Botsch. 1972, Bot. Zhurn. (Moscow & Leningrad) 57(9): 1038. – [ **10, 11** ]. – (R).

**Megacarpaea megalocarpa** (Fisch. ex DC.) Schischk. ex B. Fedtsch. **1939**, Fl. URSS 8: 543. – [ **14** (Alag uul), (Ebel & Rudaya 2002) ]. – (R, RB).

# **Microstigma brachycarpum** Botsch. **1959**, Bot. Zhurn. (Moscow & Leningrad) 44: 1485. – *M. junatovii* Grubov, 1972, Bot. Zhurn. (Moscow & Leningrad) 63(3): 363. – [ **6+**,

7+ (Neuffer *et al.* 2003), 15, 16+ (Sulin), (Smirnov *et al.* 2003; German & Oyuntsetseg 2008) ]. – **Endemic**. Described from Transaltai Altai phytogeographical region (LE). – (R).

# **M. deflexum Juz. 1939**, Fl. URSS 8: 298. - *Sterigmostemum botschanzevii* Grubov, 1978, Bot. Zhurn. (Moscow & Leningrad) 63(3): 363. – [ 3+ (Ebel 2000; German & Oyuntsetseg 2008), 6, 7, 12, 13, 15 (?), 16 ].

+ **Neotorularia brevipes (Kar. & Kir.) Hedge & J. Leonard, 1986**, Bull. Jard. Bot. Nat. Belg. 56(3–4): 393. - *Sisymbrium brevipes* Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 154. - *Malcolmia brevipes* (Kar. & Kir.) Boiss. 1867, Flora Orientalis 1: 226. – [ 7+ (Mogoin Ulaan uul), 14+ (Uvgud uul), (Smirnov *et al.* 2003; Kamelin & Ulziykhutag 2005; Urgamal *et al.* 2013) ]. – **Subendemic**.

**N. grubovii (Botsch.) Botsch. 1988**, Bot. Stud. 73: 1187. - *Torularia grubovii* Botsch. 1975, Bot. Stud. 60: 948. – [ 1 ]. – **Endemic**. Described from Khovsgol phytogeographical region (LE). – (R, RB).

**N. korolkowii (Regel & Schmalh.) Hedge & J. Leonard, 1986**, Bull. Jard. Bot. Nat. Belg. 56(3–4): 394. - *Sisymbrium korolkowii* Regel & Schmalh. 1877, Trudy Imp. St.-Peterburgsk. Bot. Sada 5(1): 240. - *Torularia korolkowii* (Regel & Schmalh.) O.E. Schulz, 1922, Pflanzenr. 4, 105(Heft 86): 220. – [ 6, 14 (Gubanov 1996; German & Oyuntsetseg 2008; German 2009) ].

**N. mongolica Botsch. & Gubanov, 1988**, Bot. Stud. 73: 1187. – [ 1 ]. – **Endemic**. Described from Khovsgol phytogeographical region (LE).

**Notes:** Some authors regards *Neotorularia maximowiczii* (Botsch.) Botsch. conspecific with *Braya humilis* (German & Oyuntsetseg 2008 as *Neotorularia humilis*).

**Neslia paniculata (L.) Desv. 1814**, J. Bot. Agric. 3(4): 162. - *Myagrum paniculatum* L. 1753, Sp. Pl. 2: 641. – [ 2, 3, 4 ].

+ **Noccaea ferganensis (N. Busch) Czerep. 1981**, Sosud. Rast. SSSR 140. – *Thlaspi ferganense* N. Busch, 1936, Bot. Zurn. SSSR 21: 551. – *T. cochleariforme* auct. Fl. Mong., non DC. – [ 7+ (German & Oyuntsetseg 2008; German 2009) ].

+ **Olimarabidopsis pumila (Stephan) Al-Shehbaz, O'Kane & R.A. Price, 1999**, Novon 9(3): 303. - *Sisymbrium pumilum* Stephan, 1800, Sp. Pl. 3(1): 507. - *Arabidopsis pumila* (Steph.) Busch, 1909, Fl. Cauc. Crit. 3(4): 457. – [ 14+ (Buduun uul), (Al-Shehbaz *et al.* 1999; Ebel & Rudaya 2002) ].

**Oreoloma violaceum Botsch. 1980**, Bot. Zhurn. (Moscow & Leningrad) 65: 426. – [ 6, 7, 14 ]. – **Subendemic**.

**Pachyneurum grandiflorum Bunge, 1840**, Del. Sem. Hort. Dorp. 8. - *Draba grandiflora* C.A. Mey. 1831, Fl. Altaic. 3: 74. - *Parrya grandiflora* Schischk. 1951, Fl. Sibir. Occ. vi. 1394. – [ 1, 3, 6, 7, 13 ]. – **Subendemic**.

+ **Pachypterygium multicaule (Kar. & Kir.) Bunge, 1843**, Del. Sem. Hort. Dorp. 8. - *Pachypterygium multicaule* Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 159. – [ 14+ (Uvgud uul), (Smirnov *et al.* 2003; Kamelin & Ulziykhutag 2005) ]. – **Subendemic**.

**Ptilotrichum canescens (DC.) C.A. Mey. 1831**, Fl. Altaic. 3: 66. - *Alyssum canescens* DC. 1821, Syst. Nat. 2: 322. – [ 1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 15, 16 ].

**P. dahuricum Peschkova, 1978**, Novosti Syst. Vyssh. Rast. 15: 230. – [ 2+, 4, 5, 8+ (Neuffer *et al.* 2012), 9, 12 (?) ].

**Pugionium dolabratum** Maxim. 1880, Bull. Acad. Imp. Sci. St.-Petersbourg 26(4): 426–427. – *P. cristatum* Kom. 1932, Izv. Bot. Sada Akad. Nauk SSSR 30: 718. – [ 11, 12, 13, 16 ]. – **Subendemic.**

**P. pterocarpum** Kom. 1932, Izv. Bot. Sada Akad. Nauk SSSR 30: 720. – [ 10 (Uvs, Durgun nuur) ]. – **Subendemic.** Described from Great Lake phytogeographical region (LE). – (R).

**Raphanus raphanistrum** L. 1753, Sp. Pl. 2: 669. – [ 3, 4, 7, 8 ].

# **Rhammatophyllum kamelinii** (Botsch.) Al-Shehbaz & O. Appel, 2002, Novon 12(1): 3. 2002. - *Prionotrichon kamelinii* Botsch. 1987, Novosti Syst. Vyssh. Rast. 24: 98. – [ 7, 14+ (Uvgud uul), (Smirnov et al. 2003) ]. – **Subendemic.**

**Rorippa barbareifolia** (DC.) Kitag. 1937, J. Jap. Bot. 13(2): 137. - *Camelina barbareifolia* DC. 1937, Syst. Nat. 2: 517. - *Rorippa hispida* auct. Fl. Mong. non Britt. – [ 2 ].

**R. palustris** (L.) Bess. 1822, Enum. Pl. 27, 103. - *Sisymbrium amphibium* var. *palustre* L. 1753, Sp. Pl. 2: 657. - *Rorippa islandica* subsp. *fernaldiana* (Butters & Abbe) Hulten, 1967, - *R. islandica* auct. Fl. Mong., non Bobr. – [ 1, 2, 3, 4, 5, 6, 7, 8+ (Neuffer et al. 2012), 9, 10, 11, 13, 14 ].

**Sinapis arvensis** L. 1753, Sp. Pl. 2: 663. – [ 4, 5+, 8, 9+ (German & Oyunsetseg 2008; German 2009) ].

+ **Sisymbrium altissimum** L. 1753, Sp. Pl. 2: 659. – [ 2+ (Bogd Khan uul), (German, 2010; Urgamal et al. 2013) ].

**S. brassiciforme** C.A. Mey. 1831, Fl. Altaic. 3: 129–131. – [ 7, 14+ (Uushigiin us), (Ebel & Rudaya 2002; German & Oyunsetseg 2008; German 2009), 15+ (Atas Bogd uul), (Smirnov et al. 2003; German & Oyunsetseg 2008; German 2009) ]. – **Subendemic.**

**S. heteromallum** C.A. Mey. 1831, Fl. Altaic. 3: 132–133. – [ 2, 3, 4, 6, 7, 8, 10, 11, 12, 13, 14 ].

**S. loeselii** L. 1755, Cent. Pl. 1: 18. – [ 3, 4, 14 ]. – (R).

**S. polymorphum** (Murr.) Roth, 1830, Man. Bot. 2: 946–947. - *Brassica polymorpha* Murr. 1776, Novi Comment. Soc. Regiae Sci. Gott. 7: 35. – [ 3, 4, 6, 7, 8, 9, 10, 14 ].

**S. subspinescens** Bunge, 1847, Arb. Naturf. Ver. Riga 1(2): 151. – [ 14 (Barangiin Khar nuruu, Uushigiin us), (Ebel & Rudaya 2002) ]. – (R).

+ **S. volgense** M. Bieb. ex E. Fourn. 1865, Rech. Anat. Taxon. Crucifures 97. - *Hesperis volgense* (M. Bieb. ex E. Fourn.) Kuntze, 1891, Revis. Gen. Pl. 2: 935. – [ 4+ (Ulaanbaatar), (German & Oyunsetseg 2008; German 2009; Neuffer et al. 2012) ].

**Smelowskia alba** (Pall.) Regel, 1861, Bull. Soc. Imp. Nat. Moscou 34(3): 208. - *Sisymbrium album* Pall. 1776, Reise Russ. Reichs 3: 293. – [ 1, 3, 4, 6, 7, 10, 13 ].

# **S. altaica** (Pobed.) Botsch. 1968, Novosti Syst. Vyssh. Rast. 5: 142. - *Hedinia altaica* Pobed. 1966, Novosti Syst. Vyssh. Rast. 117. – [ 6, 7 (Olonova & Beket 2010) ]. – **Subendemic.**

**S. bifurcata** (Ledeb.) Botsch. 1968, Novosti Syst. Vyssh. Rast. 5: 140. - *Hutchinsia bifurcata* Ledeb. 1841, Fl. Ross. 1: 201. – [ 1 ]. – (R).

**S. calycina** (Steph.) C.A. Mey. 1831, Fl. Altaic. 3: 170. - *Lepidium calycinum* Steph. 1800, Sp. Pl. 3(1): 433–434. – *Smelowskia pectinata* (Bunge) Velichkin, 1976, Novosti Syst. Vyssh. Rast. 13: 130. – [ 1, 3, 6, 7, 13+ (German & Oyunsetseg 2008; German, 2009), 14 ].

**S. mongolica** Kom. 1911, Explor. Sci. Tunisie. Ill. Bot. 9: 393. - *Sophiopsis mongolica* (Kom.) N. Busch. 1939, Fl. Uzbekistan. 8: 87. - *Hedinia mongolica* Veliczkin, 1974, Biol. Nauk, 17, 6: 126. - [ 3, 6+ (Neuffer *et al.* 2003), 7 (?) ]. - **Endemic**. Described from Khangai phytogeographical region (LE).

+ **Sterigmostemum regeliorum** Kamelin & D. German, 2001, Turczaninowia 4(3): 5-9. - [ 14+ (Kamelin & German, 2001; Urgamal *et al.* 2013) ]. - **Subendemic**.

**Stevenia alyssoides** Adams. & Fisch. 1817, Mem. Soc. Nat. Mosc. 5: 84. - [ 1, 3 ].

**S. cheiranthoides** DC. 1821, Syst. Nat. 2: 210. - *Draba multiceps* Kitag. 1933, Rep. First Sci. Exped. Manchoukou 2: 18. - [ 4, 5, 6+, 7+ (Neuffer *et al.* 2003), 9+ (Neuffer *et al.* 2012) ].

**S. incarnata** (Pall. ex DC.) Kamelin, 1995, Bot. Stud.: 73. - *Arabis incarnata* Pall. ex DC. 1821, Rech. Anat. Taxon. Fam. Crucifer. 2: 210. - [ 1, 2, 3, 4, 6, 7, 8, 10 ].

**S. sergievskajae** (Krasnob.) Kamelin & Gubanov, 1986, Bull. Moskovsk. Obac. Isp. Prir. Otd. Biol. 91: 91. - *Alyssum sergievskajae* Krasnob. 1975, Bot. Zhurn. (Moscow & Leningrad) 60(5): 664. - [ 3 (Delgermurun) (Kamelin 2005) ].

+ **Strigosella brevipes** (Bunge) Botsch. 1972, Bot. Zhurn. (Moscow & Leningrad) 57: 1041. - *Dontostemon brevipes* Bunge, 1847, Arbeiten Naturf. Vereins Riga 1(2): 149. - [ 14+ (Uvgud uul), (Smirnov *et al.* 2003; Urgamal *et al.* 2013) ].

**Subularia aquatica** L. 1753, Sp. Pl. 2: 642. - [ 3, 6 ].

**Tauscheria lasiocarpa** Fisch. ex DC. 1821, Syst. Nat. 2: 563. - [ 14 ].

**Tetracme quadricornis** (Steph.) Bunge, 1836, Del. Sem. Hort. Bot. Dorpat. 1836: 7. - *Erysimum quadricornis* Steph. 1800, Sp. Pl. 3: 541. - [ 7, 14 ]. - **(R)**.

**Thlaspi arvense** L. 1753, Sp. Pl. 2: 646. - [ 1, 2, 3, 4, 6, 7, 13 ].

# **Th. ceratocarpum** N. Busch, 1913, Fl. Sibir. Orient. Extr. 1: 119. - *Carpoceras ceratocarpum* N. Busch, 1913, Fl. Sibir. Orient. Extr. 1: 119. - *Lepidium ceratocarpum* Pall. 1773, Reise Russ. Reich. 2: App. 740. - [ 6, 10, 14 ]. - **(R)**.

**Th. cochleariforme** DC. 1821, Syst. Nat. 2: 381. - *Noccea cochleariformis* (DC.) A. et D. Love, 1976, Bot. Not. 128: 513. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 11+ (Neuffer *et al.* 2012), 13 ].

**Turritis glabra** L. 1753, Sp. Pl. 2: 645. - [ 7 ].

**Notes:** The cultivated plants followed in the Brassicaceae family: *Brassica oleracea* L. and other species (Manibazar 2010; Urgamal *et al.* 2013).

## 29. MALVALES JUSS. 1820

O Prir. Rostlin 221

### 84. MALVACEAE JUSS. 1789 (3/6)

Gen. Pl. 271

**Abutilon theophrasti** Medik. 1787, Malvenfam. 28. - [ 15 ].

**Hibiscus trionum** L. 1753, Sp. Pl. 2: 697. - [ 8, 9, 12, 13+, 16+ (Hilbig & Tungalag 2006) ].

**Malva neglecta** Wallr. 1824, Syll. Pl. Nov. 1: 140–142. - [ 4, 7, 10, 11, 14 ].

**M. pusilla** Sm. 1794, Engl. Bot. 4: 241. - [ 13+ (Hilbig & Tungalag 2006), 14, 15 ].

**Malva sylvestris** L. 1753, Sp. Pl. 2: 689. – *M. mauritiana* L. 1753, Sp. Pl. 2: 689. – [ 13, 15 ]. – (VR, RB).

**M. verticillata** L. 1753, Sp. Pl. 2: 689. – *M. mohileviensis* Down. 1861, Bull. Soc. Imp. Nat. Moscou 34(1): 177. – [ 1+ (Oyumaa & Paula de Priest 2011), 2+ (Khonin nuga, Ulaan Burgas), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004; Dariimaa 2009), 3, 4, 7, 8, 10, 16+ (Hilbig & Tungalag 2006) ].

### 85. THYMELAEACEAE JUSS. 1789 (2/3)

Gen. Pl. 76

+ **Diarthron altaicum** (Pers.) Kit Tan, 1982, Notes Roy. Bot. Gard. Edinburgh 40(1): 219. - *Stellera altaica* Pers. 1805, Syn. Pl. 1: 436. - *Stelleropsis altaica* (Pers.) Pobed. 1949, Fl. URSS 15: 504. – [ 7+ (Olonova et al. 2013; Urgamal et al. 2013) ]. – Subendemic.

**D. linifolium** Turcz. 1832, Bull. Soc. Imp. Nat. Moscou 4: 204. – [ 2, 3, 4, 5 ]. – (R).

**Stellera chamaejasme** L. 1753, Sp. Pl. 1: 559. – [ 2, 3, 4, 5, 9 ].

### 30. SAPINDALES JUSS. EX BERCHT. & J. PRESL, 1820

Prir. Rostlin 224

### 86. BIEBERSTEINIACEAE SCHNIZLEIN, 1856 (1/1)

Anal. Nat. Ordn. Gew. 14

**Biebersteinia odora** Stephan ex Fisch. 1806, Mem. Soc. Imp. Nat. Moscou 1: 89. – [ 6, 7 ]. – (VR, RB).

### # 87. NITRARIACEAE LINDL. 1830 (2/6)

Intr. Nat. Syst. Bot. 149

# [incl. Peganaceae]

**Nitraria roborowskii** Kom. 1908, Trudy Imp. St.-Peterburgsk. Bot. Sada 29(1): 168. – [ 7+ (Bodonchiin gol), (Ebel & Rudaya 2002), 10, 13, 14, 15 ].

**N. sibirica** Pall. 1784, Fl. Ross. 1: 80. – [ 2+ (Dulamsuren & Muhlenberg 2003), 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**N. sphaerocarpa** Maxim. 1833, Melanges Biol. Bull. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 11: 657. – [ 13, 15, 16 ]. – Subendemic.

**Peganum harmala** L. 1753, Sp. Pl. 1: 444-445. – [ 7, 10, 13, 14, 15 ]. – (VU, VR, RB).

+ **P. multisectum** (Maxim.) Bobrov, 1949, Fl. URSS 14: 149. - *P. harmala* var. *multisectum* Maxim. 1889, Fl. Tangut. 1: 103. – [ 14+, 15+ (Amartuvshin 2012; Urgamal et al. 2013) ]. – Subendemic.

**P. nigellastrum** Bunge, 1835, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 2: 87. – [ 3, 4+ (Amartuvshin 2010), 8, 9, 10, 11, 12, 13, 16 ].

### 88. RUTACEAE JUSS. 1789 (2/2)

Gen. Pl. 296

# **Dictamnus albus** L. 1753, Sp. Pl. 1: 383. - *D. dasycarpus* Turcz. 1842, Bull. Soc. Imp. Nat. Moscou 15: 637. - [ 5, 9 ]. - (EN, VR, RB).

**Haplophyllum dauricum** (L.) G. Don, 1831, Gen. Hist. 1: 781. - *Peganum dauricum* L. 1753, Sp. Pl. 1: 445. - [ 2, 3, 4, 5, 6, 8, 9, 11, 12, 13, 16+ (Hilbig & Tungalag 2006) ]. - (RL).

### 31. CORNALES LINK, 1829

Handbuch 2: 2

#### 89. CORNACEAE BERCHT. EX J. PRESL, 1825 (1/1)

Prir. Rostlin 2(23): 92

# **Cornus alba** L. 1767, Mant. Pl. 1: 40. - *Swida alba* (L.) Opiz. 1838, Oekon.-Techn. Fl. Bohm. 2(1): 174. - [ 1, 2, 3, 4, 5, 9 ]. - (R).

#### 32. ERICALES BERCHT. & J. PRESL, 1820

Prir. Rostlin 251

#### 90. BALSAMINACEAE A. RICH. 1822 (1/1)

Dict. Class. Nat. 2: 173

**Impatiens noli-tangere** L. 1753, Sp. Pl. 2: 938. - [ 1, 2, 3, 4, 5, 9 ].

#### 91. POLEMONIACEAE JUSS. 1789 (2/4)

Gen. Pl. 136

**Phlox sibirica** L. 1753, Sp. Pl. 1: 153. - [ 1, 4 ].

**Polemonium boreale** Adams, 1817, Mem. Soc. Imp. Nat. Moscou 5: 92–94. - [ 1, 3, 6 ].

**P. chinense** (Brand) Brand, 1921, Repert. Spec. Nov. Regni Veg. Beih. 17(492–503): 316. - *P. caeruleum* var. *chinense* Brand, 1913, Annuaire Conserv. Jard. Bot. Geneve 15/16: 324. - [ 1, 2, 3, 4, 5, 6, 7, 9 ].

**P. pulchellum** Bunge, 1829, Fl. Altaic. 1: 233. - [ 1, 3, 6 ].

#### 92. PRIMULACEAE BATSCHE EX BORKH. 1797 (5/28)

Bot. Worterb. 2: 240

# **Androsace amurensis** Prob. 1987, Sosud. Rast. Sovetsk. Dalnego Vostoka 2: 155. - *A. lactiflora* Pall. 1776, Reise Russ. Reich. 3: 244. - [ 1, 2, 3, 4, 6, 7, 9, 14 ].

+ **A. chamaejasme** var. **carinata** (Torr.) R. Knuth, 1905, Pflanzenr. 22(4, 237): 190. - *A. carinata* Torr. 1824, Ann. Lyceum Nat. Hist. New York 1: 30–31. - [ 1+, 2+, 3+, 6+, 7+, 9+ (Urgamal et al. 2013) ].

**A. fedtschenkoi** Ovcz. 1932, Izv. Bot. Sada Akad. Nauk SSSR 30: 369. - [ 1, 6, 7, 13 ].

**A. filiformis** Retz. 1781, Observ. Bot. 2: 10. - [ 1, 2, 3, 4, 5, 9 ].

**A. gmelinii (L.) Roem. & Shult.** 1819, Syst. Veg. (ed. 15) 4: 165. - *Cortusa gmelinii* L. 1753, Sp. Pl. 1: 144. - [ 2, 3, 9, 11 ].

# **A. lemanniana Spreng.** 1817, sis (Oken) 1: 1289. - *A. chamaejasme* subsp. *lemanniana* (Spreng.) Hulten, 1948, Fl. Alaska Yukon 8: 1280. - [ 1, 2, 3, 6, 7, 9 ].

**A. longifolia Turcz.** 1832, Bull. Soc. Imp. Nat. Moscou 5: 202. - [ 5+ (Modot Khamar, between Degee and Numrugiin gol), (Mongolian Red Book, 1997), 9 (Dornod, Matad sum, Vangiin Tsagaan uul), (Grubov 1982) ]. - [CR, VR, RB].

# **A. maxima L.** 1753, Sp. Pl. 1: 141. - *A. turczaninowii* Freyn, 1890, Oesterr. Bot. Z. 40(4): 157. - *A. maxima* subsp. *turczaninovii* (Freyn) Fed. 1981, Fl. Evropeiskoi Chasti SSSR 5: 77. - *Aretia maxima* (L.) Bubani, 1897, Fl. Pyren. 1: 219. - [ 2, 3, 4, 6, 7, 8, 9, 10, 13, 14, 15 ].

**A. ovzzinnikovii Schischk. & Bobr.** 1952, Fl. URSS 18: 729. - [ 3, 6, 7 ].

**A. septentrionalis L.** 1753, Sp. Pl. 1: 142. - *Primula septentrionalis* (L.) Kuntze, 1891, Revis. Gen. Pl. 2: 400. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 12+ (Dariimaa et al. 2004), 13 ].

+ **A. septentrionalis** var. **breviscapa Krylov,** 1904, Fl. Altay, Tomsk. Gub. 3: 817. - [ 7+, 14+ (Urgamal et al. 2013) ].

# **A. villosa** var. **dasyphylla (Bunge) Kar. & Kir.** 1842, Bull. Soc. Imp. Nat. Moscou 15: 518. - *A. dasyphylla* Bunge, 1829, Fl. Altaic. 1: 218. - [ 1, 2, 3, 6, 7, 13 ].

# **A. villosa** var. **incana (Lam.) Duby,** 1844, Prodr. 8: 50. - *A. incana* Lam. 1772, Tabl. Encycl. 1: 432. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 13 ].

**Cortusa brotheri Pax ex Lipksy,** 1901, Trudy Imp. St.-Peterburgsk. Bot. Sada 18: 85, 87. - [ 7 ]. - [R, RB].

# **C. matthioli** subsp. **altaica (Losinsk.) Korobkov,** 1980, Arktic. Fl. SSSR 8: 187. - *C. altaica* Losinsk. 1937, Acta Inst. Bot. Acad. Sc. URSS, Ser. I. Fasc. 3, 243. - *C. mongolica* Losinsk. 1937, Trudy Bot. Inst. Akad. Nauk SSSR. Ser. 1, Sist. Vyssh. Rast. Moscow & Leningrad 3: 246. - [ 1, 2, 3, 7, 13 ].

**Lysimachia davurica Ledeb.** 1812, Mem. Acad. Imp. Sci. St.-Petersbourg. Hist. Acad. 5: 523. - [ 2, 3, 4, 5, 9, 14 ].

# **L. maritima (L.) Galasso, Banfi & Soldano,** 2005, Atti Soc. Ital. Sci. Nat. Mus. Civico Storia Nat. Milano 146(2): 229. - *Glaux maritima* L. 1753, Sp. Pl. 1: 207. - [ 1-16 (all regions) ].

# **L. thyrsiflora L.** 1753, Sp. Pl. 1: 147. - *Naumburgia thyrsiflora* (L.) Rchb. 1831, Fl. Germ. Excurs. 1: 410. - [ 2, 3, 4, 5, 9, 10, 14 ].

**Primula algida Adams.** 1805, Beitr. Naturk. 1: 46. - [ 3, 6, 7 ].

**P. cortusoides L.** 1753, Sp. Pl. 1: 144. - [ 3 ].

**P. farinosa L.** 1753, Sp. Pl. 1: 151. - [ 1, 2, 3, 4, 6, 7, 10, 13 ].

**P. longiscapa Ledeb.** 1815, Mem. Acad. Imp. Sci. St.-Petersbourg. Hist. Acad. 5: 520. - [ 3, 6, 7, 10, 13, 14 ].

**P. maximowiczii Regel,** 1874, Trudy Imp. St.-Peterburgsk. Bot. Sada 3(1): 139. - [ 5 ].

**P. nivalis Pall.** 1776, Reise Russ. Reich. 3: 723. - [ 1, 2, 3, 6, 7, 10 ].

**P. nutans Georgi,** 1775, Reise Russ. Reich. 3: 723. - [ 2, 3, 4, 5, 7, 9 ].

**P. serrata** Georgi, 1775, Reise Russ. Reich. 3: 723. – [ 1, 2, 3, 5, 7+ (Sagsai gol), (Krasnoborov 2006), 9, 13 ].

**P. xanthobasis** Fed. 1952, Fl. URSS 18: 727. – [ 1, 2, 3 ].

**Trientalis europaea** L. 1753, Sp. Pl. 1: 151. – [ 1, 2, 3, 4, 5 ].

# 93. ERICACEAE JUSS. 1789 (12/27)

Gen. Pl. 159–160

# [incl. Vacciniaceae, Empetraceae, Pyrolaceae, Monotropaceae]

+ **Arctostaphylos uva-ursi** (L.) Spreng. 1825, Syst. Veg. 2: 287. - *Arbutus uva-ursi* L. 1753, Syst. Veg. 2: 287. – [ 2+ (Kamelin & Ulziykhutag 2005; Urgamal *et al.* 2013) ].

**Arctous alpina** (L.) Nied. 1889, Bot. Jahrb. Syst. 11(2): 144. - *Arbutus alpina* L. 1753, Sp. Pl. 1: 395. - *Arctostaphylos alpina* (L.) Spreng. 1825, Syst. Veg. 2: 287. – [ 1, 3, 6, 10 ].

+ **Cassiope ericoides** (Pall.) D. Don. 1834, Edinburgh New Philos. J. 17: 158. - *Andromeda ericoides* Pall. 1789, Fl. Ross. 1(2): 56. - *Erica asiatica* Waitz, 1805, Beschr. Gatt. Art. Heid. 157. – [ 4+ (Urgamal *et al.* 2013) ].

**Chamaedaphne calyculata** (L.) Moench, 1794, Methodus 457. - *Andromeda calyculata* L. 1753, Sp. Pl. 1: 394. – [ 1, 2, 3, 6, 7, 13 ].

+ **Empetrum nigrum** L. 1753, Sp. Pl. 2: 1022. – [ 1+, 2+, 3+, 4+ (Grubov 1982; Urgamal *et al.* 2013) ].

+ **E. nigrum** subsp. **sibiricum** (V.N. Vassil.) Kuvaev, 1996, Bot. Zurn. (Kiev) 81(10): 113. – *E. sibiricum* V. Vassil. 1946, Ref. Nauchno-Issl. Rabot, Otdelenie Biol. Nauk 3. – *E. nigrum* auct. Fl. Mong., non L. – *E. subholarcticum* auct. Fl. Mong., non V. Vassil. – [ 1+, 2+, 3+, 4+, 6+, 7+ (Grubov 1982; Urgamal *et al.* 2013) ].

**Notes:** This species was not given in Gubanov's conspectus (1996).

**Ledum palustre** L. 1753, Sp. Pl. 1: 391. - *Rhododendron palustre* (L.) Kron & Judd, 1990, Syst. Bot. 15(1): 67. – [ 1, 2, 3, 4 ].

# **L. palustre** var. **decumbens** Aiton, 1789, Hort. Kew. 2: 65. – *L. decumbens* (Aiton) Lodd. ex Steud. 1840, Nomencl. Bot. (ed. 2) 2: 20. - *Rhododendron tomentosum* subsp. *decumbens* (Aiton) Elven & D.F. Murray, 2008, Journ. Bot. Res. Inst. Texas 2(1): 441. – [ 1, 4 ].

**Moneses uniflora** (L.) A. Gray, 1848, Manual 273. - *Pyrola uniflora* L. 1753, Sp. Pl. 1: 397. – [ 1+ (Oyumaa & Paule de Priest, 2011), 2, 4, 7 ]. – (R).

**Monotropa hypopitys** L. 1753, Sp. Pl. 1: 387. - *Hypopithis monotropa* Crantz 1766, Inst. Rei Herb. 2: 467. – *H. europaea* Nutt. 1818, Gen. N. Amer. Pl. 1: 271. – *H. latisquama* Rydb. 1913, Bull. Torrey Bot. Club 40(9): 461. – [ 1, 3, 4 ].

**Orthilia obtusata** (Turcz.) H. Hara, 1944, J. Jap. Bot. 20(6–7): 328. - *Pyrola secunda* var. *obtusata* Turcz. 1848, Bull. Soc. Imp. Nat. Moscou 21(4): 507. – *P. obtusata* (Turcz.) Kom. 1905, Acta Hort. Gothob. 25: 193. – [ 1, 2, 3, 4, 6, 7 ].

**O. secunda** (L.) House, 1921, Amer. Midl. Naturalist 7(4–5): 134. - *Pyrola secunda* L. 1753, Sp. Pl. 1: 396. – [ 1+ (Munkh-Erdene & Urgamal 2009), 2, 3, 4, 7 ].

# **Pyrola asarifolia** subsp. *incarnata* (DC.) Haber & Hir. **Takah.** 1988, Bot. Mag. (Tokyo) 101(1064): 492. – *P. rotundifolia* var. *incarnata* DC. 1839, Prodr. 7: 773. - *P. incarnata* (DC.) Freyn, 1902, Oesterr. Bot. Z. 52(10): 401. – [ 1, 2, 3, 4, 5, 6, 7, 9+ (Munkh-Erdene & Urgamal 2009) ].

**P. chlorantha** Swartz, 1810, Kongl. Vetensk. Acad. Nya Handl. 31(3): 190–198. – [ 1+ (Munkh-Erdene & Urgamal 2009), 4 ].

# **P. dahurica** (Andres) Kom. 1923, Trudy Imp. St.-Peterburgsk. Bot. Sada 39: 96. – *P. incarnata* subsp. *dahurica* (Andres) Krisa, 1967, Novit. Bot. Univ. Carol. 1667: 31. – [ 1, 4, 5, 7, 9 ].

**P. media** Swartz, 1804, Kongl. Svenska Vetensk. Acad. Handl. 257. – [ 1+ (Munkh-Erdene & Urgamal 2009), 4 ].

+ **P. minor** L. 1753, Sp. Pl. 1: 396. – *P. minor* var. *conferta* Cham. & Schltdl. 1826, Linnaea 1: 514. – [ 2+ (Sangastai, Khonin nuga), (Dulamsuren *et al.* 2004; Kamelin & Ulziykhutag 2005) ].

**P. rotundifolia** L. 1753, Sp. Pl. 1: 396. – [ 1, 2, 3, 4, 7 ].

**Rhododendron adamsii** Rehder, 1921, Monogr. Azaleas 190. – *Rh. anthopogon* auct. Fl. Mong., non D. Don. – [ 1, 3 ]. – (VU, VR, RB).

**Rh. aureum** Georgi, 1775, Bemerk. Reise Russ. Reich. 1: 51. – [ 1, 2 ]. – (VU, VR, RB).

**Rh. dauricum** L. 1753, Sp. Pl. 1: 396. – [ 1, 2, 3, 4, 5 ]. – (NT, VR, RB).

# **Rh. lapponicum** (L.) Wahlenb. 1812, Fl. Lapp. 104. - *Azalea lapponica* L. 1753, Sp. Pl. 1: 151. - *Rhododendron parvifolium* Adams, 1834, Nouv. Mem. Soc. Imp. Nat. Moscou 9: 237. – [ 1, 2, 3 ]. – (LC, VR, RB).

**Rh. ledebourii** Pojark. 1952, Fl. URSS 18: 722. – [ 1, 3 ]. – (NT, VR, RB).

# **Vaccinium microcarpum** (Turcz. ex Rupr.) Schmalh. 1871, Trudy Imp. St.-Peterburgsk. Obsc. Estestvoisp. 2: 149. - *Oxycoccus microcarpus* Turcz. ex Rupr. 1845, Beitr. Pflanzenk. Russ. Reiches 4: 56. – [ 1+ (Oyumaa & Paule de Priest 2011), 2 ]. – (CR, VR, RB).

**V. myrtillus** L. 1753, Sp. Pl. 1: 349-350. – [ 1+ (Oyumaa & Paule de Priest 2011), 2 ]. – (VU, VR, RB).

**V. uliginosum** L. 1753, Sp. Pl. 1: 350. – [ 1, 2, 3, 4, 6 ].

**V. vitis-idaea** L. 1753, Sp. Pl. 1: 351. - *Rhodococcum vitis-idaea* (L.) Avrorin, 1958, Bot. Zhurn. (Moscow & Leningrad) 43(12): 1723. – [ 1, 2, 3, 4, 5, 6 ].

### 33. BORAGINALES JUSS. EX BERCHT. & J. PRESL, 1820

Prir. Rostlin 244

### 94. BORAGINACEAE JUSS. 1789 (22/66)

Gen. Pl. 128

**Amblynotus rupestris** (Pall. ex Georgi) Popov ex Serg. 1934, Fl. W. Sib. 12(2): 3423. - *Myosotis rupestris* Pall. ex Georgi, 1755, Bemerk. Reise Russ. Reich 1772 1: 200. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 13 ].

# **Anchusa arvensis** subsp. **orientalis** (L.) Nordh. 1940, Norsk Fl. 526. - *Lycopsis orientalis* L. 1753, Sp. Pl. 1: 139. - *Anchusa ovata* Lehm. 1818, Pl. Asperif. Nucif. 1: 122. - [ 7, 10, 11, 14 ].

**Anoplocaryum compressum** (Turcz.) Ledeb. 1847, Fl. Ross. 3: 154. - *Echinospermum compressum* (Turcz.) Turcz. 1850, Bull. Soc. Imp. Nat. Moscou 23(1): 522. - *Anoplocaryum turczaninovii* Krasnob. 1967, Syst. Zam. Herb. Tomsk Univ. 84: 3. - [ 1, 2, 3, 4, 6, 7, 8, 9, 10 ].

+ **A. tenellum** A.L. Ebel et Rudaya, 2002, Turczaninowia 2002, 5(2) : 5–10. - [ 7+ (Tolbo nuur), (Rudaya & Ebel 2002; Olonova & Beket 2010) ]. - **Subendemic.** Described from Mongolian Altai phytogeographical region (TK, isotype – LE, MW, SSBG).

**Arnebia decumbens** (Vent.) Coss. & Kralik 1857, Bull. Soc. Bot. France 4: 398, 402–403. - *Lithospermum decumbens* Vent. 1800, Descr. Pl. Nouv. 37. - [ 6, 7, 8+ (Neuffer et al. 2012), 13, 14 ].

**A. fimbriata** Maxim. 1881, Bull. Acad. Imp. Sci. St.-Petersbourg 27(4): 507. - [ 11, 12, 13, 15, 16 ]. - **Subendemic.**

# **A. guttata** Bunge, 1840, Index Sem. (St.-Petersburg) 1840: 7. - *A. tibetana* Kruz. 1874, J. Asiat. Soc. Bengal. Part 2. Nat. Hist. 43(2): 189. - [ 3, 7, 10, 11, 12, 13, 14, 15, 16 ]. - **(LC, VR, RB).**

**Asperugo procumbens** L. 1753, Sp. Pl. 1: 138. - [ 3, 6, 7, 10, 14 ].

**Craniospermum canescens** DC. 1846, Prodr. 10: 175. - [ 3, 7, 13, 14 ]. - **Subendemic.**

**C. mongolicum** Johnston, 1952, J. Arnold Arbor. 33(1): 74–75. - [ 7, 11, 12, 13, 14 ]. - **Subendemic.** Described from Depression of Great Lakes phytogeographical region (GH).

+ **C. subfloccosum** Krylov, 1903, Trudy Imp. St.-Peterburgsk. Bot. Sada 21(1): 10. - [ 7+ (Olonova & Beket 2010; Urgamal et al. 2013) ]. - **Subendemic.**

+ **C. subvillosum** Lehm. 1818, Pl. Asperif. Nucif. 337. - *C. echiooides* (Schrenk) Bunge, 1871, Heliocarya 10. - [ 10+ (Khovd gol), (Ebel & Rudaya 2002), 14+ (Baitag Bogd uul, Budan Khargaitiin gol), (Gubanov 1999; Dariimaa 2009; Olonova & Beket 2010) ]. - **Subendemic.**

**Cynoglossum divaricatum** Stephan ex Lehm. 1818, Pl. Asperif. Nucif. 1: 161. - [ 3, 4, 8, 9, 13, 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin et al. 2014) ].

+ **Eritrichium alpinum** Ovczinnikova, 1999, Turczaninowia 2(4): 17. - [ 6+ (?) (Ovchinnikova, 2002, 2008) ].

+ **E. kamelinii** Ovczinnikova, 1999, Turczaninowia 2(4): 17. - [ 7+ (Olonova et al. 2013; Urgamal et al. 2013) ]. - **Subendemic.**

**E. pauciflorum** (Ledeb.) DC. in A. DC. 1846, Prodr. 10: 127. - *Myosotis pauciflora* Ledeb. 1812, Mem. Acad. Imp. Sci. St.-Petersbourg. Hist. Acad. 5: 517. - *Eritrichium altaicum* Popov, 1953, Spisok Rast. Gerb. Fl. SSSR 12: 60. - *E. pulviniforme* Popov, 1953, Fl. URSS 19: 710–711. - [ 1, 2, 3, 4, 5, 6, 7, 8, 13 ]. - **Subendemic.**

**E. pectinatum** A. DC. 1846, Prodr. 10: 127. - *E. rupestre* var. *pectinatum* (Pall.) Brand. 1831, Pflanzenr. IV, 252(97): 192. - *Myosotis pectinata* Pall. 1776, Reise Russ. Reich. 3: 717. - [ 3 ].

+ **E. sajanense** Sipliv. 1975, Novosti Syst. Vyssh. Rast. 12: 298. – [ 1+ (Ovchinnikova, 2002, 2008) ]. – **Subendemic.**

# **E. thymifolium** (A. DC.) Y.S. Lian & J.Q. Wang, 1980, Bull. Bot. Lab. N.-E. Forest. Inst., Harbin 9: 46. - *Echinospermum thymifolium* A. DC. 1846, Prodr. 10: 127. - *Hackelia thymifolia* (A. DC.) I.M. Johnst. 1940, J. Arnold Arbor. 21(1): 54. - *Lappula thymifolia* (A. DC.) Gurke, 1897, Nat. Pflanzenfam. 4(3a): 107. – [ 3, 4, 6, 7, 8, 9, 10+ (Khar-Us nuur, Khovd gol), (Revushkin et al. 2001), 11, 12, 13, 14, 15 ].

**E. villosum** (Ledeb.) Bunge, 1836, Verz. Altai Pfl. 14. - *Myosotis villosa* Ledeb. 1815, Mem. Acad. Imp. Sci. St.-Petersbourg. Hist. Acad. 5: 516. – [ 2, 3, 4, 6, 7, 14+ (Baitag Bogd uul, Altan ovoo), (Kechaykin et al. 2014) ].

**Hackelia deflexa** (Wahlenb.) Opiz, 1839, Oekon.-techn. Fl. Bohm. 2(2): 147. – [ 2, 3, 4, 5, 7, 9, 10, 13+ (Neuffer et al. 2012) ].

**Heliotropium ellipticum** Ledeb. 1847, Pl. Nov. 10. – [ 6, 7+ (Uvgud uul), (German et al. 2009), 15 ].

+ **Lappula anisacantha** (Turcz. ex Bunge) Gurke, 1893, Nat. Pflanzenfam. 4(3a): 107. – *Echinospermum anisacanthum* Turcz. ex Bunge, 1840, Del. Sem. Hort. Dorpat.: 520. – [ 3+ (Egiin gol), 4+ (Kharaa gol), 9+ (Buir nuur), (Ovchinnikova 2005) ].

**L. balchaschensis** Popov ex Pavlov, 1945, Bot. Zhurn. SSSR 30: 190. – [ 7, 13, 14, 15 ].

**L. consanguinea** (Fisch. & C.A. Mey.) Gurke, 1897, Nat. Pflanzenfam. 4(3a): 107. – *Echinospermum consanguineum* Fisch. & C.A. Mey. 1838, Index Sem. (St.-Petersburg) 5: 35. – [ 2+ (Vlasova et al. 2012), 3, 4, 6, 7, 10, 11, 13, 14 ].

**L. coronifera** Popov, 1953, Fl. URSS 19: 713. – [ 3 ].

**L. diploloma** (Fisch. & C.A. Mey.) Gurke, 1897, Nat. Pflanzenfam. 4(3a): 107. – [ 10 ].

**L. granulata** (Krylov) Popov, 1953, Fl. URSS 19: 426. – *L. marginata* var. *granulata* Krylov, 1937, Fl. Zap. Sibir. 9: 2248. – [ 3, 7, 9, 10, 12 ].

+ **L. heterocantha** (Ledeb.) Gurke, 1897, Nat. Pflanzenfam. 4(3a): 107. – [ 7+ (Bulgan gol), (Gubanov 1999; Dariimaa 2009; Urgamal et al. 2013) ].

**L. intermedia** (Ledeb.) Popov, 1953, Fl. URSS 19: 713. – *Echinospermum intermedium* Ledeb. 1829, Fl. Altaic. 1: 199. - *L. redowskii* auct. Fl. Mong., non (Hornem.) Greene. – [ 6, 7, 14, 15 (Ovchinnikova 2005) ].

**L. lipskyi** Popov, 1951, Bot. Mater. Gerb. Bot. Inst. Akad. Nauk SSSR 14: 311. – [ 7 ].

**L. macrantha** (Ledeb.) Gurke, 1897, Nat. Pflanzenfam. 4(3a): 107. – *Echinospermum macranthum* Ledeb. 1829, Fl. Altaic. 1: 205–206. – [ 7, 14 ]. – **Subendemic.**

**L. microcarpa** (Ledeb.) Gurke, 1897, Nat. Pflanzenfam. 4(3a): 107. – *Echinospermum microcarpum* Ledeb. 1829, Fl. Altaic. 1: 202–203. – [ 7, 10 ]. – **Subendemic.**

**L. myosotis** V. Wolf, 1776, Sp. Pl. (Wolf) 17. – [ 2, 3, 4, 5, 8, 9, 13+ (Neuffer et al. 2012) ].

**L. occultata** Popov, 1951, Bot. Mater. Gerb. Bot. Inst. Akad. Nauk SSSR 14: 331. – [ 14 ].

**L. patula (Lehm.) Asch. ex Gurke, 1897**, Nat. Pflanzenfam. 4(3a): 107. - *Echinospermum patulum* Lehm. 1818, Pl. Asperif. Nucif. 2: 124. - [ 3+ (Ovchinnikova 2005), 15 ].

+ **L. redowskii (Hornem.) Greene, 1891**, Pittonia 2(10B): 182. - *Myosotis redowskii* Hornem. 1813, Hort. Bot. Hafniensis 1: 174. - [ 1+, 2+, 3+, 4+, 8+, 9+, 11+, 12+, 13+ (Ovchinnikova 2005) ].

**L. semiglabra (Ledeb.) Gurke, 1897**, Nat. Pflanzenfam. 4(3a): 107. - *Echinospermum semiglabra* Ledeb. 1829, Fl. Altaic. 1: 204–205. - [ 7+ (Bodonchiin gol), (Ebel & Rudaya 2002), 11, 14, 15 ].

**L. stricta (Ledeb.) Gurke, 1897**, Nat. Pflanzenfam. 4(3a): 107. - *Echinospermum strictum* Ledeb. 1829, Fl. Altaic. 1: 200–201. - [ 3+, 7, 8+, 9+ (Ovchinnikova 2005), 10, 11, 12, 14, 15 ].

+ **L. tenuis (Ledeb.) Gurke, 1897**, Nat. Pflanzenfam. 4(3a): 107. - *Echinospermum tenue* Ledeb. 1829, Fl. Altaic. 1: 201. - [ 14+, 15+ (Gubanov 1999; Dariimaa 2009) ]. - **Subendemic**.

+ **L. tuvinica Ovczinnokova, 1997**, Fl. Sibir. 13: 114. - [ 6+ (Gubanov 1999; Dariimaa 2009) ]. - **Subendemic**.

**Lindelofia stylosa (Kar. & Kir.) Brand, 1921**, Pflanzenr. 4(Heft 78): 85. - *Cynoglossum stylosum* Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 409. - [ 7, 10, 14 ].

**Mertensia davurica (Sims) G. Don, 1837**, Gen. Hist. 4: 318. - *Pulmonaria davurica* Sims, 1815, Bot. Mag. 42: 1743. - [ 1, 2, 3, 4 ].

+ **M. pallasii (Ledeb.) G. Don, 1837**, Gen. Hist. 4: 319. - *Lithospermum pallasii* Ledeb. 1829, Fl. Altaic. 1: 176–179. - [ 7+ (Olonova et al. 2013; Urgamal et al. 2013) ]. - **Subendemic**.

**M. stylosa DC. 1846**, Prodr. 10: 91. - [ 1, 2, 3 ]. - **Subendemic**.

+ **M. tarbagataica B. Fedtsch. 1915**, Trudy Imp. St.-Peterburgsk. Bot. Sada 15: 402. - [ 7+ (Olonova et al. 2013; Urgamal et al. 2013) ]. - **Subendemic**.

**Microula tibetica var. pratensis (Maxim.) W.T. Wang, 1980**, Acta Phytotax. Sin. 18(1): 115. - *Tretocarya pratensis* Maxim. 1881, Bull. Acad. Imp. Sci. St.-Petersbourg 27(4): 505–506. - [ 3 ]. - (R).

# **Myosotis alpestris F.W. Schmidt, 1794**, Fl. Boem. Cent. 3: 26. - *M. suaveolens* Waldst. & Kit. 1821, Enum. Pl. Hort. Berol. Alt. 1: 165. - *M. imitata* Serg. 1936, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 6–7. - [ 1, 2, 3, 4, 6, 7, 9, 14+ (Baitag Bogd uul, Altan ovoo), (Kechaykin et al. 2014) ].

+ **M. austrosibirica O.D. Nikif. 1997**, Bot. Zhurn. (Kiev) 73(11): 562. - [ 7+ (Aj Bogd, Turgen uul), (Gubanov 1999; Ebel & Rudaya 2002; Neuffer et al. 2003), 13+ (Gubanov 1999) ]. - **Subendemic**.

**M. baltica Sam. ex Lindm. 1926**, Sv. Fanerogamfl. 2: 458. - [ 3, 5 ].

+ **M. caespitosa Schultz, 1819**, Prodr. Fl. Starg. Suppl. 1: 11. - [ 2+, 3+, 4+, 5+, 9+, 10+, 14+ (Grubov 1982; Gubanov 1999) ].

**M. krylovii Serg. 1936**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 6–7: 6. - [ 1, 2, 3, 4, 6, 7, 13 ].

+ **M. scorpioides** L. 1753, Sp. Pl. 1: 131. – *M. palustris* (L.) Nath. 1756, *Fl. Monspel.* 11. – [ 2+ (*Eroo gol, Khonin nuga*), (Gubanov 1999; Urgamal et al. 2013) ].

+ **M. stricta** Link ex Roem. & Schult. 1819, Syst. Veg. 4: 104. – *M. arenaria* Schrad. 1819, Prodr. Fl. Starg. Suppl. 1: 12. – *M. micrantha* Pall. ex Lehm. 1817, Neue Schriften der Naturf. Ges. Halle 3(2): 24. – *M. discolor* Pers. ex Murray, 1797, Syst. Veg. (ed. 15) 190. – [ 7+ (Neuffer et al. 2003; Urgamal et al. 2013) ].

**Nonea caspica** (Willd.) G. Don, 1838, Gen. Hist. 4: 336. - *Onosma caspica* Willd. 1797, Sp. Pl. 1: 775. – [ 7, 10+ (Khovd, Darvi sum), (Ebel & Rudaya 2002), 11, 14, 15 ].

**N. pulla** (L.) DC. 1805, Fl. Franc. 3: 626. - *Lycopsis pulla* L. 1759, Syst. Nat. 10,2: 910, 916. – [ 2+ (Khotongiin davaa), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 4, 8, 9, 14 ].

+ **N. rossica** Steven, 1851, Bull. Soc. Imp. Nat. Moscou 24: 572. – [ 3+ (Tsagaannuur ?), (Doronkin & Khan 2012; Urgamal et al. 2013) ].

**Onosma gmelinii** Ledeb. 1829, Fl. Altaic. 1: 184-185. – [ 7, 14 ].

+ **O. setosa** Ledeb. 1810, Beitr. Naturk. 70. – [ 7+ (Beket 2009) ]. – **Subendemic**.

**O. setosa** subsp. **transrhytmnense** (Klokov ex Popov) Kamelin, 1993, Novon 3(3): 263. – *O. transrhytmensis* Klokov ex Popov, 1953, Spisok Rast. Gerb. Fl. SSSR Bot. Inst. Vsesojuzn. Akad. Nauk 12: 3564. – [ 3, 7, 10 ]. – **(R)**.

**Pulmonaria mollissima** A. Kern. 1878, Monogr. Pulmon. 47. – [ 2, 4 ].

**Rindera tetraspis** Pall. 1771, Reise Russ. Reichs 1: 486. – [ 14 (Khovd, Altai sum) ].

**Rochelia bungei** Trautv. 1886, Trudy Imp. St.-Peterburgsk. Bot. Sada 9(2): 462. – [ 3, 6, 14 ].

**R. leiocarpa** Ledeb. 1829, Fl. Altaic. 1: 172–173. – [ 6, 14 ]. – **(R)**.

**Stenosolenium saxatile** (Pall.) Turcz. 1840, Bull. Soc. Imp. Nat. Moscou 13: 253. - *Anchusa saxatile* Pall. 1776, Reise Russ. Reichs 3: 718. – [ 3, 4, 10+ (Khovd, Mankhan sum), (Kechaykin et al. 2014) ].

**Tournefortia sibirica** L. 1753, Sp. Pl. 1: 141. - *Argusta sibirica* (L.) Dandy, 1972, Bot. J. Linn. Soc. 65(2): 256. – [ 5, 8, 9, 10, 11, 12, 13, 16 ].

#### 34. GENTIANALES JUSS. EX BERCHT. & J. PRESL, 1820

Prir. Rostlin 248

#### 95. RUBIACEAE JUSS. 1789 (3/13)

Gen. Pl. 196

**Asperula saxicola** Ehrend. 1974, Bot. J. Linn. Soc. 68: 269. – *A. saxicola* Grubov 1982, Opred. Sosud. Rast. Mongolii 230. – *A. gobicola* Grubov, 2000, – [ 13, 16 ]. – **Endemic**. Described from Gobi Altai phytogeographical region (LE). – **(R)**.

**Galium amblyophyllum** Schrenk, 1841, Enum. Pl. Nov. 1: 56. – [ 14 (Baitag Bogd uul), (Grubov 2006) ].

**G. boreale** L. 1753, Sp. Pl. 1: 108. – [ 1, 2, 3, 4, 5, 6, 7, 8+ (Gants khudag), 9+ (Dariganga, Shiliin Bogd uul), 10+ (Khyargas nuur), (Grubov 2006), 13, 14 ].

**G. densiflorum** **Ledeb.** **1829**, Fl. Altaic. 1: 137. - [ 3, 6+ (Siilkhemii nuruu), (Grubov 2006), 7, 14 ].

+ **G. davuricum** **Turcz. ex Ledeb.** **1838**, Prodr. 6: 545. - [ 2+ (Khuderiiin gol), (Kamelin & Dariimaa 2004) ].

**G. humifusum** **M. Bieb.** **1808**, Fl. Taur.-Caucas. 1: 104-105. - *Asperula humifusa* (M. Bieb.) Besser, 1811, Cat. Hort. Crem. 3: 4. - [ 3, 7, 13 ]. - (R).

**G. songaricum** **Schrenk** **1841**, Enum. Pl. Nov. 1: 57-58. - *G. songaricum* var. *diffusum* Regel, 1867, Bull. Soc. Imp. Nat. Moscou 40(1): 11. - [ 1+ (Khan 2012), 2, 3 ].

**G. spurium** **L.** **1753**, Sp. Pl. 1: 106. - *G. vaillantii* DC. **1805**, Fl. Franc. 4: 263. - [ 1, 2, 3, 4, 5, 6, 7, 8, 10, 13, 14 ].

**G. trifidum** **L.** **1753**, Sp. Pl. 1: 105-106. - [ 2, 3, 4, 5, 7, 10, 14 ].

**G. uliginosum** **L.** **1753**, Sp. Pl. 1: 106. - [ 1, 2+ (Eruugiin khaluun rashaan), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3, 4, 10 ].

**G. verum** **L.** **1753**, Sp. Pl. 1: 107. - *G. glabratum* Klokov, 1961, Fl. URSS 10: 472. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10+ (Grubov 2006), 13, 14 ].

**Notes:** *Galium saurens* Litv. is a synonym of *Galium verum* L. (in the Gubanov's conpestus, 1996).

+ **Galium verum** subsp. **wirtgenii** (F.W. Schultz) Oborny, **1885**, Verh. Naturf. Vereins Brunn 23: 735. - *Galium wirtgenii* F.W. Schultz, 1854, Arch. Fl. 201. - [ 7+ (Khovd gol), (Krasnoborov 2006) ].

**Notes:** It was informed that *G. aparine* L. is distributed in Mongolia (Grubov 2006).

**Rubia cordifolia** **L.** **1768**, Syst. Nat. (ed. 12) 3: 229. - [ 2, 3, 4, 5, 8, 9, 12, 13 ].

## 96. GENTIANACEAE JUSS. 1789 (8/34)

Gen. Pl. 196

**Centaurium pulchellum** (Swartz) Druce, **1897**, Fl. Berkshire 342. - *Gentiana pulchella* Swartz. 1788, Kongl. Vetensk. Acad. Nya Handl. 4(1): 85-87. - [ 10+ (Khovd gol, Khar-Us nuur), 11+ (Tuin gol), (Grubov 2007), 15 (Zakhui Zaram) ]. - (R).

**C. pulchellum** var. **meyeri** (Bunge) Omer, **1995**, in Pakistan 197. - *Erythraea meyeri* Bunge, 1829, Fl. Altaic. 1: 220. - *Centaurium meyeri* Druce, 1917, Rep. Bot. Soc. Club Brit. Isles 1916: 613. - *C. roxburghii* Druce, 1917, Rep. Bot. Soc. Club Brit. Isles 1916: 614. - *C. pulchellum* var. *altaicum* (Griseb.) Kitag. et H. Hara, 1995, Fl. China 16: 4. - [ 7, 10, 13 ].

**Comastoma falcatum** (Turcz. ex Kar. & Kir.) Toyok. **1961**, Bot. Mag. (Tokyo) 74: 198. - *Gentiana falcata* Turcz. ex Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 404. - [ 1, 6, 7, 13 ].

**C. malyschevii** (Zuev) Zuev, **1990**, Bot. Zhurn. 75: 1304. - *Gentianella malyschevii* Zuev, 1985, Bot. Zhurn. 70: 1401. - [ 1, 3, 7 ].

**C. pulmonarium** (Turcz.) Toyok. **1961**, Bot. Mag. (Tokyo) 74: 198. - *Gentiana pulmonaria* Turcz. 1848, Bull. Soc. Imp. Nat. Moscou 22(4): 317. - [ 1, 2, 3, 6 ]. - (VU, VR, RB).

# **C. tenellum** (Rottb.) Toyok. **1961**, Bot. Mag. (Tokyo) 74(874): 198. - *Gentiana tenella* Rottb. 1770, Skr. Naturhist.-Selsk. 10: 436. - *Gentianella tenella* (Rottb.) Börner, 1912, Fl. Deut. Volk 542. - *Lomatogonium tenellum* (Rottb.) Á. Love & D. Love, 1956, Acta Horti Gothob. 20(4): 117. - [ 1, 2, 3, 6, 7, 13 ].

**Gentiana algida** Pall. 1789, Fl. Ross. 1(2): 107. – [ 1, 2, 3, 6, 7, 13 ]. – (EN).

**G. aquatica** L. 1753, Sp. Pl. 1: 229. – [ 1, 2, 3, 6, 7, 8 ].

# **G. aquatica** var. **pseudoaquatica** (Kusn.) S. Agrawal, 1984, J. Econ. Taxon. Bot. 5: 437. – *G. pseudoaquatica* Kusn. 1893, Trudy Imp. St.-Peterburgsk. Bot. Sada 13(1): 63–64. – [ 1, 2, 3, 4, 6, 7, 8, 9, 13 ].

**G. dahurica** Fisch. 1812, Mem. Soc. Imp. Nat. Moscou 3: 63. – [ 4, 5, 8+ (Kherlen gol), (Grubov 2007), 9 ].

**G. decumbens** L. f. 1781, Suppl. Pl. 174. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14 ].

**G. grandiflora** Laxm. 1774, Novi Com. Acad. Sci. Imp. Petrop. 18: 526 . – [ 1, 2, 3, 7 ].

**G. leucomelaena** Maxim. 1891, Melanges Biol. Bull. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 13: 175. – [ 1, 2, 3, 4, 7, 8, 10, 11, 13, 14 ].

**G. macrophylla** Pall. 1789, Fl. Ross. 1(2): 108. – [ 1, 2, 3, 4, 5, 6, 7, 9+ (Grubov 2007), 13, 14 ]. – (NT, VR, RB).

**G. prostrata** Haenke, 1789, Collectanea 2: 66–68. – *G. nutans* Bunge, 1829, Fl. Altaic. 1: 244. – [ 1, 2, 3, 4, 6, 7, 8+ (Uvur Jargalantiin gol), 10, 11+ (Teeliin gol), 13+ (Ikh Bogd uul), (Grubov 2007), 14 ].

# **G. prostrata** var. **karelinii** (Griseb.) Kusn. 1904, Trudy Imp. St.-Peterburgsk. Bot. Sada 15(3): 368–369. – *G. karelinii* Griseb. 1845, Prodr. 9: 106. – [ 7 (Khovd sum) ].

**G. riparia** Kar. & Kir. 1841, Bull. Soc. Imp. Nat. Moscou 14: 706. – [ 7+ (Undur Khairkhan uul), 14 (Bor Tsunj), (Grubov 2007) ]. – (R).

**G. squarrosa** Ledeb. 1815, Mem. Acad. Imp. Sci. St.-Petersbourg Hist. Acad. 5: 520. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11+ (Neuffer et al. 2012) ].

**G. triflora** Pall. 1789, Fl. Ross. 1(2): 105. – [ 2, 4, 5 ].

**G. uniflora** Georgi, 1775, Bemerk. Reise Russ. Reich. 1: 203. – [ 1, 3, 6, 7 ].

# **Gentianella amarella** subsp. **acuta** (Michx.) J.M. Gillett, 1957, Ann. Missouri Bot. Gard. 44(3): 253. - *Gentiana acuta* Michx. 1803, Fl. Bor.-Amer. 1: 177. - *Gentianella acuta* (Michx.) Hiitonen, 1950, Mem. Soc. Fauna Fl. Fenn. 25: 76. – [ 1, 2, 3, 4, 6, 7, 8, 9, 13 ].

+ **G. aurea** (L.) Harry Sm. ex Hyl. 1945, Uppsala Univ. Arsskr. 1945(7): 259. - *Gentiana aurea* L. 1759, Syst. Nat., 10: 951. – *G. sibirica* (Kusn.) Grossh. 1952, Fl. URSS 18: 612. – [ 7+ (Olonova et al. 2013; Urgamal et al. 2013) ]. – Subendemic.

+ **G. atrata** Holub, 1967, Folia Geobot. Phytotax. 11: 83. - *Gentiana atrata* Bunge ex Griseb. 1839, Prodr. 9: 98. – [ 5+ (Gubanov 1999; Dariimaa 2009) ].

**G. azurea** (Bunge) Holub, 1967, Folia Geobot. Phytotax. 2(1): 116. - *Gentiana azurea* Bunge, 1829, Mem. Soc. Imp. Nat. Moscou 7: 230. – [ 2, 3, 6, 7, 13 ].

**G. turkestanorum** (Gand.) Holub, 1967, Folia Geobot. Phytotax. 2(1): 118. - *Gentiana turkestanorum* Gand. 1918, Bull. Soc. Bot. France 65: 60. – [ 7 (Khar Azargiin nuruu), (Grubov 2007), 14 ].

**Gentianopsis barbata** (Froel.) Ma, 1951, Acta Phytotax. Sin. 1(1): 8. - *Gentiana barbata* Froel. 1796, Gentiana 114. - *Gentianella barbata* Bercht. ex J. Presl, 1823, Prir. Rostlin 1: 22. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11+ (Olgoi gol), (Grubov 2007), 13, 14 ]. – (R).

**Halenia corniculata** (L.) Comaz, 1897, Bull. Soc. Neuchateloise Sci. Nat. 25: 171. - *Swertia corniculata* L. 1753, Sp. Pl. 1: 227. – [ 1, 2, 3, 4, 5, 8, 13 ].

**Lomatogonium carinthiacum (Wulfen) Rchb.** 1830, Fl. 13: 221. - *Swertia carinthiaca* Wulfen, 1781, Misc. Austriac. 2: 53. - [ **1, 2, 3, 4, 6, 7, 8+** (Ikh Tukhum nuur), (Grubov 2007), **11+, 13+** (Neuffer *et al.* 2012) ].

**L. rotatum (L.) Fr. ex Nyman,** 1849, Rhodora 21: 194. - *Swertia rotata* L. 1753, Sp. Pl. 1: 226. - [ **1, 2, 3, 4, 5, 6, 7, 8+** (Sanchir *et al.* 2004), **10, 13+** (Neuffer *et al.* 2012), **14+** (Uushigiin us), (Ebel & Rudaya 2002) ].

**Swertia banzragczii Sanczir,** 1984, Novosti Syst. Vyssh. Rast. 21: 136. - [ **6, 7** (Tavan Bogd uul, Tsagaan gol), (German *et al.* 2003; Krasnoborov 2006; Olonova & Beket 2010) ]. - **Endemic.** Described from Mongolian Altai phytogeographical region (LE). - (**VU, VR, RB**).

# **S. dichotoma L.** 1753, Sp. Pl. 1: 227. - *Anagallidium dichotomum* (L.) Griseb. 1839, Gen. Sp. Gent. 312. - [ **1, 2, 3, 4, 8+** (Uvur Jargalantiin gol), (Grubov 2007), **9** ].

**S. komarovii Pissjauk.** 1961, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR. 21: 298. - [ **1** ]. - **Subendemic.**

**S. marginata Schrenk,** 1842, Bull. Sci. Acad. Imp. Sci. St.-Petersbourg 10: 353. - [ **1+** (Grubov 1982), **7** ].

**S. obtusa Ledeb.** 1812, Mem. Acad. Imp. Sci. St.-Petersbourg Hist. Acad. 5: 526. - [ **2, 6, 7** ].

#### # 97. APOCYNACEAE JUSS. 1789 (2/10)

Gen. Pl. 143-144

# [incl. Asclepiadaceae]

# **Apocynum pictum Schrenk,** 1844, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 2: 115. - *A. hendersonii* Hook. f. 1873, Lahore to Yarkand 327. - *Poacynum pictum* (Schrenk) Baill. 1888, Bull. Mens. Soc. Linn. Paris 1(95): 757-758. - *P. hendersonii* (Hook. f.) Woodson, 1930, Ann. Missouri Bot. Gard. 17: 167. - [ **14** (Gashuun-Us), **15** (Bilkhigiin bulag), (Grubov 2007) ]. - (**R**).

# **A. venetum L.** 1753, Sp. Pl. 1: 213. - *A. lancifolium* Russianov, 1933, Trudy Bot. Inst. Akad. Nauk SSSR. Ser. 1, Fl. Sist. Vyssh. Rast. 1: 167-168. - *Trachomitum lancifolium* (Russianov) Pobed. 1952, Fl. URSS 18: 658. - [ **14** (Bulgan gol), (Grubov 2007) ].

# **Cynanchum acutum subsp. sibiricum (Willd.) Rech. f.** 1970, Fl. Iranica 73: 9. - *C. sibiricum* Willd. 1799, Ges. Naturf. Freunde Berlin, Neue Schriften 2: 124. - [ **10, 11, 12, 13, 14, 15, 16** (Grubov 2000) ].

+ **C. bungei Decne.** 1844, Prodr. 8: 549. - *Vincetoxicum hastatum* (Bunge) Kuntze, 1891, Rev. Gen. Pl. 2: 424. 1891. - [ **9+ (?)** (Grubov 2000; Urgamal *et al.* 2013) ].

**C. chinense R. Br.** 1810, Mem. Wern. Nat. Hist. Soc. 1: 44. - *C. pubescens* Bunge, 1831, Enum. Pl. China Bor. 44. - *Vincetoxicum pubescens* (Bunge) Kuntze, 1891, Revis. Gen. Pl. 2: 423. - [ **9+ (Grubov 2000), 12, 15, 16** (Rashaantiin nuruu), (Grubov 2007) ].

# **C. gobicum Grubov,** 2000, Novosti Syst. Vyssh. Rast. (New Delhi) 32: 135. - *Vincetoxicum lanceolatum* (Grubov) Grubov, 1984, Novosti Sist. Vyss. Rast. 21: 208. - *Antitoxicum lanceolatum* Grubov, 1955, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk

SSSR. 17: 21. – [ **12, 13, 14, 15, 16** (Grubov 2000) ]. – **Endemic.** Described from Gobi Altai phytogeographical region (LE). – **(R).**

+ **C. mongolicum (Maxim.) Kom. 1920**, Trudy Glavn. Bot. Sada 34: 54. – *Vincetoxicum mongolicum* Maxim. 1876, Melanges Biol. Bull. (Phys.-Math.) Acad. Imp. Sci. St.-Petersbourg 9: 780. – *Cynanchum komarovii* Ijinsk. 1921, Bot. Mater. Inst. Sporov. Rast. Glavn. Bot. Sada RSFSR 2: 18. – [ **16+** (Grubov 2000; Urgamal et al. 2013) ]. – **Subendemic.**

# **C. paniculatum (Bunge) Kitag. 1940**, J. Jap. Bot. 16: 20. - *Asclepias paniculata* Bunge, 1833, Enum. Pl. China Bor. 43. - *Vincetoxicum paniculatum* (Bunge) C.Y. Wu & D.Z. Li 1989, Acta Bot. Yunnan. 11(1): 48. - *Pycnostelma paniculatum* (Bunge) K. Schum. 1895, Nat. Pflanzenfam. 4(2): 243. – [ **4, 5, 9+** (Grubov 2000) ].

**C. purpureum (Pall.) K. Schum. 1895**, Nat. Pflanzenfam. 4(2): 253. – *Asclepias purpurea* Pall. 1776, Reise Russ. Reichs 3: 260. - *Vincetoxicum purpureum* (Pall.) Kuntze, 1891, Revis. Gen. Pl. 2: 424. - *Cynoctonum purpureum* (Pall.) Pobed. 1952, Fl. URSS 18: 709. – [ **1+** (Doronkin 2012), **2, 4, 5, 8, 9, 12+** (Dariimaa et al. 2004) ].

# **C. thesioides (Freyn) K. Schum. 1895**, Nat. Pflanzenfam. 4(2): 252. – *Vincetoxicum thesioides* Freyn, 1890, Oesterr. Bot. Z. 40(3): 124. – *Asclepias sibiricum* L. 1753, Sp. Pl. 1: 217. - *Cynanchum sibiricum* (L.) R. Br. 1811, Mem. Wern. Nat. Hist. Soc. 1: 48. - *Vincetoxicum sibiricum* (L.) Decne. 1844, Prodr. 8: 525. - *Antitoxicum sibiricum* (L.) Pobed. 1952, Fl. URSS 18: 707. – [ **2+** (Eruugiin khaluun rashaan), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004; Neuffer et al. 2012), **3, 4, 5, 6+** (Grubov 2000), **7, 8, 9, 10, 11, 12, 13, 14, 15, 16** ]. – **(LC, VR, R, RB).**

### 35. LAMIALES BROMHEAD, 1838

Mag. Nat. Hist. 2: 210

#### # 98. PLANTAGINACEAE JUSS. 1789 (8/46)

Gen. Pl. 89-90

# [ incl. five genera *Lagotis*, *Linaria*, *Pseudolysimachion*, *Veronica*, *Veronicastrum* from Scrophulariaceae and Callitrichaceae, Hippuridaceae]

**Callitricha hermaphroditica L. 1753**, Cent. Pl. 1: 31. – *C. autumnalis* L. 1755, Fl. Suec. 2: 2. – [ **1+** (Egiin gol), (Dulmaa 2004), **3, 4, 5** ]. – **(R).**

**C. palustris L. 1753**, Sp. Pl. 2: 969. – *C. verna* L. 1755, Fl. Suec. 2: 2. – [ **1, 2, 3, 4, 5, 7, 9, 10, 11+** (Buuntsagaan nuur), (Dulmaa et al. 2011), **14** ].

**Hippuris vulgaris L. 1753**, Sp. Pl. 1: 4. – [ **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14** ].

**Lagotis integrifolia (Willd.) Schischk. ex Vikulova, 1955**, Fl. URSS 22: 502. - *Gymnandra integrifolia* Willd. 1811, Ges. Naturf. Freunde zu Berlin Mag. Neuesten Entdeck. Gesammten Naturk. 5: 392. – [ **1, 2, 3, 7, 13** ].

**Linaria altaica Fisch. ex Kuprian. 1936**, Fl. Altaic. 2: 448. – [ **3, 6, 7, 10, 14+** (Baitag Bogd, Baruun Khargaitiin gol), (Kechaykin et al. 2014) ]. – **Subendemic.**

**L. buriatica Turcz. ex Benth. 1846**, Prodr. 10: 281. – [ **1, 2, 3, 4, 5, 6, 8, 9** ].

**L. debilis Kuprian. 1936**, Sovetsk. Bot. 4: 115. – [ **7, 14** ].

**L. hepatica** Bunge, 1829, Icon. Pl. 1: 22. – [ 6+ (Khovd, Mankhan), (Smirnov *et al.* 2003; Kechaykin *et al.* 2014), 7, 11, 13, 14 ]. – Subendemic. – (R).

**L. incompleta** Kuprian. 1936, Sovetsk. Bot. 4: 114. – [ 7 ].

**L. melampyroides** Kuprian. 1950, Trudy Bot. Inst. Akad. Nauk SSSR. Ser. 1, Fl. Sist. Vyssh. Rast. 9: 68. – [ 3, 4, 5, 7+ (German *et al.* 2003), 9 ].

**Note:** This species is common in North and Northeast part of Mongolia; this is the first record for the Western part of the country and for the Mongolian Altai (German *et al.* 2003). It is also the most Western known locality of the species – previously it was Khakassia (Flora of Siberia 1996).

**L. pedicellata** Kuprian. 1949, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR. 11: 161. – [ 6+ (Kechaykin *et al.* 2014), 7, 10, 13+ (Neuffer *et al.* 2012), 14 ].

# **L. vulgaris** subsp. **acutiloba** (Fisch. ex Rchb.) D.Y. Hong, 1979, Fl. Reipubl. Popularis Sin. 67(2): 208. – *L. acutiloba* Fisch. ex Rchb. 1827, Icon. Bot. Pl. Crit. 5: 14. – [ 1, 2, 3, 4, 6, 7, 8, 13, 14 ].

**Notes:** The *L. acutiloba* var. *pygmaea* Ivanova, 1970 are distributed in Gobi Altai (Ikh Bogd uul) phytogeographical region.

**Plantago arachnoidea** Schrenk ex Fisch. & C.A. Mey. 1841, Enum. Pl. Nov. 1: 16. – [ 14 (Baitag Bogd uul), (Borodina-Grabovskaya 2006) ].

**P. cornuti** Gouan, 1773, Ill. Observ. Bot. 6. – [ 2, 9+ (Khulunbiur), (Borodina-Grabovskaya 2006), 10 (Uvs nuur) ].

**P. depressa** Willd. 1813, Enum. Pl. Suppl.: 8. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12+ (Borodina-Grabovskaya 2006), 13 ].

**P. komarovii** Pavlov, 1929, Bull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. 38: 130. – [ 1, 3, 6, 7, 13 ]. – Subendemic. – (R).

**P. major** L. 1753, Sp. Pl. 1: 112- 113. – [ 2, 3, 4, 5, 6, 7+ (Indertiin gol), (Ebel & Rudaya 2002; Borodina-Grabovskaya 2006), 8, 9, 10, 11, 12+ (Dariimaa *et al.* 2004; Borodina-Grabovskaya 2006), 13, 14 ].

# **P. maritima** subsp. **ciliata** Printz, 1921, - *P. salsa* Pall. 1773, Reise Russ. Reich. 3: 716. – [ 1, 3, 4, 5, 6, 8, 9, 10, 11, 13, 14 ].

**P. minuta** Pall. 1776, Reise Russ. Reich. 3: 716. – [ 3, 7, 8+ (Grubov 1982), 10, 11, 12, 13, 14+ (Baitag Bogd uul), (Borodina-Grabovskaya 2006), 15 ].

**P. polysperma** Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 431. – [ 10, 13, 15 ].

+ **P. urvillei** Opiz. 1838, Oekon.-Techn. Fl. Bohm. 2(1): 42. – [ 2+ (Gubanov 1999; Dariimaa 2009; Urgamal *et al.* 2013) ].

# **Pseudolysimachion dauricum** (Steven) Holub, 1967, Folia Geobot. Phytotax. 2(4): 424. – *Veronica daurica* Steven, 1817, Mem. Soc. Imp. Nat. Moscou 5: 339. – [ 2, 4, 5, 8, 9 ].

# **P. linariifolium** (Pall. ex Link) Holub, 1967, Folia Geobot. Phytotax. 2(4): 422. – *Veronica linariifolia* Pall. ex Link, 1820, Jahrb. Gewecksk. 1(3): 35. – [ 1, 2, 3, 4, 5, 8, 9 ].

# **P. longifolium** (L.) Opiz, 1852, Seznam Rost. Kvet. Cesk. 80. - *Veronica longifolia* L. 1753, Sp. Pl. 1: 10. – [ 1, 2, 3, 4, 6, 7, 9, 10 ].

# **P. pinnatum** (L.) Holub, 1967, Folia Geobot. Phytotax. 2(4): 425. – *Veronica pinnata* L. 1767, Mant. Pl. 1: 24. – [ 2, 3, 4, 6, 7, 8+ (Sanchir *et al.* 2004), 10, 14+ ].

# **P. spicatum (L.) Opiz, 1852**, Seznam 80. - *Veronica spicata* L. 1753, Sp. Pl. 1: 10. - *V. porphyriana* Pavlov, 1951, Vestn. Akad. Nauk Kazakhsk. SSR 4: 92. - [ 7 (Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006), 14 ]. - (R).

**Veronica anagallis-aquatica L. 1753**, Sp. Pl. 1: 12. - [ 1+ (Egiin gol), (Dulmaa 2004), 2, 3, 4, 7, 8, 9, 10, 11, 12+ (Dariimaa *et al.* 2004), 13, 14, 15, 16 ].

**V. beccabunga L. 1753**, Sp. Pl. 1: 12. - [ 3, 7, 8+ (Ogii nuur), (Dulmaa *et al.* 2011) ].

**V. biloba L. 1771**, Mant. Pl. 2: 172. - [ 3, 6, 7, 14, 15 ].

**V. ciliata Fisch. 1812**, Linnaea 12(2): 202. - [ 1, 2, 3, 6, 7 ].

**V. densiflora Ledeb. 1829**, Fl. Altaic. 1: 34–35. - [ 2, 7 ].

**V. ferganica Popov, 1922**, Trans. Turest. Univ. 4: 64. - [ 6, 7+ (Mogoin-Ulaan uul), (Smirnov *et al.* 2003), 14 ].

**V. incana L. 1753**, Sp. Pl. 1: 12. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11+ (Neuffer *et al.* 2012), 13 ].

**V. macrostemon Bunge, 1829**, Fl. Altaic. 1: 35. - [ 1, 7 ].

+ **V. pinnata subsp. nana Polozh. 1996 (publ. 1997)**, Fl. Sibir. 12: 13. - *V. pinnata* fo. *Nana* Krylov, 1907, Fl. Altaic. 4: 939. - [ 7+ (Olonova & Beket 2010; Urgamal *et al.* 2013) ]. - **Subendemic**.

# **V. peregrina L. 1753**, Sp. Pl. 1: 14. - *V. peregrina* subsp. *asiatica* Jelenevsky, 1974, Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 79(4): 144. - [ 4 ]. - (R).

# **V. pusilla Kotschy & Boiss. 1845**, Pl. Pers. Austr., ed. R.F. Hohenacker 717. - *V. perpusilla* Boiss. ex Benth. 1846, Diagn. Pl. Orient. ser. 1, 7: 43. - [ 7 ].

**V. sajanensis Printz. 1921**, Veg. Siber.-Mongol. Front. 385. - *Pseudolysimachion sajanense* Holub, 1967, Folia Geobot. Phytotax. 2: 425. - [ 7+ (Neuffer *et al.* 2003) ]. - **Subendemic**.

+ **V. sapozhnikovii Kossatschev, 2003**, Turczaninowia 6(1): 24. - [ 7+ (German *et al.* 2003; Kossachev, 2003, 2009; Olonova & Beket 2010), 14+ (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin *et al.* 2014) ]. - **Endemic**. Described from Mongolian Altai phytogeographical region (LE).

**V. scutellata L. 1753**, Sp. Pl. 1: 12. - [ 7 (Khurgan nuur), (Krasnoborov 2006) ].

+ **V. schmakovii Kossatschev, 2003**, Turczaninowia 6(1): 16. - [ 7+ (Kossachev 2003, 2009; Olonova *et al.* 2013) ]. - **Subendemic**.

+ **V. sessiliflora Bunge, 1829**, Fl. Altaic. 1: 35. - [ 7+ (Kossachev 2003; Olonova *et al.* 2013) ]. - **Subendemic**.

+ **V. smirnovii Kossaczev et D. German, 2004**, Novosti Syst. Vyssh. Rast. 36: 209. - [ 7+ (Bayan gol), (Kosachev & German 2004; Olonova & Beket 2010) ]. - **Endemic**. Described from Mongolian Altai phytogeographical region (LE).

**V. spuria L. 1753**, Sp. Pl. 1: 12. - [ 2, 3, 4, 5, 6+ (Kossachev 2003) ].

**Veronicastrum sibiricum (L.) Pennell, 1935**, Acad. Nat. Sci. Philadelphia Monogr. 1: 321. - *Veronica sibirica* L. 1753, Sp. Pl. 1: 12. - [ 2, 4, 5, 6+, 7+ (Neuffer *et al.* 2003), 9 ].

**V. tubiflorum (Fisch. & C.A. Mey.) H. Hara, 1940**, J. Jap. Bot. 16(6): 53, 381. - *Veronica tubiflora* Fisch. & C.A. Mey. 1835, Index Sem. (St. Petersburg) 2: 53. - [ 4 ].

**99. SCROPHULARIACEAE JUSS. 1789 (3/6)**

Gen. Pl. 117-118

**Limosella aquatica L. 1753**, Sp. Pl. 2: 631-632. – [ **1, 2, 3, 4, 6, 7+** (Yolt uul), (German *et al.* 2009), **9, 10, 11, 13+** (Neuffer *et al.* 2012), **14** ].

**Scrophularia altaica Murray, 1781**, Comm. Soc. Reg. Sci. Gott. 1781: 35. – [ **1, 3, 6+** (Kossachev 2010), **7 (?)** ]. – **Subendemic**.

**S. hilbigii Jaeger, 1985**, Feddes Repert. 96, 3: 188. – [ **13, 14** ]. – **Endemic**. Described from Dzungarian Gobi phytogeographical region (HAL, isotype - UBA).

**S. incisa Weinm. 1810**, Bot. Gart. Dorpat., Suppl. 2, 136. – [ **2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14+** (Ovgod, Baitag Bogd uul), (Smirnov *et al.* 2003; Kechaykin *et al.* 2014), **15** ].

+ **S. umbrosa Dumort. 1827**, Fl. Belg. 37. – [ **10+** (Borig Deliin els, Bayan nuur), (Smirnov *et al.* 2003; Kamelin & Dariimaa 2004) ].

+ **Verbascum thapsus L. 1753**, Sp. Pl. 1: 177. – [ **4+** (Gubanov 1999; Dariimaa 2009) ].

**\$ 100. PHRYMACEAE SCHAUER, 1847 (3/3)**

Prodr. 11: 520

\$ [ incl. two genera *Dodartia* and *Lancea* from Scrophulariaceae; genus *Mazus* from Mazaceae ]

**Dodartia orientalis L. 1753**, Sp. Pl. 2: 633. – *D. atrocoerulea* Pavlov, 1952, Vestn. Akad. Nauk Kazakhsk. S.S.R. 5: 91. - *D. virgata* Moench, 1794, Methodus 446. – [ **6, 7, 14** ].

**Lancea tibetica Hook. f. & Thomson, 1857**, Hooker's J. Bot. Kew Gard. Misc. 9: 244. – [ **3** ]. – **(CR, VR, RB, RL)**.

+ **Mazus stachydifolius (Turcz.) Maxim. 1875**, Bull. Acad. Imp. Sci. St.-Petersbourg 20(3): 438–439. – *Tittmannia stachydifolia* Turcz. 1837, Bull. Soc. Imp. Nat. Moscou 7: 156. – *Vandellia stachydifolia* Walp. 1844, Repert. Bot. Syst. 3: 294. – [ **5+** (Gubanov 1999; Urgamal *et al.* 2013) ].

**Citation:** Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch. 2014. *Conspectus of the vascular plants of Mongolia*. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp. (p. 158-187).

# 101. LAMIACEAE MARTINOV, 1820 (24/103)

Tekhno-Bot. Slovar. 355

# [ incl. one genus *Caryopteris* from Verbenaceae]

**Amethystea coerulea** L. 1753, *Spl pl.* 1: 21. – [ 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13 ].

**Caryopteris mongholica** Bunge, 1835, *Pl. Mongolico-Chin.* 28. – *C. mongholica* var. *serrata* Maxim. 1886, *Bull. Acad. Imp. Sci. St.-Petersbourg* 31(1): 88. – [ 2, 3, 4, 7, 8, 9, 11, 12, 13, 15, 16 ]. – **Subendemic.** Described from Eastern Mongolia phytogeographical region (P, isotype - LE). – (VU).

**Notes:** Some data for *Caryopteris mongholica* var. *nuda* V.I. Dorof. var. *nova* is distributed in Eastern (Sukhbaatar province, Tumentsoqt sum) Mongolia (Dorofeyev *et al.* 2011).

**Dracocephalum argunense** Fisch. ex Link 1822, *Enum. Pl. Hort. Berol. Alt.* 2: 118. – [ 5 (Numrugiin gol) ].

**D. discolor** Bunge, 1835, *Verz. Altai Pfl.* 51. – [ 3, 7, 10 ].

**D. foetidum** Bunge, 1830, *Fl. Altaic.* 2: 386. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13 ].

**D. fragile** Turcz. ex Benth. 1834, *Labiat. Gen. Spec.* 495. – [ 1, 3, 6+, 7+ (Neuffer *et al.* 2003) ]. – **Subendemic.** It was described Khovsgol phytogeographical region (LE, isotype - MW).

**D. fruticosum** Stephan ex Willd. 1800, *Sp. Pl.* 3(1): 152–153. – [ 3, 4, 6, 7, 8, 10, 11, 12, 13, 16 ]. – **Subendemic.**

**D. grandiflorum** L. 1753, *Sp. Pl.* 2: 595. – [ 1, 2, 3, 6, 7, 13 ].

**D. heterophyllum** Benth. 1834, *Labiat. Gen. Spec. fasc.* 7: 738. – [ 3 (Orkhon gol) ].

**D. heterophyllum** subsp. *ovalifolium* A. Budantzev, 1987, *Bot. Zhurn. (Moscow & Leningrad)* 72: 93. – [ 3 ].

**D. imberbe** Bunge, 1835, *Verz. Altai Pfl.* 50. – [ 1, 6, 7 ].

**D. integrifolium** Bunge, 1830, *Fl. Altaic.* 2: 387–388. – [ 6, 7 ].

**D. junatovii** A. Budantzev, 1987, *Bot. Zhurn. (Moscow & Leningrad)* 72: 93. – [ 4, 9 ]. – **Endemic.** Described from Eastern Mongolia phytogeographical region (LE).

**D. moldavicum** L. 1753, *Sp. Pl.* 2: 595. – [ 12, 13, 15 ].

+ **D. nodulosum** Rupr. 1869, *Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 7, 14:* 65. – [ 14+ (Urgamal *et al.* 2013) ].

**D. nutans** L. 1753, *Sp. Pl.* 2: 596. – [ 1, 2, 3, 4, 7 ].

+ **D. olchonense** Peschkova, 1997, *Fl. Sibir.* 11: 180. – [ 4+ (Gubanov 1999; Dariimaa 2009) ].

**D. origanoides** Stephan ex Wilid. 1800, *Sp. Pl.* 3(1): 151. – [ 1, 3, 4, 6, 7, 8, 9, 13, 14 ].

- + **D. organoides** subsp. **bungeanum** (**Schischk. & Serg.**) **A. Budantsev**, 1987, Bot. Zurn. (Kiev) 72: 93. - *D. bungeanum* Schischk. & Serg. 1937, Fl. Zap. Sibiri ed. 2, 9: 2322. - [ **1+**, **6+**, **7+** (Olonova & Beket 2010; Olonova *et al.* 2013), **13+** ]. - **Subendemic**.
- D. paulsenii** Briq. 1908, Bot. Tidsskr. 28(2): 238–239. - [ **14** ].
- D. peregrinum** L. 1753, Cent. Pl. 2: 20. - [ **6**, **7** ].
- + **D. pinnatum** L. 1753, Sp. Pl. 2: 594. - [ **6+** (Hilbig & Schamsran 1980; Urgamal *et al.* 2013) ].
- D. ruyschianum** L. 1753, Sp. Pl. 2: 594. - [ **2**, **3**, **4**, **5**, **6**, **8** ].
- Elsholtzia ciliata** (**Thunb.**) **Hyl.** 1941, Bot. Not. 129. - *Sideritis ciliata* Thunb. 1784, Syst. Veg. 532. - [ **2+** (Khonin nuga), (Dulamsuren *et al.* 2004), **4** ].
- E. densa** Benth. 1835, Labiat. Gen. Spec. fasc. 7: 714. - [ **4**, **13** ].
- Eremostachys moluccelloides** Bunge, 1830, Fl. Altaic. 2: 415. - [ **6**, **14** ]. - **Subendemic**.
- Galeopsis bifida** Boenn. 1824, Prodr. Fl. Monast. Westphal. 178. - [ **2**, **3**, **4**, **9** ].
- + **Hyssopus ambiguus** (**Trautv.**) **Iljin ex Prochorov. & Lebel**, 1932, Dushit. Rast. Altai 35. - *H. officinalis* var. *ambiguus* Trautv. 1866, Bull. Soc. Imp. Nat. Moscou 39(2): 447. - [ **7+** (Gubanov 1999; Dariimaa 2009) ].
- H. cuspidatus** Boriss. 1950, Bull. Soc. Imp. Nat. de Moscou 39(2): 447. - [ **7**, **14** ].
- Lagochilus bungei** Benth. 1834, Labiat. Gen. Spec. fasc. 6: 641. - [ **7**, **14** ]. - (R).
- L. diacanthophyllus** (**Pall.**) **Benth.** 1834, Labiat. Gen. Spec. fasc. 6: 641. - *Moluccella diacanthophyllum* Pall. 1797, Nova Acta Sci. Imp. Petrop. Hist. Acad. 10: 380. - [ **6**, **7**, **14** ].
- L. ilicifolius** Bunge, 1834, Labiat. Gen. Spec. fasc. 6: 641. - [ **3**, **7**, **8**, **10**, **11**, **12**, **13**, **14+** (Kechaykin *et al.* 2014), **15**, **16** ]. - **Subendemic**. Described from Eastern Mongolia phytogeographical region (LE).
- + **Lagopsis darwiniana** Pyak, 2007, Kew Bull. 62, 1: 107–111. - [ **7+** (Jargalant Khairkhan uul), (Pyak *et al.* 2007; Olonova & Beket 2010) ]. - **Endemic**. Described from Mongolian Altai phytogeographical region (LE).
- L. eriostachya** (**Benth.**) **Ikonn.-Gal.** 1937, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. SSSR 7: 42. - *Marrubium eriostachyum* Benth. 1834, Labiat. Gen. Spec. fasc. 6: 586. - *M. mongholica* Turcz. 1849, Fl. Ross. 3: 402. - [ **1**, **7**, **10**, **14** ].
- + **L. flava** Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 425. - *Marrubium flavum* (Kar. & Kir.) Walp. 1844, Repert. Bot. Syst. 3: 856. - [ **7+** (Pyak *et al.* 2007; Urgamal *et al.* 2013) ].
- L. marrubiastrum** (**Steph.**) **Ikonn.-Gal.** 1937, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. SSSR 7: 41. - *Moluccella marrubiastrum* Stephan 1809, Bull. Soc. Imp. Nat. Moscou 39(2): 447. - *Marrubium lanatum* Benth. 1834, Labiat. Gen. Spec. fc. 6: 587. - [ **3**, **6**, **7**, **13**, **14** ]. - **Subendemic**.
- L. supina** (**Steph. ex Willd.**) **Ikonn.-Gal.** 1937, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. SSSR 7: 45. - *Leonurus supinus* Stephan ex Willd. 1800, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. SSSR 7: 45. - *Marrubium incisum* Benth. 1834, Labiat. Gen. Spec. fasc. 6: 641. - [ **2**, **3**, **4**, **9** ].

**Lamium album L.** 1753, Sp. pl. 2: 579. – *L. album* subsp. *orientale* Kamelin & A.L. Budantzev, 1990, Novosti Syst. Vyssh. Rast. 27: 138. – [ 1+ (Oyumaa & Paula de Priest 2011; Doronkin 2012), 2, 4, 5, 7, 9 ].

**Leonurus deminutus V.I. Krecz. ex Kuprian.** 1949, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. SSSR 11: 134. – [ 1, 2, 3, 4, 7, 8, 9, 13 ].

**L. glaucescens Bunge,** 1830, Fl. Altaic. 2: 409. – [ 6, 7, 8, 9 ].

**L. mongolicus V.I. Krecz. & Kuprian.** 1949, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. SSSR 11: 134. – [ 2, 3, 4, 8, 9 ]. – **Subendemic.** Described from Mongolian Dauria phytogeographical region (LE).

**L. pseudopanzerioides Krestovsk.** 1988, Bot. Zurn. SSSR 73: 1749. – [ 7+ (German et al. 2003), 14 (Bayan gol) ]. – *L. panzerioides* Popov, 1954, Fl. URSS 21: 650. – **Endemic.** Described from Mongolian Altai phytogeographical region (LE). – (R).

**L. sibiricus L.** 1753, Sp. Pl. 2: 584. – [ 1, 2, 3, 4, 5, 8, 9, 12 ].

**L. turkestanicus V.I. Kresz. et Kuprian.** 1949, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. SSSR 11: 134. – [ 7 ].

**Lophanthus chinensis (Rafin) Benth.** 1829, Edwards's Bot. Reg. 15: 1282. - *Vleckia chinensis* (Benth.) Raf. 1837, Fl. Tellur. 3: 89. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10+ (Jargalant Khairkhan uul, Rashaantiin gol), (Kechaykin et al. 2014), 12, 13 ].

**L. krylovii Lipsky,** 1905, Trudy Imp. St.-Peterburgsk. Bot. Sada 24(2): 122. – [ 7 (Olonova & Beket 2010) ]. – **Subendemic.** – (R).

**Lycopus lucidus Turcz. ex Benth.** 1848, Prodr. 12: 178–179. – [ 9 ].

+ **Mentha aquatica L.** 1753, Sp. Pl. 2: 576. – [ 4+ (Neuffer et al. 2012; Urgamal et al. 2013) ].

**M. arvensis L.** 1753, Sp. Pl. 2: 577. – [ 2, 3, 4, 5, 6, 7, 8, 9, 10, 14 ].

+ **M. canadensis L.** 1753, Sp. Pl. 2: 577. – *M. haplocalyx* Briq. 1889, Bull. Trav. Soc. Bot. Geneve 5: 39. – [ 2+ (Khuderiiin gol), (Kamelin & Dariimaa 2004; Urgamal et al. 2013)].

# **Nepeta annua Pall.** 1783, Acta Acad. Sci. Imp. Petrop. 3(2): 263. - *Schizonepeta annua* (Pall.) Schischk. 1936, Spisok Rast. Gerb. Fl. SSSR 10(64): 72. – [ 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**N. densiflora Kar. & Kir.** 1841, Bull. Soc. Imp. Nat. Moscou 14: 725. – [ 7 (Bulgan gol), (Olonova & Beket 2010) ]. – **Subendemic.** – (R).

**N. micrantha Bunge,** 1830, Fl. Altaic. 2: 401-402. – [ 7, 14 ].

# **N. multifida L.** 1753, Sp. Pl. 2: 572. - *Schizonepeta multifida* (L.) Briq. 1895, - Nat. Pflanzenfam. IV. 3a: 235. – [ 1, 2, 3, 4, 5, 7+ (Kechaykin et al. 2014), 8, 9, 13 ].

**N. nuda L.** 1753, Sp. Pl. 2: 570-571. - *N. pannonica* L. 1753, Sp. Pl. 2: 570. – [ 6 ]. – (R).

**N. pungens (Bunge) Benth.** 1834, Labiat. Gen. Spec. fasc. 6: 487-488. – *Ziziphora pungens* Bunge, 1829, Fl. Altaic. 1: 23. – [ 14 (Uushigiin us), (Ebel & Rudaya 2002) ].

**N. sibirica L.** 1753, Sp. Pl. 2: 572. – [ 2+ (Tailagt uul), (Dulamsuren et al. 2004), 3, 6, 7, 10, 13, 14 ].

**Origanum vulgare L.** 1753, Sp. Pl. 2: 572. – [ 1+ (Oyumaa & Paule Priest, 2011), 6, 9 ].

**Panzerina canescens (Bunge) Sojak, 1981**, Cas. Nar. Muz. Praze, Rada Prir. 150: 216. - *Panzeria canescens* Bunge, 1829, Del. Sem. Hort. Bot. 15. - [ 6, 7, 10, 13 ]. - **Subendemic.**

**P. lanata (L.) Sojak, 1981**, Cas. Nar. Muz. Praze, Rada Prir. 150: 216. - *Panzeria lanata* (L.) Bunge, 1830 Fl. Altaic. 2: 410. - *Ballota lanata* L. 1753, Sp. Pl. 2: 582. - [ 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16 ].

? + **Perovskia abrotanoides Kar. 1841**, Bull. Soc. Imp. Nat. Moscou 14: 15. - [ 6+ (Urgamal *et al.* 2013) ].

# **Phlomis agraria Bunge, 1830**, Fl. Altaic. 2: 411-412. - *Phlomoides agraria* (Bunge) Adylov, Kamelin & Makhm. 1987, in Opred. Rast. Sred. Azii 9: 106. - [ 6, 7 ].

# **Ph. alpina Pall. 1783**, Acta Acad. Sci. Imp. Petrop. 2: 265. - *Phlomoides alpina* (Pall.) Adylov, Kamelin & Makhm. 1987, in Opred. Rast. Sred. Azii 9: 106. - [ 7 ].

# **Ph. mongolicus Turcz. 1851**, Bull. Soc. Imp. Nat. Moscou 24(2): 406. - *Phlomoides mongolica* (Turcz.) Kamelin & Makhm. 1987, in Opred. Rast. Sred. Azii 9: 106. - [ 5, 9 ]. - (R, RB).

# **Ph. oreophila Kar. & Kir. 1842**, Bull. Soc. Imp. Nat. Moscou 15: 426. - *Phlomoides oreophila* (Kar. & Kir.) Adylov, Kamelin & Makhm. 1987, in Opred. Rast. Sred. Azii 9: 106. - [ 7, 10, 14 ]. - (NT, VR, RB).

# **Ph. pratensis Kar. & Kir. 1842**, Bull. Soc. Imp. Nat. Moscou 15: 426. - *Phlomoides pratensis* (Kar. & Kir.) Adylov, Kamelin & Makhm. 1987, in Opred. Rast. Sred. Azii 9: 106. - [ 6 (Khatuu gol) ]. - (R, RB).

# **Ph. tuberosa L. 1753**, Sp. Pl. 2: 586. - *Phlomoides tuberosa* (L.) Moench, 1794, Methodus 404. - [ 2, 3, 4, 5, 6, 7, 8, 9 ].

# **Ph. tuvinica A. Schroet. 1980**, Bull. Moskovsk. Obac. Isp. Prir. Otd. Biol. 85(5): 78. - *Phlomoides tuvinica* (A. Schroet.) Kamelin, Adylov & Makhm. 1987, in Opred. Rast. Sred. Azii 9: 106. - [ 6, 7, 8 ].

**Salvia deserta Schangin, 1824**, Bot. Gart. Dorpat., Suppl. 2, 6. - [ 6 ]. - (VR, RB).

+ **Scutellaria altaica Fisch. ex Sweet, 1823**, Brit. Fl. Gard. 45. - *S. altaicola* C.Y.Wu & H.W.Li, 1977, Fl. Reipubl. Popul. Sin. 65(2): 586. - *S. lupulina* var. *violacea* Bunge, 1830, Fl. Altaic. 2: 411-412. - [ 7+ (Olonova & Beket 2010; Olonova *et al.* 2013) ]. - **Subendemic.**

**S. baicalensis Georgi, 1775**, Bemerk. Reise Russ. Reich. 1: 223. - [ 1+ (Oyumaa & Paule de Priest 2011), 2, 3, 4, 5, 8, 9 ]. - (R).

+ **S. dependens Maxim. 1859**, Prim. Fl. Amur. 219–220. - *S. nipponica* Franch. & Sav. 1875, Enum. Pl. Jap. 1(2): 337. - [ 2+ (Khuderiin gol), (Kamelin & Dariimaa 2004), 4+ (Kamelin & Dariimaa 2002; Dariimaa 2009) ].

**S. galericulata L. 1753**, Sp. Pl. 2: 599. - [ 1, 2, 3, 4, 5, 6, 9, 10, 14 ].

**S. grandiflora Sims, 1803**, Bot. Mag. (Tokyo) 17: 635. - [ 2+ (Badamtsetseg 2008), 3, 4, 6, 7, 10, 13, 14 ].

**S. grandiflora subsp. *gymnosperma* Kamelin & Gubanov, 1989**, Bull. Moskovsk. Obac. Isp. Prir. Otd. Biol. 94: 110. - [ 7, 13 (Olonova & Beket 2010) ]. - **Endemic.** Described from Mongolian Altai phytogeographical region (LE).

**S. grandiflora** subsp. **tuvensis** (Juz.) Kamelin & Gubanov, 1989, Bull. Moskovsk. Obac. Isp. Prir. Otd. Biol. 94: 110. – *S. tuvensis* Juz. 1951, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR. 14: 389. – [ 10 ]. – **Subendemic.**

**S. paulsenii** Briq. 1908, Bot. Tidsskr. 28: 233. – [ 7 (Bulgan, Khovd gol), (Krasnoborov 2006; Olonova & Beket 2010) ]. – **Endemic.** Described from Mongolian Altai phytogeographical region (NS). – (R, RB).

# **S. regeliana** var. **ikonnikovii** (Juz.) C.Y. Wu & H.W. Li, 1977, Fl. Reipubl. Popularis Sin. 65(2): 226. - *S. ikonnikovii* Juz. 1951, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR. 14: 388. – [ 2, 4 ].

**S. scordifolia** Fisch. ex Schrank, 1822, Denkschr. Bayer. Bot. Ges. Regensburg. 2: 55. – [ 1, 2, 3, 4, 5, 8, 9 ].

+ **S. sieversii** Bunge, 1830, Fl. Altaic. 2: 394-395. – [ 6+, 7+ (Gubanov 1999; Dariimaa 2009) ].

**S. supina** L. 1753, Sp. Pl. 2: 598. – [ 7, 14 ]. – (R).

**S. viscidula** Bunge, 1833, Enum. Pl. China Bor. 52. – [ 9 ]. – (R, RB).

+ **Stachys aspera** subsp. **baicalensis** (Fisch. ex Benth.) Krestovsk. 2004, Turczaninowia, 7(4): 20. – [ 2+, 3+, 4+, 5+ (Krestovskaya 2004) ].

**Notes:** The is focused on the problems of systematics of *Stachys aspera* Mich. The species is split on to 4 subspecies; new combinations *S. aspera* subsp. *baicalensis* (Fisch. ex Benth.) Krestovsk., *S. aspera* subsp. *chinensis* (Bunge ex Benth.) Krestovsk. and *S. aspera* subsp. *japonica* (Miq.) Krestovsk. are given.

? **S. palustris** L. 1753, Sp. Pl. 2: 580-581. – [ 2, 3, 4, 5, 6, 9, 10 ].

**Thymus altaicus** Klokov & Desyat.-Shost. 1936, Zurn. Inst. Bot. Vseukrajinsk. Akad. Nauk 10(18): 159. – [ 3, 6, 7, 10 ]. – **Subendemic.**

**Th. baicalensis** Serg. 1936, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1-2: 4. – [ 1, 2, 3, 4, 10 ].

**Th. bituminosus** Klokov, 1954, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 16: 304. – [ 1 ].

# **Th. dahuricus** Serg. 1938, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1-2: 3. – [ 2, 4, 5, 8+ (Sanchir et al. 2004), 9 ].

**Th. gobi-altaicus** (N. Ulzij.) Kamelin & A.L. Budantzev, 1990, Bull. Moskovsk. Obac. Isp. Prir. Otd. Biol. 95(3): 97. - *Th. gobicus* subsp. *gobi-altaicus* N. Ulzij. 1975, Trudy Inst. Prir. Soedin. AN MNR Ulan-Bator 1975(1): 60. – [ 13 (Arts Bogd uul) ]. – **Endemic.** Described from Gobi Altai phytogeographical region (UBA). – (R, RB).

**Th. gobicus** Czern. 1970, Rast. Tsentr. Azii 5: 86. – [ 2, 3, 4, 7+ (Revushkin et al. 2001), 8, 9, 10, 11, 12+ (Dariimaa et al. 2004), 13 ]. – **Subendemic.**

**Th. komarovii** Serg. 1936, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1-2: 5. – [ 9 (Shiliin Bogd uul) ]. – **Subendemic.** – (R).

**Th. michaelis** (Klokov) Kamelin & A.L. Budantzev, 1990, Bull. Mosk. Obac. Isp. Prir. Otd. Biol. 95(3): 96. - *Th. mongolicus* Klokov, 1934, Acta Horti Gothob. 9: 99. – [ 2, 4, 8, 9 ].

**Th. minussinensis** Serg. 1937, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 6-7: 5. – [ 10 ]. – Described from Inner Mongolia (KW).

**Th. mongolicus (Ronniger) Ronniger, 1934**, Acta Horti Gothob. 9(5): 99. - *Th. serpyllum* subsp. *mongolicus* Ronniger, 1930, Notizbl. Bot. Gart. Berlin-Dahlem 10(99): 890–891. - *Th. roseus* auct. Fl. Mong., non Schipcz. - [ 7, 13+ (Grubov 1982) ]. - **Subendemic.** Described from Dzungarian Alatay (W, - isotype LE, MW, KW). - **(R, RB).**

+ **Th. narymensis Serg. 1937**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 6-7: 4. - *Th. serpyllum* var. *hispidus* Serg. 1936, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1-2: 6. - [ 7+ (Olonova et al. 2013; Urgamal et al. 2013) ]. - **Subendemic.**

**Th. pavlovii Serg. 1953**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1-2: 10. - [ 1, 3 ]. - **(R).**

+ **Th. roseus Schipcz. 1921**, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR. 2: 95. - [ 7+ (Olonova et al. 2013; Urgamal et al. 2013) ]. - **(R).**

**Th. sibiricus (Serg.) Klokov & Des.-Shost. 1936**, Zurn. Inst. Bot. Vseukrajinsk. Akad. Nauk 10(18): 159. - *Th. serpyllum* var. *sibiricus* Serg. 1936, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1-2: 6. - *Th. tonsilis* Klokov, 1954, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 16: 304. - [ 4 ].

**Th. turczaninovii Serg. 1936**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1-2: 4. - [ 9 ].

**Ziziphora clinopodioides Lam. 1791**, Illustr. Gen. 1: 63. - [ 7, 14 ]. - **(R).**

**Z. clinopodioides subsp. *bungeana* (Juz.) Rech. f. 1982**, in Fl. Iran. 150: 487. - *Z. bungeana* Juz. 1954, Fl. URSS 21: 664-665. - [ 6, 7, 13 ].

**Z. pamiroalaica Juz. ex Neveski, 1937**, Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyssh. Rast. 4: 328. - [ 7, 14 ].

# **Z. tomentosa Juz. 1954**, Fl. URSS 21: 667. - *Z. clinopodioides* subsp. *tomentosa* (Juz.) Kamelin & Gubanov, 1996, Consp. Vasc. Pl. Outer Mongolia: 90. - [ 7, 14 ].

**Notes:** The cultivated plants followed in the Lamiaceae family: *Perovskia abrotanoides* Kar., *Satureja hortensis* L. (Manibazar 2010; Urgamal et al. 2013).

## # 102. OROBANCHACEAE VENT. 1799 (9/59)

Tabl. Regne Veg. 2: 292

# [incl. five genera *Castilleja*, *Cymbalaria*, *Euphrasia*, *Odontites*, *Pedicularis*, *Rhinanthus* from Scrophulariaceae]

+ **Boschniakia rossica (Cham. & Schlecht.) B. Fedtsch. 1910**, Fl. Evropeiskoi Ross. 896. - *Orobanche rossica* Cham. & Schltdl. 1828, Linnaea 3(2): 132–134. - *Boschniakia glabra* C.A. Mey. ex Bong. 1833, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 2: 159. - [ 2+ (Dariimaa 2009; Urgamal et al. 2013) ].

**Castilleja pallida (L.) Kunth, 1823**, Sin. Pl. 2: 100. - *Bartsia pallida* L. 1753, Sp. Pl. 2: 602. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 13 ].

**Cistanche deserticola Ma, 1960**, Acta Sci. Nat. Univ. Intramongol. 1: 63. - *C. ambigua* auct. Fl. Mong., non Bunge. - [ 7, 10, 11, 12, 13+, 14+ (Munkhjargal 2004), 15, 16+ (Noyon sum, Ingen Sevstei), (Munkhjargal 2004, 2005; Tzvelev 2006) ]. - **Subendemic.** - **(EN, VR, RB).**

+ **C. feddeana** K.S. Hao, 1934, Repert. Spec. Nov. Regni Veg. 36: 222. – [ 13+, 16+ (Grubov 1982; Urgamal *et al.* 2013) ]. – (R).

**Notes:** This is species was not given in Gubanov's conspectus (1996).

**C. lanzhouensis** Zhi Y. Zhang, 1984, Bull. Bot. Res., Harbin 4(4): 114–116. - *C. feddeana* auct. Fl. Mong., non Hao. – [ 12 (Khar Sukhai), (Tzvelev 2006) ].

**C. ningxiaensis** D.Z. Ma & J.A. Duan, 1993, Acta Bot. Bor.-Occid. Sin. 13(1): 75. - *C. feddeana* auct. Fl. Mong., non Hao. – [ 12 (Mandakh sum, Zagiin khudag), (Tzvelev 2006) ]. – (R, RB).

**C. salsa** (C.A. Mey.) G. Beck, 1895, Nat. Pflanzenfam. 4(3b): 129. - *Phelipaea salsa* C.A. Mey. 1830, Fl. Altaic. 2: 461–463. – [ 12, 13, 14, 15, 16 ].

**Cymbalaria dahurica** L. 1753, Sp. Pl. 2: 618. – [ 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13 ].

+ **Euphrasia altaica** Serg. 1935, Trudy Biol. Nauchno-Issl. Inst. Tomsk. Gosud. Univ. 1: 81. – [ 7+ (Yolt uul, Yoltiin gol), (German *et al.* 2009) ].

**E. hirtella** Jord. ex Reut. 1855, Compt. Rend. Trav. Soc. Helv. Sci. Nat. 4: 120. – [ 2, 3, 4, 5+ (Neuffer *et al.* 2012) ].

**E. maximowiczii** Wettst. ex Pubalin, 1895, Trudy Imp. St.-Peterburgsk. Bot. Sada 14: 133. – [ 2, 4, 5, 9 ].

**E. pectinata** Ten. 1811, Fl. Napol. 1: 36. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14 ].

+ **E. schischkinii** Serg. 1935, Trudy Biol. Nauchno-Issl. Inst. Tomsk. Gosud. Univ. 1: 80. – [ 7+ (Khoton nuur, Sanginiin gol), (Smirnov *et al.* 2003; Olonova & Beket 2010; Olonova *et al.* 2013) ]. – **Subendemic**.

**E. syreitschikovii** Govor. 1929, Bull. Soc. Imp. Nat. Moscou 38: 126. – [ 1, 2+ (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3, 5, 6, 7, 8, 13+ (Neuffer *et al.* 2012) ]. – **Subendemic**. Described from Khangai phytogeographical region (MW).

**Odontites vulgaris** Moench, 1794, Methodus 439. - *Euphrasia odontites* L. 1753, Sp. Pl. 2: 604. - *O. rubra* Opiz, 1852, Seznam 69. – [ 2, 3, 4, 7, 8, 9, 10, 11, 14 ].

**Orobanche amoena** C.A. Mey. 1830, Fl. Altaic. 2: 457–458. – [ 7+ (Bayan gol), (German *et al.* 2009), 14 ].

# **O. cernua** Loefl. 1758, Iter Hispan. 152. - *O. cumana* Wallr. 1825, Orobanches Gen. Diask. 58. – [ 5, 7+ (Sutai uul), (Smirnov *et al.* 2003), 8, 9, 10, 11, 12, 13, 14, 15 ].

# **O. coerulescens** Stephan, 1800, Sp. Pl. 3(1): 349. – *O. korshinskyi* Novopokr. 1950, Bot. Mater. Gerb. Bot. Inst. Komarova Acad. Nauk SSSR 13: 311. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ].

+ **O. coerulescens** var. *albiflora* Kuntze, 1891, Revis. Gen. Pl. 1, 1: 374. – [ 1+, 2+, 3+, 4+ (Grubov 1982) ].

# **O. lanuginosa** (C.A. Mey.) Beck ex Krylov, 1881, Trudy Obshch. Imp. Kazansk. Univ. 9: 202. - *Phelipaea lanuginosa* C.A. Mey. 1830, Fl. Altaic. 2: 460–461. - *O. caesia* Rchb. 1829, Pat. Icon. 7: 48. – [ 7, 10+ (Khovd gol), (Tzvelev 2006), 13, 14 ].

**O. pycnostachya** Hance, 1873, J. Linn. Soc., Bot. 13: 84–85. – [ 5 (Tzvelev 2006) ].

**Pedicularis abrotanifolia** M. Bieb. ex Steven, 1823, Mem. Soc. Imp. Nat. Moscou 6: 22. – [ 1, 3, 6+ (Khovd, Uvurtiin davaa), (Kechaykin et al. 2014), 7, 13, 14 ]. – **Subendemic.** – (LC, VR, RB).

**P. achilleifolia** Stephan ex Willd. 1800, Sp. Pl. 3(1): 219-220. – [ 1, 3, 6, 7, 8, 10+ (Dzun Jargalant, Rashaantiin gol), (Kechaykin et al. 2014), 14 ].

**P. altaica** Stephan ex Steven, 1823, Mem. Soc. Imp. Nat. Moscou 6: 48. – [ 6+ (Olgoi uul), (Kechaykin et al. 2014), 7, 10+ (Uvs nuur, Nariin gol), (Smirnov et al. 2003; Kechaykin et al. 2014), 14 ]. – **Subendemic.** – (VU, VR, RB).

**P. amoena** Adams ex Steven, 1823, Monogr. 70. – [ 1, 2, 3, 6, 7, 13, 14+ (Baitag Bogd uul, Altan ovoo), (Kechaykin et al. 2014) ].

**P. anthemifolia** Fisch. ex Colla, 1835, Herb. Pedem. 4: 370. – [ 1, 3, 6, 7, 13 ].

**P. compacta** Stephan, 1800, Sp. Pl. 3(1): 219-220. – [ 1, 2, 3, 6, 7 ].

**P. dasystachys** Schrenk, 1844, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 2: 195. – [ 6+ (Neuffer et al. 2003), 7 ]. – (R, RB).

**P. dolichorhiza** Schrenk, 1842, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 1: 80. – [ 7, 14 ].

**P. elata** Willd. 1800, Sp. Pl. 3(1): 210-211. – [ 3, 6, 7 ].

**P. fetisowii** Regel, 1879, Trudy Imp. St.-Peterburgsk. Bot. Sada 6(2): 349–350. – [ 14 ].

**P. fissa** Turcz. 1843, Bull. Soc. Imp. Nat. Moscou 24(2): 339. – [ 2, 7+ (German et al. 2003) ]. – (R).

**P. flava** Pall. 1773, Reise Russ. Reich. 3: 736. – [ 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 15 ]. – **Subendemic.**

**P. labradorica** Wirsing, 1778, Eclog. Bot. 2: 10. – [ 1, 2, 3, 4 ].

**P. lapponica** L. 1753, Sp. Pl. 2: 609. – [ 1 ].

**P. lasiostachys** Bunge, 1841, Fl. Altaic. 2: 434. – [ 3, 6, 7 ]. – **Subendemic.**

**P. longiflora** Rudolph, 1811, Mem. Acad. Imp. Sci. St.-Petersbourg Hist. Acad. 4: 345. – [ 1, 2, 3, 7, 11 ].

**P. moschata** Maxim. 1881, Bull. Acad. Sci. Petersb. 4: 345. – [ 6, 7, 10+ (Dzun Jargalant, Rashaantiin gol), (Kechaykin et al. 2014) ]. – **Endemic.** Described from Mongolian Altai phytogeographical region (LE).

**P. myriophylla** Pall. 1776, Reise Russ. Reich. 3: 737. – [ 1, 2, 3, 4, 6, 7, 8, 13 ].

**P. oederi** Vahl, 1806, Dansk Oekonom. Plantel ed. 2 580–581. – [ 1, 2, 3, 6, 7 ].

# **P. palustris** subsp. **karo** (Freyn) Tsoong, 1963, Fl. Reipubl. Popularis Sin. 68: 117. – *P. karo* Freyn, 1896, Oesterr. Bot. Z. 46(1): 26–27. – [ 1, 2, 3, 4, 5, 6, 8, 9, 10, 14 ].

+ **P. physocalyx** Bunge, 1841, Fl. Altaic. 2: 434. – [ 7+ (Bulgan gol), (Smirnov et al. 2003; Kamelin & Ulziykhutag 2005) ]. – **Subendemic.**

**P. proboscidea** Steven, 1823, Bull. Soc. Imp. Nat. Moscou 6: 33. – [ 7 (Burkhan Buudai uul) ]. – (R, RB).

**P. resupinata** L. 1753, Sp. Pl. 2: 608. – [ 1, 2, 3, 4, 5, 6, 8, 9, 10, 13 ].

**P. rhinanthoides Schrenk ex Fisch. & C.A. Mey. 1841**, Enum. Pl. Nov. 1: 22. – [ 7 ]  
(Tsagaan gol) ].

**P. rubens Stephan ex Willd. 1800**, Sp. Pl. 3(1): 219-220. – [ 1, 2, 3, 4, 5 ].

**P. scepturn-carolinum L. 1753**, Sp. Pl. 2: 608. – [ 2, 3, 4, 5, 7 ].

**P. sibirica Vved. 1955**, Fl. URSS 22: 816. – [ 1, 3, 7 ].

**P. spicata Pall. 1776**, Reise Russ. Reich. 3: 738. – [ 3, 4, 5 ].

**P. striata Pall. 1776**, Reise Russ. Reich. 3: 737. – [ 1+ (Khan 2012), 2, 3, 4, 5, 8, 9, 14 (?) ].

**P. sudetica Willd. 1800**, Sp. Pl. 3(1): 209. – [ 1, 2 ].

**P. tristis L. 1753**, Sp. Pl. 2: 608. – [ 1, 2, 3, 6, 7, 8 ].

**P. uliginosa Bunge, 1839**, Del. Sem. Hort. Bot. Dorpat. 8. – [ 1, 2, 3, 4, 6, 7, 10, 13 ].

**P. venusta Schangin ex Bunge, 1841**, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 8: 251. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11 ].

**P. verticillata L. 1753**, Sp. Pl. 2: 608. – [ 1, 2, 3, 4, 5, 9 ].

**P. violascens Schrenk, 1842**, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 1: 79. – [ 7 ].

+ **P. wlassowiana Steven, 1823**, Bull. Soc. Imp. Nat. Moscou 6: 33. – [ 2+ (Kamelin & Ulziykhutag 2005; Urgamal *et al.* 2013) ].

**Rhinanthus glaber Lam. 1778**, Fl. Franc. 2: 352. – [ 2, 3, 4 ].

+ **Rh. serotinus Oborny. 1886**, Fl. Mahren 2: 435. – [ 2+ (Gubanov 1999; Dariimaa 2009) ].

### 103. LENTIBULARIACEAE RICH 1808 (2/6)

Fl. Paris 1: 23

**Pinguicula alpina L. 1753**, Sp. Pl. 1: 17. – [ 1 (Arsain gol) ]. – (R).

**P. vulgaris L. 1753**, Sp. Pl. 1: 17. – [ 1 ]. – (R, RB).

**Utricularia australis R. Br. 1810**, Prodr. 430. – [ 10, 14 ].

**U. intermedia Hayne, 1801**, J. Bot. 1(1): 18. – [ 1, 2, 3, 6 ].

**U. minor L. 1753**, Sp. Pl. 1: 18. – [ 3, 9+ (Buir nuur), (Dulmaa *et al.* 2011), 10, 14 ].

**U. vulgaris L. 1753**, Sp. Pl. 1: 18. – [ 1, 2, 3, 4, 5, 6, 7+ (Khurgan nuur), (Krasnoborov 2006), 8, 9, 10, 11, 14, 15+ (Tseel sum, Zavkhan gol), (Grubov 2006) ].

### 104. BIGNONIACEAE JUSS. 1789 (1/1)

Gen. Pl. 137

**Incarvillea potaninii Batalin, 1891**, Trudy Imp. St.-Peterburgsk. Bot. Sada 11(2): 492–493. – [ 13, 15, 16 ]. – Subendemic. Described from Transaltai phytogeographical region (LE). – (EN, VR, RB).

### 36. SOLANALES JUSS. EX BERCHT. & J. PRESL, 1820

Prir. Rostlin 243

# 105. CONVOLVULACEAE JUSS. 1789 (4/16)

Gen. Pl. 132

# [incl. Cuscutaceae]

**Calystegia hederacea** Wall. 1824, Fl. Ind., 2: 94–95. – [ 12+ (Ikh Nart ?), 13 ]. – (R, RB).

**C. inflata** Sweet, 1830, Hort. Brit. 3: 486. – [ 5, 9 ].

**C. pellita** (Ledeb.) G. Don, 1837, Gen. Hist. 4: 296. - *Convolvulus pellitus* Ledeb. 1829, Fl. Altaic. 1: 223. – *Calystegia dahurica* var. *pellita* (Ledeb.) Choisy, 1845, Prodr. 9: 433. – [ 1, 3, 4 ].

**C. sepium** (L.) R. Br. 1810, Prodr. 483. - *Convolvulus sepium* L. 1753, Sp. Pl. 1: 153. – [ 14 ].

**C. subvolubilis** Ledeb. 1837, Fl. Altaic. 1: 122. – [ 2+ (Khuderiiin gol), (Kamelin & Dariimaa 2004), 3 (Buteeliin nuruu) ]. – (R, RB).

**Convolvulus ammannii** Desr. 1792, Encycl. 3(2): 549. – [ 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16 ].

# **C. arvensis** L. 1753, Sp. Pl. 1: 153. – *C. chinensis* Ker Gawl. 1877, Edwards's Bot. Reg. 322. – [ 2, 3, 4, 7+ (Indertiin gol), (Ebel & Rudaya 2002), 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**C. fruticosus** Pall. 1773, Reise Russ. Reich. 2: 734. – [ 7, 10, 11, 12, 13, 14, 15, 16 ].

**C. gortschakovii** Schrenk, 1841, Enum. Pl. Nov. 1: 18.. – [ 7, 8+ (Neuffer *et al.* 2012), 10, 11, 13, 14, 15, 16 ].

**C. tragacanthoides** Turcz. 1832, Bull. Soc. Imp. Nat. Moscou 5: 201. – [ 12, 16 ].

**Cuscuta australis** R. Br. 1810, Prodr. 1: 491. – [ 9 (Ongon els) ].

**C. chinensis** Lam. 1786, Encycl. 2(1): 229. – [ 4, 9, 12, 13, 15, 16 ].

**C. europaea** L. 1753, Sp. Pl. 1: 124. – [ 3, 4, 5, 6, 7, 9, 13, 14 ].

**C. lupuliformis** Krocke, 1787, Fl. Siles. 1: 261. – [ 6, 7, 10, 14 ].

**C. monogyna** Vahl, 1791, Symb. Bot. 2: 32. – [ 4, 5, 8, 14 ].

**Merremia sibirica** (L.) Hallier f. 1893, Bot. Jahrb. Syst. 16(4–5): 551. - *Convolvulus sibiricus* L. 1771, Mant. Pl. 2: 203. - *Ipomoea sibirica* (L.) Pers. 1805, Syn. Pl. 1: 183. – [ 3 ].

106. SOLANACEAE JUSS. 1789 (4/9)

Gen. Pl. 124

**Hyoscyamus niger** L. 1753, Sp. Pl. 1: 179-180. – [ 2, 3, 4, 5, 7, 8, 9, 10+ (Khovd, Darvi sum), (Revushkin *et al.* 2001), 12, 13 ].

**H. pusillus** L. 1753, Sp. Pl. 1: 180. – [ 6, 7, 10, 14, 15 ].

**Lycium potaninii** Pojark. 1950, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 13: 265–268. – [ 16 ]. – Subendemic. – (R).

**L. ruthenicum** Murray, 1780, Commentat. Soc. Regiae Sci. Gott. 2: 9–13. – [ 10, 11, 13, 14, 15, 16 ].

**L. truncatum** Y.C. Wang, 1934, Contr. Inst. Bot. Nat. Acad. Peiping 2(4): 104. – [ **10+** (Khovd gol), (Ebel & Rudaya 2002), **12, 15, 16** ]. – **Endemic.** – (R, RB).

**Physochlaina albiflora** Grubov, 1955, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 17: 22. – [ **3, 4** ]. – **Endemic.** Described from Khangai phytogeographical region (LE). – (DD, VR, RB).

**Ph. physaloides** (L.) G. Don f. 1837, Gen. Hist. 4: 470. - *Hyoscyamus physaloides* L. 1753, Sp. Pl. 1: 180. – [ **1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13** ].

**Solanum kitagawae** Schonb.-Tem. 1972, Fl. Iranica 100: 15. – [ **3, 6, 9, 14** ].

**S. septemlobum** Bunge, 1833, Enum. Pl. China Bor. 48. – [ **4, 8, 9, 12** ].

**Notes:** The cultivated plants followed in the Solanaceae family: *Capsicum annuum* L., *Lycopersicon esculentum* Mill., *S. tuberosum* L. (Manibazar 2010; Urgamal *et al.* 2013).

### 37. ASTERALES LINK, 1821

Handbuch 1: 731

#### 107. CAMPANULACEAE JUSS. 1789 (4/17)

Gen. Pl. 163

**Adenophora changaica** Cubanov & Kamelin, 1988, Bull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. 93 (5): 111. – [ **3** ]. – **Endemic.** – (R, RB).

? **A. crispata** Turcz. ex Ledeb. 1939, Fl. Ross. 2: 893. – [ **2, 4, 8+** (Unjuul sum, Bayan uul), (Krestovskaja 2006), **9** ].

# **A. gmelinii** (Biehler) Fisch. 1823, Bull. Soc. Imp. Nat. Moscou 6: 167. – *Campanula gmelinii* Biehler, 1807, Pl. Nov. Herb. Spreng. 14. - *Adenophora coronopifolia* (Fisch. ex Schult.) Fisch. 1823, Bull. Soc. Imp. Nat. Moscou 6: 157. – [ **4, 5, 9** ].

**A. lamarckii** Fisch. 1823, Bull. Soc. Imp. Nat. Moscou 6: 168. – [ **2, 3, 4, 6** ].

+ **A. liliifolia** (L.) A. DC. 1830, Monogr. Campan. 358. - *Campanula liliifolia* L. 1753, 1: 165. – [ **2+, 6+** (Kharkhiraa), **8+** (Unjuul sum), (Krestovskaja 2006) ].

**A. pereskiiifolia** (Fisch. ex Schult.) Fisch. ex G. Don, 1830, Hort. Brit. 75. - *Campanula pereskiiifolia* Fisch. ex Schult. 1819, Syst. Veg. 5: 116. – [ **4, 5, 9** ].

**A. stenanthina** (Lebed.) Kitag. 1939, Lin. Fl. Manshur. 1: 418. - *Campanula stenanthina* Lebed. 1814, Mem. Acad. Imp. Sci. St.-Petersbourg. Hist. Acad. 5: 525. – [ **1, 2, 3, 4, 5, 8, 9, 13+** (Khairkhan uul), (Krestovskaja 2006) ].

**A. tricuspidata** (Fisch. ex Schult.) A. DC. 1830, Monogr. Campan. 355. - *Campanula tricuspidata* Fisch. 1819, Syst. Veg. 5: 158. – [ **2, 4, 5, 9+** (Bayantsagaan), (Krestovskaja 2006; Pistrick *et al.* 2012) ].

# **A. triphylla** (Thunb.) A. DC. 1830, Monogr. Campan. 365. - *Campanula tetraphylla* Thunb. 1784, Fl. Jap. 87. - *Adenophora verticilata* Fisch. 1823, Bull. Soc. Imp. Nat. Moscou 6: 167. – [ **2, 4, 9** ].

**Campanula dasyantha** M. Bieb. 1819, Syst. Veg. 5: 116. – [ **1, 2** ].

**C. glomerata** L. 1753, Sp. Pl. 1: 166-167. – [ **1, 2, 3, 4, 5, 6, 7, 9** ].

+ **C. punctata** Lam. 1785, Prodr. 1(2): 586. – [ **9+** (Khulunbuir), (Grubov 2001; Urgamal *et al.* 2013) ].

**C. rotundifolia L. 1753**, Sp. Pl. 1: 163. - *C. langsdorffiana* (A. DC.) Fisch. ex Trautv. & C.A. Mey. 1856, Reise Sibir. 1(2-3): 60. - *C. rotundifolia* subsp. *langsdorffiana* (Fisch. ex Trautv. & C.A. Mey.) Vodop. 1972, in Malyshev (ed.), Vysokovo Fl. Stanovogo Nagor'ya: 139. - [ 6 (Kharkhiraaj) (Grubov 2001; Krestovskaja 2006) ].

# **C. stevenii subsp. altaica (Ledeb.) Fed.** 1973, Bot. J. Linn. Soc. 67: 281. - *Campanula altaica* Ledeb. 1824, Index Sem. Hort. Dorpat.: 2. - [ 7 (Tsagaan gol, Bulgan gol), (Grubov 2001; Krestovskaja 2006) ]. - **Subendemic.**

# **C. stevenii subsp. turczaninovii (Fed.) Victorov**, 2002, Novosti Syst. Vyssh. Rast. (New Delhi) 34: 230. - *Campanula turczaninovii* Fed. 1957, Fl. URSS 24: 304. - [ 1, 2, 3, 6, 13].

**Codonopsis clematidea (Schrenk ex Fisch. & C.A. Mey.) C.B. Clarke**, 1881, Fl. Brit. India 3(8): 433. - *Wahlenbergia clematidea* Schrenk ex Fisch. & C.A. Mey. 1841, Enum. Pl. Nov. 1: 38. - [ 7 (Yoltiin gol), (Krestovskaja 2006) ]. - {EN, VR, RB}.

**Platycodon grandiflorus (Jacq.) A. DC.** 1830, Monogr. Campan. 125. - *Campanula grandiflora* Jacq. 1776, Hort. Bot. Vindob. 3: 4. - [ 5 ].

## 108. MENYANTHACEAE DUMORT. 1829 (2/2)

Anal. Fam. Pl. 20, 25

**Menyanthes trifoliata L. 1753**, Sp. Pl. 1: 145. - [ 1, 2, 4+ (?) (Grubov 2007) ].

**Nymphoides peltatum (S.G. Gmel.) Kuntze**, 1891, Revis. Gen. Pl. 2: 429. - *Limnanthemum peltatum* S.G. Gmel. 1769, Novi Comment. Acad. Sci. Imp. Petrop. 14(1): 527. - [ 1+ (Egiin gol), (Dulmaa 2004), 4, 8, 9, 10, 14 ].

**Citation:** Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch. 2014. *Conspectus of the vascular plants of Mongolia*. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp. (p. 199-230).

**109. ASTERACEAE BERCHT. & J. PRESL 1820 (87/476)**

Prir. Rostlin 254

**Achillea acuminata (Ledeb.) Sch. Bip.** 1855, Fl. 38: 15. - *Ptarmica acuminata* Ledeb. 1845, Fl. Ross. 2: 529. - [ 2, 4, 5, 9 ]. - (R).

**A. alpina L.** 1753, Sp. Pl. 2: 899. - *Ptarmica mongolica* (Fisch.) DC. 1837, Prodr. 6: 22. - [ 1, 2, 3, 4, 5, 6, 8, 9, 10 ].

**A. asiatica Serg.** 1946, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva (1): 6. - [ 1, 2, 3, 4, 5, 6, 7, 8+ (Filatova 2003), 9, 10, 14 ]. - (R).

**A. impatiens L.** 1753, Sp. Pl. 2: 898. - *Ptarmica impatiens* (L.) DC. 1838, Prodr. 6: 22. - [ 2, 3, 4 ].

**A. ledebourii Heimerl.** 1883, Fl. 66: 389. - [ 3, 7, 8+ (Bayan-Erkhet uul), (Filatova 2003) ]. - (R).

+ **A. millefolium L.** 1753, Sp. Pl. 2: 899. - [ 1+ (Ulziykhutag 1985), 2+, 3+, 4+ (Grubov 1982; Filatova 2003), 7+ (Grubov 1982) ].

+ **A. ptarmicoides Maxim.** 1859, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 9: 154. - [ 2+, 4+ (Neuffer et al. 2012), 8+, 9+ (Filatova 2003), 10+ (Grubov 1982) ].

+ **A. sergievskiana Schaulo et Schmakov,** 2002, Turczaninowia 5(4): 8-9. - 1(72): 6. - [ 7+ (Ussein gol), (Shaulo & Shmakov 2002; Urgamal et al. 2013) ]. - **Subendemic.**

**Notes:** *Achillea millefolium* L. and *A. ptarmicoides* Maxim. are species was not given in Gubanov's conspectus (1996).

**Ajania achilleoides (Turcz.) Poljakov ex Grubov,** 1972, Novosti Syst. Vyssh. Rast. 9: 296. - *Artemisia achilloides* Turcz. 1832, Bull. Soc. Imp. Nat. Moscou 5: 195. - [ 3, 6, 7, 8, 10, 11, 12, 13, 15, 16 ]. - **Subendemic.** Described from East Gobi phytogeographical region (KW).

**A. fruticulosa (Ledeb.) Poljakov,** 1955, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 17: 428. - *Tanacetum fruticosum* Ledeb. 1829, Icon. Pl. 1: 10. - [ 3, 4+ (Filatova 2003), 6, 7, 8+, 9+ (Filatova 2003; Neuffer et al. 2012), 10, 11, 12, 13, 14, 15, 16 ].

**A. grubovii Muldashev,** 1982, Bot. Zhurn. SSSR 67: 1529. - [ 7, 14 ]. - **Endemic.** Described from Dzungarian Gobi phytogeographical region (LE, isotype - UBA).

**Notes:** The *A. trifida* (Turcz.) Muldashev is a synonym of *Hippolytia trifida* (Turcz.) Poljak. and *A. trifida* (Turcz.) Tzvelev is name uncertain.

**Ancathia igniaria (Spreng.) DC.** 1833, Arch. Bot. 2: 331. - *Cirsium igniarium* Spreng. 1826, Syst. Veg. 3: 375. - [ 3, 7, 10, 14, 15 ].

**Antennaria dioica (L.) Gaertn.** 1791, Fruct. Sem. Pl. 2(3): 410. - *Gnaphalium dioicum* L. 1753, Sp. Pl. 2: 850. - [ 1, 2, 3, 4, 7 ].

**Arctogeron gramineum (L.) DC.** 1836, Prodr. 5: 261. - *Erigeron gramineus* L. 1753, 2: 864. - [ 1, 2, 3, 4, 5, 7, 8, 9 ].

# ***Arnica angustifolia* subsp. *iljinii* I.K. Ferguson, 1973**, Bot. J. Linn. Soc. 67. - *A. iljinii* (Maguire) Iljin, 1961, Fl. URSS 26: 658. - *A. alpina* subsp. *iljinii* Maguire, 1943, Brittonia 4(3): 411–412. – [ 7 (Tavan Bogd uul, Tsagaan and Bulgan gol), (Dariimaa 2003; Krasnoborov 2006; Beket 2009) ]. – (**EN, VR, RB**).

***Artemisia adamsii* Besser, 1834**, Tent. Abrot. 27. – [ 2, 3, 4, 6, 7, 8, 9, 10, 11, 12+ (Sainshand), (Filatova 2003), 13 ].

***A. aksaiensis* V.R. Ling. 1985**, Bull. Bot. Res., Harbin 5(2): 3–4. – [ 2, 6, 8, 12, 13, 14, 16+ (Yamaat uul), (Filatova 2003) ].

***A. amoena* Poljakov, 1954**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 16: 421. - *Seriphidium amoena* (Poljakov) Poljakov, 1961, Trudy Inst. Bot. Akad. Nauk Kazakhst. SSR. 11: 1714. – [ 7 (Olonova & Beket 2010) ]. – **Subendemic**.

***A. anethifolia* Weber ex Stechm. 1775**, Dissert. Artemis. 29. – [ 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14+ (Bulgan gol), (Filatova 2003), 15, 16 ].

***A. anethoides* Mattf. 1926**, Repert. Spec. Nov. Regni Veg. 22(618–626): 249. – *A. anethifolia* var. *anethoides* (Mattf.) Pamp. 1927, Nuovo Giorn. Bot. Ital. 34(3): 636. – [ 8, 9+ (Dariganga), (Filatova 2003), 10, 11+ (Orog nuur), (Filatova 2003), 12, 13, 14, 15, 16 ].

***A. annua* L. 1753**, Sp. Pl. 2: 847. – [ 2, 3, 4, 7, 8, 9, 10, 12, 13, 14, 15, 16 ].

***A. argyi* Levl. & Vaniot, 1910**, Repert. Spec. Nov. Regni Veg. 8(163–165): 138. – [ 2, 4, 5, 7, 8, 9, 12, 13 ].

***A. argyrophylla* Ledeb. 1833**, Fl. Altaic. 4: 166–167. – *A. frigida* var. *argyrophylla* (Ledeb.) Trautv. 1866, Bull. Soc. Imp. Nat. Moscou 2: 358. - *A. argyrophylla* var. *arcuata* Ameljcz. & Revuschkin, 1979, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 86: 4. – [ 1, 3, 6, 7, 13, 15 ]. – **Subendemic**.

***A. aurata* Kom. 1901**, Trudy Imp. St.-Peterburgsk. Bot. Sada 18(3): 422. – [ 2, 3, 4, 5, 8, 9, 13+ (Gurvan Saikhan uul), (Filatova 2003) ].

***A. bargusinensis* Spreng. 1826**, Syst. Veg. 3: 493. – [ 1, 2, 3, 4, 5 ].

***A. blepharolepis* Bunge, 1851**, Beitrag Fl. Russl. 164. – [ 11, 12, 13, 16 ].

***A. borealis* Pall. 1776**, Reise Russ. Reich. 3: 755. – [ 1, 2, 3, 4, 6, 7, 10, 13 ].

***A. brachyloba* Franch. 1884**, Nouv. Arch. Mus. Hist. Nat. 2, 6: 51. – *A. licentii* Pamp. 1927, Nuov. Giorn. Bot. Ital. 34(3): 676–677. – [ 4, 8, 9 ].

+ ***A. brachyphylla* Kitam. 1936**, Acta Phytotax. Geobot. 5(2): 97–98. – *A. koidzumii* var. *manchurica* Pamp. 1930, Nuov. Giorn. Bot. Ital. 36(4): 483. - *A. pronutans* Kitag. 1942, Rep. Inst. Sci. Res., Manchoukuo 6: 126. – [ 5+ (Kamelin & Ulziykhutag 2005; Urgamal *et al.* 2013) ].

***A. caespitosa* Ledeb. 1833**, Fl. Altaic. 4: 80–81. - *A. frigidioides* H.C. Fu & Z.Y. Zhu, 1982, Fl. Intramongol. 6: 326. – [ 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16+ (Filatova 2003) ]. – **Subendemic**.

**Notes:** It was informed that *A. frigidioides* H.C. Fu & Z.Y. Zhu is distributed Dund Saikhan uul of South Mongolia (Filatova 2003).

***A. capillaris* Thunb. 1784**, Nova Acta Regiae Soc. Sci. Upsal. 3: 209. – [ 2, 3, 4, 5, 8, 9 ].

**A. changaica Krasch.** 1936, Trudy Bot. Inst. AN URSS 1, 3: 346. - *A. dracunculus* var. *changeica* (Krasch.) Y.-R. Ling, 1982, Bull. Bot. Res., Harbin 2(2): 36. - [ 1, 3, 7, 8, 10, 11+ (Tuin gol), (Filatova 2003), 13 ]. - **Endemic**. Described from in the North Mongolia (LE).

**A. commutata Besser,** 1835, Bull. Soc. Imp. Nat. Moscou 8: 70. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 12 ].

**A. compacta Fisch. ex DC.** 1838, Bull. Soc. Imp. Nat. Moscou 7: 34. - [ 3, 6, 7, 8+ (Neuffer *et al.* 2012), 10, 11+ (Filatova 2003), 12, 14 ].

+ **A. dahurica (Turcz.) Poljakov,** 1955, Conspl. Fl. Mongol. 264. - *A. maritima* var. *dahurica* Turcz. 1835, Bull. Soc. Imp. Nat. Moscou 8: 17. - [ 4+ (Grubov 1955; Urgamal *et al.* 2013) ].

**A. davazamczii Darijma & Kamelin,** 1992, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 97, 5: 65. - [ 7, 10, 13, 15 ]. - **Subendemic**. Described from Gobi Altai phytogeographical region (LE, paratype - MW).

**A. demissa Krasch.** 1936, Trudy Bot. Inst. AN URSS 1, 3: 348. - [ 3, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**A. depauperata Krasch.** 1949, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva (1-2): 3. - [ 1, 2+ (Filatova 2003), 3, 4, 6, 7, 8, 10, 11, 13, 14 ].

**A. desertorum Spreng.** 1826, Syst. Veg. 3: 490. - [ 2, 4, 5, 9, 13+ (Neuffer *et al.* 2012) ].

**A. desertorum subsp. *pseudojaponica* Darijma & Kamelin,** 1992, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 97, 5: 66. - [ 5 ]. - **Endemic**. Described from Foothills of Great Khingan phytogeographical region (UBA).

**A. disjuncta Krasch.** 1946, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 9: 162, 176. - [ 7, 13 (Filatova 2003) ]. - **Subendemic**.

**A. dolosa Krasch.** 1949, Animadvers. Syst. Herb. Univ. Tomsk. 1-2: 4. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13 ].

**A. dracunculus L.** 1753, 2: 849. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ].

+ **A. eriopoda Bunge,** 1831, Enum. Pl. China Bor. 37. - *A. desertorum* var. *fontanesiana* Besser, 1835, Bull. Soc. Imp. Nat. Moscou 8: 66. - [ 16+ (Urgamal *et al.* 2013) ].

**A. feddei Lev. & Vaniot.** 1910, Repert. Spec. Nov. Regni Veg. 8(163-165): 138. - [ 5+ (Filatova 2003), 9 ].

? **A. feddei subsp. *arschantinica* (Darijma) Gubanov & Kamelin,** 1996, Conspl. Fl. Outer Mongolia 97. - *A. arschantinica* Darijma, 1992, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 97, 5: 65. - [ 16 (Rashaantiin nuruu), (Kamelin *et al.* 1992; Gubanov 1996) ]. - **Endemic**. Described from Alashan Gobi phytogeographical region (LE, isotype - MW, UBA).

**A. freyniana (Pamp.) Krasch.** 1949, Spisok Rast. Gerb. Fl. SSSR Bot. Inst. Vsesojuzn. Akad. Nauk 11: 42. - *A. sacrorum* fo. *freyniana* Pamp. 1927, Nuov. Giorn. Bot. Ital. 34(3): 688-689. - [ 4, 5, 6, 8, 9, 10, 12, 13 ].

**A. frigida Willd.** 1803, Sp. Pl. 3(3): 1838. - [ 1-16 (all regions) ].

**Notes:** This species is distributed all phytogeographical regions in the Mongolia. Also *A. frigida* subsp. *willdenoviana* (Besser) Krasch., *A. frigida* var. *parva* (Krasch) Poljak. and *A. frigida* var. *gmeliniana* Besser are distributed (Gubanov's, conspectus 1996), but these names no concept.

**A. giraldii Pamp.** 1927, Nuov Giorn. Bot. Ital. 34(3): 657. - [ 4 (Filatova 2003) ].

**A. glabella Kar. & Kir. 1841**, Bull. Soc. Imp. Nat. Moscou 14: 441. – *A. obtusiloba* var. *glabra* Ledeb. 1833, Fl. Altaic. 4: 70. – [ 3, 6+ (Tsagaan nuur), (Filatova 2003), 10 ].

**A. glauca Pall. ex Willd. 1803**, Sp. Pl. 3(3): 1831. – [ 1, 2, 3, 4, 5+ (Filatova 2003), 6, 7, 8+ (Pistrick *et al.* 2012), 10, 14 ].

**Notes:** It was informed that *A. glauca* Pall. ex Willd. is a synonym of *A. dracanculus* var. *glauca* (Pall. ex Willd.) H.M. Hall & Clem. (TICA).

**A. globosa Krasch. 1922**, Not. Syst. Herb. Hort. Petrop. iii. 27 (1922). : 27. – [ 6, 7, 8+ (Undurkhaan), (Filatova 2003), 10, 12+ (Ikh Nart ?), 13+ (Ikh Bogd, Gurvan Saikhan uul), (Filatova 2003), 14 ]. – **Endemic.** Described from Western North part of Mongolia (LE).

**A. globosoides Ling & Y.R. Ling, 1985**, Bull. Bot. Res., Harbin 5(2): 7–8. – [ 9+ (Tevsh Khairkhan), (Filatova 2003), 12 ].

**A. gmelinii Weber ex Stechm. 1775**, Artemis. 17, 30. – [ 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 ].

+ **A. gobica (Krasch.) Grubov, 1955**, Conspect. Fl. Mong.: 265. - *A. mongolorum* subsp. *gobicum* Krasch. et var. *salsuginosa* Krasch. 1936, Trudy Bot. Inst. Akad. Nauk SSSR Geobot. 1(3): 350. – [ 3+, 4+, 6+, 7+, 8+, 9+, 10+, 11+, 12+, 13+, 14+, 15+, 16+ (Filatova 2003) ].

**Notes:** It was informed that *Seriphidium nitrosa* var. *gobica* (Krasch.) Y.-R. Ling is an accepted name and as possible distributed in Western Mongolia (TICA).

**A. gracilescens Krasch. & Iljin 1949**, Syst. Zametki Mater. Gerb. Krylova pri Tomsk. Gosud. Univ. Kuybysheva 1(2): 2, 3. – [ 7, 14, 15 ]. – **Subendemic.**

**Notes:** It was informed that *Seriphidium gracilescens* (Krasch. & Iljin) Poljakov is an accepted name and as possible distributed in Western Mongolia (TICA).

**A. halodendron Turcz. ex Besser, 1835**, Bull. Soc. Imp. Nat. Moscou 8: 17-19. - *A. intramongolica* H.C. Fu, 1982, Fl. Intramongol. 6: 125, 327. – [ 4, 5+ (Filatova 2003), 8, 9, 12+, 13+ (Khurmen), 16+ (Takhilt uul), (Filatova 2003) ].

+ **A. implicata Leonova, 1980**, Novosti Syst. Vyssh. Rast. 17: 237. – [ 16+ (Urgamal *et al.* 2013) ]. – **Subendemic.**

**A. integrifolia L. 1753**, Sp. Pl. 2: 848. – [ 1, 2, 3, 4, 5, 8, 9, 13+ (Neuffer *et al.* 2012) ].

**A. klementzae Krasch. 1964**, Mater. Istorii Fl. Rastit. SSSR 2: 163. – [ 3, 4, 7+ (Tsagaan gol), (Filatova 2003), 9, 10, 11, 12+ (Dariimaa *et al.* 2004), 13+ (Arts Bogd uul), (Filatova 2003), 14 ]. – **Endemic.** Described from Khangai phytogeographical region (LE).

**A. laciniata Willd. 1803**, Sp. Pl. 3(3): 1843. – *A. laciniatiformis* Kom. 1930, Fl. Kamtschatka 3: 153. – [ 1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 14 ].

? **A. lagocephala subsp. lithophila Malyshev, 1965**, Fl. Vost. Sayan: 222. – [ 1 (Sul uul), (Mongolian Red Book 1997) ]. – **(VU, VR, RB).**

**A. latifolia Ledeb. 1815**, Mem. Acad. Imp. Sci. St.-Petersbourg Hist. Acad. 5: 569. – [ 2, 4, 5, 9 ].

**A. leucophylla (Turcz. ex Besser) Turcz. ex C.B. Clarke, 1876**, Compos. Ind. 162. - *A. vulgaris* var. *leucophylla* Turcz. ex Besser, 1834, Fl. Ross. 2: 586. – *A. mongolica* var. *leucophylla* (Turcz. ex Besser) W. Wang & H.T. Ho, 1982, Fl. Intramongol. 6: 140. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 13 ]. – Described from Khovsgol phytogeographical region (LE).

**A. macilenta (Maxim.) Krasch.** 1946, Mater. Istorii Fl. Rastitel'nosti SSSR 2: 156. - *A. campestris* var. *macilenta* Maxim. 1859, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 9: 158. - [ 2, 3, 4, 5, 9 ].

**A. macrantha Ledeb.** 1815, Mem. Acad. Imp. Sci. St.-Petersbourg 5: 573. - [ 1, 2, 3, 7 ].

**A. macrocephala Jacq. ex Besser,** 1836, Bull. Soc. Imp. Nat. Moscou 9: 28. - [ 1, 2, 3, 4, 5+ (Filatova 2003), 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**A. manshurica (Kom.) Kom.** 1932, Key. Pl. Far East. Reg. USSR 2: 1053. - *A. japonica* var. *mandshurica* Kom. 1907, Neolin. Fl. Manshur. 3(2): 625. - [ 2, 3, 4, 5, 8, 9 ].

**A. marschalliana Spreng.** 1826, Syst. Veg. 3: 496. - *A. campestris* auct. Fl. Mong., non L. - [ 7 (Filatova 2003) ].

**Notes:** It was informed that *A. marschalliana* Serg. is a synonym of *A. campestris* subsp. *inodora* Nyman (TICA).

**A. maximovicziana (F. Schmidt) Krasch. ex Poljakov,** 1955, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 17: 403. - [ 4, 5, 9 ].

**A. medioxima Krasch. ex Poljakov,** 1955, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 17: 405. - [ 1, 2, 3, 4, 9 ].

**A. messerschmidtiana Besser,** 1834, Nouv. Mem. Soc. Imp. Nat. Moscou 3: 27–28. - [ 2, 3, 4+ (Filatova 2003), 5, 8, 9, 12, 13 ].

**A. mongolica (Fisch. ex Besser) Fisch. ex Nakai,** 1917, Bot. Mag. (Tokyo) 31: 112. - *A. vulgaris* var. *mongolica* Fisch. ex Besser, 1834, Nouv. Mem. Soc. Imp. Nat. Moscou 3: 53. - *A. obscura* Pamp. 1930, Nuov. Giorn. Bot. Ital. 36(4): 417–419. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ]. - Described from Northern Mongolia (LE).

? **A. mongolorum subsp. gobica Krasch.** 1936, Trudy Bot. Inst. Akad. Nauk SSSR, ser. 1, Fl. Sist. Vyssh. Rast. 3: 350. - [ 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ]. - **Endemic** (LE, MW).

**Notes:** It was informed that *A. mongolorum* subsp. *saissanica* Krasch. (LE) and *A. mongolorum* subsp. *mongolorum* Krasch. is distributed in Mongolia and Inner Mongolia (Gubanov 1996; TICA).

**A. nitrosa Weber ex Stechm.** 1775, Artemis. 24. - [ 3+, 4+ (Filatova 2003), 8, 9 ].

**A. obtusiloba Ledeb.** 1833, Fl. Altaic. 4: 68–70. - [ 3, 6, 7, 10, 13, 14 ]. - (Lectotype - LE).

# **A. obtusiloba subsp. altiensis (Krasch.) Krasnob.** 1998, Fl. Sibir. 13: 124. - *A. altiensis* Krasch. 1949, Fl. Zap. Sibir. 11: 2792. - *A. obtusiloba* var. *fruticulosa* Ledeb. 1833, Fl. Altaic. 4: 69. - [ 3, 6, 7 ]. - **Subendemic** (LE).

**A. ordosica Krasch.** 1946, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 9: 173. - [ 7, 9, 10, 12, 13, 14, 15, 16 ]. - **Subendemic**.

**A. oxycephala Kitag.** 1936, Rep. Exped. Manchoukuo Sect. IV 4: 93. - [ 4, 5, 8, 9 ].

**A. palustris L.** 1753, Sp. Pl. 2: 846. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 ].

**A. pamirica C. Winkl.** 1890, Trudy Imp. St.-Peterburgsk. Bot. Sada 11: 32. - [ 3, 6, 7, 10, 11, 12, 13 ]. - **Subendemic**.

**A. phaeolepis Krasch.** 1949, Animadvers. Syst. Herb. Univ. Tomsk. 1-2 (73-74): 1. - [ 1, 2, 3, 4, 6, 7, 8, 9, 13, 14 ].

# **A. pubescens** Ledeb. **1805**, Mem. Acad. Sci. Petersb. 5: 568. - *A. monostachya* Bunge ex Maxim. 1872, Prim. Fl. Amur. 482. - *A. commutata* Besser, 1835, Bull. Soc. Imp. Nat. Moscou 8: 70. - [ **1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13+, 14+** (Filatova 2003) ].

**A. pycnorhiza** Ledeb. **1833**, Fl. Altaic. 4: 79. - [ **1, 2, 3, 4, 6, 7, 8, 10, 11, 12, 13, 14** ].

**A. rubripes** Nakai. **1917**, Bot. Mag. (Tokyo) 31(364): 112. - [ **2, 3+** (Filatova 2003), **4, 5, 8, 9** ].

**A. rupestris** L. **1753**, Sp. Pl. 2: 847. - [ **1, 2, 3, 4, 6, 7, 8, 10, 14** ].

**A. rutifolia** Stephan ex Spreng. **1826**, Syst. Veg. 3: 488. - [ **1, 2, 3, 4, 6, 7, 8, 9, 10, 12+** (Ikh Nart), (Filatova 2003; Dariimaa & Mandakh 2013), **13, 14, 15** ]. - (R).

+ **A. rutifolia** var. *altaica* (Krylov) Krasch. **1949**, Fl. Sibir. Occ. 11: 2792. - *A. turczaninoviana* var. *altaica* Krylov, 1904, Fl. Altaic. 3: 61. - [ **7+** (Urgamal *et al.* 2013) ]. - Subendemic.

# **A. saissanica** (Krasch.) Filatova **1963**, Not. Inst. Bot. Acad. Sci. Kaschg. RSS 15: 234. - *A. mongolorum* subsp. *saissanica* Krasch. 1949, Kryl. Fl. Sibir. Occ. 11: 2783. - [ **7, 10, 14** ]. - Subendemic.

**A. santolinifolia** Turcz. ex Krasch. **1949**, Fl. Zap. Sibir. 11: 2791. - [ **2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15** ]. - (R).

**A. santolinifolia** subsp. *stepposa* Darijma, **1992**, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 97(5): 67. - [ **8, 9** ]. - Endemic. Described from Middle Khalkha and East Mongolian phytogeographical regions (UBA, paratype - LE, MW, UBA).

**A. schischkinii** Krasch. **1949**, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1-2: 2. - [ **6, 7, 10, 14** ].

**A. schrenkiana** Ledeb. **1845**, Fl. Ross. 2(2): 575. - [ **3, 6, 10, 14** ].

**A. scoparia** Waldst. & Kitam. **1802**, Descr. Icon. Pl. Hung. 1: 66. - [ **2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12+** (Ikh Nart ?) ].

**A. selengensis** Turcz. ex Besser, **1834**, Nouv. Mem. Soc. Imp. Nat. Moscou 3: 50. - [ **3, 4, 5, 9** ]. - Subendemic.

**A. sericea** Weber ex Stechm. **1775**, Artemis. 16. - [ **1, 2, 3, 4, 5, 8** ].

**A. sieversiana** Willd. **1803**, Sp. Pl. 3(3): 1845. - [ **1-16** (all regions) ].

**A. sphaerocephala** Krasch. **1936**, Trudy Bot. Inst. Akad. Nauk SSSR. ser. 1, Fl. Sist. Vyssh. Rast. (Moscow & Leningrad) 3: 348. - [ **3, 10, 11, 12, 13, 14, 15, 16** ]. - Subendemic.

? **A. stolonifera** (Maxim.) Kom. **1907**, Fl. Manschur. 3(2): 676. - *A. vulgaris* var. *stolonifera* Maxim. 1859, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 9: 161. - [ **3, 7, 10, 13, 14, 15, 16** ].

**A. subdigitata** Mattf. **1926**, Repert. Spec. Nov. Regni Veg. 22(618-626): 243-244. - *A. dracunculus* var. *subdigitata* (Mattf.) Pamp. 1929, Nuov. Giorn. Bot. Ital. 36(3): 379. - [ **3, 4+** (Filatova 2003), **7, 10, 12+** (Ikh Shantain nuruu), (Filatova 2003), **13, 14, 15, 16** ].

**A. sublessingiana** Krasch. ex Poljakov, **1954**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 16: 395-396. - *Seriphidium sublessingianum* (Krasch. ex Poljakov) Poljakov, 1961, Trudy Bot. Inst. Akad. Nauk Kazakh. SSSR 11: 174. - [ **7, 8+** (Neuffer *et al.* 2012), **13, 14, 15** ]. - Subendemic.

**A. subulata** Nakai, **1915**, Bot. Mag. (Tokyo) 29: 8. - [ **1+** (Filatova 2003), **5, 9** ].

+ **A. succulenta** Ledeb. 1833, Fl. Altaic. 4: 81-82. – [ 7+ (Neuffer *et al.* 2003; Urgamal *et al.* 2013) ]. – **Subendemic**.

**A. superba** Pamp. 1930, Nuov. Giorn. Bot. Ital. 36(4): 473. – [ 2+ (Filatova 2003), 3, 4, 9 ].

**A. sylvatica** Maxim. 1859, Prim. Fl. Amur. 161. – [ 4, 5, 9, 10+, 15+ (Filatova 2003)].

**A. tanacetifolia** L. 1753, Sp. Pl. 2: 848. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14 ].

**A. terrae-albae** Krasch. 1930, Otchet Rabotakh Pochv.-Bot. Otryada Kazakhstansk. Eksped. Akad. Nauk SSSR 4(2): 269. – [ 7+ (Filatova 2003), 14, 15 ]. – **Subendemic**.

**A. tomentella** Trautv. 1866, Bull. Soc. Imp. Nat. Moscou 39(I): 351. – [ 1, 3, 6, 10, 11+, 12+ (Dariimaa 2003; Nyambayar *et al.* 2011), 14 ]. – **(VU, VR, RB)**.

**A. tournefortiana** Rchb. 1823, Icon. Bot. Exot. 1: 6. – [ 7, 9+ (Enger shand), 12+ (Sainshand, Baruun tugrug), (Filatova 2003), 14 ].

**A. transbaicalensis** Leonova, 1970, Novosti Syst. Vyssh. Rast. 6: 195. – [ 1, 3 ]. – **Subendemic**.

**A. umbrosa** (Besser) Turcz. 1837, Prodr. 6: 113. – *A. vulgaris* var. *umbrosa* Besser, 1834, Nouv. Mem. Soc. Imp. Nat. Moscou 3: 50. – [ 4, 5, 9 ].

+ **A. vestita** Wall. ex Besser, 1834, Nouv. Mem. Soc. Imp. Nat. Moscou 3: 25. – [ 13+ (Baruun Saikhan uul), (Filatova 2003) ].

**A. viridis** Willd. 1803, Fl. Filip. 2: 436. – [ 6, 7, 14 ].

**A. vulgaris** L. 1753, Sp. Pl. 2: 848. – [ 1+, 2+, 3+, 4+ (Filatova 2003), 7, 10, 13, 14 ].

**A. vulgaris** subsp. *inundata* Darjima, 1992, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 97(5): 68. – [ 2, 3 (Kamelin *et al.* 1992) ]. – **Subendemic**. Described from Khentei phytogeographical region (UBA, paratype - MW).

**Notes:** *A. vulgaris* subsp. *inundata* Darjima name is sometimes unknown and but Gubanov's conceptus (1996) given it.

**A. wudanica** S.L. Liou & W. Wang. 1979, Acta Phytotax. Sin. 17(4): 88. – [ 8, 9, 12 ].

**A. xanthochloa** Krasch. 1946, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 10: 174. – [ 3, 4, 5, 6+ (Filatova 2003), 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ]. – **Subendemic**. Described from East Gobi phytogeographical region (LE). – **(NT, VR, RB)**.

**Notes:** The some reports for *Artemisia xanthochroa* Krasch. it is synonym name.

**A. xerophytica** Krasch. 1922, Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR 3: 24. – [ 6, 7, 8, 10, 11, 12, 13, 14, 15, 16 ]. – **Subendemic**. Described from Mongolia and Inner Mongolia region (LE).

**A. xylorrhiza** Krasch. ex Filatova, 1986, Mater. Istorii Fl. Rastitelnosti SSSR 2: 155. – [ 3, 4, 7+ (Indertiin gol), (Filatova 2003), 8, 9, 10, 11, 12, 13, 16 ]. – **Endemic**. Described from Northern Mongolia (LE).

**Notes:** The following species *Artemisia assurgens*, *A. borotalense*, *A. heptapotamica*, *A. mongolorum*, *A. subchrysolepis* are included to genus *Seriphidium* (Besser ex W. Hook.) Poljakov (TICA).

# **Askellia flexuosa** (Ledeb.) Weber, W.A. 1984, Phytologia 55: 6. - *Crepis flexuosa* (Ledeb.) Benth. ex C.B. Clarke, 1876, Compositae Ind. 18: 254. - *Youngia flexuosa* (Ledeb.) Ledeb. 1845, Fl. Ross. 2: 838. - *Prenanthes polymorpha* var. *flexuosa* Ledeb. 1833, Fl. Altaic.

4: 145. – [ 1, 3, 5, 6, 7, 8, 9, 10, 11, 13, 14+ (Barlag, Bodonchiin gol), (Tzvelev 2008), 15, 16+ (Tost uul), (Tzvelev 2008) ].

# **A. pygmaea (Ledeb.) Sennikov 2008**, Komarovia 5: 86. - *Prenanthes pygmaea* Ledeb. 1815, Mem. Acad. Imp. Sci. 5: 553. - *Crepis nana* Richardson, 1823, Narr. Journey Polar Sea 746–747. - *Youngia nana* (Richardson) Kamelin, 1993, – [ 1+ (Oyumaa & Paula de Priest 2011), 3+, 6+ (Kharkhiraa uul), 7+ (Tsagaan gol), (Tzvelev 2008) ].

**Aster alpinus L. 1753**, Sp. Pl. 2: 872. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13 ].

# **A. hispidus Thunb. 1784**, Fl. Jap. 315. - *Heteropappus hispidus* (Thunb.) Less. 1832, Syn. Comp. 189. – *Kalimeris hispida* (Thunb.) Nees, 1832, Gen. Spec. Aster. 227. – [ 2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 15 ].

**Notes:** *Heteropappus hispidus* (Thunb.) Less. is a synonym of *Aster hispidus* Thunb. (Iwatsuki, K. et al. 1993~. in the book Flora of Japan).

**A. maackii Regel, 1861**, Mem. Acad. Imp. Sci. St.-Petersbourg 7, 4: 81. – [ 5 ].

**A. sanczirii Kamelin & Gubanov, 1992**, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 97(5): 69. – [ 5 ]. – **Endemic**. Described from Foothills of Great Khingan phytogeographical region (MW, isotype – LE, UBA). – (R).

**A. tataricus L. f. 1781**, Suppl. Pl. 373. – [ 2, 3, 4, 5, 9 ].

**Astrothamnus alyssoides (Turcz.) Novopokr. 1950**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 13: 336. - *Aster alyssoides* Turcz. 1832, Bull. Soc. Imp. Nat. Moscou 5: 198. – [ 8, 12 ]. – **Subendemic**. Described from Middle Khalkha phytogeographical region (LE).

**A. centraliasiaticus Novopokr. 1950**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 13: 338. – [ 7, 8, 9, 11, 12, 13, 14+ (Uushgiin us), (Revushkin et al. 2001), 15, 16 ]. – **Subendemic**. Described from Gobi Altai phytogeographical region (LE). – (LC, VR, RB).

**Notes:** The It was informed that *A. centraliasiaticus* var. *potaninii* (Novopokr.) Y. Ling & Y.L. Chen is possible distributed in the South Mongolia (TICA).

**A. heteropappoides Novopokr. 1950**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 13: 345. – [ 6, 7, 10, 14 ]. – **Subendemic**. Described from Great Lakes (Uvs nuur) phytogeographical region (LE).

**A. molliusculus Novopokr. 1950**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 13: 342. – [ 12 ]. – **Endemic**. Described from East Gobi phytogeographical region (LE). – (R, RB).

**A. poliifolius Novopokr. 1950**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 13: 343. – [ 3, 6, 7, 10, 11, 13, 14, 15 ]. – **Subendemic**. Described from Mongolian Altai phytogeographical region (LE).

**Notes:** *Astrothamnus fruticosus* (C.Winkl.) Novopokr. species is possible distributed in Mongolian Altai region.

**Bidens cernua L. 1753**, Sp. Pl. 2: 832. – [ 1+ (Egiin gol), (Dulmaa 2004), 3, 4, 6, 7, 9, 10, 11 ].

**B. parviflora Willd. 1809**, Enum. Pl. Horti Bot. Berol. 2: 848. – [ 3, 4, 6, 8, 9, 10, 13 ].

**B. radiata Thuill. 1799**, Fl. Env. Paris 2: 432. – [ 3, 4, 6, 7, 8, 9, 10 ].

**B. tripartita L. 1753**, Sp. Pl. 2: 831-832. – [ 2, 3, 4, 7, 8, 9, 10, 14 ].

**Brachanthemum gobicum Krasch.** 1933, Trudy Bot. Inst. Akad. Nauk SSSR. Ser. 1, Fl. Syst. Vyssh. Rast. (Moscow & Leningrad) 1: 177. – [ 12, 13, 16 ]. – **Subendemic**. Described from Gobi Altai phytogeographical region (LE). – (NT, VR, RB).

**B. mongolicum Krasch.** 1949, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 11: 196. – [ 12+ (Neuffer *et al.* 2012), 14 ]. – **Subendemic**. Described from Dzungarian Gobi phytogeographical region (LE). – (R, RB).

**B. mongolorum Grubov,** 1972, Bot. Zhurn. 57, 12: 1593. – [ 9 (Dornod, Matad sum, Tsog-Undur and Ar Jargalant uul), (Filatova 2003; Nyambayar *et al.* 2011) ]. – **Endemic**. – (CR, VR, RB, RL).

**Cancrinia discoidea (Ledeb.) Poljakov,** 1961, Fl. URSS 26: 313. – *Pyrethrum discoideum* Ledeb. 1830, Icon. Pl. 2: 153. – [ 7, 10+ (Jargalant Khairkhan uul), (Revushkin *et al.* 2001), 11, 12, 13, 14, 15, 16 ].

**Carduus crispus L.** 1753, Sp. Pl. 2: 821-822. – [ 2, 3, 4, 5, 6, 7, 9 ].

**C. nutans L.** 1753, Sp. Pl. 2: 821. – [ 1+ (Dariimaa 2014), 7 (Dayan nuur) ]. – (R).

**Centaurea adpressa Ledeb.** 1824, Index Sem. Dorpat 3. – [ 6 (Khatuu gol), (Dariimaa 2014) ]. – (R).

# **C. chartolepis Greuter,** 2003, Willdenowia 33(1): 54. – *Chartolepis intermedia* Boiss. 1856, Diagn. Pl. Orient. 2, 3: 64. – [ 6+ (Dariimaa 2014), 7 ].

**Chondrilla lejosperma Kar. & Kir.** 1841, Bull. Soc. Imp. Nat. Moscou 14(3): 456. – [ 6, 7, 10+ (Buyant gol), (Tzvelev 2008), 14 ].

# **Chrysanthemum chalchingolicum Grubov,** 1972, Bot. Zhurn. (Moscow & Leningrad) 57(12): 1592. – *Dendranthema chalchingolicum* (Grubov) Gubanov & Kamelin, 1996, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 101(2): 62. – [ 5, 9 ]. – **Endemic**. Described from Khalkhiin gol river (LE). – (R).

+ **Ch. trilobatum (Poljakov ex Poljakov) H. Ohashi & Yonek.** 2004, J. Jap. Bot. 79(3): 192. - *Ajania trilobata* Poljakov ex Poljakov, 1961, Fl. URSS 26: 880. – [ 12+ (Sainshand), 13+ (Filatova 2003) ]. – **Subendemic**.

# **Ch. zawadskii Herbich,** 1831, Addit. fl. Galic. 44. - *Dendranthema zawadskii* (Herbich) Tzvelev, 1961, Fl. URSS 26: 376. – [ 1, 2, 3, 4, 5, 8+ (Filatova 2003), 9 ].

**Cicerbita azurea (Ledeb.) Beauverd,** 1910, Bull. Soc. Bot. Geneve 2: 123. - *Sonchus azureus* Ledeb. 1883, Fl. Altaic. 4: 138. – [ 3, 7, 10+ (Khyargas nuur), (Tzvelev 2008) ].

**Cichorium intybus L.** 1753, Sp. Pl. 2: 813. – [ 6 (Khovd gol) ]. – (R).

? # **Cirsium arvense (L.) Scop.** 1772, Fl. Carniol. 2, 2: 126–127. - *Serratula arvensis* L. 1753, Sp. Pl. 2: 820. - *Cirsium arvense* var. *incanum* (S.G. Gmel.) Ledeb. 1845, Fl. Ross. 2: 735. – *C. incanum* (S.G. Gmel.) Fisch. ex M. Bieb. 1819, Fl. Taur.-Caucas. 3: 561. – [ 2+ (Khonin nuga), (Dulamsuren 2004; Dulamsuren *et al.* 2004), 3, 4, 7, 9, 10, 11, 13, 14, 15 ].

**C. esculentum (Siev.) C.A. Mey.** 1848, Beitr. Pflanzenk. Russ. Reichen 5: 43. - *Cnicus esculentus* Siev. 1796, Neueste Nord. Beytr. 3: 362. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 14 ].

**C. glabrifolium (C. Winkl.) O. Fedtsch. & B. Fedtsch.** 1912, Conspl. Fl. Turkest. 4: 286. - *Cnicus glabrifolium* C. Winkl. 1886, Trudy Imp. St.-Peterburgsk. Bot. Sada 9: 523. – [ 7 ].

**C. helenioides (L.) Hill,** 1768, Hort. Kew. 64. - *Carduus helenioides* L. 1753, Sp. Pl. 2: 825. – [ 2 ].

**C. pendulum** Fisch. ex DC. 1837, Prodr. 6: 650. - [ 2+ (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 4, 5, 9 ]. - (R).

**C. polyacanthum** Kar. & Kir. 1841, Bull. Soc. Imp. Nat. Moscou 14: 450. - [ 7 ].

**C. serratuloides** (L.) Hill, 1768, Hort. Kew. 64. - *Carduus serratuloides* L. 1753, Sp. Pl. 2: 825. - [ 1, 2, 3 ].

**C. setosum** (Willd.) Besser, 1816, Fl. Taur.-Caucas. 3: 560–561. - *Serratula setosa* Willd. 1803, Sp. Pl. 3(3): 1654. - [ 3, 4, 7, 8, 9, 10, 11, 14, 15 ].

**C. vlassovianum** Fisch. ex DC. 1837, Prodr. 6: 653. - [ 2+ (Sangastai, Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 5, 9 ].

**Cousinia affinis** Schrenk, 1841, Enum.o Pl. Nov. 1: 41. - [ 14 (Tsagaan Tunj) ]. - (R, RB).

# **Crepidiastrum akagii** (Kitag.) J.W. Zhang & N. Kilian, 2011, Fl. China, 20–21: 269. - *Geblera akagii* Kitag. 1937, J. Jap. Bot. 13(6): 430–431. - *Youngia tenuifolia* subsp. *tenuicaulis* Babc. & Stebbins, 1937, Carnegie Inst. Wash. Publ. 484: 50. - *Y. akagii* (Kitag.) Kitag. 1940, J. Jap. Bot. 16(3): 182. - *Y. tenuicaulis* (Babc. & Steb.) Czer. 1964, Fl. URSS 29: 385. - *Y. ordosica* Y.Z. Zhao & L. Ma, 2003, Bull. Bot. Res., Harbin 23(3): 261. - *Crepidifolium tenuicaule* (Babc. & Stebbins) Tzvelev, 2007, Bot. Zhurn. 92: 1752. - *C. akagii* (Kitag.) Sennikov 2008, Komarovia, 5(2): 95. - [ 2, 3, 6+ (Uureg nuur), (Tzvelev 2008), 7, 8, 10, 11, 12, 13, 14, 15+ (Tsagaan Bogd uul), (Tzvelev 2008; Dariimaa 2014) ].

**Note:** This species have for name by *Youngia tenuicaulis* (Babc. & Steb.) Czer. in the (Flora of Mongolia, 14a issue, 2014) book.

# **C. sonchifolium** (Maxim.) Pak & Kawano, 1992, Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 15: 58. - *Youngia sonchifolia* Maxim. 1859, Prim. Fl. Amur. 180. - *Y. serotina* Maxim. 1859, Mem. Pres. Acad. Sci. Petersb. Div. Savans, 9: 180. - *Ixeris serotina* (Maxim.) Kitag. 1936, Rep. First Sci. Exp. Manchoukou 4: 55. - *Paraixeris serotina* (Maxim.) Tzvelev, 1964, Fl. URSS 29: 399. - *P. sonchifolia* var. *serotina* (Maxim.) Kitag. 1979, Neolin. Fl. Mansh.: 664. - *Crepidiastrum sonchifolium* (Maxim.) Pak et Kawano, 1992, Mem. Fac. Sci. Kyoto Univ. Biol. 15, 1-2: 58. - *Ixeridium sonchifolium* (Maxim.) Shih, 1993, Acta Phytotax. Sin. 31: 543. - [ 5 (Numregiin gol), (Tzvelev 2008) ].

**Note:** This species have for name by *Paraixeris serotina* (Maxim.) Tzvelev in the (Flora of Mongolia, 14a 2014) book.

# **Crepidifolium tenuifolium** (Willd.) Sennikov, 2007, Bot. Zhurn. 92: 1752. - *Crepis tenuifolia* Willd. 1803, Sp. Pl. 3: 1606. - *Youngia tenuifolia* (Willd.) Babc. & Stebb. 1937, Publ. Carnegie Inst. Wash. 484: 46. - *Y. tenuifolia* subsp. *altaica* Babc. & Stebbins, 1937, Carnegie Inst. Wash. 484: 50. - *Y. altaica* (Babc. & Stebbins) Czerep. 1964, Fl. URSS, 29: 383. - *Crepidiastrum tenuifolium* (Willd.) Sennikov, 1997, Bot. Zhurn. 82(5): 115. - *Crepidifolium altaicum* (Babc. & Stebbins) Tzvelev, 2007, Bot. Zhurn. 92: 1752. - *C. diversifolium* (Lebed. ex Spreng.) Tzvelev, 2007, Bot. Zhurn. 92(11): 1752. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10+ (Turgenii gol), 11+ (Serkh uul), (Tzvelev, 2007, 2008), 13, 14 ].

**Note:** This species have for name by *Youngia altaica* (Babc. & Stebbins) Czerep. in the (Flora of Mongolia, 14a issue, 2014) book.

**Crepis bungei** Ledeb. 1838, Prodr. 7(1): 164. - [ 1, 2, 3, 4, 6, 7+ (Tzvelev 2008; Dariimaa 2014), 8, 9+ (Bayan Berkh oboo), 11+ (Taatsiin gol), (Tzvelev 2008) ].

**C. chrysantha (Ledeb.) Turcz. 1838**, Bull. Soc. Imp. Nat. Moscou 11: 96. - *Hieracium chrysanthum* Ledeb. 1833, Fl. Altaic. 4: 129-130. - [ **1, 2, 3, 6, 7, 10+** (Kharkhiraas), (Tzvelev 2008) ].

# **C. crocea (Lam.) Babc. 1941**, Univ. Calif. Publ. Bot. 19: 400. - *Hieracium croceum* Lam. 1786, Encycl. 2: 360. - *Crepis turczaninowii* C.A. Mey. 1848, Bull. Soc. Imp. Nat. Moscou 21: 110. - [ **2, 3, 4, 6, 7+** (Khovd gol), (Tzvelev 2008), **8, 9, 10+** (Bogdiin gol), **11+** (Tuin gol), (Tzvelev 2008), **12, 13** ].

**C. czuensis Serg. 1949**, Animadvers. Syst. Herb. Univ. Tomsk. 1-2: 11. - [ **6, 7+** (Olonova & Beket 2010; Olonova *et al.* 2013) ]. - **Subendemic**. - (**R, RB**).

+ **C. lomonosovae Tzvelev, 2007**, Bot. Zhurn. 92(11): 1748. - [ **3+** (Khan Khukhii uul), **13+** (Ikh Bogd uul), (Tzvelev 2008) ].

+ **C. lyrata (L.) Froel. 1838**, Prodr. 7: 170. - *Hieracium lyratum* L. 1753, Sp. Pl. 2: 803. - [ **1+ (?)**, (Tzvelev 2008), **7+** (Gubanov 1999; Dariimaa 2009) ].

**C. multicaulis Ledeb. 1829**, Icon. Pl. 1: 9. - [ **3+** (Tzvelev 2008), **7, 10, 13+** (Neuffer *et al.* 2012), **14+** (Baitag Bogd uul, Baruun Khargaitiin gol), (Kechaykin *et al.* 2014) ].

**C. polytricha (Ledeb.) Turcz. 1838**, Bull. Soc. Imp. Nat. Moscou 11: 96. - *Hieracium polytrichum* Ledeb. 1833, Fl. Altaic. 4: 130. - [ **1, 3, 4+** (Tzvelev 2008), **6, 7** ].

**C. praemorsa (L.) Tausch, 1829**, Flora 12(1, Erganz.): 79. - *Hieracium praemorsum* L. 1753, Sp. Pl. 2: 801. - [ **4** (Bugantain gol), (Kamelin & Dariimaa 2004; Dariimaa 2014), **10+** (Uvs nuur), (Tzvelev 2008) ].

**C. sibirica L. 1753**, Sp. Pl. 2: 807. - [ **2, 3, 4, 5, 7+** (Yolt uul), (German *et al.* 2009), **8, 11+** (Tzvelev 2008) ].

**C. tectorum L. 1753**, Sp. Pl. 2: 807. - [ **2+** (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), **4, 7, 10, 14** ].

**Dendranthema mongolicum (Ling) Tzvelev, 1961**, Fl. URSS 26: 378. - *Chrysanthemum mongolicum* Ling, 1935, Contr. Inst. Bot. Nat. Acad. Peiping 3: 463. - [ **1, 2, 3** ]. - **Subendemic**.

+ **D. nakdongense (Nakai) Tzvelev, 1959**, Fl. URSS, 2: 375. - *Chrysanthemum nakdongense* Nakai 1909, Bot. Mag. (Tokyo) 23(273): 186. - [ **9+** (Zotol Khan uul, Dariganga), (Filatova 2003) ].

**Doronicum altaicum Pall. 1783**, Acta Acad. Sci. Imp. Petrop. 2: 271. - [ **1** ]. - **Subendemic**.

**D. oblongifolium DC. 1838**, Prodr. 6: 321. - [ **7** (Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006), **14** ].

**D. turkestanicum Cavill. 1909**, Annaire Conserv. Jard. Bot. Geneve 13-14: 301, 354. - [ **3, 7, 14** ].

**Echinops gmelinii Turcz. 1832**, Bull. Soc. Imp. Nat. Moscou 5: 195. - [ **3, 7+** (Revushkin *et al.* 2001), **8, 9, 10, 11, 12, 13, 14, 15, 16** ].

**E. humilis M. Bieb. 1819**, Fl. Taur.-Caucas. 3: 598. - [ **3, 7, 13, 14+** (Dzagiin Ulaan uul), (German *et al.* 2009), **15+** (Dariimaa 2014) ].

**E. integrifolius Kar. & Kir. 1841**, Bull. Soc. Imp. Nat. Moscou 14: 446. - [ **6, 7, 14** ].

**E. latifolius Tausch, 1828**, Fl. 11: 486. - [ **1, 2, 3, 4, 5, 8, 9, 11+** (Neuffer *et al.* 2012)].

**E. nanus** Bunge, 1863, Bull. Acad. Imp. Sci. St.-Petersbourg 6(4): 411. – [ 7, 14 ]. – (R).

**E. ritro** L. 1753, Sp. Pl. 2: 815. – [ 7, 14 ].

# **Elachanthemum intricatum** (Franch.) Ling & Y.R. Ling, 1978, Acta Phytotax. Sin. 16(1): 63. - *Artemisia intricata* Franch. 1883, Nouv. Arch. Mus. Hist. Nat. 2, 6: 50–51. – [ 3, 4+ (Filatova 2003), 7, 9, 10, 11, 12, 13, 14+ (Filatova 2003), 15 ]. – **Subendemic**.

**Erigeron acris** L. 1753, Sp. Pl. 2: 863–864. – *E. acer* auct. Fl. Mong., non L. – [ 1, 2, 3, 4, 5, 7, 9, 10 ].

+ **E. altaicus** Popov, 1940, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 8: 53. – [ 7+, 14+ (Dariimaa 2009; Urgamal *et al.* 2013) ]. – **Subendemic**.

**E. baicalensis** Botsch. 1959, Fl. URSS 25: 584. – [ 1 (Arigiin gol) ]. – **Subendemic**.

+ **E. elongatus** Ledeb. 1833, Fl. Altaic. 4: 91. – [ 1+, 2+, 3+, 4+, 6+, 7+, 13+ (Grubov 1982; Urgamal *et al.* 2013) ]. – **Subendemic**.

**Notes:** This is species was not given in Gubanov's conspectus (1996).

**E. eriocalyx** (Ledeb.) Vierh. 1906, Beih. Bot. Centralbl., Abt. 2, 19: 521. - *E. alpinus* var. *eriocalyx* Ledeb. 1833, Fl. Altaic. 4: 91. – [ 1, 2, 3, 6, 7, 13 ].

**E. flaccidus** (Bunge) Botsch. 1954, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR 16: 388. - *Aster flaccidus* Bunge, 1835, Mem. Acad. Imp. Sci. St.-Petersbourg, 7,2: 599. – [ 1, 2, 3, 4, 6, 7 ].

**E. heterochaeta** (Benth. ex C.B. Clarke) Botsch. 1954, Bot. Mater. Gerb. Glavn. Bot. Sada SSSR 16: 388. - *Aster heterochaeta* Benth. ex C.B. Clarke, 1876, Compos. Ind. 44. – [ 3 (Bogdiin gol) ].

+ **E. krylovii** Serg. 1945, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 1945(1): 2. – [ 3+, 7+ (Indertiin gol), (Ebel & Rudaya 2002; German *et al.* 2003; Dariimaa 2009) ]. – **Subendemic**.

**E. lonchophyllum** Hook. 1834, Fl. Bor.-Amer. 2(7): 18. – [ 1, 2, 3, 4, 5+ (Pistrick *et al.* 2012), 6, 7, 9+ (Pistrick *et al.* 2012), 10, 13+ (Neuffer *et al.* 2012) ].

**E. oreades** (Schrenk) Fisch. & C.A. Mey. 1846, Index Sem. (St.-Petersburg) 11: 17. - *E. uniflorus* var. *oreades* Schrenk ex Fisch. & C.A. Mey. 1842, Enum. Pl. Nov. 2: 39. – [ 1, 3, 7, 13 ].

**E. petiolaris** Vierh. 1906, Beih. Bot. Centralbl., Abt. 2 19: 522. – [ 3, 7 ].

**E. politus** Fr. 1846, Summa Veg. Scand. 3: 184. – [ 1, 2, 3, 4, 6, 7, 13 ].

**E. pseudoeriocephalus** Popov 1948, Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyssh. Rast. 7: 10. – [ 3 ].

**Filago arvensis** L. 1753, Sp. Pl. 2: 856. – [ 7, 8, 10, 14+ (German *et al.* 2009) ].

**Filifolium sibiricum** (L.) Kitam. 1940, Acta Phytotax. Geobot. 9(3): 157. - *Tanacetum sibiricum* L. 1753, Sp. Pl. 2: 844. – [ 1, 2, 3, 4, 5, 8, 9 ].

+ **Galatella altaica** Tzvelev, 1959, Fl. URSS 25: 582. – [ 7+ (Dayan nuur), (Smirnov *et al.* 2003; Dariimaa 2009; Olonova & Beket 2010; Olonova *et al.* 2013), 14 ]. – **Subendemic**.

+ **G. angustissima** (Tausch.) Nokopokr. 1948, Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyssh. Rast. 7: 136. - *Aster angustissimus* Tausch, 1828, Fl. 11: 487. – [ 1+ (Dariimaa 2009); Urgamal *et al.* 2013 ].

**G. dahurica DC. 1836**, Prodr. 5: 256. – [ **1, 2, 3, 4, 5, 6, 7, 9, 10** ].

+ **G. hauptii (Ledeb.) Lindl. ex DC. 1836**, Prodr. 5: 257. - *Aster hauptii* Ledeb. 1833, Fl. Altaic. 4: 100. – [ **7+** (Bulgan gol), (Revushkin *et al.* 2001; Dariimaa 2009) ]. – **Subendemic**.

**G. macrosciadia Gand. 1918**, Bull. Soc. Bot. France 65: 41. – [ **1, 7, 14** ]. – **(R)**.

**Gnaphalium baicalense Kirp. 1960**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 20: 300. – [ **2, 3, 4, 9, 10, 13+** (Neuffer *et al.* 2012), **14** ]. – **Subendemic**.

+ **G. uliginosum L. 1753**, Sp. Pl. 2: 856. – *G. sibiricum* Kirp. 1960, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 20: 302. – *Filaginella uliginosa* subsp. *sibirica* (Kirp.) Holub, 1976, Bot. J. Linn. Soc., 74(1): 271. – [ **7+** (Sagsai gol), (Krasnoborov 2006), **10+** (Chono kharaikh gol), (Grubov 2005; Urgamal *et al.* 2013) ].

**Helichrysum arenarium (L.) Moench, 1794**, Methodus 575. - *Gnaphalium arenarium* L. 1753, 2: 854. – [ **7** (Bayan, Bulgan gol) ]. – **(NA, VR, RB)**.

**Heteropappus altaicus (Willd.) Novopokr. 1922**, Herb. Fl. Ross. 56: 2769. - *Aster altaicus* Willd. 1809, Enum. Pl. 2: 881-882. – *Heteropappus distortus* (Turcz. ex Ave-Lall.) Tamamsch. 1959, Fl. URSS 25: 66. – [ **1+** (Oyumaa & Paula de Priest 2011), **2, 3, 4, 6, 7, 8, 10, 12, 13, 14, 15, 16** ].

**H. biennis (Ledeb.) Tamamsch. ex Grubov, 1972**, Novosti Syst. Vyssh. Rast. 9: 281. - *Aster biennis* Ledeb. 1811, Detect. Sem. Horti Dorpat., 1: 1. - *Heteropappus tataricus* (Lindl.) Tamamsch. 1959, Fl. URSS 25: 71. – [ **1, 2, 3, 4, 5, 8, 9** ].

+ **H. mediis Tamamsch. 1959**, Fl. URSS 25: 68. – [ **3+, 4+, 5+, 8+, 9+** (Dariimaa 2009; Urgamal *et al.* 2013) ].

# **Hieracium czadanense Tupitz. 1994**, - *H. crocatum* subsp. *mongolicum* S. Braeutigam, 1980, Feddes Repert. 91, 5-6: 274. – [ **1+** (Sennikov 2008), **10** (Kharkhiraal), (Sennikov 2008) ]. – **Endemic**. Described from Kharkhiraal gol (HAL).

**Notes:** It was informed that of *H. mongolicum* S. Braeutigam is a accepted name (Dariimaa 2014).

+ **H. dublizkii B. Fedtsch. & Nevski, 1933**, Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyssh. Rast. 1: 208. – [ **7+** (Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006) ].

**H. korshinskyi Zahn, 1921**, Pflanzenr. 4: 280. – [ **2, 4** ].

**H. narymense Schischkin & Serg. 1949**, Syst. Herb. Univ. Tomsk. 1949, 1-2, 23. – [ **2, 4** ].

+ **H. robustum Fr. 1848**, Nova Acta Regiae Soc. Sci. Upsal. 14: 193. – [ **8+** (Uvur Jargalant), **9+** (Khalkhiin gol), (Sennikov 2008) ].

+ **H. sershukense Uksip. 1959**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 19: 488. – [ **7+** (Dariimaa 2009; 2014) ]. – **Subendemic**.

# **H. subramosum Lonnr. 1882**, Ofvers. Kongl. Vetensk.-Akad. Forh. 49(4): 86 - *H. ganeschinii* Zahn, 1912, Mitt. K. Bot. Gard. Petersb. 2(5) : 151. – [ **2+** (Sennikov 2008), **4** (Noyon uul) ].

**H. umbellatum L. 1753**, Sp. Pl. 2: 804. – [ **1, 2, 3, 4, 5, 7+** (Bulgan gol), **8+** (Uvur Jargalant), (Sennikov 2008), **9, 10** ].

**H. virosum Pall. 1771**, Reise Russ. Reichs 1: 501. – [ **2+** (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), **3, 4, 5, 7, 9** ].

# **Hippolytia trifida (Turcz.) Poljakov, 1957**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 18: 289. – *Artemisia trifida* Turcz. 1832, Bull. Soc. Imp. Nat. Moscou 5: 196. - *Ajania trifida* (Turcz.) Muldashev, 1983, Bot. Zhurn. (Moscow & Leningrad) 68(2): 213. – [ 3, 6+, 7+ (Neuffer et al. 2003), 8, 9, 11, 12, 13, 16 ]. – **Endemic.**

+ **Hololeion maximowiczii Kitam. 1941**, Acta Phytotaxonomica et Geobotanica 10(4): 303–304. - *Hieracium hololeion* Maxim. 1859, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 9: 182. - *Crepis hololeion* (Maxim.) Sennikov, 2001, Bot. Zhurn. 86(3): 37-59. – [ 9+ (Kherlen gol), (Tzvelev 2008) ].

**Hyalea pulchella (Ledeb.) K. Koch, 1851**, Linnaea 24: 422. - *Centaurea pulchella* Ledeb. 1829, Icon. Pl. 1: 22. – [ 7, 14 ]. – **(EN, VR, RB).**

# **Hypochaeris maculata L. 1753**, Sp. Pl. 2: 810. - *Achyrophorus maculatus* (L.) Scop. 1772, Fl. Carniol. 2: 116. – *Trommsdorffia maculata* (L.) Bernh. 1800, Syst. Verz. 140. – [ 4, 8+ (Kherlen gol), (Tzvelev 2008) ]. – **(R).**

+ **Inula aspera Poir. 1813**, Encycl. 3: 154. – [ 2+, 3+, 9+ (Dariimaa 2009; Urgamal et al. 2013) ].

**I. britannica L. 1753**, Sp. Pl. 2: 882. – [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11+ (Grubov, 2005), 13, 14 ].

+ **I. japonica Thunb. 1784**, Nova Acta Regiae Soc. Sci. Upsal. 4: 39. – [ 2+ (Khuderii gol), (Kamelin & Dariimaa 2004; Kamelin & Ulziykhutag 2005) ].

**I. linariifolia Turcz. 1837**, Bull. Soc. Imp. Nat. Moscou 10(7): 154. – [ 5, 8, 10, 11 ].

**I. salicina L. 1753**, Sp. Pl. 2: 882-883. – [ 2, 3, 4, 5, 9 ].

# **Ixeridium gramineum (Fisch.) Tzvelev, 1964**, Fl. URSS 29: 391. - *Prenanthes graminea* Fisch. 1812, Mem. Soc. Imp. Nat. Moscou 3: 67. - *Ixeris chinensis* subsp. *versicolor* (Fisch. ex Link) Kitam. 1935, Bot. Mag. 49: 283. – [ 2, 3, 4, 5, 8, 9, 12+ (Tzvelev 2008) ].

# **I. graminifolium Tzvelev, 1964**, Fl. URSS 29: 392. – *I. chinense* subsp. *graminifolium* (Ledeb.) Tzvelev, 1967, Spisok Rast. Gerb. Fl. SSSR 17: 103. – [ 2+ (Tzvelev 2008), 3, 4+ (Tzvelev 2008), 7+ (Dariimaa 2014), 9, 14+ (Dariimaa 2014) ].

# **Ixeris chinensis (Thunb. ex Thunb.) Nakai, 1920**, Bot. Mag. (Tokyo) 34: 152. - *Prenanthes chinensis* Thunb. 1784, Syst. Veg. 714. - *Ixeridium chinense* (Thunb.) Tzvelev, 1964, Fl. URSS 29: 390. – [ 4, 9+ (Bayan-Uul), (Tzvelev 2008) ].

**Jurinea chaetocarpa (Ledeb.) Ledeb. 1838**, Fl. Ross. 2, 2: 765. - *Serratula chaetocarpa* Ledeb. 1833, 4: 42. – [ 7, 14 ]. – **(R, RB).**

**J. margalensis Iljin, 1925**, Trans. Sc. Soc. Turk. 2: 22 – [ 7, 14 ].

**J. mongolica Maxim. 1874**, Bull. Acad. Imp. Sci. St.-Petersbourg 19(5): 519-520. – [ 10, 11, 12, 13, 14 ]. – **Subendemic.** – **(VU, VR, RB).**

+ **J. multiflora (L.) B. Fedtsch. 1911**, Consp. Fl. Turkest. 4: 295. - *Serratula multiflora* L. 1753, Sp. Pl. 2: 817. – [ 7+, 14+ (Gubanov 1999; Dariimaa 2009) ].

**Karelinia caspia (Pall.) Less. 1834**, Linnaea 9: 187-188. - *Serratula caspia* Pall. 1773, Reise Russ. Reichs 2(App.): 743, 923. – [ 14, 15, 16 ].

**Kaschgaria komarovii (Krasch. & Rubtzov) Poljakov, 1957**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 18: 284. – *Tanacetum komarovii* Krasch. & N.I. Rubtzov, 1946, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 9: 168. – [ 7, 14, 15 ]. – **Subendemic.**

**Lactuca serriola L.** **1756**, Cent. Pl. II 29. – *L. altaica* Fisch. & C.A. Mey. 1846, Index Sem. (St.-Petersburg) 11: 73. – [ **7, 10, 14, 15** ].

**L. sibirica (L.) Benth. ex Maxim.** **1874**, Bull. Acad. Imp. Sci. St.-Petersbourg 19: 528. - *Sonchus sibiricus* L. 1753, Sp. Pl. 2: 795. – [ **2, 3, 4, 5, 6, 8+** (Tzvelev 2008; Pistrick *et al.* 2012; Neuffer *et al.* 2012; Dariimaa 2014), **9, 11** ].

**L. tatarica (L.) C.A.Mey.** **1831**, Verz. Pfl. Casp. Meer. 56. - *Sonchus tataricus* L. 1771, Mant. 2: 572. - *Mulgedium tataricum* (L.) DC. 1831, Prodr. 7: 248. – [ **3, 4, 6, 7, 8+** (Zurkhiin gol), (Tzvelev 2008), **9, 10, 11, 12, 13, 14, 15, 16** ].

**Notes:** It was informed that *L. tatarica* var. *polyphyllum* Tzvelev, var. nova (typus - LE) is distributed in Nemegt uul of the Gobi Altai phytogeographical region of Mongolia (Tzvelev 2008).

**L. undulata Ledeb.** **1830**, Icon. Pl. 2: 12. – [ **7, 14** (Serteng uul), (Tzvelev 2008) ].

**Leibnitzia anandria (L.) Turcz.** **1831**, Ukaz. Otkuyt. 8(1): 404. - *Tussilago anandria* L. 1753, Sp. Pl. 2: 865. – [ **2, 3, 4, 5, 9** ].

**Leontopodium campestre (Ledeb.) Hand.-Mazz.** **1927**, Beih. Bot. Centralbl. Abt. 2, 44: 130. – *L. alpinum* var. *campestre* Ledeb. 1846, Fl. Rossica 2: 614. – *L. ochroleucum* var. *campestre* (Ledeb.) Grubov, 1959, Fl. URSS 25: 354. – [ **1, 2, 3, 6+, 7, 8+, 9, 11+** (Grubov 2003), **13, 14** ].

**L. conglobatum (Turcz.) Hand.-Mazz.** **1924**, Acta Horti Gothob. 1: 114. – *L. sibiricum* var. *conglobatum* Turcz. 1847, Bull. Soc. Imp. Nat. Moscou 20(3): 9. - *L. ochroleucum* var. *conglobatum* (Turcz.) Grubov, 1959, Fl. URSS 25: 355. – [ **1+, 2, 3, 4, 5, 6+, 7+, 8, 9+, 13+** (Grubov 2003) ].

**L. leontopodioides (Willd.) Beauverd,** **1909**, Bull. Soc. Bot. Geneve 1: 371, 374. - *Filago leontopodioides* Willd. 1794, Phytographia 12. – [ **1, 2, 3, 4, 5, 8, 9, 16+** (Grubov 2003) ].

? + **L. nanum (Hook. f. et Thoms.) Hand.-Mazz.** **1928**, Beih. Bot. Centralbl. 44(2): 111. – [ **16+** (?), (Grubov 2003) ].

**L. ochroleucum Beauverd,** **1914**, Bull. Soc. Bot. Geneve 4: 146. – *L. fischerianum* Beauverd, 1914, Bull. Soc. Bot. Geneve 4: 143. – [ **1+, 2+, 3+, 6, 7, 13+** (Grubov 2003) ].

+ **L. palibinianum Beauverd,** **1913**, Bull. Soc. Bot. Geneve 2: 280. – [ **2+, 4+, 5+** (Dariimaa 2009; Urgamal *et al.* 2013) ].

**Ligularia altaica DC.** **1838**, Prodr. 6: 315. – [ **6, 7** ]. – **Subendemic.**

**L. fischeri (Ledeb.) Turcz.** **1838**, Bull. Soc. Imp. Nat. Moscou 11: 95. – [ **2, 3+** (Illarionova 2006), **4, 5, 9** ].

+ **L. glauca O. Hoffm.** **1892**, Nat. Pflanzenfam. 5: 288. – [ **7+** (Kamelin, 1998; Dariimaa 2009) ].

+ **L. Hodgsonii Hook.** **1863**, Bot. Mag. 89: 514. – [ **5+, 9+** (Dariimaa 2009; Urgamal *et al.* 2013) ].

+ **L. mongolica (Turcz.) DC.** **1837**, Prodr. 6: 315. – *Cineraria mongolica* Turcz. 1832, Bull. Soc. Imp. Nat. Moscou 5: 199. – [ **5+** (Kamelin & Ulziykhutag 2005), **9+** (Illarionova 2006) ]. – **Subendemic.**

+ **L. przewalskii (Maxim.) Diels,** **1901**, Bot. Jahrb. Syst. 29(5): 621. - *Senecio przewalskii* Maxim. 1880, Bull. Acad. Imp. Sci. St.-Petersbourg 26(3): 493. – [ **9+, 12+** (Illarionova 2006) ]. – **Subendemic.**

**L. sagitta (Maxim.) Mattf. ex Rehder & Kobuski, 1933**, J. Arnold Arbor. 14(1): 40. - *Senecio sagitta* Maxim. 1881, Melanges Biol. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 11: 240. - [ 4, 5, 9 ].

**L. sibirica (L.) Cass. 1823**, Dict. Sci. Nat. (ed. 2) 26: 401. - *Othonna sibirica* L. 1753, Sp. Pl. 2: 924. - [ 1, 2, 3, 4, 5, 9 ].

**L. songarica (Fisch.) Ling, 1933**, Contr. Inst. Bot. Nat. Acad. of Peiping 2: 532. - *Senecio soongaricus* Fisch. 1841, Enum. Pl. Nov. 52. - [ 14 (Baitag Bogd uul), (Illarionova 2008) ]. - (R, RB).

+ **L. thomsonii (C.B. Clarke) Pojark. 1949**, Spisok Rast. Gerb. Fl. SSSR 11: 165. - *Senecio thomsonii* C.B. Clarke, 1876, Compos. Ind. 205. - [ 14+ (Dariimaa 2009; Urgamal et al. 2013) ].

**L. thyrsoides Ledeb. 1838**, Prodr. 6: 315. - [ 6, 7, 14 ].

**Limbarda salsoloides Ikonn. 1972**, Novosti Syst. Vyssh. Rast. 9: 303. - [ 8, 11, 12, 13, 15, 16 ].

**Matricaria recutita L. 1753**, Sp. Pl. 2: 891. - [ 2 (Filatova 2003) ]. - (R).

**Neopallasia pectinata (Pall.) Poljakov, 1955**, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 17: 428. - *Artemisia pectinata* Pall. 1776, Reise Russ. Reich. 725. - [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16 ].

**Olgaea leucophylla (Turcz.) Iljin, 1922**, Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR 3(36-37): 145. - *Carduus leucophyllus* Turcz. 1832, Bull. Soc. Imp. Nat. Moscou 5: 194. - [ 8, 9, 11, 12, 13 ]. - Subendemic. - (NT, VR, RB).

**O. lomonosowii (Trautv.) Iljin, 1922**, Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR 3(36-37): 144. - *Carduus lomonossowii* Trautv. 1871, Trudy Imp. St.-Peterburgsk. Bot. Sada 1(2): 183. - [ 9 (Dariganga) ]. - (EN, R, RB).

**Omalotheca supina (L.) DC. 1838**, Dict. Sci. Nat. (ed. 2) 56: 218. - *Gnaphalium supinum* L. 1753, Syst. Nat. 12, 3: 234. - [ 2 (Grubov 2005), 7+ (Indertiin gol), (Ebel & Rudaya 2002) ].

# **Packera cymbalaria (Pursh) W.A.Weber & D. Love, 1981**, Phytologia 49(1): 46. - *Senecio cymbalaria* Pursh, 1814, Fl. Amer. Sept., 2: 530. - *S. resedifolius* Less. 1831, Linnaea 6(2): 243-244. - [ 1, 3, 7 ].

# **Parasenecio hastatus (L.) H. Koyama, 1995**, Fl. Jap. 3(b): 52. - *Cacalia hastata* L. 1753, Sp. Pl. 2: 835. - [ 1, 2, 3, 4, 5, 9 ]. - (R).

# **Petasites frigidus (L.) Fr. 1845**, Summa Veg. Scand. 182. - *Tussilago frigida* L. 1753, Sp. Pl. 2: 865-866. - *Nardosmia frigida* (L.) Hook. 1833, Fl. Bor.-Amer. 1(6): 307. - [ 1 ].

# **P. radiatus (J.F. Gmel.) Toman, 1972**, Folia Geobot. Phytotax. 7(4): 388. - *Tussilago radiata* J.F. Gmel. 1792, Syst. Nat. 2(2): 1226. - *Nardosmia laevigata* (Willd.) DC. 1836, Prodr. 5: 205. - [ 1 ].

# **P. rubellus (J.F. Gmel.) Toman, 1972**, Folia Geobot. Phytotax. 7(4): 391. - *Tussilago rubella* J.F. Gmel. 1792, Syst. Nat. 2(2): 1225. - *Nardosmia saxatilis* Turcz. 1838, Bull. Moskovsk. Obac. Isp. Prir., Otd. Biol. 19(2): 138. - [ 1, 3 ].

**Notes:** The genus *Petasites* name is an accepted and new combination by E.I. Wiebe (2000).

# **Phalacrachena calva** (Ledeb.) Iljin, 1937, Syst. Herb. Inst. Bot. Acad. Sci. URSS, 7: 51. - *Centaurea calva* Ledeb. 1838, Prodr. 6: 583. - [ **10** (Ulaangom), (Dariimaa 2014) ]. - (R).

+ **Picris davurica** Fisch. ex Hornem. 1819, Hort. Bot. Hafn.: 155. - [ **1+**, **3+** (Tzvelev 2008), **4+** (Dariimaa 2014), **8+**, **9+** (Tzvelev 2008) ].

**P. hieracioides** L. 1753, Sp. Pl. 2: 792. - [ **2**, **3**, **4**, **5** ].

**P. japonica** Thunb. 1784, Syst. Veg. (ed. 14) 711. - [ **2+** (Khonin nuga), (Dulamsuren et al. 2004), **3**, **4**, **5**, **9** ].

# **Pilosella echoioides** (Lumn.) F.W. Schultz & Sch. Bip. 1862, Fl. 45: 431. - *Hieracium echoioides* Lumn. 1791, Fl. Pos. 1: 348. - [ **2+** (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), **4** (Sennikov 2008) ]. - (R).

**Pulicaria vulgaris** Gaertn. 1791, De Fruct. Sem. Pl. 2: 461–462. - [ **10** (Shargiin gol)].

**Pyrethrum alataicum** (Herder) O. Fedtsch. & B. Fedtsch. 1911, Conspr. Fl. Turkest. 4: 186. - *Tanacetum alataicum* Herder, 1867, Bull. Soc. Imp. Nat. Moscou 40(3–4): 129. - [ **7** (Filatova 2003) ]. - (R).

**P. changaicum** Krasch. ex Grubov, 1955, Bot. Math. (Leningrad) 17: 23. - [ **3**, **7**, **10+** (Dzun Jargalant, Rashaantiin gol), (Kechaykin et al. 2014) ]. - **Endemic**. Described from Khangai phytogeographical region (LE). - (R, RB).

**P. krylovianum** Krasch. 1946, Bot. Math. (Leningrad) 9: 155. - [ **7** (Filatova 2003) ].

**P. lanuginosum** Tzvelev, 1961, Fl. URSS 26: 252. - [ **1**, **6+** (Tsagaan Shiveet uul), (Filatova 2003), **7**, **13+** (Olonova & Beket 2010; Neuffer et al. 2012) ]. - **Subendemic**.

+ **P. pulchellum** Turcz. ex Ledeb. 1838, Prodr. 6: 55. - [ **7+** (Beket 2009; Urgamal et al. 2013) ].

**P. pulchrum** Ledeb. 1829, Icon. Pl. 1: 20. - [ **3**, **7** (German et al. 2003), **13+** (Neuffer et al. 2012) ]. - (R, RB).

+ **P. pyrethroides** (Kar. & Kir.) B. Fedtsch. ex Krasch. 1933, Trudy Bot. Inst. Akad. Nauk SSSR. Ser. 1, Fl. Sist. Vyssh. Rast. Moscow & Leningrad 1: 176. - *Richteria pyrethroides* Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15: 127. - *Chrysanthemum pyrethroides* (Kar. & Kir.) B. Fedtsch. 1915, Rast. Tsentr. Azii 737. 1915. - *Tanacetum pyrethroides* (Kar. & Kir.) Podlech, 1977, Mitt. Bot. Staatssamml. Munchen 13: 495 (1977) 495. - [ **7+** (Neuffer et al. 2003; Urgamal et al. 2013) ].

**Rhaponticum carthamoides** (Willd.) Iljin, 1933, Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyssh. Rast. 1: 204. - *Cnicus cartamoides* Willd. 1803, Sp. Pl. 3(3): 1686. - *Leuzea carthamoides* (Willd.) DC. 1810, Ann. Mus. Natl. Hist. Nat. 16: 205. - *Stemmacantha carthamoides* (Willd.) Dittrich, 1984, Candollea 39: 46. - [ **7** (Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006) ]. - (VU, VR, RB).

# **Rh. repens** (L.) Hidalgo, 2006, Ann. Bot. (Oxford) 97(5): 714. - *Centaurea repens* L. 1763, Sp. Pl. (ed. 2) 2: 1293. - *Acroptilon australe* Iljin, 1937, Bot. Mater. Gerb. Bot. Inst. Akad. Nauk SSSR 7: 59. - *A. repens* (L.) DC. 1838, Prodr. 6: 663. - [ **6**, **7**, **10**, **11**, **12**, **13**, **14**, **15**, **16** ].

**Rh. uniflorum** (L.) DC. 1810, Ann. Mus. Natl. Hist. Nat. 16: 189. - *Cnicus uniflorus* L. 1771, Mant. Pl. Alt. 2: 572. - [ **1**, **2**, **3**, **4**, **5**, **8**, **9** ].

**Rhinactinidia eremophila (Bunge) Novopokr. ex Botsch. 1986**, Novosti Syst. Vyssh. Rast. 23: 180. - *Aster eremophilus* Bunge, 1835, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 2: 599. - *Krylovia eremophila* (Bunge) Schischk. 1949, Fl. Sibir., Occ., ed. 2 11: 2671. - [ 3, 6, 7, 10, 11, 13, 14+ (Uvgud uul), (Smirnov *et al.* 2003) ]. - **(VU, R).**

**Rh. eremophila subsp. grubovii Botsch. 1986**, Novosti Syst. Vyssh. Rast. 23: 180. - [ 7 (Olonova & Beket 2010) ]. - **Endemic.** Described from Mongolian Altai phytogeographical region (LE).

**Rh. limoniifolia (Less.) Novopokr. & Botsch. 1986**, Novosti Syst. Vyssh. Rast. 23: 179. - *Rhinactina limoniifolia* Less. 1831, Linnaea 6: 119. - [ 7 ].

**Saussurea acuminata Turcz. ex Fisch. & C.A. Mey. 1835**, Index Sem. (St.-Petersburg) 1: 37. - [ 2+ (Sangastai, Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 4, 5 ]. - **(R).**

**S. alaschanica Maxim. 1881**, Bull. Acad. Imp. Sci. St.-Petersbourg 27(4): 492–493. - [ 6, 10 ]. - **Subendemic.**

**S. alata DC. 1810**, Ann. Mus. Natl. Hist. Nat. 16: 202. - [ 4, 6, 10 ].

**S. alpina (L.) DC. 1810**, Ann. Mus. Natl. Hist. Nat. 16: 198. - *Serratula alpina* L. 1753, Sp. Pl. 2: 816–817. - [ 1, 2, 3, 6, 7, 13 ].

**S. amara (L.) DC. 1810**, Ann. Mus. Natl. Hist. Nat. 16: 198. - *Serratula amara* L. 1753, Sp. Pl. 2: 819. - [ 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12+ (Dariimaa *et al.* 2004), 14 ].

**S. arctecapitulata Lipsch. 1972**, Bot. Zhurn. (Moscow & Leningrad) 57(4): 524. - [ 1, 3 ]. - **Subendemic.** Described from Khovsgol phytogeographical region (LE).

**S. baicalensis (Adams) Robins. 1911**, Proc. Amer. Acad. Arts 47: 216. - *Liatis baicalensis* Adams, 1817, Mem. Soc. Imp. Nat. Moscou 5: 115. - [ 1, 2, 3, 7 ]. - **Subendemic.**

**S. catharinae Lipsch. 1974**, Bot. Zhurn. (Moscow & Leningrad) 59(11): 1603. - [ 15 (Atas, Tsagaan Bogd uul), (Dariimaa 2014) ]. - **Endemic.** Described from Transaltai Gobi phytogeographical region (LE). - **(R, RB).**

**S. ceterachifolia Lipsch. 1954**, Bull. Soc. Imp. Nat. Moscou 59: 6, 73. - [ 3, 6, 7 ]. - **Subendemic.**

**S. congesta Turcz. 1838**, Prodr. 6: 535. - [ 1 (Urandush uul), (Dariimaa 2014) ].

**S. controversa DC. 1810**, Ann. Mus. Natl. Hist. Nat. 16: 199. - *S. propinqua* Iljin, 1929, Bull. Soc. Imp. Nat. Moscou 38: 146. - [ 1, 2+ (Bayantugul), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3, 5 ].

**S. coronata Schrenk. 1845**, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 3: 107. - [ 7 (Dariimaa 2014) ].

**S. daurica Adams. 1834**, Nouv. Mem. Soc. Imp. Nat. Moscou 3: 251. - [ 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ].

**S. dorogostaiskii Palib. 1928**, Zhurn. Russk. Bot. Obsh. Akad. Nauk SSSR 13: 109. - [ 1+ (Khordil Saridag), (Smirnov 2004; Oyumaa & Paula de Priest 2011; Dariimaa 2014), 2 ]. - **Subendemic.** Described from Northern Mongolia (LE). - **(CR, R, RB).**

+ **S. elata Ledeb. 1829**, Icon. Pl. 1: 20. - [ 7+ (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. - **Subendemic.**

**S. elegans Ledeb. 1829**, Icon. Pl. 1: 19. - [ 3, 6, 7+ (Jargalant Khairkhan uul, Gurvan-Uliasiin gol), (Revushkin *et al.* 2001) ].

**S. elongata DC. 1810**, Ann. Mus. Natl. Hist. Nat. 16: 201. – [ **1, 2, 4** ].

**S. foliosa Ledeb.** 1829, Icon. Pl. 1: 17. – [ **6+** (Revushkin *et al.* 2001), **7** (Tsengel Khairkhan uul) ]. – (**R**).

**S. glacialis Herder**, 1867, Bull. Soc. Imp. Nat. Moscou 40(3): 144. – [ **3, 6, 7, 13** ]. – **Subendemic**. – (**R**).

**S. grubovii Lipsch.** 1961, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 21: 366. – [ **7, 14, 15** ]. – **Subendemic**. Described from Dzungarian Gobi phytogeographical region (LE).

**S. gubanovii Kamelin**, 1988, Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 93(5): 113. – [ **15** (Dariimaa 2014) ]. – **Endemic**.

**S. involucrata (Kar. & Kit.) Sch. Bip.** 1846, Linnaea 19: 331. - *Aplotaxis involucrata* Kar. & Kir. 1842, Bull. Soc. Imp. Nat. Moscou 15(2): 389. – [ **1, 2, 3, 6+** (Dariimaa 2014), **7** (Aj Bogd uul), (Smirnov 2004), **13+** (Neuffer *et al.* 2012), **14** ]. – (**EN, VR, RB, RL**).

**S. japonica (Thunb.) DC.** 1810, Ann. Mus. Natl. Hist. Nat. 16: 203. – *Serratula japonica* Thunb. 1784, Syst. Veg. 723. – [ **9** (Dariimaa 2014) ].

**S. klementzii Lipsch.** 1954, Bot. Zhurn. (Leningrad) 16: 458. – [ **7** (Aj Bogd uul), (Dariimaa 2014) ]. – **Endemic**. Described from Western Mongolia (LE). – (**R, RB**).

+ **S. krasnoborovii S. Smirnov**, 2004, Turczaninowia, 7(4): 13. – [ **1+** (East Sayanii nuruu), (Smirnov 2004) ].

**S. krylovii Schischk. & Serg.** 1944, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 1944(1): 1. – [ **7** (Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006; Dariimaa 2014) ].

**S. laciniata Ledeb.** 1829, Icon. Pl. 1: 16. – [ **3, 4, 6, 7, 8, 10, 11, 13, 14, 15, 16** ].

**S. latifolia Ledeb.** 1829, Icon. Pl. 1: 17. – [ **3, 7** ]. – (**R**).

**S. leucophylla Schrenk**, 1842, Bull. Acad. Imp. Sci. St.-Petersbourg 10(23): 354. – [ **1, 3, 6, 7, 13** ].

**S. lipschitzii Filatova**, 1966, Fl. Kazakhst. 9: 258, 570. – [ **7** (Munkh Khairkhan uul), (Ebel & Rudaya 2002; Dariimaa 2014), **13** ]. – **Subendemic**.

**S. mongolica (Franch.) Franch.** 1897, Bull. Herb. Boissier 5(7): 539–540. - *S. ussuriensis* var. *mongolica* Franch. 1883, Nouv. Arch. Mus. Hist. Nat. 2, 6: 60–61. – [ **5** (Dariimaa 2014) ].

**S. neoserrata Nakai.** 1831, Bot. Mag. (Tokyo) 45: 519. – [ **2+** (Khuderiin gol), (Kamelin & Dariimaa 2004), **5** (Khan Chandmana uul) ].

**S. odontolepis (Herder) Sch. Bip.ex Maxim.** 1883, Bull. Acad. Imp. Sci. St.-Petersbourg 16(29): 176. – *S. ussuriensis* var. *odontolepis* Herder, 1868, Bull. Soc. Imp. Nat. Moscou 41(3): 13. – [ **5** (Dariimaa 2014) ].

**S. orgaadayi Khanm. & Krasnob.** 1984, Izv. Sibirsk. Otd. Akad. Nauk SSSR 13(2): 15. – [ **7** (Munkh Khairkhan uul), (Olonova & Beket 2010; Dariimaa 2014) ]. – **Subendemic**. Described from Mongolia.

**S. parviflora (Poir.) DC.** 1810, Ann. Mus. Natl. Hist. Nat. 16: 200. – *Serratula parviflora* Poir. 1804, Encycl. 6: 554. – [ **1, 2, 3, 4, 5, 6, 7, 9** ].

**S. popovii Lipsch.** 1954, Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 59(6): 82. – [ **14** (Dariimaa 2014) ]. – **Subendemic**. (LE).

**S. pricei Simps.** 1913, J. Linn. Soc. Bot. 41(283): 426–427. – [ 3, 6, 7, 8, 10, 11, 13, 14 ]. – **Subendemic.** Described from Mongolia (K).

**S. pseudoalpina Simps.** 1913, J. Linn. Soc. Bot. 41(283): 427. – [ 1, 2, 3, 6, 7, 13, 14 ].

**S. pseudosalsa Lipsch.** 1954, Bull. Moskovsk. Obsh. Isp. Prir., Otd. Biol. 59(6): 76. – [ 15, 16+ (Dariimaa 2014) ]. – **Subendemic.**

**S. pulchella (Fisch.) Fisch.** 1834, Herb. Pedem. 3: 234. - *Heterotrichum pulchellum* Fisch. 1812, Mem. Soc. Imp. Nat. Moscou 3: 71. – [ 5, 7+, 8+ (Dariimaa 2014), 9 ].

+ **S. purpurata (Fisch. ex Herder) Lipsch.** 1979, Bull. Moskovsk. Obsh. Isp. Prir., Otd. Biol. 59(6): 243. – [ 2+ (Khuderiiin gol), (Kamelin & Dariimaa 2004), 4+ (Kamelin 1998; Dariimaa 2009, 2014) ]. – **Subendemic.**

**S. ramosa Lipsch.** 1954, Bull. Moskovsk. Obsh. Isp. Prir., Otd. Biol. 59(6): 72. – [ 3, 10, 11, 15 ]. – **Endemic.** Described from Shargiin Gobi (LE).

**S. recurvata (Maxim.) Lipsch.** 1961, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 21: 374. - *S. elongata* var. *recurvata* Maxim. 1859, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 9: 167. – [ 2+ (Khonin nuga), (Dulamsuren *et al.* 2004), 5 ].

**S. runcinata DC.** 1810, Ann. Mus. Natl. Hist. Nat. 16: 202. – [ 2, 3, 4, 7, 8, 10 ].

**S. saichanensis Kom. ex Lipsch.** 1960, Bot. Zhurn. (Leningrad) 20: 340. – [ 1, 2, 3, 6, 7, 13 (Gobi Gurvan Saikhan), (Karsten *et al.* 2005), 14 ]. – **Endemic.** Described from Gobi Altai phytogeographical region (LE).

**S. salicifolia (L.) DC.** 1810, Ann. Mus. Natl. Hist. Nat. 16: 200. – *Serratula salicifolia* L. 1753, Sp. Pl. 2: 817. – [ 2, 3, 4, 5, 6+, 7+ (Neuffer *et al.* 2003), 8, 9 ].

**S. salsa (Pall. ex Pall.) Spreng.** 1826, Syst. Veg. 3: 381. - *Serratula salsa* Pall. 1776, Reise Russ. Reich. 3: 607. – [ 3, 5, 6, 7, 8, 9, 10, 11, 14, 16 ].

**S. schanginiana (Wydl.) Fisch. ex Herder,** 1868, Fl. Zap. Sibir. 11: 2906. - *Lagurostemon pygmaeus* var. *schanginianus* Wydl. 1830, Linnaea 5: 427. – [ 1, 2, 3, 6, 7, 13 ].

+ **S. squarrosa Turcz.** 1847, Bull. Soc. Imp. Nat. Moscou 20(2): 44. – [ 1+ (Dariimaa 2014) ]. – **Subendemic.**

**S. stubendorffii Herder,** 1868, Fl. Zap. Sibir. 11: 26. – [ 1, 3 ].

**S. subacaulis Serg.** 1941, Animadvers. Syst. Herb. Univ. Tomsk. 1941: 2, 3, 4. – [ 1, 3, 6, 7, 13+ (Neuffer *et al.* 2012) ].

**S. sukaczewii Lipsch.** 1954, Bull. Soc. Nat. Mosc., Biol. 6: 71. – [ 1, 2, 3 ].

**S. ussuriensis Maxim.** 1859, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 9: 167. – [ 5 (Dariimaa 2014) ].

+ **Scorzonera albicaulis Bunge,** 1833, Mem. Acad. Imp. Sci. St.-Petersbourg Divers Savans 2: 114. – *Achyroseris albicaulis* (Bunge) Kamelin & Tagaev, 1993, Opred. Rast. Srednei Azii 10: 631. – [ 1+, 2+, 4+ (Tzvelev 2008), 5+ (Grubov 1982), 9+ (Grubov 1982; Tzvelev 2008) ].

**Notes:** This is species was not given in Gubanov's conspectus (1996).

**S. austriaca Willd.** 1803, Sp. Pl. 3: 1498. – [ 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13 ].

**S. capito Maxim.** 1888, Bull. Acad. Imp. Sci. St.-Petersbourg 32: 491. – [ 8, 11, 12, 13, 14+ (Ikh Alag uul), (Tzvelev 2008), 15, 16 ]. – **Subendemic.**

**S. curvata (Popl.) Lipsch.** 1964, Fl. URSS 29: 72. – *S. austriaca* var. *curvata* Popl. 1916, Trudy Bot. Muz. Imp. Akad. Nauk 15: 38. – [ 3+ (Dariimaa 2014), 7, 8+, 9+ (Tzvelev 2008; Dariimaa 2014), 13 ].

**S. divaricata Turcz.** 1832, Bull. Soc. Imp. Nat. Moscou 5: 200. – [ 6+ (Uureg nuur), 7+ (Tolbo nuur), (Tzvelev 2008), 8, 9, 10, 11, 12+ (Dariimaa 2014), 13, 15, 16 ]. – **Subendemic.** Described from East Mongolia.

**S. grubovii Lipsch.** 1981, Novosti Syst. Vyssh. Rast. 18: 229. – [ 7+ (Serkhiin nuruu), (Tzvelev 2008), 14 (Takhiin Shar nuruu), (Ebel & Rudaya 2002; Kamelin & Smirnov, 2002) ]. – **Endemic.** Described from Shariin nuruu (LE). – (R, RB).

**S. ikonnikovii Lipsch. & Krasch.** 1935, Fragm. Monogr. Scorzonera 1: 109. – [ 3, 6, 7, 8, 9+ (Dariganga), (Tzvelev 2008), 10, 11, 12+ (Dariimaa *et al.* 2004), 13, 14, 15+ (Edrengiin nuruu), (Tzvelev 2008) ]. – **Subendemic.** Described from Gobi Altai phytogeographical region (LE).

**S. mongolica Maxim.** 1888, Bull. Acad. Imp. Sci. Saint-Petersbourg 32(4): 492. – [ 10+ (Dzavkhan gol), (Tzvelev 2008), 11, 12, 13, 14+ (Gashuun us), (Tzvelev 2008), 15, 16 ]. – **Subendemic.**

**S. parviflora Jacq.** 1776, Fl. Austriac. 4: 3. – [ 14 (Bodonchiin gol), (Tzvelev 2008) ]. – (R, RB).

**S. pseudodivaricata Lipsch.** 1933, Bull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. 42(2): 158. – [ 3+, 6+ (Khovd gol), (Tzvelev 2008), 7, 9, 10, 11, 12, 13, 14, 15, 16 ]. – **Subendemic.**

+ **S. pusilla Pall.** 1773, Reise Russ. Reich. 2: 329. – *S. astrachiana* DC. 1838, Prodr. 7(1): 18. – *S. popovii* Lipsch. 1935, Fragm. Monogr. Gen. Scorzon. (Trans. Rubber & Guttap. Inst., Moscow) 23. – [ 8+ (Delgerkhaan uul), (Tzvelev 2008), 14+ (Uvgud uul), (Smirnov *et al.* 2003) ].

**S. radiata Fisch.** 1833, Fl. Altaic. 4: 160–161. – [ 1, 2, 3, 4, 5+ (Dariimaa 2014), 6, 7, 8+ (Khurendel uul), 9, 10+ (Khan Khukhii uul), 13+ (Noyon uul), (Tzvelev 2008), 14 ].

+ **S. sinensis Lipsch. & Krasch.** 1935, Fragm. Monog. Gen. Scorzonera 120. – *S. austriaca* subsp. *sinensis* Lipsch. & Krasch. 1935, – [ 9+ (Zodol Khan uul), (Tzvelev 2008) ].

+ **S. subacaulis (Regel) Lipsch.** 1933, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 1933, n. s. 13: 160. – [ 3+ (?), 6+ (Tsagaan Khairkhan uul), (Tzvelev 2008) ].

**Senecio ambraceus Turcz.** 1838, Prodr. 6: 348. – [ 2, 3, 4, 6, 7, 8, 9, 10, 14 ].

**S. argunensis Turcz.** 1847, Bull. Soc. Imp. Nat. Moscou 20(2): 18. – [ 9 (Tamsag) ]. – (R).

**S. atropurpureus (Ledeb.) B. Fedtsch.** 1910, Fl. Europ. Russia 992. – *Cineraria atropurpurea* Ledeb. 1815, Mem. Acad. St. Petersb. 5: 575. – [ 1 ].

**S. cannabifolius Less.** 1831, Linnaea 6(2): 242–243. – [ 2, 3, 5, 9 ].

**S. dubitabilis C. Jeffrey & Y.L. Chen,** 1984, Kew Bull. 39(2): 427. – [ 2, 3, 7, 8, 10, 11, 12+ (Ikh Nart ?), 13, 14, 15 ].

**S. erucifolius L.** 1755, Fl. Suec. (ed. 2) 291. – [ 2, 3, 4, 6, 7, 9, 10 ].

**S. flammeus Turcz.** 1818, Prodr. 6: 362. – [ 5 ]. – (R, RB).

**S. jacobaea L.** 1753, Sp. Pl. 2: 870. – [ 3, 4, 7, 8, 9, 10, 14 ].

**S. kenteicus** Grubov 1982, Opred. Vyssh. Rast. Mongolia: 255. – [ 2 ]. – **Endemic**. Described from Khentei phytogeographical region (LE).

**S. nemorensis** L. 1753, Sp. Pl. 2: 870. – [ 1, 2, 3 ].

**S. porphyranthus** Schischk, 1954, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 16: 432. – [ 1, 7 ].

**S. pricei** N.D. Simpson, 1913, J. Linn. Soc. Bot. 41(283): 425–426. - *Tephroseris pricei* (N.D. Simpson) Holub, 1973, Folia Geobot. Phytotax. 8(2): 174. – [ 1, 3, 6, 7, 13, 14 ].

**S. subdentatus** Ledeb. 1833, Fl. Altaic. 4: 110. – [ 7, 10, 14+ (Uvgud uul), (German et al. 2009), 15 ].

**S. sukaczewii** Schischk. 1954, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 16: 437. – [ 2+ (Eruugiin khaluun rashaan), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 4, 9 ].

**S. sumnevicii** Schischk. & Serg. 1949, Animadvers. Syst. Herb. Univ. Tomsk. 1–2: 27. – [ 1, 2, 3, 6, 7 ].

+ **S. veresczaginii** Schischk. & Serg. 1944, Animadvers. Syst. Herb. Univ. Tomsk. 1: 4. - *Tephroseris veresczaginii* (Schischk. & Serg.) Holub, 1976, Folia Geobot. Phytotax. 11(1): 82. – [ 7+ (Olonova & Beket 2010; Olonova et al. 2013) ]. – **Subendemic**. Described from Altai mountain (NS).

**S. vulgaris** L. 1753, Sp. Pl. 2: 867. – [ 1+ (Dulmaa 2004), 2, 3, 4, 7, 8, 10 ].

# **Seriphidium assurgens** (Filatova) K. Bremer & Humphries ex Y.R. Ling 1991, Bull. Bot. Res., Harbin 11(4): 7. - *A. assurgens* Filatova, 1982, Novosti Syst. Vyssh. Rast. 19: 178. – [ 7, 11, 13, 14, 15 ]. – **Endemic**. Described from Gobi Altai phytogeographical region (LE).

# **S. borotalense** (Poljakov) Ling & Y.R. Ling, 1988, Bull. Bot. Res., Harbin 8(3): 120. - *Artemisia borotalensis* Poljakov, 1954, Bot. Mater. Gerb. Bot. Inst. Akad. Nauk SSSR 16: 425. – [ 7, 14 ]. – **Subendemic**.

# **S. heptapotamicum** (Poljakov) Y. Ling & Y.-R. Ling, 1988, Bull. Bot. Res., Harbin 8(3): 119. - *Artemisa heptapotamica* Poljakov, 1957, Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR 18: 278. – [ 7, 14 ]. – **Subendemic**.

+ **S. gorjaevii** (Poljakov) Y.R. Ling, 1991, Bull. Bot. Res., Harbin 11(4): 23. - *Artemisia gorjaevii* Poljakov, 1954, Bot. Mater. Gerb. Bot. Inst. Akad. Nauk SSSR 16: 419. – [ 14+ (Jargalant uul), (Filatova 2003) ]. – **Subendemic**.

# **S. mongolorum** (Krasch.) Ling & Y.R. Ling 1988, Bull. Bot. Res., Harbin 8(3): 115. - *Artemisia mongolorum* Krasch. 1936, Trudy Bot. Inst. Akad. Nauk SSSR. 1, Fl. Sist. Vyssh. Rast. Moscow & Leningrad 3: 350. – [ 7, 12, 13, 14, 15 ]. – **Subendemic**.

# **S. subchrysolepis** (Filatova) K. Bremer & Humphries ex K. Bremer & Humphries, 1991, Bull. Bot. Res., Harbin 11(4): 24. - *Artemisia subchrysolepis* Filatova, 1981, Novosti Syst. Vyssh. Rast. 18: 224. – [ 7, 14 ]. – **Subendemic**.

**Serratula alatavica** C.A. Mey. 1869, Mem. Acad. Imp. Sci. St.-Petersbourg (Ser. 7) 14: 56. – [ 6 (Dariimaa 2014) ].

+ **S. cardunculus** (Pall.) Schischk. 1949, Fl. Sibir. Centr. 11: 2938. - *Centaurea cardunculus* Pall. 1771, Reise Russ. Reich. 1: 500. - *Klasea cardunculus* (Pall.) Holub, 1977, Folia Geobot. Phytotax. 12: 305. – [ 2+, 3+, 4+, 5+, 7+ (Gubanov 1999; Dariimaa 2009, 2014) ].

**S. centauroides** L. 1753, Sp. Pl. 2: 820. – [ 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12+ (Dariimaa *et al.* 2004), 13 ].

**S. coronata** L. 1763, Sp. Pl. (ed. 2) 2: 1144. – [ 5, 9 ].

+ **S. kirghisorum** Iljin, 1934, Repert. Spec. Nov. Regni Veg. 35: 358. – [ 7+ (Olonova *et al.* 2013; Urgamal *et al.* 2013) ] – **Subendemic**.

**S. marginata** Tausch, 1828, Fl. 11(31): 484. – [ 1, 2, 3, 4, 7, 8, 9, 10, 13 ].

+ **Solidago virgaurea** L. 1753, Sp. Pl. 2: 880. – [ 7+ (Dariimaa 2009; Urgamal *et al.* 2013) ].

# **S. virgaurea** subsp. **dahurica** (Kitag.) Kitag. 1939, Rep. Inst. Sci. Res. Manchukuo 3(App. 1): 472. – *S. dahurica* Kitag. 1937, Rep. Inst. Sci. Res. Manchoukuo 1: 297. – [ 1, 2, 3, 4, 5, 7, 9 ]. – (**VU, VR, RB**).

# **Sonchella dentata** (Ledeb.) Sennikov 2008, Komarovia 5: 106. - *Sonchus dentatus* Ledeb. 1829, Icon. Pl. 1: 21. - *Prenanthes angustifolia* Boulos, 1962, Bot. Notis. 115. – [ 10, 14, 15 (Tzvelev 2008) ].

# **S. stenoma** (DC.) Sennikov, 2007, Bot. Zhurn. 92 : 1753. - *Youngia stenoma* (Turcz.) Ledeb. 1845, Fl. Ross. 2: 837. - *Crepis stenoma* Turcz. 1838, Prodr. 7: 164. – [ 8, 9, 10, 11+ (Ongiin gol), (Tzvelev 2008), 12, 13, 14, 15 ].

**Sonchus arvensis** L. 1753, Sp. Pl. 2: 793. – [ 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 14 ].

+ **S. brachyotus** DC. 1838, Prodr. 7(1): 186. – *S. arvensis* subsp. *brachyotus* (DC.) Kitam. 1956, Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, Biol. 23. 1956 : 148. – [ 8+ (Muren gol), 9+ (Dariganga, Kherlen gol), 10+ (Teeliin gol), 13+ (Dzun Saikhan uul), 14+ (Bodonchiin gol), (Tzvelev 2008) ].

**S. oleraceus** L. 1753, Sp. Pl. 2: 794. – [ 7, 10, 13+ (Dzun Saikhan uul), (Tzvelev 2008), 14, 15, 16 ].

# **S. uliginosus** M. Bieb, 1808, Fl. Taur.-Caucas. 2: 238–239. – *S. arvensis* subsp. *uliginosus* (M.M. Bieb.) Nym. 1879, Conspl. Fl. Eur. 433. – [ 4, 5, 8+, 9+ (Khalkhiin gol), 10+ (Orog nuur), (Tzvelev 2008) ].

**Stilpnolepis intricata** (Franch.) C. Shih, 1985, Acta Phytotax. Sin. 23: 471. - *Elachanthemum intricatum* var. *macrocephalum* H.C. Fu, 1982, Fl. Intramongol. 6: 326. – [ 3, 4, 7, 9, 10, 11, 12, 13, 15 ]. – **Subendemic**.

# **Symphyotrichum ciliatum** (Ledeb.) G.L. Nesom, 1994, Phytologia 77(3): 277. - *Erigeron ciliatus* Ledeb. 1829, Icon. Pl. 1: 24. - *Brachyactis ciliata* (Ledeb.) Ledeb. 1846, Fl. Ross. 2: 495. – [ 3+ (Shargaljuut), (Smirnov *et al.* 2003), 4, 9, 10 ].

**Synurus deltoides** (Aiton) Nakai, 1932, Koryo Sikenrin Ippan 64. - *Onopordum deltoides* Aiton, 1789, Hort. Kew 3: 146. – [ 4, 5 ]. – (**R**).

**Tanacetum boreale** Fisch. ex DC. 1837, Prodr. 6: 128. – [ 2, 3, 7+ (Filatova 2003) ].

+ **T. crassipes** (Stschegl.) Tzvelev, 1961, Fl. URSS 26: 338. - *Pyrethrum crassipes* Stschegl. 1854, Bull. Soc. Imp. Nat. Moscou 27: 172. - *Chrysanthemum crassipes* B. Fedtsch. 1915, Rastit. Turkest. 737. – [ 7+ (Beket 2009; Urgamal *et al.* 2013) ]. – **Subendemic**.

# **T. sinuatum** Sch. Bip. 1844, Tanacet. 35. - *Chrysanthemum sinuatum* Ledeb. 1833, Fl. Altaic. 4: 116. - *Dendranthema sinuatum* (Ledeb.) Tzvelev, 1961, Fl. URSS 26: 337. – [ 6, 7 (Olonova & Beket 2010) ]. – **Subendemic**. – (**EN, VR, RB**).

**T. tanacetoides (DC.) Tzvelev**, 1961, Fl. URSS 26: 337. – *Pyrethrum tanacetoides* DC. 1837, Prodr. 6: 59. – [ 2+, 3+ (Filatova 2003), 6, 7 ]. – (R).

**T. vulgare L.** 1753, Sp. Pl. 2: 844-845. – [ 1, 2, 3, 4, 5, 6, 7, 9+ (Khalkhiin gol), (Filatova 2003) ].

+ **Taraxacum altaicum Schischk.** 1949, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 1-2: 6. – [ 3+, 6+, 7+ (Dariimaa 2009, 2014; Urgamal *et al.* 2013) ]. – **Subendemic.** Described from Altai mountain (LE).

? + **T. armeriifolium Soest**, 1965, Feddes Repert. 70: 61. – [ 3+, 4+, 5+, 7+, 9+ (Grubov 1982), 10+ (Dariimaa 2009, 2014), 11+, 12+, 13+, 14+, 16+ (Grubov 1982; Urgamal *et al.* 2013) ]. – **Subendemic.** Described from Great Lakes phytogeographical region (GAT). – (R).

**Notes:** This is species was not given in Gubanov's conspectus (1996).

**T. asiaticum Dahlst.** 1926, Acta Horti Gothob. 2(5): 173-176. – [ 4, 7, 8, 13+ (Dariimaa 2014) ].

**T. atrans Schischk.** 1964, Fl. URSS 29: 510, 739. – [ 7, 13 ].

**T. bessarabicum (Hornem.) Hand.-Mazz.** 1907, Monogr. Taraxacum: 26. - *Leontodon bessarabicus* Hornem. 1819, Suppl. Horti Bot. Hafn. 88. – [ 2+, 3+, 4+, 7+ (Dariimaa 2014), 8, 9+ (Dariimaa 2014), 10 ].

**T. bicorne Dahlst.** 1906, Ark. Bot. 5(9): 29-31. – [ 1, 2, 3, 7+ (Dayan nuur), 9+ (Khalkhiin gol), 10+ (Uvs nuur), (Tzvelev 2008), 11, 12 ].

+ **T. borealisinense Kitam.** 1980, Acta Phytotax. Geobot. 31(1-3): 45. – *T. czuensis* Schischk. 1949, Animadvers. Syst. Herb. Univ. Tomsk., 1-2, 6. – *T. ob lanceofolium* D.Z. Ma, 1991, Acta Bot. Bor.-Occid. Sin. 11(4): 347. – [ 15+ (Gubanov 1999; Dariimaa 2009) ].

**T. bornuurense R. Doll,** 1975, Feddes Repert. 86, 9-10. – [ 3, 4 (Dariimaa 2014), 6, 7 ]. – **Endemic.** Described from Mongolian Dauria phytogeographical region (GAT).

**T. brevirostre Hand-Mazz.** 1907, Monogr. Gatt. Taraxacum 46. – [ 3, 7, 13 ].

**T. ceratophorum (Ledeb.) DC.** 1838, Prodr. 7(1): 146. - *Leontodon ceratophorus* Ledeb. 1829, Icon. Pl. 1: 9. – [ 1, 2, 3, 4, 5, 6, 7, 9, 13+ (Dund Saikhan uul), (Tzvelev 2008), 14 ].

**T. collinum DC.** 1838, Prodr. 7(1): 149. – [ 3, 4, 6+, 7+ (Tzvelev 2008), 8, 9, 13+ (Neuffer *et al.* 2012), 14 ].

+ **T. commixtiforme Soest**, 1965, Feddes Repert. 70: 61. – [ 4+, 8+ (Kherlen gol), (Sanchir *et al.* 2004; Tzvelev 2008), 9+, 10+, 13+ (Dund Saikhan uul), (Tzvelev 2008), 14+ (Kuvchiin nuruu), (Tzvelev 2008; Dariimaa 2014) ]. – **Subendemic.** Described from Gobi Altai phytogeographical region (GAT).

**Notes:** This is species was not given in Gubanov's conspectus (1996).

+ **T. compactum Schischk.** 1949, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 1-2: 5. – [ 1+, 2+ (Gubanov 1999; Dariimaa 2009, 2014) ].

# **T. dealbatum Hand-Mazz.** 1907, Monogr. Gatt. Taraxacum 30. – *T. aksaicum* Schischk. 1949, Animadvers. Syst. Herb. Univ. Tomsk. 1-2: 7. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ].

# **T. dissectum (Ledeb.) Lebed.** 1846, Fl. Ross. 2: 814. - *Leontodon dissectus* Lebed. 1814, Mem. Acad. Imp. Sci. St.-Petersbourg. Hist. Acad. 5(1812): 553, 555. - *Taraxacum*

*baicalense* Schischk. 1964, Fl. URSS 29: 747–748. – *T. haneltii* Soest, 1973, Feddes Repert. 84(7-8): 569. – [ **1, 2, 3, 4, 6, 8+** (Choir uul), (Tzvelev 2008), **7, 9, 10+** (Tumen gol), (Tzvelev 2008), **12+** (Dariimaa *et al.* 2004, 2014), **13** ].

**Notes:** It was informed that of *T. haneltii* Soest is a accepted name. (Dariimaa 2014).

**T. eriopodum (D. Don) DC. 1838**, Prodr. 7(1): 147. - *Leontodon eriopodon* D. Don, 1820, Mem. Wern. Nat. Hist. Soc. 3: 413–414. – [ **6+** (Neuffer *et al.* 2003), **7, 13+** (Neuffer *et al.* 2012; Dariimaa 2014), **14** ].

+ **T. erythrospermum Andrz. ex Besser, 1821**, Enum. Pl.: 75. – [ **3+** (Dariimaa 2014) ].

**T. glabrum DC. 1838**, Prodr. 7(1): 146. – [ **1, 3, 6, 7, 14** ]. – (R).

+ **T. glaucanthum (Ledeb.) DC. 1838**, Prodr. 7(1): 147. - *Leontodon glaucanthum* Ledeb. 1829, Fl. Ross. 1: 9. – [ **3+, 4+** (Tzvelev 2008; Dariimaa 2014), **8+** (Sanchir *et al.* 2004) ].

**Notes:** This is species was not given in Gubanov's conspectus (1996).

**T. goloskokovii Schischk. 1964**, Fl. URSS 29: 748–749. – [ **6, 7+** (Dariimaa 2014), **10+** (Khovd gol), (Tzvelev 2008), **13** ].

+ **T. inimitabile Kirschn. et Step. 2006**, Preslia, 78: 57. – [ **13+** (Gruvan Saikhan uul, Yoliin am), (Tzvelev 2008) ]. – **Endemic**. Described from Gobi Altai phytogeographical region (PRA).

**T. junatovii Tzvelev, 1987**, Novosti Syst. Vyssh. Rast. 24: 221. – [ **3, 7, 13, 14** ]. – **Endemic**. Described from Mongolian Altai phytogeographical region (LE).

+ **T. kok-saghyz L.E. Rodin, 1933**, Trudy Bot. Inst. Akad. Nauk SSSR Ser. 1, Fl. Sist. Vyssh. Rast. (Moscow & Leningrad) 1: 187–189. – *T. brevicorniculatum* Korol. 1940, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 8(6): 93. – [ **3+** (Dariimaa 2009, 2014) ]. – **Subendemic**.

+ **T. krasnoborovii Krasnikov. 1997**, Fl. Sibir. 13: 279. – [ **7+** (Olonova & Beket 2010; Olonova *et al.* 2013; Dariimaa 2014) ]. – **Subendemic**. Described from Altai mountain (NS).

+ **T. krylovii Krasnikov et V. Khan. 1997**, Fl. Sibir. 13: 280. – [ **7+** (Tsagaan Shiveet uul), (Olonova & Beket 2010; Olonova *et al.* 2013) ]. – **Subendemic**. Described from Altai mountain (NS).

**T. leucanthum (Ledeb.) Ledeb. 1846**, Fl. Ross. 2: 815. - *Leontodon leucanthus* Ledeb. 1830, Icon. Pl. 2: 12. – [ **1, 2, 3, 4, 6, 7, 8, 10, 11, 12+** (Dariimaa *et al.* 2004), **13, 14, 15** ].

+ **T. linczevskii Schischk. 1964**, Fl. URSS 29: 554, 751. – [ **7+** (Dariimaa 2009, 2014) ].

**T. longicorne Dahlst. 1906**, Ark. Bot. 5(9): 9. – *T. printzii* Dahlst. 1921, Veg. Siber.-Mongol. Front. 439. – [ **1, 2, 5, 6+** (Dariimaa 2014), **7+** (Dayan nuur), (Tzvelev 2008), **8, 9, 10+** (Ulaangom), (Tzvelev 2008) ].

**T. luridum G.E. Haglund, 1938**, Bot. Not. 1938: 307. – *T. pojarkoviae* Schischk. 1964, Fl. URSS 29: 749. – [ **6+** (Tsast uul), (Tzvelev 2008; Dariimaa 2014), **7** ].

**T. lyratum (Ledeb.) DC. 1838**, Prodr. 7: 148. - *Leontodon lyratus* Ledeb. 1833, Fl. Altaic. 4: 152. – [ **1, 3, 6, 7, 13+** (Dariimaa 2014) ]. – **Subendemic**.

**T. macilentum** Dahlst. 1906, Ark. Bot. 5(9): 7. – [ **1, 3, 6+** (Bukhmurun), (Tzvelev 2008), **7** ]. – **(R).**

+ **T. minutilobum** Popov ex Kovalevsk. 1962, Bot. Mater. Gerb. Bot. Inst. Uzbekistansk. Fil. Akad. Nauk SSSR 17: 6. – [ **7+** (Beket 2009; Dariimaa 2014) ]. – **Subendemic.**

**T. mongolicum** Hand-Mazz. 1907, Monogr. Gatt. Taraxacum 67. – [ **1, 2+** (Khonin nuga), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), **3, 4, 6, 7+** (Khar Azargiin nuruu), (Tzvelev 2008), **10, 11, 13+** (Noyon uul), (Tzvelev 2008) ].

**T. mongoliforme** R. Doll, 1975, Feddes Repert. 86, 9-10: 514. – *T. cuspidatum* Dahlst. 1926, Acta Horti Gothob. 2(5): 171. – [ **1, 2, 4, 7, 8+** (Pistrick et al. 2012), **9, 10+** (Dariimaa 2014), **11, 13+** (Baruun Saikhan uul), **15+** (Tsagaan Bogd uul), (Tzvelev 2008) ]. – **Subendemic.** Described from Mongolian Dauria phytogeographical region (GAT).

**T. monochlamydeum** Hand-Mazz. 1907, Monogr. Gatt. Taraxacum 43. – [ **3, 4+** (Tzvelev 2008), **7+** (Indertiin gol), (Ebel & Rudaya 2002), **12, 13+** (Bayanlig sum), (Tzvelev 2008), **14, 15** ].

+ **T. mujense** Petroch. 1971, Novosti Syst. Vyssh. Rast. 7: 301. – [ **1+, 2+** (Gubanov 1999; Dariimaa 2009, 2014) ].

**T. multisectum** Kitag. 1938, Rep. Inst. Sci. Res., Manchoukuo 2: 310. – [ **9** (Jargalant uul), (Tzvelev 2008; Dariimaa 2014) ].

+ **T. officinale** F.H. Wigg. 1780, Prim. Fl. Holsat.: 56. – [ **1+, 2+, 3+, 4+** (Urgamal et al. 2013; Dariimaa 2014) ].

+ **T. parvulum** DC. 1838, Prodr. 7(1): 148-149. - *T. himalaicum* Soest, 1961, Bull. Brit. Mus. (Nat. Hist.), Bot. 2(1): 267. – [ **14+** (Olonova et al. 2013; Urgamal et al. 2013) ].

+ **T. pawlodarskum** R. Doll, 1973, Feddes Repert. 83(7-8): 997. – *T. ustamenum* R. Doll, 1973, Feddes Repert. 83(7-8): 498. – [ **7+** (Munkhkhairkhan uul), (Tzvelev 2008) ]. – **Subendemic.**

**T. pingue** Schischk. 1937, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 7: 3. – [ **1+, 3+** (Dariimaa 2014), **6+** (Kharkhira), (Tzvelev 2008), **7** ].

+ **T. pseudoatratum** Orazova, 1966, Fl. Kazakhstana 9: 491. - *T. atratum* Schischk. 1964, Fl. URSS 29: 743. – [ **6+** (Siilkhemii nuruu), (Gubanov 1999; Dariimaa 2009, 2014)].

**T. pseudonivale** Malysch. 1966, Novosti Syst. Vyssh. Rast. 254. – [ **1** (Dariimaa 2014), **7+** (Tavan Bogd uul, Tsagaan gol), (Krasnoborov 2006) ].

**T. puberulum**, 1938, Bot. Not.: 312. – [ **14** (Baitag Bogd uul), (Dariimaa 2014) ].

+ **T. sangilense** Krasnob. & Khanm. 1984, Bot. Zhurn. (Moscow & Leningrad) 69(4): 539. – [ **1+, 2+** (Gubanov 1999; Dariimaa 2009), **3+, 4+, 6+** (Kharkhira uul), (Tzvelev 2008), **7+** (Dariimaa 2014) ]. – **Subendemic.**

**T. selengensis** Tzvelev, 1991, Bull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. 96(5): 72. – [ **3** (Khutag uul), (Dariimaa 2014) ]. – **Endemic.** Described from Khangai phytogeographical region (LE, isotype - MW).

**T. sinicum** Kitag. 1933, Bot. Mag. (Tokyo) 47: 826. – [ **3, 4, 5, 6+** (Bukhmurun), (Tzvelev 2008), **7, 8+** (Choir uul, Uvur Jargalant), (Tzvelev 2008), **9, 10, 11, 12, 13, 14, 16** ].

+ **T. smirnovii** Ivanova, 2011, Turczaninowia 14(1) : 8-9. – [ **7+** (Ivanova 2011; Urgamal et al. 2013) ]. – **Subendemic.**

**T. songoricum Schischk.** 1964, Fl. URSS 29: 740. – [ 6, 7+ (Tzvelev 2008), 13 ]. – **Subendemic.**

**T. stanjukoviczii Schischk.** 1964, Fl. URSS 29: 737-738. – [ 7, 13 ]. – **Subendemic.** Described from Mongolia (LE, MW).

**T. stenolobum Stschegl.** 1854, Sc. Bull. Soc. Nat. Mosc. 27: 180. – *T. scariosum* (Tausch) Kirschner & Stepanek, 2011, Preslia 83: 498. – [ 8, 9 ].

**T. submacilentum Tzvelev,** 1991, Bull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. 96(5): 72. – [ 7 (Tsengel Khairkhan uul), (Tzvelev 2008; Dariimaa 2014) ]. – **Endemic.** Described from Mongolian Altai phytogeographical region (LE, isotype - MW).

**T. sumneviczii Schischk.** 1949, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 1-2: 8. – [ 1, 7, 13 ].

+ **T. tibetanum Hand-Mazz.** 1907, Monogr. Gatt. Taraxacum 67. – [ 13+ (Ikh Bogd uul), (Tzvelev 2008), 14 (?), (Hilbig & Schamsran, 1985) ].

**T. turgaicum Schischk.** 1964, Fl. URSS 29: 436, 728. – [ 7, 13+ (Dariimaa 2014), 14 ].

+ **T. tuvinense Krasnob. & Krasnikov,** 1984, Bot. Zhurn. 69, 4: 537. – [ 1+ (Gubanov 1999; Dariimaa 2009) ]. – **Subendemic** (NS, isotype - LE).

**T. ustamenum R. Doll,** 1973, Feddes Repert. 83(7-8): 498. – [ 7 (Tzvelev 2008; Dariimaa 2014) ].

# **Tephroseris integrifolia (L.) Holub,** 1973, Folia Geobot. Phytotax. 8(2): 173. - *Othonna integrifolia* L. 1753, Sp. Pl. 2: 925. - *Senecio integrifolius* (L.) Clairv. 1811, Man. Herb. Suisse: 241. – [ 1, 2, 3, 4, 6, 7, 8, 9, 13 ].

# **T. kirilowii (Turcz. ex DC.) Holub,** 1977, Folia Geobot. Phytotax. 12: 249. - *Senecio kirilowii* Turcz. ex DC. 1838, Prodr. 6: 361. – *S. amurensis* Schischk. 1961, Fl. URSS 26: 883, 757. – [ 5 ].

# **T. palustris (L.) Rchb.** 1842, Fl. Saxon. 146. - *Othonna palustris* L. 1753, Sp. Pl. 2: 924-925. - *Senecio arcticus* Rupr. 1845, Beitr. Pflanzenk. Russ. Reich. 44. – [ 1, 2, 4, 5, 6, 7, 8+ (Sanchir *et al.* 2004), 9, 10 ].

# **T. praticola (Schischk. & Serg.) Holub,** 1973, Folia Geobot. Phytotax. 8(2): 174. - *Senecio asiaticus* Schischk. & Serg. 1961, Fl. URSS 26: 762. – *S. praticola* Schischk. & Serg. 1949, Syst. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybyseva 1-2: 28. – [ 1, 2+ (Sharlangiin guur), (Dulamsuren & Muhlenberg 2003; Dulamsuren 2004), 3, 7 ].

# **T. turczaninovii (DC.) Holub,** 1973, Folia Geobot. Phytotax. 8(2): 174. - *Senecio turczaninovii* DC. 1838, Prodr. 6: 360. - *S. reverdattoi* Sobol. 1951, Bot. Zhurn. 14: 50. – [ 1 ].

**Notes:** The genus *Tephroseris* name is an accepted and new combination by E.I. Wiebe (2000).

+ **Tragopogon kasahstanicus Nikit.** 1938, Bot. Mater. Gerb. Bot. Inst. V.L. Komarova Akad. Nauk SSSR 7: 268. – [ 7+ (Biluuut uul, Rashaantiin nuruu), (Tzvelev 2008) ].

**T. orientalis L.** 1753, Sp. Pl. 2: 789. – [ 6, 7 (Tzvelev 2008) ].

**T. ruber G.G. Gmel.** 1774, Reise durch Russland 2: 198. – *T. kasahstanicus* S.A. Nikit. 1937, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 7: 268. – [ 7, 14+ (Uvgud uul), (Smirnov *et al.* 2003) ].

**T. songoricus S.A. Nikit.** 1933, Trudy Bot. Inst. Akad. Nauk SSSR Ser. 1, Fl. Sist. Vyssh. Rast. 1: 198. – [ 6, 7, 13+ (Dund Saikhan uul), (Tzvelev 2008), 14 ].

**T. trachycarpus S.A. Nikit.** 1937, Bot. Mater. Gerb. Bot. Inst. Akad. Nauk SSSR 7: 259. – [ 2, 3, 4, 5, 7, 8, 13 ].

**Notes:** It was informed that *T. turkestanicus* S.A.Nikitin ex Pavlov is distributed in Mongolian Altai phytogeographical region of Mongolia (Dariimaa 2014).

**Tripleurospermum ambiguum (Ledeb.) Franch. & Sav.** 1875, Enum. Pl. Jap. 1(2): 236. - *Pyrethrum ambiguum* Ledeb. 1833, Fl. Altaic. 4: 118. - *Matricaria ambigua* (Ledeb.) Krylov, 1904, Fl. Altaic. 3: 625. – [ 6, 7 ].

**Tripolium vulgare Nees.** 1833, Gen. Sp. Aster. 152. – [ 4, 9, 10, 11, 12, 13 ].

**Trommsdorffia ciliata (Thunb.) Sojak** 1972, Cas. Nar. Mus. Odd. Prir. 140(3-4): 131. – *Arnica ciliata* Thunb. 1784, Syst. Veg. ed. 14: 768. – [ 5 (Sumber), (Tzvelev 2008) ].

**Tugarinovia mongolica Iljin.** 1928, Izv. Glavn. Bot. Sada SSSR 27: 357. – [ 11, 12, 13, 16 ]. – **Subendemic.** Described from Great Lakes phytogeographical region (LE). – (VU, VR, RB).

+ **Turczaninowia fastigiata (Fisch.) DC.** 1836, Prodr. 5: 258. - *Aster fastigiatus* Fisch. 1812, Mem. Soc. Imp. Nat. Moscou 3: 74. – [ 2+, 4+ (Gubanov 1999; Dariimaa 2009)].

**Waldheimia tridactylites Kar. & Kir.** 1842, Bull. Soc. Imp. Nat. Moscou 15: 126. – [ 1+ (Filatova 2003), 3, 6, 7, 13 ].

**Xanthium albinum (Widd.) Scholz & Sukopp,** 1960, Verh. Bot. Ver. Brandenb. 48: 47. – [ 3 ].

+ **X. sibiricum Patrin ex Widder,** 1923, Repert. Spec. Nov. Regni Veg. Beih. 20: 32-38. – [ 9+ (Neuffer *et al.* 2012; Urgamal *et al.* 2013) ].

**X. strumarium L.** 1753, Sp. Pl. 2: 987. – [ 5, 7+ (Indertiin gol), (Ebel & Rudaya 2002), 9, 10+ (Khovd, Darvi sum), (Ebel & Rudaya 2002), 11, 12, 14, 16+ (Hilbig & Tungalag 2006) ].

**Notes:** The cultivated plants followed in the Asteraceae family: *Callistephus chinensis* (L.) Nees, *Cosmea bipinnatus* (Cav.) Willd., *Dahlia pinnata* Cav., *Helianthus annuus* L., *Lactuca sativa* L. (Gubanov 1996; Urgamal *et al.* 2013; Dariimaa 2003, 2014).

**Citation:**

**Urgamal, M., Oyuntsetseg, B., Nyambayar, D. & Dulamsuren, Ch.** 2014. Conspectus of the vascular plants of Mongolia. (Editors: Sanchir, Ch. & Jamsran, Ts.). Ulaanbaatar, Mongolia. "Admon" Press. 334pp.

**38. APIALES NAKAI 1930**

Hisi-Shokubutsu 58

**110. APIACEAE LINDL. 1836 (37/74)**

Intr. Nat. Syst. Bot. 21

\* by M. Urgamal (2013)

**Aegopodium alpestre Ledeb.** 1829, Ledeb. Fl. Altaic. 1: 354-355. - *A. tadshikorum* auct. Fl. Mong., non Schischk. - [ 1, 2, 3, 4, 5, 13 ].

+ **Anethum graveolens L.** 1753, Sp. Pl. 1: 263. - [ 3+, 4+, 13+ (Urgamal 2013) ].

**Angelica czernaevia (Fisch. & C.A. Mey.) Kitag.** 1935, J. Jap. Bot. 12(4): 241-243. - *Conioselinum czernaevia* Fisch. & C.A. Mey. 1835, Index Sem. (St.-Petersburg) 2: 33. - *Czernaevia laevigata* Turcz. 1844, Bull. Soc. Imp. Nat. Moscou 17: 740. - [ 5, 9 ].

**A. dahurica (Fisch.) Benth. & Hook. f. ex Franch. & Sav.** 1873, Enum. Pl. Jap. 1(1): 187. - *Callisace dahurica* Fisch. 1816, Gen. Pl. Umbell. 2: 170. - [ 2, 3, 4+ (Urgamal 2009, 2013), 5, 9 ].

# **A. archangelica subsp. decurrens (Ledeb.) Kuvaev,** 1981, Bot. Zhurn. 66: 952. - *A. decurrens* (Ledeb.) B. Fedtsch. 1909, Consp. Fl. Turkest. 3: 99. - *Archangelica decurrens* Ledeb. 1829, Fl. Altaic. 1: 316. - [ 1, 2, 3, 4+ (Urgamal 2009), 6, 7, 14 ].

+ **A. saxatilis Turcz. ex Ledeb.** 1844, Fl. Ross. 2: 296. - *Coelopleurum saxatile* (Turcz. ex Ledeb.) Drude, 1898, Die Nat. Pflanzenf. 3(8): 213. - [ 2+ (Urgamal 2013) ].

**A. sylvestris L.** 1753, Sp. Pl. 1: 251. - [ 6, 7+ (Urgamal 2009) ].

**A. tenuifolia (Pall. ex Spreng.) Pimenov,** 1985, Bot. Zhurn. (Moscow & Leningrad) 70: 1494. - *Athamanta tenuifolia* Pall. ex Schult. 1820, Syst. Veg. 6: 495. - *Peucedanum salinum* Pall. ex Spreng. 1825, Syst. Veg. 1: 910. - [ 1, 2, 3, 4, 6, 7, 8, 9+ (Pistrick et al. 2012), 10, 13+ (Urgamal 2013) ].

**Anthriscus sylvestris (L.) Hoffm.** 1814, Gen. Pl. Umbell. 40. - *Chaerophyllum sylvestre* L. 1753, Sp. Pl. 1: 258. - [ 1+ (Urgamal 2004), 2, 3, 4, 5, 6, 7, 8, 9, 10 ].

+ **Apium graveolens L.** 1753, Sp. Pl. 1: 264-265. - [ 2+, 3+, 4+ (Urgamal 2009, 2013) ].

**Aulacospermum anomalum Ledeb.** 1833, Fl. Altaic. 4: 335. - *Cnidium anomalum* Ledeb. 1829, Fl. Altaic. 1: 333. - [ 6+ (Urgamal 2009), 7 ]. - (R).

**Bunium setaceum (Schrenk ex Fisch. & C.A. Mey.) H. Wolff,** 1927, Pflanzenr. IV, 228(90): 209. - *Carum setaceum* Schrenk ex Fisch. & C.A. Mey. 1841, Enum. Pl. Nov. 1: 61. - *Scaligeria setacea* (Schrenk ex Fisch. & C.A. Mey.) Korovin 1926, Bull. Sredne-Aziatsk. Gosud. Univ. 14: Suppl. 19. - *Conopodium setaceum* (Schrenk ex Fisch. & C.A. Mey.) Korovin, 1924, Bull. Sredne-Aziatsk. Gosud. Univ. 7(Suppl.): 24. - [ 6, 7 ]. - (R).

**Bupleurum aureum** Fisch. ex Hoffm. **1814**, Gen. Pl. Umbell. 115. – [ 7 (Dayan nuur), (Vinogradova 1994) ].

**B. bicaule** Helm. **1809**, Mem. Soc. Imp. Nat. Moscou 2: 108. – [ 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13 ].

**B. krylovianum** Schischk. **1935**, Fl. Zap. Sibiri 8: 2010. – [ 3+ (Vinogradova 1994; Urgamal 2009), 7 (Chubarov 2004) ]. – **Subendemic**.

+ **B. longiinvolucratum** Krylov, **1903**, Trudy Imp. St.-Peterburgsk. Bot. Sada 21(1): 17. – [ 7+ (Olonova *et al.* 2013; Urgamal *et al.* 2013) ]. – **Subendemic**.

**B. mongolicum** V.M. Vinogr. **1985**, Novosti Syst. Vyssh. Rast. (New Delhi) 22: 194. - *B. densiflorum* auct. Fl. Mong., non Rupr. – [ 7, 13, 14 ]. – **Subendemic**. Described from Dzungarian Gobi (Baitag Bogd) phytogeographical region (LE).

**B. multinerve** DC. **1828**, Mem. Soc. Phys. Geneve 4: 500. – [ 1+ (Oyumaa & Paula de Priest 2011), 2, 3, 4, 5, 7+, 9+ (Urgamal 2009), 11 ].

+ **B. pusillum** Krylov, **1903**, Trudy Imp. St.-Peterburgsk. Bot. Sada 21(1): 18. – *B. bicaule* subsp. *pusillum* (Krylov) Czubarov, 2004, Turczaninowia 7(3): 66. 2004. - *B. bicaule* var. *pusillum* (Krylov) Gubanov, 1983, in Fl. Vostoch. Khangaya (MNR) 143. - *B. falcatum* var. *pusillum* (Krylov) Koso-Pol. 1914, Trudy Imp. St.-Peterburgsk. Bot. Sada 21(1): 18. – [ 1, 2, 3, 6, 7, 13 (Urgamal 2013; Urgamal *et al.* 2013) ].

**Notes:** It was informed that *B. bicaule* subsp. *pusillum* (Krylov) Czubarov distributed Western Mongolia (Czubarov 2004).

**B. scorzoniferifolium** Willd. **1809**, Enum. Pl. 300. – [ 1, 2, 3, 4, 5, 6+ (Urgamal 2009), 8, 9, 12+ (Urgamal 2009), 13+ (Neuffer *et al.* 2012) ].

**B. sibiricum** Vest. ex Spreng. & Schult. **1820**, Syst. Veg. (ed. 15) 6: 368. – [ 2, 4, 8+, 9+ (Urgamal 2004, 2009) ].

**Carum buriaticum** Turcz. **1844**, Bull. Soc. Imp. Nat. Moscou 17: 713. – [ 1+ (Urgamal 2004, 2009), 2, 3, 4, 5, 6, 8, 9 ].

**C. carvi** L. **1753**, Sp. Pl. 1: 263. – [ 1+ (Urgamal 2004, 2009), 2, 3, 4, 5, 7, 8, 9, 10, 14].

**Cenolophium denudatum** (Fisch. & Hornem.) Tutin, **1967**, Feddes Repert. 74(1-2): 31. - *Athamanta denudata* Fisch. & Hornem. 1819, Suppl. Hort. Bot. Hafn. 32. – [ 3, 7, 10, 14 ]. – (R).

**Cicuta virosa** L. **1753**, Sp. Pl. 1: 255. – [ 1+ (Khuvsulgul nuur, Darkhadiin khotgor), (Dulmaa 2004; Urgamal 2004, 2009), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 ].

**Cnidium dauricum** (Jacq.) Turcz. ex Fisch. & C.A. Mey. **1835**, Index Sem. (St.-Petersburg) 2: 33. - *Laserpitium dauricum* Jacq. 1776, Hort. Bot. Vindob. 3: 22. – [ 2, 3, 4, 5, 6, 7, 8, 9, 10 ].

**C. monnierii** (L.) Cuss. **1782**, Mem. Soc. Med. Emul. Paris 280. – [ 4, 9 ].

# **C. salinum** Turcz. **1844**, Bull. Soc. Imp. Nat. Moscou 17: 733. - *Kadenia salina* (Turcz.) Lavrova & V.N. Tikhom. 1986, Bull. Soc. Imp. Nat. Moscou 3: 93. – [ 2, 3, 4, 8, 9, 10, 11, 13 ].

**Conioselinum longifolium** Turcz. 1844, Bull. Soc. Imp. Nat. Moscou 17: 736. - [ 1, 2+, 4+, 7+ (Urgamal 2009, 2013), 9, 10 ].

# **C. vaginatum** (Spreng.) Thell. 1926, Fl. Mitt.-Eur. 5(2): 1329. - *C. tataricum* Hoffm. 1816, Gen. Pl. Umbell. ed. 2: 185. - [ 1, 2, 3, 4 ].

+ **Coriandrum sativum** L. 1753, Sp. Pl. 1: 256. - [ 4+ (Ligaa 1996; Urgamal 2009, 2013) ].

**Eryngium planum** L. 1753, Sp. Pl. 1: 233. - [ 4 (South Darkhan), (Ulziykhutag 1985; Urgamal 2009, 2013) ]. - (R, RB).

**Ferula bungeana** Kitag. 1956, J. Jap. Bot. 31(10): 304. - *Peucedanum rigidum* Bunge, 1835, Mem. Acad. Imp. Sci. St.-Petersbourg (Ser. 7) 2: 106. - [ 5+ (Urgamal 2009), 8, 9, 10, 11, 12, 13, 14, 15, 16 ]. - Subendemic.

+ **F. caspica** M. Bieb. 1808, Fl. Taur.-Caucas. 1: 220. - [ 7+, 14+ (Urgamal 2009) ].

**F. dissecta** (Ledeb.) Ledeb. 1844, Fl. Ross. 2: 301. - *Peucedanum dissectum* Ledeb. 1829, Fl. Altaic. 1: 326. - [ 3, 6+ (Urgamal 2009, 2013), 7, 10+, 14+ (Urgamal 2009) ].

**F. dubjanskyi** Korovin ex Pavlov, 1934, Fl. Kazakstana 2: 539. - *F. dshaudshamyr* Korovin, 1947, Monogr. Ferula 79. - [ 7, 14 ].

**F. feruloides** (Steud.) Korovin, 1947, Monogr. Ferula 77. - *Peucedanum feruloides* Steud. 1841, Nomencl. Bot. 2: 311. - [ 7 (Ikh and Baga Ongog, Biluut uul), (Vinogradova 1994; Suran 1996; Suran & Jamsran 1997; Urgamal 2009) ]. - (EN, VR, RB).

**F. mongolica** (V.M. Vinogr. & Kamelin) V.M. Vinogr. & Kamelin, 1990, Novosti Syst. Vyssh. Rast. 27: 118. - *F. songarica* subsp. *mongolica* V. Vinogr. & Kamelin, 1976, Novosti Syst. Vyssh. Rast. 23: 101. - [ 3, 7, 10, 14, 15 ]. - Subendemic. - Described from Mongolian Altai phytogeographical region (LE).

**F. potaninii** Korovin ex Pavlov, 1935, Fl. Tsentr. Kazak. 2: 532. - [ 14 (Argalant uul), (Vinogradova 1994; Urgamal 2009) ].

**Ferulopsis hystrix** (Bunge ex Ledeb.) Pimenov, 1991, Bot. Zhurn. (Moscow & Leningrad) 76: 1391. - *Peucedanum hystrix* Bunge ex Ledeb. 1835, Verz. Suppl. Fl. Alt. 23. - [ 2, 3, 4, 6, 7, 8, 9+ (Urgamal 2009, 2013), 10, 11, 13, 15 ]. - Subendemic.

**Hansenia mongholicum** Turcz. 1844, Bull. Soc. Imp. Nat. Moscou 17: 754. - *Ligusticum mongholicum* Krylov, 1935, Fl. Zapadnoi Sibiri viii. 2014. - [ 1, 2 ]. - Subendemic. Described from Mongolian Altai phytogeographical region (LE).

**Heracleum dissectum** Ledeb. 1829, Fl. Altaic. 1: 301. - [ 1, 2, 3, 4, 5, 6, 7, 9, 10, 11+ (Urgamal 2013), 13 ].

**H. sibiricum** L. 1753, Sp. Pl. 1: 249. - [ 1+, 2+ (Urgamal 2004, 2009), 3, 9, 13 ].

# **Libanotis abolinii** (Korovin) Korovin, 1963, Fl. Kazakhstana 6: 351. - *Phlojodicarpus abolinii* Korovin, 1924, Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR 5: 74. - *Seseli abolinii* (Korovin) Schischk. 1950, Fl. URSS 16: 505. - [ 7, 10, 11+ (Urgamal 2009, 2013), 13 ].

# **L. buchtormensis** (Fisch.) DC. 1829, Coll. Mem. 5: 3. - *Bubon buchtormensis* Fisch. 1815, Pl. Min. Cogn. Pug. 2: 55. - *Seseli buchtormense* (Fisch.) W.D.J. Koch, 1824, Nov.

Actorum Acad. Caes. Leop.-Carol. German. Nat. Cur. 12(1): 110-111. - [7, 14 (Urgamal 2013)].

# **L. condensata (L.) Crantz 1767**, Class. Umbell. Emend. 105-106. - *Athamanta condensata* L. 1753, Sp. Pl. 2: 1195. - *Seseli condensatum* (L.) Rchb. 1867, Icon. Fl. Germ. Helv. 21: 37. - [1, 2, 3, 6, 7, 8, 10, 14+ (Urgamal 2013)].

# **L. eriocarpa Schrenk, 1843**, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.-Petersbourg 2: 195. - *Seseli eriocarpum* (Schrenk) B. Fedtsch. 1915, Rastitelnost turkestana 617. - [7, 10, 14].

# **L. grubovii (V.M. Vinogr. & Sanczir) M.L. Sheh & M.F. Watson, 2004**, Acta Phytotax. Sin. 42(6): 563. - *Seseli grubovii* V.M. Vinogr. & Sanczir, 1985, Bot. Zhurn. (Moscow & Leningrad) 70(7): 965. - [7, 13, 14, 15]. - **Subendemic**.

# **L. seseloides (Fisch. & C.A. Mey. ex Turcz.) Turcz. 1844**, Bull. Soc. Imp. Nat. Moscou 17: 725. - *Seseli seseloides* (Fisch. & C.A. Mey. ex Turcz.) Hiroe, 1958, Umbelliferae Asia 1: 135. - *Ligusticum seseloides* Fisch. & C.A. Mey. ex Turcz. 1838, Bull. Soc. Imp. Nat. Moscou 11: 530. - [1+ (Urgamal 2013), 2, 3, 4, 5, 6, 7, 9+ (Urgamal 2013)].

**Lithosciadium kamelinii (V.M. Vinogr.) Pimenov, 1996**, Conspp. Fl. Outer Mongolia (vasc. pl.) 79. - *Cnidium kamelinii* V.M. Vinogr. 1988, Novosti Syst. Vyssh. Rast. 25: 122. - [7 (Bulgan, Ulajstain gol), (Vinogradova 1994; Urgamal 2013)]. - **Subendemic**. Described from Mongolian Altai phytogeographical region (LE).

**L. multicaule Turcz. 1844**, Bull. Soc. Imp. Nat. Moscou 17: 731. - *Cnidium multicaule* (Turcz.) Ledeb. 1844, Fl. Ross. 2: 284. - [1, 3, 4, 6, 7, 13].

**Oenanthe aquatica (L.) Poir. 1798**, Encycl. 4(2): 530. - *Phellandrium aquaticum* L. 1753, Sp. Pl. 1: 255. - *Oenanthe decumbens* auct. Fl. Mong., non (Thunb.) Koso-Pol. - [10 (Chono Kharaikhiin gol), (Urgamal 2009, 2013)].

+ **Oe. javanica (Blume) DC. 1830**, Prodr. 4: 138. - *Sium javanicum* Blume, 1826, Bijdr. Fl. Ned. Ind. 15: 881. - *Oenanthe decumbens* Koso-Pol. 1915, Bull. Soc. Imp. Nat. Moscou 29: 130. - [10+ (Chono Kharaikhiin gol), (Gubanov 1999; Urgamal 2013)]. - **(R)**.

**Pachypleurum alpinum Ledeb. 1829**, Fl. Altaic. 1: 297. - [1, 2, 3, 4+ (Neuffer et al. 2012), 6, 7, 13+ (Neuffer et al. 2012), 14+ (Urgamal 2009)].

**Paraligisticum discolor (Ledeb.) V.N. Tikhom. 1973**, Bull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 78(1): 107. - *Ligusticum discolor* Ledeb. 1829, Fl. Altaic. 1: 321-322. - [7 (Dayan nuur), (Vinogradova 1994; Chubarov 2004; Urgamal 2009)].

+ **Pastinaca sativa L. 1753**, Sp. Pl. 1: 262. - [3+, 4+ (Urgamal 2009, 2013)].

# **Peucedanum baicalense (Redowsky ex Willd.) Koch, 1824**, Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 12(1): 94. - *Selinum baicalense* Redowsky ex Willd. 1809, Enumeratio Pl. 1: 306. - *Kitagawia baicalensis* (Redowsky ex Willd.) Pimenov, 1986, Bot. Zhurn. (Moscow & Leningrad) 71(7): 944. - [1, 2, 3, 4, 5, 6, 7+ (Urgamal 2013), 8, 10].

**P. falcaria Turcz. 1832**, Bull. Soc. Imp. Nat. Moscou 5: 192. - [1+, 3, 4+ (Urgamal 2009), 6, 7, 8, 10, 11, 13, 14, 15, 16+ (Urgamal 2013)]. - **Subendemic**. Described from North Mongolia (KW).

**P. puberulum (Turcz.) Schischk.** 1951, Fl. URSS, 17: 186. - *Peucedanum vaginatum* var. *puberulum* Turcz. 1844, Fl. Baic.-Dahur. 1: 504. - [ 2, 3, 6, 8, 13 ]. - Subendemic.

# **P. terebinthaceum (Fisch. ex Trevir.) Ledeb.** 1844, Bull. Soc. Imp. Nat. Moscou 17(4): 743. - *Selinum terebinthaceum* Fisch. ex Trevir. 1821, Ind. Sem. Hort. Vratisl. Append. 3: 3. - *Kitagawia terebinthacea* (Fisch. ex Trevir.) Pimenov, 1986, Bot. Zhurn. (Moscow & Leningrad) 71(7): 944. - [ 2, 4, 5, 9 ]. - (R).

**P. vaginatum Ledeb.** 1829, Fl. Altaic. 1: 312. - [ 1, 2, 3, 4, 6, 7, 8+, 11+, 13+ (Urgamal 2009) ].

**Phlojodicarpus sibiricus (Stephan ex Fischer) Koso-Pol.** 1922, Spisok Rast. Gerb. Russk. Fl. Bot. Muz. Rossijsk. Akad. Nauk 8: 117. - *Cachrys sibirica* Stephan ex Fischer, 1825, Syst. Veg. 1: 892. - [ 1, 2, 3, 4, 7+ (Urgamal 2009), 8, 9, 13+ (Urgamal 2013) ].

**Ph. villosus (Turcz. ex Fisch. & C.A. Mey.) Ledeb.** 1844, Fl. Ross. 2: 331. - *Libanotis villosa* Turcz. ex Fisch. & C.A. Mey. 1835, Index Sem. (St.-Petersburg) 1: 31. - [ 1, 2, 3, 6 ].

**Pimpinella thehungiana H. Wolff,** 1927, Pflanzenr. 4, 228(90): 304. - [ 4, 5, 9 ].

**Pleurospermum uralense Hoffm.** 1814, Gen. Pl. Umbell. 9. - [ 1, 2, 3, 4, 5+ (Urgamal 2009), 6, 8, 9 ].

**Prangos ledebourii Herrnst. & Heyn,** 1977, Boissiera 26: 68. - *Cachrys macrocarpa* Ledeb. 1829, Fl. Altaic. 1: 364-366. - [ 7, 14 ].

# **Sajania monstrosa Pimenov,** 1974, Bull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. 79(3): 11. - *Sajanella monstrosa* (Willd.ex Spreng.) Sojak, 1980, Cas. Nar. Muz. Prague, 148, 3-4: 209. - *Libanotis monstrosa* DC. 1829, Coll. Mem. 5: 48. - [ 2 (Onon gol), (Urgamal 2013) ]. - Subendemic. - (R, RB).

**Saposhnikovia divaricata (Turcz.) Schischkin,** 1951, Fl. URSS 17: 54. - *Stenocoelium divaricatum* Turcz. 1834, Bull. Soc. Imp. Nat. Moscou 17: 734. - [ 2, 3, 4, 5, 6, 8+ (Urgamal 2009), 9 ]. - (R, RB).

**Schultzia crinita (Pall.) Spreng.** 1813, Neue Schriften Naturf. Ges. Halle 2(1): 30. - *Sison crinitum* Pall. 1779, Acta Acad. Sci. Imp. Petrop. 2: 250. - [ 1, 2, 3, 4+ (Neuffer et al. 2012), 6, 7 ].

**Seseli glabratum Willd. ex Schult.** 1820, Syst. Veg. 6: 406. - [ 7 (Yamaat uul), (Vinogradova 1994) ].

**S. mucronatum (Schrenk ex Fisch. & C.A. Mey.) Pimenov & Sdobnina,** 1973, Bull. Moskovsk. Obac. Isp. Prir. Otd. Biol. 78(4): 139. - *Neogaya mucronata* Schrenk ex Fisch. & C.A. Mey. 1842, Enum. Pl. Nov. 2: 40. - *Ligusticum mucronatum* (Schrenk ex Fisch. & C.A. Mey.) Leute, 1970, Ann. Naturhist. Mus. Wien 74: 473. - [ 14 (Baitag Bogd and Khavtaga uul), (Vinogradova 1994; Urgamal 2009) ].

**Sium suave Walt.** 1788, Fl. Carol. 115. - [ 1, 2, 3, 4, 5, 6, 7, 8, 9+ (Pistrick et al. 2012), 10, 14+ (Urgamal, 2012) ].

**Sphallerocarpus gracilis (Bess. ex Trev.) Koso-Pol.** 1915, Bull. Soc. Imp. Nat. Moscou 29: 202. - *Chaerophyllum gracile* Besser ex Trevir. 1826, Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 13(1): 172. - [ 1, 2, 3, 4, 6+ (Urgamal 2009), 7, 8, 9, 10, 11, 12, 13 ].

**Stenocoelium athamantoides (M. Bieb.) Ledeb.** 1829, Fl. Altaic. 1: 298-299. - *Cachrys athamantoides* M. Bieb. 1829, Fl. Taur.-Caucas. 3: 217. - [ 6, 7 (Vinogradova 1994; Urgamal 2009) ]. - **Subendemic. - (R).**

**Notes:** The cultivated plants followed in the Apiaceae family: *Conium maculatum* L., *Daucus carota* L., *Foeniculum vulgare* Mill., *Petroselinum crispum* (Mill.) Hyman. ex A.W. Hill. (Vinogradova 1994; Gubanov 1996, 1999; Urgamal 2009, 2013; Urgamal *et al.* 2013).

## APPENDIX I.

ADDITIONS TO THE VASCULAR PLANT FLORA OF MONGOLIA COMPARED  
TO GUBANOV (1996)

No.	Species	Family	Phytogeographical region
1	<i>Achillea millefolium</i> L. 1753	Asteraceae	1,2,3,4,7
2	<i>Achillea ptarmicoides</i> Maxim. 1859	Asteraceae	2,4,8,9,10
3	<i>Achillea sergievskiana</i> Schaulo et Schmakov 2002	Asteraceae	7
4	<i>Aconitum birobidshanicum</i> Vorosch. 1943	Ranunculaceae	9
5	<i>Aconitum kamelinii</i> Solovjev 1998	Ranunculaceae	3,13
6	<i>Aconitum khanminthunii</i> Solovjev & Shmakov 1999	Ranunculaceae	6,7
7	<i>Aconitum macrorhynchum</i> Turcz. ex Ledeb. 1842	Ranunculaceae	4(?)
8	<i>Aconitum nemorum</i> Popov 1935	Ranunculaceae	7
9	<i>Aconitum ranunculoides</i> Turcz. 1842	Ranunculaceae	4(?)
10	<i>Aconitum rubicundum</i> Fisch. ex Steud. 1840	Ranunculaceae	1(?)
11	<i>Adenophora liliifolia</i> (L.) A. DC. 1830	Campanulaceae	2,6,8
12	<i>Agrostis tuvinica</i> Peschkova 1990	Poaceae	1,2
13	<i>Alhagi sparsifolia</i> Shap. ex Keller & Shap. 1933	Fabaceae	14,15
14	<i>Allium carolinianum</i> DC. 1804	Amaryllidaceae	14
15	<i>Allium pallasii</i> Murr. 1775	Amaryllidaceae	14
16	<i>Allium rubens</i> Schrad. ex Willd. 1809	Amaryllidaceae	6,7,14
17	<i>Allium spirale</i> Willd. 1814	Amaryllidaceae	1,4,9
18	<i>Alyssum linifolium</i> Stephan ex Willd. 1800	Brassicaceae	3,7
19	<i>Amygdalus pedunculata</i> Pall. 1789	Rosaceae	2,3,4,6-13,16
20	<i>Androsace chamaejasme</i> var. <i>carinata</i> (Torr.) R. Knuth 1905	Primulaceae	1,2,3,6,7,9
21	<i>Androsace septentrionalis</i> var. <i>breviscapa</i> Krylov 1904	Primulaceae	7,14
22	<i>Anethum graveolens</i> L. 1753	Apiaceae	3,4,13
23	<i>Angelica saxatilis</i> Turcz. ex Ledeb. 1844	Apiaceae	2
24	<i>Anoplocaryum tenellum</i> A.L. Ebel et Rudaya 2002	Boraginaceae	7
25	<i>Apium graveolens</i> L. 1753	Apiaceae	2,3,4
26	<i>Arabis amplexicaulis</i> Edgew. 1851	Brassicaceae	5
27	<i>Arctostaphylos uva-ursi</i> (L.) Spreng. 1825	Ericaceae	2
28	<i>Arenaria serpyllifolia</i> subsp. <i>leptoclados</i> (Rchb.) Nyman 1878	Caryophyllaceae	7
29	<i>Artemisia brachyphylla</i> Kitam. 1936	Asteraceae	5
30	<i>Artemisia dahurica</i> (Turcz.) Poljakov 1955	Asteraceae	4
31	<i>Artemisia eriopoda</i> Bunge 1831	Asteraceae	16
32	<i>Artemisia gobica</i> (Krasch.) Grubov 1955	Asteraceae	3,4,6-16
33	<i>Artemisia implicata</i> Leonova 1980	Asteraceae	16
34	<i>Artemisia rutifolia</i> var. <i>altaica</i> (Krylov) Krasch. 1949	Asteraceae	7
35	<i>Artemisia succulenta</i> Ledeb. 1833	Asteraceae	7
36	<i>Artemisia vestita</i> Wall. ex Besser 1834	Asteraceae	13
37	<i>Asparagus burjaticus</i> Peschkova 1974	Asparagaceae	4
38	<i>Asparagus neglectus</i> Kar. & Kir. 1841	Asparagaceae	14
39	<i>Astragalus aksaicus</i> Schischk. 1932	Fabaceae	7

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

40	<i>Astragalus albertii</i> Bunge 1880	Fabaceae	10,11
41	<i>Astragalus arcuatus</i> Kar. & Kir. 1841	Fabaceae	14
42	<i>Astragalus chorinensis</i> Bunge 1868	Fabaceae	2,3,4
43	<i>Astragalus consanguineus</i> Bong. 1841	Fabaceae	10
44	<i>Astragalus grum-grshimailoi</i> Palib. 1908	Fabaceae	7
45	<i>Astragalus hamiensis</i> S.B. Ho 1983	Fabaceae	14
46	<i>Astragalus laxmannii</i> Jacq. 1776	Fabaceae	7,10,14
47	<i>Astragalus ochrias</i> Bunge 1877	Fabaceae	12,14,15,16
48	<i>Astragalus ortholobus</i> Bunge 1868	Fabaceae	7
49	<i>Astragalus oxyglottis</i> Steven ex M. Bieb. 1808	Fabaceae	7,14
50	<i>Astragalus peterae</i> H.T. Tsai & T.T. Yu 1936	Fabaceae	6,10
51	<i>Astragalus pseudoborodinii</i> S.B. Ho 1983	Fabaceae	14
52	<i>Astragalus roseus</i> Ledeb. 1831	Fabaceae	7,14
53	<i>Astragalus schrenkianus</i> Fisch. & C.A. Mey. 1844	Fabaceae	7
54	<i>Astragalus scleropodius</i> Ledeb. 1831	Fabaceae	7
55	<i>Astragalus tephrolobus</i> Bunge 1868	Fabaceae	7
56	<i>Astragalus tulinovii</i> B. Fedtsch. 1903	Fabaceae	7
57	<i>Astragalus xanthotrichus</i> Ledeb. 1831	Fabaceae	7
58	<i>Astragalus yumenensis</i> S.B. Ho 1994	Fabaceae	14,15
59	<i>Astragalus zacharensis</i> Bunge 1968	Fabaceae	9
60	<i>Atriplex altaica</i> Sukhor. 2000	Amaranthaceae	7
61	<i>Avena sativa</i> L. 1753	Poaceae	2,3,4,9,11,12
62	<i>Berteroia incana</i> (L.) DC. 1821	Brassicaceae	2,4
63	<i>Boschniakia rossica</i> (Cham. & Schlecht.) B. Fedtsch. 1910	Orobanchaceae	2
64	<i>Bupleurum longiinvolutratum</i> Krylov 1903	Apiaceae	7
65	<i>Bupleurum pusillum</i> Krylov 1903	Apiaceae	1,2,3,6,7,13
66	<i>Calamagrostis angustifolia</i> subsp. <i>tenuis</i> (V.N.Vassil.) Tzvelev, 1965	Poaceae	4
67	<i>Calamagrostis inexpansa</i> subsp. <i>micrantha</i> (Kearney) Stebbins 1930	Poaceae	2
68	<i>Calamagrostis kuznetzovii</i> Tzvelev 1965	Poaceae	2
69	<i>Callianthemum angustifolium</i> Witasek 1899	Ranunculaceae	7
70	<i>Campanula punctata</i> Lam. 1785	Campanulaceae	9
71	<i>Capsella orientalis</i> Klokov 1922	Brassicaceae	7
72	<i>Caragana davazamicii</i> Sanczir 1974	Fabaceae	9,11-13,16
73	<i>Cardamine impatiens</i> L. 1753	Brassicaceae	6
74	<i>Carex chordorrhiza</i> Ehrh. ex L. f. 1781	Cyperaceae	2
75	<i>Carex lasiocarpa</i> Ehrh. 1784	Cyperaceae	2
76	<i>Carex limosa</i> L. 1753	Cyperaceae	2
77	<i>Carex magellanica</i> subsp. <i>irrigua</i> (Wahlenb.) Hiit. 1933	Cyperaceae	2,3
78	<i>Carex praecox</i> Schreb. 1771	Cyperaceae	2,4
79	<i>Carex raddei</i> Kuk. 1899	Cyperaceae	2
80	<i>Cassiope ericoides</i> (Pall.) D. Don. 1834	Ericaceae	4
81	<i>Cerastium maximum</i> L. 1753	Caryophyllaceae	13
82	<i>Ceratocephala testiculata</i> (Crantz) Roth 1827	Ranunculaceae	7
83	<i>Chenopodium gubanovii</i> Sukhor. 1999	Amaranthaceae	10,14
84	<i>Chenopodium novopokrovskyanum</i> (Aellen) Uotila 1993	Amaranthaceae	7

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

85	<i>Chrysanthemum trilobatum</i> (Poljakov ex Poljakov) H.Ohashi & Yonek. 2004	Asteraceae	12,13
86	<i>Cinna latifolia</i> (Trev.) Griseb. 1852	Poaceae	2,3,4
87	<i>Cistanche feddeana</i> K.S. Hao 1934	Orobanchaceae	13,16
88	<i>Clematis macropetala</i> Ledeb. 1829	Ranunculaceae	9
89	<i>Comarum salesovianum</i> (Stephan) Asch. & Graebn. 1904	Rosaceae	6,7,10,13,14
90	<i>Coriandrum sativum</i> L. 1753	Apiaceae	4
91	<i>Corydalis sajanensis</i> Peschkova 1990	Papaveraceae	4
92	<i>Corydalis schanginii</i> (Pall.) B. Fedtsch. 1904	Papaveraceae	7,14
93	<i>Craniospermum subfloccosum</i> Krylov 1903	Boraginaceae	7
94	<i>Craniospermum subvillosum</i> Lehm. 1818	Boraginaceae	14
95	<i>Crepis lomonosovae</i> Tzvelev 2007	Asteraceae	3,13
96	<i>Crepis lyrata</i> (L.) Froel. 1838	Asteraceae	1(?)7
97	<i>Cynanchum bungei</i> Decne. 1844	Apocynaceae	9(?)
98	<i>Cynanchum mongolicum</i> (Maxim.) Kom. 1920	Apocynaceae	16
99	<i>Cypripedium ventricosum</i> Sw. 1800	Orchidaceae	2
100	<i>Cystopteris sudetica</i> A. Braun & Milde 1855	Cystopteridaceae	2
101	<i>Dactylis glomerata</i> L. 1753	Poaceae	3,4
102	<i>Delphinium malyschevii</i> N. Friesen 1990	Ranunculaceae	1
103	<i>Dendranthema nakdongense</i> (Nakai) Tzvelev 1959	Asteraceae	9
104	<i>Diarthron altaicum</i> (Pers.) Kit Tan 1982	Thymelaeaceae	7
105	<i>Dontostemon dentatus</i> (Bunge) Ledeb. 1842	Brassicaceae	5
106	<i>Dontostemon senilis</i> subsp. <i>gubanovii</i> D.A. German 2007	Brassicaceae	6,7,10
107	<i>Draba czuensis</i> Rebuschkin & A.L. Ebel 1998	Brassicaceae	3,6,7,10
108	<i>Draba lanceolata</i> Royel 1839	Brassicaceae	1-4,6,7,13
109	<i>Draba stenocarpa</i> Hook. f. & Thomson 1861	Brassicaceae	7
110	<i>Dracocephalum nodulosum</i> Rupr. 1869	Lamiaceae	14
111	<i>Dracocephalum olchonense</i> Peschkova 1997	Lamiaceae	4
112	<i>Dracocephalum origanoides</i> subsp. <i>bungeanum</i> (Schischk. & Serg.) A.L. Budantsev 1987	Lamiaceae	1,6,7,13
113	<i>Dracocephalum pinnatum</i> L. 1753	Lamiaceae	6
114	<i>Dryopteris expansa</i> (C. Presl) Fraser-Jenk. & Jermy 1977	Dryopteridaceae	2,5
115	<i>Elymus karakabinicus</i> Kotukhov 1992	Poaceae	7
116	<i>Elymus kronokensis</i> (Kom.) Tzvelev 1968	Poaceae	4
117	<i>Empetrum nigrum</i> L. 1753	Ericaceae	1,2,3,4
118	<i>Empetrum nigrum</i> subsp. <i>sibiricum</i> (V.N. Vassil.) Kuvaev 1996	Ericaceae	1,2,3,4,6,7
119	<i>Epilobium alpinum</i> L. 1753	Onagraceae	7
120	<i>Epilobium ciliatum</i> Raf. 1808	Onagraceae	2
121	<i>Eremogone androsacea</i> (Grubov) Ikonn. 1973	Caryophyllaceae	13
122	<i>Eremogone mongholica</i> (Schischk.) Ikonn. 1973	Caryophyllaceae	7
123	<i>Erigeron altaicus</i> Popov 1940	Asteraceae	7,14
124	<i>Erigeron elongatus</i> Ledeb. 1833	Asteraceae	1,-4,6,7,13
125	<i>Erigeron krylovii</i> Serg. 1945	Asteraceae	3,7
126	<i>Eritrichium alpinum</i> Ovczinnikova 1999	Boraginaceae	6(?)
127	<i>Eritrichium kamelinii</i> Ovczinnikova 1999	Boraginaceae	7
128	<i>Eritrichium sajanense</i> Sipliv. 1975	Boraginaceae	1(?)

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

129	<i>Erysimum flavum</i> subsp. <i>altaicum</i> (C.A. Mey.) Polozh. 1979	Brassicaceae	3,6,7,10
130	<i>Erysimum ledebourii</i> (C.A. Mey.) D.A. German 2004	Brassicaceae	7
131	<i>Erysimum mongolicum</i> D.A. German 2005	Brassicaceae	7,14
132	<i>Erysimum quadrangulum</i> (L'Her.) Desf. 1804	Brassicaceae	7
133	<i>Erysimum vassilczenkoi</i> Polatschek 1994	Brassicaceae	7,14
134	<i>Erysimum virgatum</i> Roth 1797	Brassicaceae	7
135	<i>Erythronium sibiricum</i> (Fisch. & C.A. Mey.) Krylov 1929	Liliaceae	7
136	<i>Euphorbia caesia</i> Kar. & Kir. 1841	Euphorbiaceae	7
137	<i>Euphorbia macrorrhiza</i> C.A. Mey. 1830	Euphorbiaceae	6,7
138	<i>Euphorbia pachyrrhiza</i> Kar. & Kir. 1841	Euphorbiaceae	7 (?)
139	<i>Euphorbia pilosa</i> L. 1753	Euphorbiaceae	7 (?)
140	<i>Euphorbia soongarica</i> Boiss. 1860	Euphorbiaceae	7
141	<i>Euphrasia altaica</i> Serg. 1935	Orobanchaceae	7
142	<i>Euphrasia schischkinii</i> Serg. 1935	Orobanchaceae	7
143	<i>Eutrema heterophyllum</i> (W.W. Sm.) H. Hara 1973	Brassicaceae	7
144	<i>Ferula caspica</i> M. Bieb. 1808	Apiaceae	7,14
145	<i>Festuca jacutica</i> Drobov 1935	Poaceae	4,9
146	<i>Festuca pseudosulcata</i> Drobov 1915	Poaceae	4
147	<i>Fritillaria dagana</i> Turcz. 1834	Liliaceae	1,2
148	<i>Gagea brevistolonifera</i> Levichev 1982	Liliaceae	7
149	<i>Gagea kuraiensis</i> Levichev 2001	Liliaceae	7
150	<i>Galatella altaica</i> Tzvelev 1959	Asteraceae	7,14
151	<i>Galatella angustissima</i> (Tausch.) Nokopokr. 1948	Asteraceae	1
152	<i>Galatella hauptii</i> (Ledeb.) Lindl. ex DC. 1836	Asteraceae	7
153	<i>Galium davuricum</i> Turcz. ex Ledeb.	Rubiaceae	2
154	<i>Galium verum</i> subsp. <i>wirtgenii</i> (F.W. Schultz) Oborny 1885	Rubiaceae	7
155	<i>Gentianella atrata</i> Holub 1967	Gentianaceae	5
156	<i>Gentianella aurea</i> (L.) Harry Sm. ex Hyl. 1945	Gentianaceae	7
157	<i>Geranium krylovii</i> Tzvelev 1993	Geraniaceae	2
158	<i>Geum rivale</i> L. 1753	Rosaceae	7
159	<i>Glaucium elegans</i> Fisch. & C.A. Mey. 1835	Papaveraceae	14
160	<i>Glycyrrhiza alaschanica</i> Grankina 2001	Fabaceae	12,15,16
161	<i>Glycyrrhiza gobica</i> Grankina 2001	Fabaceae	12,13,15,16
162	<i>Glycyrrhiza soongorica</i> Grankina 2001	Fabaceae	2-4,8,9,12,15,16
163	<i>Gnaphalium uliginosum</i> L. 1753	Asteraceae	7,10
164	<i>Goldbachia pendula</i> Botsch. 1963	Brassicaceae	7,14
165	<i>Gypsophila altissima</i> L. 1753	Caryophyllaceae	7
166	<i>Halostachys caspica</i> C.A. Mey. 1843	Amaranthaceae	14,15
167	<i>Hedysarum austrosibiricum</i> B. Fedtsch. 1949	Fabaceae	3,6,7
168	<i>Hedysarum brachypterum</i> Bunge 1835	Fabaceae	2,9
169	<i>Hedysarum chalchorum</i> N. Ulzij. 1989	Fabaceae	3,4,8
170	<i>Hedysarum consanguineum</i> DC. 1825	Fabaceae	7
171	<i>Hedysarum gmelini</i> Ledeb. 1838	Fabaceae	1-4,6,7,9,10,13
172	<i>Hedysarum iliense</i> B. Fedtsch. 1937	Fabaceae	7
173	<i>Hedysarum linczevskyi</i> Bajtenov 1956	Fabaceae	7,13

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

174	<i>Hedysarum theinum</i> Krasnob. 1985	Fabaceae	7
175	<i>Herniaria caucasica</i> Rupr. 1869	Caryophyllaceae	7
176	<i>Heteropappus medius</i> Tamamsch. 1959	Asteraceae	3,4,5,8,9
177	<i>Hieracium dublizkii</i> B. Fedtsch. & Nevski 1933	Asteraceae	7
178	<i>Hieracium robustum</i> Fr. 1848	Asteraceae	8,9
179	<i>Hieracium sershukense</i> Uksip. 1959	Asteraceae	7
180	<i>Hippophae rhamnoides</i> subsp. <i>turkestanica</i> Rousi 1971	Elaeagnaceae	14
181	<i>Hololeion maximowiczii</i> Kitam. 1941	Asteraceae	9
182	<i>Hordeum vulgare</i> L. 1753	Poaceae	1-4,7,10-13
183	<i>Hypecoum leptocarpum</i> Hook. f. & Thomson 1855	Papaveraceae	3
184	<i>Hyssopus ambiguus</i> (Trautv.) Iljin ex Prochorov. & Lebel 1932	Lamiaceae	7
185	<i>Inula aspera</i> Poir. 1813	Asteraceae	2,3,9
186	<i>Inula japonica</i> Thunb. 1784	Asteraceae	2
187	<i>Iris ivanovae</i> Doronkin 1987	Iridaceae	2,3
188	<i>Iris kamelinii</i> Alexeeva 2006	Iridaceae	1,7
189	<i>Iris loczyi</i> Kanitz 1891	Iridaceae	7,10
190	<i>Iris ludwigii</i> Maxim. 1880	Iridaceae	7
191	<i>Iris psammocola</i> Y.T. Zhao 1992	Iridaceae	10
192	<i>Iris pseudothoroldii</i> Galanin 2009	Iridaceae	4
193	<i>Iris sibirica</i> L. 1753	Iridaceae	4,5
194	<i>Juncus filiformis</i> L. 1753	Juncaceae	7
195	<i>Juncus virens</i> Buchenau 1906	Juncaceae	4
196	<i>Jurinea multiflora</i> (L.) B. Fedtsch. 1911	Asteraceae	7,14
197	<i>Lagopsis darwiniana</i> Pyak 2007	Lamiaceae	7
198	<i>Lagopsis flava</i> Kar. & Kir. 1842	Lamiaceae	7
199	<i>Lappula anisacantha</i> (Turcz. ex Bunge) Gurke 1893	Boraginaceae	3,4,9
200	<i>Lappula heterocantha</i> (Ledeb.) Gurke 1897	Boraginaceae	7
201	<i>Lappula redowskii</i> (Hornem.) Greene 1891	Boraginaceae	1-4,8,9,11-13
202	<i>Lappula tenuis</i> (Ledeb.) Gurke 1897	Boraginaceae	14,15
203	<i>Lappula tuvinica</i> Ovczinnokova 1997	Boraginaceae	6
204	<i>Larix czeckanowskii</i> Szafran 1913	Pinaceae	4
205	<i>Lathyrus ledebourii</i> Trautv. 1875	Fabaceae	7
206	<i>Lathyrus sativus</i> L. 1753	Fabaceae	4
207	<i>Leontopodium nanum</i> (Hook. f. et Thoms.) Hand.-Mazz. 1928	Asteraceae	16(?)
208	<i>Leontopodium palibinianum</i> Beauverd 1913	Asteraceae	2,4,5
209	<i>Lepidium apetalum</i> Willd. 1800	Brassicaceae	7
210	<i>Lepidium ruderale</i> L. 1753	Brassicaceae	1-5,7,8,11,13
211	<i>Lepidium songaricum</i> Schrenk 1841	Brassicaceae	7
212	<i>Leymus ordensis</i> Peschkova 1985	Poaceae	15
213	<i>Leymus secalinus</i> var. <i>mongolicus</i> (Meld.) Tzvelev, 1968	Poaceae	10
214	<i>Ligularia glauca</i> O. Hoffm. 1892	Asteraceae	7
215	<i>Ligularia hodgsonii</i> Hook. 1863	Asteraceae	5,9
216	<i>Ligularia mongolica</i> (Turcz.) DC. 1837	Asteraceae	5,9
217	<i>Ligularia przewalskii</i> (Maxim.) Diels 1901	Asteraceae	9,12
218	<i>Ligularia thomsonii</i> (C.B. Clarke) Pojark. 1949	Asteraceae	14

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

219	<i>Linum perenne</i> L. 1753	Linaceae	7,14
220	<i>Linum violascens</i> Bunge 1829	Linaceae	7
221	<i>Litwinowia tenuissima</i> (Pall.) Woronow ex Pavlov 1935	Brassicaceae	14
222	<i>Lonicera caerulea</i> L. 1753	Caprifoliaceae	6
223	<i>Lonicera tatarica</i> L. 1753	Caprifoliaceae	4
224	<i>Lotus corniculatus</i> L. 1753	Fabaceae	2,4
225	<i>Lychnis fulgens</i> Fisch. 1818	Caryophyllaceae	5
226	<i>Lythrum salicaria</i> L. 1753	Lythraceae	4
227	<i>Lythrum virgatum</i> L. 1753	Lythraceae	6,14
228	<i>Maianthemum trifolium</i> (L.) Sloboda 1852	Asparagaceae	2
229	<i>Matteuccia struthiopteris</i> (L.) Todaro 1866	Onocleaceae	2,4
230	<i>Mazus stachydifolius</i> (Turcz.) Maxim. 1875	Phrymaceae	5
231	<i>Melica transsilvanica</i> Schur 1866	Poaceae	7
232	<i>Mentha aquatica</i> L. 1753	Lamiaceae	4
233	<i>Mentha canadensis</i> L. 1753	Lamiaceae	2
234	<i>Mertensia pallasii</i> (Ledeb.) G. Don 1837	Boraginaceae	7
235	<i>Mertensia tarbagataica</i> B. Fedtsch. 1915	Boraginaceae	7
236	<i>Milium effusum</i> L. 1753	Poaceae	2
237	<i>Myosotis austrosibirica</i> O.D. Nikif. 1997	Boraginaceae	7,13
238	<i>Myosotis caespitosa</i> Schultz 1819	Boraginaceae	2-5,9,10,14
239	<i>Myosotis scorpioides</i> L. 1753	Boraginaceae	2
240	<i>Myosotis stricta</i> Link ex Roem. & Schult. 1819	Boraginaceae	7
241	<i>Nanophyton erinaceum</i> (Pall.) Bunge 1862	Amaranthaceae	10,14
242	<i>Neotorularia brevipes</i> (Kar. & Kir.) Hedge & J. Leonard 1986	Brassicaceae	7,14
243	<i>Noccaea ferganensis</i> (N. Busch) Czerep. 1981	Brassicaceae	7
244	<i>Nonea rossica</i> Steven 1851	Boraginaceae	3
245	<i>Oenanthe javanica</i> (Blume) DC. 1830	Apiaceae	10
246	<i>Olimarabidopsis pumila</i> (Stephan) Al-Shehbaz, O'Kane & R.A. Price 1999	Brassicaceae	14
247	<i>Onobrychis arenaria</i> (Kit.) DC. 1825	Fabaceae	2,3,4,8
248	<i>Onoclea sensibilis</i> L. 1753	Onocleaceae	2
249	<i>Onosma setosa</i> Ledeb. 1810	Boraginaceae	7
250	<i>Ornithopus perpusillus</i> L. 1753	Fabaceae	4
251	<i>Oxytropis alpestris</i> Schischk. 1932	Fabaceae	7
252	<i>Oxytropis glandulosa</i> Turcz. 1842	Fabaceae	1,3
253	<i>Oxytropis hirta</i> Bunge 1835	Fabaceae	5
254	<i>Oxytropis latibracteata</i> Jurtz. 1959	Fabaceae	3
255	<i>Oxytropis physocarpa</i> Ledeb. 1831	Fabaceae	7
256	<i>Oxytropis sulphurea</i> (DC.) Ledeb. 1831	Fabaceae	7
257	<i>Oxytropis teres</i> DC. 1802	Fabaceae	7
258	<i>Pachypterygium multicaule</i> (Kar. & Kir.) Bunge 1843	Brassicaceae	14
259	<i>Pastinaca sativa</i> L. 1753	Apiaceae	3,4
260	<i>Patrinia heterophylla</i> Bunge 1833	Caprifoliaceae	9
261	<i>Pedicularis physocalyx</i> Bunge 1841	Orobanchaceae	7
262	<i>Pedicularis wlassowiana</i> Steven 1823	Orobanchaceae	2
263	<i>Peganum multisectum</i> (Maxim.) Bobrov 1949	Nitrariaceae	14,15

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

264	<i>Perovskia abrotanoides</i> Kar. 1841	Lamiaceae	6
265	<i>Petrosimonia sibirica</i> (Pall.) Bunge 1862	Amaranthaceae	14
266	<i>Picris davurica</i> Fisch. ex Hornem. 1819	Asteraceae	1,3,4,8,9
267	<i>Pisum arvense</i> L. 1753	Fabaceae	4
268	<i>Plantago urvillei</i> Opiz. 1838	Plantaginaceae	2
269	<i>Poa attenuata</i> subsp. <i>tshuensis</i> (Serg.) Olon. 1998	Poaceae	1-4,7-13
270	<i>Poa ircutica</i> Roshev. 1922	Poaceae	4
271	<i>Poa mongolica</i> (Rendle) Keng 1957	Poaceae	5
272	<i>Poa pratensis</i> subsp. <i>pruinosa</i> (Korotky) Dickore 1995	Poaceae	2,4
273	<i>Polygonum volchovense</i> Tzvel. 1989	Polygonaceae	7
274	<i>Potentilla angustiloba</i> T.T. Yu & C.L. Li 1980	Rosaceae	7,14
275	<i>Potentilla chamaeleo</i> Sojak 1986	Rosaceae	6,7,14
276	<i>Potentilla conferta</i> var. <i>conferta</i> Kuntze 1891	Rosaceae	6,7,10,14
277	<i>Potentilla crantzii</i> (Crantz) Beck ex Fritsch 1897	Rosaceae	7
278	<i>Potentilla gobica</i> Sojak 2006	Rosaceae	7
279	<i>Potentilla hubsugulica</i> Sojak 1986	Rosaceae	1
280	<i>Potentilla jenissejensis</i> Polozh. et W. Smirn. 1975	Rosaceae	6,7,10
281	<i>Potentilla junatovii</i> Rudaya et A.L. Ebel 2002	Rosaceae	7
282	<i>Potentilla lydiae</i> Kurbatsky 1988	Rosaceae	7
283	<i>Potentilla nivea</i> subsp. <i>arenosa</i> (Turcz.) Kuvaev 2006	Rosaceae	2,3,4,6
284	<i>Potentilla pamirica</i> Th. Wolf 1915	Rosaceae	6,7,10,14
285	<i>Potentilla pamiroalaica</i> Juz. 1934	Rosaceae	14
286	<i>Potentilla stepposa</i> Sojak 1993	Rosaceae	7,10
287	<i>Potentilla strigosa</i> Pall. ex Pursh 1814	Rosaceae	12
288	<i>Potentilla subdigitata</i> T.T. Yu & C.L. Li 1980	Rosaceae	7
289	<i>Potentilla supina</i> var. <i>supina</i>	Rosaceae	4,5
290	<i>Potentilla virgata</i> var. <i>pinnatifida</i> (Lehm.) T.T. Yu & C.L. Li 1985	Rosaceae	7
291	<i>Pyrethrum pulchellum</i> Turcz. ex Ledeb. 1838	Asteraceae	7
292	<i>Pyrethrum pyrethroides</i> (Kar. & Kir.) B. Fedtsch. ex Krasch. 1933	Asteraceae	7
293	<i>Pyrola minor</i> L. 1753	Ericaceae	2
294	<i>Ranunculus arschantynicus</i> Kamelin, Schmakov et S. Smirnov 2004	Ranunculaceae	7,14
295	<i>Ranunculus polyanthemos</i> L. 1753	Ranunculaceae	6
296	<i>Ranunculus pulchellus</i> C.A. Mey. 1830	Ranunculaceae	1-4,6-10,13
297	<i>Ranunculus rigescens</i> Turcz. ex Ovcz. 1937	Ranunculaceae	14
298	<i>Ranunculus sapozhnikovii</i> Schegoleva 2006	Ranunculaceae	7
299	<i>Ranunculus tuvinicus</i> A. Erst 2007	Ranunculaceae	7
300	<i>Rhamnus davurica</i> Pall. 1776	Rhamnaceae	2,4
301	<i>Rheum uninerve</i> Maxim. 1880	Polygonaceae	13
302	<i>Rhinanthus serotinus</i> Oborny. 1886	Orobanchaceae	2
303	<i>Rhodiola coccinea</i> (Royle) Boriss. 1939	Crassulaceae	7
304	<i>Rhodiola subpinnata</i> (Krasnob.) Krasnob. 2002	Crassulaceae	1,7
305	<i>Roemeria refracta</i> DC. 1821	Papaveraceae	3,14
306	<i>Rosa xanthina</i> Lindl. 1820	Rosaceae	9
307	<i>Rubus chamaemorus</i> L. 1753	Rosaceae	2
308	<i>Salicornia altaica</i> Lomon. 2005	Amaranthaceae	7

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

309	<i>Salsola foliosa</i> (L.) Schrad. ex Schult. 1820	Amaranthaceae	14
310	<i>Salsola jacquemontii</i> Moq. 1849	Amaranthaceae	8,13
311	<i>Sambucus williamsii</i> Hance 1866	Adoxaceae	5
312	<i>Saussurea elata</i> Ledeb. 1829	Asteraceae	7
313	<i>Saussurea krasnobarovii</i> S. Smirnov 2004	Asteraceae	1
314	<i>Saussurea purpurata</i> (Fisch. ex Herder) Lipsch. 1979	Asteraceae	2,4
315	<i>Saussurea squarrosa</i> Turcz. 1847	Asteraceae	1
316	<i>Scorzonera albicaulis</i> Bunge 1833	Asteraceae	1,2,4,5,9
317	<i>Scorzonera pusilla</i> Pall. 1773	Asteraceae	8,14
318	<i>Scorzonera sinensis</i> Lipsch. & Krasch. 1935	Asteraceae	9
319	<i>Scorzonera subacaulis</i> (Regel) Lipsch. 1933	Asteraceae	6
320	<i>Scrophularia umbrosa</i> Dumort. 1827	Scrophulariaceae	10
321	<i>Scutellaria altaica</i> Fisch. ex Sweet 1823	Lamiaceae	7
322	<i>Scutellaria dependens</i> Maxim. 1859	Lamiaceae	2,4
323	<i>Scutellaria sieversii</i> Bunge 1830	Lamiaceae	6,7
324	<i>Secale cereale</i> L. 1753	Poaceae	2,3
325	<i>Senecio veresczaginii</i> Schischk. & Serg. 1944	Asteraceae	7
326	<i>Seriphidium gorjaevii</i> (Poljakov) Y.R. Ling 1991	Asteraceae	14
327	<i>Serratula cardunculus</i> (Pall.) Schischk. 1949	Asteraceae	2,3,4,5,7
328	<i>Serratula kirghisorum</i> Iljin 1934	Asteraceae	7
329	<i>Setaria viridis</i> subsp. <i>weinmanii</i> (Roem. et Schult.) Tzvelev 2000	Poaceae	10
330	<i>Sibirea laevigata</i> (L.) Maxim. 1879	Rosaceae	7
331	<i>Silene foliosa</i> Maxim. 1859	Caryophyllaceae	4,12,13
332	<i>Silene intramongolica</i> Lazkov 1994	Caryophyllaceae	7
333	<i>Silene quadriloba</i> Turcz. ex Kar. & Kir. 1842	Caryophyllaceae	2,3,7,10,14
334	<i>Silene sibirica</i> (L.) Pers. 1805	Caryophyllaceae	14
335	<i>Silene sobolevskajae</i> Czerep. 1981	Caryophyllaceae	2
336	<i>Sisymbrium altissimum</i> L. 1753	Brassicaceae	2
337	<i>Sisymbrium volgense</i> M. Bieb. ex E. Fourn. 1865	Brassicaceae	4
338	<i>Solidago virgaurea</i> L. 1753	Asteraceae	7
339	<i>Sonchus brachyotus</i> DC. 1838	Asteraceae	8-10,13,14
340	<i>Spiraea dahurica</i> (Rupr.) Maxim. 1879	Rosaceae	2,4
341	<i>Stachys aspera</i> subsp. <i>baicalensis</i> (Fisch. ex Benth.) Krestovsk. 2004	Lamiaceae	2,3,4,5
342	<i>Stellaria filicaulis</i> Makino 1901	Caryophyllaceae	2,3
343	<i>Stellaria martjanovii</i> Krylov 1902	Caryophyllaceae	7
344	<i>Sterigmostemum regeliorum</i> Kamelin & D. German 2001	Brassicaceae	14
345	<i>Stipa sczerbakovii</i> Kotuch. 1998	Poaceae	7
346	<i>Stipa tianschanica</i> Roshev.. 1916	Poaceae	15
347	<i>Strigosella brevipes</i> (Bunge) Botsch. 1972	Brassicaceae	14
348	<i>Suaeda corniculata</i> subsp. <i>mongolica</i> Lomon. & Freitag 2008	Amaranthaceae	3,4,7-11
349	<i>Suaeda sibirica</i> Lomon. & Freitag 2008	Amaranthaceae	3,4,8(?),9,10
350	<i>Suaeda tschujensis</i> Lomon. & Freitag 2003	Amaranthaceae	6,7
351	<i>Suaeda tuvinica</i> Lomon. & Freitag 2008	Amaranthaceae	3,6,10
352	<i>Tanacetum crassipes</i> (Stscheegl.) Tzvelev 1961	Asteraceae	7
353	<i>Taraxacum altaicum</i> Schischk. 1949	Asteraceae	3,6,7

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

354	<i>Taraxacum armeriifolium</i> Soest 1965	Asteraceae	3-5,7,9-14,16
355	<i>Taraxacum borealisinense</i> Kitam. 1980	Asteraceae	15
356	<i>Taraxacum commixtiforme</i> Soest 1965	Asteraceae	4,8-10,13,14
357	<i>Taraxacum compactum</i> Schischk. 1949	Asteraceae	1,2
358	<i>Taraxacum erythrospermum</i> Andrz. ex Besser 1821	Asteraceae	3
359	<i>Taraxacum glaucanthum</i> (Ledeb.) DC. 1838	Asteraceae	3,4,8
360	<i>Taraxacum inimitabile</i> Kirschn. et Step. 2006	Asteraceae	13
361	<i>Taraxacum kok-saghyz</i> L.E. Rodin 1933	Asteraceae	3,7,13
362	<i>Taraxacum krasnoborovii</i> Krasnikov. 1997	Asteraceae	7
363	<i>Taraxacum krylovii</i> Krasnikov et V. Khan. 1997	Asteraceae	7
364	<i>Taraxacum linczevskii</i> Schischk. 1964	Asteraceae	7
365	<i>Taraxacum minutilobum</i> Popov ex Kovalevsk. 1962	Asteraceae	7
366	<i>Taraxacum mujense</i> Petroch. 1971	Asteraceae	1,2
367	<i>Taraxacum officinale</i> F.H. Wigg. 1780	Asteraceae	1,2,3,4
368	<i>Taraxacum parvulum</i> DC. 1838	Asteraceae	14
369	<i>Taraxacum pawlodarskum</i> R. Doll 1973	Asteraceae	7
370	<i>Taraxacum pseudoatratum</i> Orazova 1966	Asteraceae	6
371	<i>Taraxacum sangilense</i> Krasnob. & Khanm. 1984	Asteraceae	1-4,6,7
372	<i>Taraxacum smirnovii</i> Ivanova 2011	Asteraceae	7
373	<i>Taraxacum tibetanum</i> Hand-Mazz. 1907	Asteraceae	13,14(?)
374	<i>Taraxacum tuvinense</i> Krasnob. & Krasnikov 1984	Asteraceae	1
375	<i>Thalictrum isopyroides</i> C.A. Mey. 1830	Ranunculaceae	7,14
376	<i>Thalictrum minus</i> subsp. <i>appendiculatum</i> (C.A. Mey.) Gubanov 1983	Ranunculaceae	3
377	<i>Thalictrum minus</i> subsp. <i>kemense</i> (Fries) Cajander 1906	Ranunculaceae	3
378	<i>Thalictrum schischkinii</i> Friesen 1993	Ranunculaceae	7
379	<i>Thermopsis dahurica</i> Czefr. 1976	Fabaceae	2,4,5,9,12
380	<i>Thermopsis lanceolata</i> var. <i>glabra</i> (Czefr.) Yakovlev 1979	Fabaceae	9
381	<i>Thermopsis lanceolata</i> var. <i>lanceolata</i> R. Br. 1811	Fabaceae	1,2,3,4,8
382	<i>Thermopsis longicarpa</i> N. Ulzij. 1987	Fabaceae	6,10
383	<i>Thymus narymensis</i> Serg. 1937	Lamiaceae	7
384	<i>Thymus roseus</i> Schipcz. 1921	Lamiaceae	7
385	<i>Tragopogon kasahstanicus</i> Nikit. 1937	Asteraceae	7
386	<i>Triticum aestivum</i> L. 1753	Poaceae	2,4,10,11,13,14
387	<i>Trollius chinensis</i> Bunge 1833	Ranunculaceae	5,9
388	<i>Trollius sajanensis</i> Sipliv. 1972	Ranunculaceae	1
389	<i>Turczaninowia fastigiata</i> (Fisch.) DC. 1836	Asteraceae	2,4
390	<i>Typha joannis</i> Mavrodiev 2002	Typhaceae	9
391	<i>Typha tzvelevii</i> Mavrodiev 2002	Typhaceae	4
392	<i>Valeriana officinalis</i> L. 1753	Caprifoliaceae	1,2,3,4,8,9
393	<i>Valeriana tangutica</i> Batalin 1894	Caprifoliaceae	16
394	<i>Verbascum thapsus</i> L. 1753	Scrophulariaceae	4
395	<i>Veronica pinnata</i> subsp. <i>nana</i> Polozh. 1996	Plantaginaceae	7
396	<i>Veronica sajanensis</i> Printz. 1921	Plantaginaceae	7
397	<i>Veronica sapozhnikovii</i> Kossatschev 2003	Plantaginaceae	7,14
398	<i>Veronica schmakovii</i> Kossatschev 2003	Plantaginaceae	7

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

399	<i>Veronica sessiliflora</i> Bunge 1829	Plantaginaceae	7
400	<i>Veronica smirnovii</i> Kossatschev 2009	Plantaginaceae	7
401	<i>Vicia faba</i> L. 1753	Fabaceae	4
402	<i>Vicia nervata</i> Sipliv. 1966	Fabaceae	1,2,3,4
403	<i>Vicia ramuliflora</i> (Maxim.) Ohwi 1936	Fabaceae	2,3,4,5
404	<i>Viola alexandrowiana</i> (W. Becker) Juz. 1949	Violaceae	4
405	<i>Viola arvensis</i> Murray 1770	Violaceae	4
406	<i>Viola disjuncta</i> W. Becker 1906	Violaceae	7
407	<i>Viola epipsiloidea</i> A. Love & D. Love 1975	Violaceae	1,2
408	<i>Viola ircutiana</i> Turcz. 1842	Violaceae	2
409	<i>Viola rudolfii</i> V. Nikitin 2007	Violaceae	4,5
410	<i>Viola schauroi</i> V. Nikitin 2007	Violaceae	2,4
411	<i>Viola tenuicornis</i> subsp. <i>trichosepala</i> W. Becker 1916	Violaceae	4
412	<i>Xanthium sibiricum</i> Patrin ex Widder 1923	Asteraceae	9

**Phytogeographical region:**

- |                                       |                                       |
|---------------------------------------|---------------------------------------|
| <b>1</b> – Khovsgol                   | <b>9</b> – East Mongolia              |
| <b>2</b> – Khentei                    | <b>10</b> – Depression of Great Lakes |
| <b>3</b> – Khangai                    | <b>11</b> – Valley of Lakes           |
| <b>4</b> – Mongolian Dauria           | <b>12</b> – East Gobi                 |
| <b>5</b> – Foothills of Great Khingan | <b>13</b> – Gobi Altai                |
| <b>6</b> – Khovd                      | <b>14</b> – Dzungarian Gobi           |
| <b>7</b> – Mongolian Altai            | <b>15</b> – Transaltai Gobi           |
| <b>8</b> – Middle Khalkha             | <b>16</b> – Alashan Gobi              |

## APPENDIX II.

## SYNONYMS OF VASCULAR PLANT SPECIES

(in comparison with names used in Gubanov (1996))

Old name	Accepted name (this conspectus)
<i>Achnatherum inebrians</i> (Hance) Keng. 1957	<i>Stipa inebrians</i> Hance 1876
<i>Achnatherum saposhnikovii</i> (Roshev.) Nevski 1937	<i>Stipa saposhnikowii</i> (Roshev.) Kitag. 1942
<i>Achyrophorus maculatus</i> (L.) Scop. 1772	<i>Hypochaeris maculata</i> L. 1753
<i>Achyroseris albicaulis</i> (Bunge) Kamelin & Tagaev 1993	<i>Scorzoneroides albicaulis</i> Bunge 1833
<i>Aconitum glandulosum</i> Rapaics 1907	<i>Aconitum altaicum</i> Steimb. 1937
<i>Aconogonon alpinum</i> (All.) 1853	<i>Persicaria alpina</i> (All.) H.Gross 1913
<i>Aconogonon chaneyi</i> (B. Fedtsch. ex Steward) Hara 1966	<i>Persicaria bungeana</i> (Turcz.) Nakai 1922
<i>Aconogonon ocreatum</i> (L.) Hara 1966	<i>Polygonum ochreatum</i> L. 1753
<i>Aconogonon sericeum</i> (Pall. ex Georgi) Hara 1966	<i>Polygonum sericeum</i> Pall. ex Georgi 1775
<i>Acroptilon repens</i> (L.) DC. 1838	<i>Rhaponticum repens</i> (L.) Hidalgo 2006
<i>Adenophora coronopifolia</i> (Fisch. ex Schult.) Fisch. 1823	<i>Adenophora gmelinii</i> (Biehler) Fisch. 1823
<i>Adenophora tetraphylla</i> (Thunb.) Fisch. 1823	<i>Adenophora triphylla</i> (Thunb.) A. DC. 1830
<i>Adonis sibirica</i> Patr. ex Ledeb. 1824	<i>Adonis apennina</i> L. 1753
<i>Aeluropus micrantherus</i> Tzvelev 1968	<i>Aeluropus littoralis</i> (Gouan) Parl. 1848
<i>Agrimonia pilosa</i> subsp. <i>dahurica</i> (Willd. ex Ser.) R.Kam. 1986	<i>Agrimonia pilosa</i> Ledeb. 1823
<i>Agriophyllum pungens</i> (Vahl.) Link 1831	<i>Agriophyllum squarrosum</i> (L.) Moq. 1849
<i>Agropyron pectinatum</i> (M.Bieb.) P. Beauv. 1812	<i>Agropyron cristatum</i> (L.) Gaertner 1770
<i>Agrostis kudoi</i> Honda 1931	<i>Agrostis vinealis</i> Schreb. 1771
<i>Agrostis mongholica</i> Roshev. 1925	<i>Agrostis divaricatissima</i> Mez 1922
<i>Agrostis trinii</i> Turcz. 1856	<i>Agrostis vinealis</i> Schreb. 1771
<i>Ajania trifida</i> (Turcz.) Tzvelev 1961	<i>Hippolytia trifida</i> (Turcz.) Poljak. 1957
<i>Aleuritopteris argentea</i> (S.G.Gmel.) Fee 1852	<i>Cheilanthes argentea</i> (S.G. Gmel.) Kunze 1850
<i>Allium amblyophyllum</i> Kar. & Kir. 1842	<i>Allium platyspathum</i> subsp. <i>amblyophyllum</i> N. Friesen 1987
<i>Allium dauricum</i> N. Friesen 1987	<i>Allium spurium</i> G.Don 1827
<i>Allium glaucum</i> Schrad. ex Poir. 1810	<i>Allium senescens</i> subsp. <i>glaucum</i> (Regel) Dostal 1984
<i>Allium uratense</i> Franch. 1884	<i>Allium macrostemon</i> Bunge 1833
<i>Allium omiostema</i> Airy Shaw 1931	<i>Allium bidentatum</i> Fisch. ex Prokh. & Ikon.-Gal. 1929
<i>Alsine segetalis</i> L. 1753	<i>Spergularia segetalis</i> (L.) G.Don. 1831
<i>Anagallidium dichotomum</i> (L.) Griseb. 1839	<i>Swertia dichotoma</i> L. 1753
<i>Androsace bungeana</i> Schischk. & Bobr. 1952	<i>Androsace chamaejasme</i> var. <i>carinata</i> (Torr.) R. Knuth 1905
<i>Androsace chamaejasme</i> subsp. <i>lehmanniana</i> (Spreng.) Hulten 1948	<i>Androsace lehmanniana</i> Spreng. 1817
<i>Androsace dasypylla</i> Bunge 1829	<i>Androsace villosa</i> var. <i>dasypylla</i> (Bunge) Kar. & Kir. 1842
<i>Androsace incana</i> Lam. 1772	<i>Androsace villosa</i> var. <i>incana</i> (Lam.) Duby 1844
<i>Androsace lactiflora</i> Pall. 1776	<i>Androsace amurensis</i> Prob. 1987
<i>Androsace turczaninowii</i> Freyn 1890	<i>Androsace maxima</i> L. 1753
<i>Anemone crinita</i> Juz. 1937	<i>Anemone narcissiflora</i> subsp. <i>crinita</i> (Juz.) Kitag. 1936
<i>Angelica decurrens</i> (Ledeb.) B. Fedtsch. 1909	<i>Angelica archangelica</i> subsp. <i>decurrens</i> (Ledeb.) Kuvaev 1981
<i>Anisantha tectorum</i> (L.) Nevski 1934	<i>Bromus tectorum</i> L. 1753
<i>Apocynum lancifolium</i> Russanov 1933	<i>Apocynum venetum</i> L. 1753
<i>Arabidopsis mollissima</i> O.E. Schulz 1924	<i>Crucihimalaya mollissima</i> (C.A. Mey.) Al-Shehbaz, O'Kane & R.A. Price 1999
<i>Arabidopsis pumila</i> (Steph.) Busch 1909	<i>Olimarabidopsis pumila</i> (Stephan) Al-Shehbaz, O'Kane &

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

	R.A. Price 1999
<i>Arabis fruticulosa</i> C.A. Mey. 1831	<i>Dendroarabis fruticulosa</i> (C.A. Mey.) D.A. German & Al-Shehbaz 2008
<i>Arabis mongolica</i> Botsch. 1975	<i>Crucihimalaya rupicola</i> (Krylov) A.L. Ebel & D.A. German 2005
<i>Arabis pendula</i> L. 1753	<i>Catolobus pendulus</i> (L.) Al-Shehbaz 2005
<i>Arabis rupicola</i> Krylov 1903	<i>Crucihimalaya rupicola</i> (Krylov) A.L. Ebel & D.A. German 2005
<i>Arabis thaliana</i> L. 1753	<i>Arabidopsis thaliana</i> (L.) Heynh. 1842
<i>Arenaria asiatica</i> Schischk. 1930	<i>Eremogone asiatica</i> Ikonn. 1973
<i>Arenaria capillaris</i> Poir. 1804	<i>Eremogone capillaris</i> (Poir.) Fenzl 1833
<i>Arenaria formosa</i> Fisch. 1824	<i>Eremogone capillaris</i> (Poir.) Fenzl 1833
<i>Arenaria juncea</i> Bieb. 1819	<i>Eremogone juncea</i> (M. Bieb.) Fenzl 1833
<i>Arenaria meyeri</i> Fenzl 1842	<i>Eremogone meyeri</i> (Fenzl) Ikonn. 1973
<i>Aristida heymannii</i> Regel 1881	<i>Aristida adscensionis</i> L. 1753
<i>Armeria sibirica</i> Turcz. 1848	<i>Armeria maritima</i> subsp. <i>sibirica</i> (Turcz. ex Boiss.) Nyman 1881
<i>Arnebia tibetana</i> Kruz. 1874	<i>Arnebia guttata</i> Bunge 1840
<i>Arnica iljinii</i> (Maguire) Iljin 1961	<i>Arnica angustifolia</i> subsp. <i>iljinii</i> I.K. Ferguson 1973
<i>Artemisia altaiensis</i> Krasch. 1949	<i>Artemisia obtusiloba</i> subsp. <i>altaicensis</i> (Krasch.) Krasnob. 1998
<i>Artemisia assurgens</i> Filatova 1982	<i>Seriphidium assurgens</i> (Filat.) K. Bremer & Humphries ex Y.R. Ling 1991
<i>Artemisia borotalensis</i> Poljakov 1954	<i>Seriphidium borotalense</i> (Poljakov) Ling & Y.R. Ling 1988
<i>Artemisia heptapotamica</i> Poljakov 1957	<i>Seriphidium heptapotamicum</i> (Poljakov) Y. Ling & Y.-R. Ling 1988
<i>Artemisia intramongolica</i> H.C. Fu 1982	<i>Artemisia halodendron</i> Turcz. ex Besser 1835
<i>Artemisia intricata</i> Franch. 1883	<i>Elachanthesum intricatum</i> (Franch.) Ling & Y.R. Ling 1978
<i>Artemisia laciniatiformis</i> Kom. 1930	<i>Artemisia laciniata</i> Willd. 1803
<i>Artemisia mongolorum</i> Krasch. 1936	<i>Seriphidium mongolorum</i> (Krasch.) Ling & Y.R. Ling 1988
<i>Artemisia mongolorum</i> subsp. <i>gobicum</i> Krasch. 1937	<i>Artemisia gobica</i> (Krasch.) Grubov 1955
<i>Artemisia mongolorum</i> subsp. <i>saissanica</i> Krasch. 1949	<i>Artemisia saissanica</i> (Krasch.) Filatova 1966
<i>Artemisia monostachya</i> Bunge ex Maxim. 1872	<i>Artemisia pubescens</i> Ledeb. 1805
<i>Artemisia obscura</i> Pamp. 1930	<i>Artemisia mongolica</i> (Fisch. ex Besser) Fisch. ex Nakai 1917
<i>Artemisia subchrysolepis</i> Filatova 1981	<i>Seriphidium subchrysolepis</i> (Filatova) K.Bremer & Humphries ex K.Bremer & Humphries 1991
<i>Aruncus asiaticus</i> Pojark. 1939	<i>Aruncus sylvester</i> Kostel. ex Maxim. 1879
<i>Arundinella anomala</i> Steud. 1854	<i>Arundinella hirta</i> (Thunb.) Tanaka 1925
<i>Asparagus gibbus</i> Bunge 1832	<i>Asparagus dauricus</i> Fisch. ex Link 1821
<i>Asperula gobicola</i> Grubov 2000	<i>Asperula saxicola</i> Ehrend. 1974
<i>Astragalus abramovii</i> Gontsch. 1946	<i>Astragalus pseudobrachytropis</i> Gontsch. 1947
<i>Astragalus alexandri</i> N. Ulzij. 1990	<i>Astragalus ulziykhutagii</i> Sytin 1996
<i>Astragalus dasylglossus</i> Fisch. 1825	<i>Astragalus agrestis</i> G. Don 1832
<i>Astragalus tenuis</i> Turcz. 1842	<i>Astragalus melilotoides</i> var. <i>tenuis</i> Ledeb. 1842
<i>Atragene ochotensis</i> Pall. 1788	<i>Clematis alpina</i> subsp. <i>ochotensis</i> (Pall.) Kuntze 1885
<i>Atragene sibirica</i> L. 1753	<i>Clematis alpina</i> var. <i>sibirica</i> (L.) Kuntze 1885
<i>Baeothryon pumilum</i> (Vahl) A. Love & D. Love 1965	<i>Trichophorum pumilum</i> (Vahl) Schinz & Thell. 1921
<i>Barbarea arcuata</i> (Opiz) Rchb. 1822	<i>Barbarea vulgaris</i> R.Br. 1812
<i>Batrachium aquatile</i> (L.) Dumort. 1827	<i>Ranunculus aquatilis</i> L. 1753
<i>Batrachium circinatum</i> (Sibth.) Spach 1829	<i>Ranunculus circinatus</i> Sibth. 1794
<i>Batrachium eradicatum</i> (Laest.) Fries 1843	<i>Ranunculus trichophyllum</i> subsp. <i>eradicatus</i> (Laest.) C.D.K. Cook 1967
<i>Betula exilis</i> Sukacz. 1911	<i>Betula nana</i> subsp. <i>exilis</i> (Sukacz.) Hult. 1944

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

<i>Betula fusca</i> Pall. ex Georgi 1775	<i>Betula ovalifolia</i> Rupr. 1857
<i>Betula hippolyti</i> Sukacz. 1926	<i>Betula pendula</i> Roth 1788
<i>Betula mandshurica</i> (Regel) Nakai 1915	<i>Betula platyphylla</i> subsp. <i>mandshurica</i> (Regel) Kitag. 1939
<i>Betula rotundifolia</i> Spach 1841	<i>Betula nana</i> subsp. <i>rotundifolia</i> (Spach) Malyschev 1965
<i>Betula tessungolica</i> P.A. Baranov 1934	<i>Betula microphylla</i> Bunge 1835
<i>Bistorta abbreviata</i> Kom. 1936	<i>Polygonum abbreviatum</i> Kom. 1936
<i>Bistorta alopecuroides</i> (Turcz. ex Besser) Kom. 1926	<i>Polygonum alopecuroides</i> Turcz. ex Bessr 1834
<i>Bistorta elliptica</i> (Willd. ex Spreng.) Kom. 1936	<i>Polygonum ellipticum</i> Willd. ex Spreng. 1825
<i>Bistorta major</i> S.F.Gray 1821	<i>Persicaria bistorta</i> (L.) Samp. 1913
<i>Bistorta vivipara</i> (L.) S.F. Gray 1821	<i>Persicaria vivipara</i> (L.) Ronse Decr. 1988
<i>Blysmus sinocompressus</i> Tang & Wang 1961	<i>Blysmus compressus</i> subsp. <i>brevifolius</i> (Decne.) Kukkonen 1995
<i>Botrychium lunaria</i> (L.) Sw. 1801	<i>Botrychium dusenii</i> Alston 1960
<i>Brachyactis ciliata</i> (Ledeb.) Ledeb. 1846	<i>Sympyotrichum ciliatum</i> (Ledeb.) G.L. Nesom 1994
<i>Brassica campestris</i> L. 1753	<i>Brassica rapa</i> L. 1753
<i>Braya siliquosa</i> Bunge 1839	<i>Braya glabella</i> Richardson 1823
<i>Bromopsis inermis</i> (Leysser) Holub 1973	<i>Bromus inermis</i> Leyss. 1761
<i>Bromopsis korotkiji</i> (Drobov) Holub 1973	<i>Bromus korotkiji</i> Drobow 1914
<i>Bromopsis pumpelliana</i> (Scribn.) Holub 1973	<i>Bromus pumpellianus</i> Scribn. 1888
<i>Cacalia hastata</i> L. 1753	<i>Parasenecio hastatus</i> (L.) H. Koyama 1995
<i>Calamagrostis neglecta</i> (Ehrh.) P. Gaertner, B. Meyer & Scherbiu 1799	<i>Calamagrostis stricta</i> (Timm) Koeler 1802
<i>Calamagrostis neglecta</i> subsp. <i>inexpansa</i> (A. Gray) Tzvelev 1976	<i>Calamagrostis inexpansa</i> A.Gray 1834
<i>Calamagrostis turczaninovii</i> Litv. 1921	<i>Calamagrostis korotkyi</i> Litv. 1922
<i>Calligonum pumilum</i> Losinsk. 1927	<i>Calligonum mongolicum</i> Turcz. 1832
<i>Calloscordum nerinifolium</i> Herb. 1844	<i>Allium neriniflorum</i> (Herb.) G.Don 1855
<i>Caltha membranacea</i> (Turcz.) Schipcz. 1921	<i>Caltha palustris</i> var. <i>membranacea</i> Turcz. 1842
<i>Campanula altaica</i> Ledeb. 1824	<i>Campanula stevenii</i> subsp. <i>altaica</i> (Ledeb.) Fed. 1973
<i>Campanula turczaninovii</i> Fed. 1957	<i>Campanula stevenii</i> subsp. <i>turczaninovii</i> (Fed.) Victorov 2002
<i>Camphorosma lessingii</i> Litv. 1905	<i>Camphorosma monspeliaca</i> subsp. <i>lessingii</i> (Litv.) Aellen 1967
<i>Caragana altaica</i> (Kom.) Pojark. 1945	<i>Caragana pygmaea</i> (L.) DC. 1825
<i>Carex amgunensis</i> var. <i>chloroleuca</i> (Meinsh.) Kuk. 1909	<i>Carex chloroleuca</i> Meinsh. 1893
<i>Carex aspratilis</i> V.I. Krecz. 1935	<i>Carex distans</i> subsp. <i>aspratilis</i> (V.I. Krecz.) T.V. Egorova 1976
<i>Carex bipartita</i> All. 1785	<i>Carex lachenalii</i> Schkuhr 1801
<i>Carex cinerea</i> Poll. 1977	<i>Carex canescens</i> L. 1753
<i>Carex delicata</i> subsp. <i>selengensis</i> (K.V. Ivanova) T.V. Egorova, 1980	<i>Carex selengensis</i> Ivanova 1937
<i>Carex dichroa</i> (Freyn) V.I. Krecz. 1935	<i>Carex pamirica</i> subsp. <i>dichroa</i> (Freyn) T.V. Egorova 1999
<i>Carex ensifolia</i> Turcz. ex V.I. Krecz. 1931	<i>Carex bigelowii</i> subsp. <i>ensifolia</i> (Turcz. ex Gorodkov) Holub 1968
<i>Carex lithophila</i> Turcz. 1855	<i>Carex disticha</i> subsp. <i>lithophila</i> (Turcz.) D. Hamet-Ahti 1970
<i>Carex macroura</i> subsp. <i>kirilovii</i> (Turcz.) Malyschev, 1990	<i>Carex supermascula</i> V.I. Krecz. 1946
<i>Carex ovalis</i> Good 1794	<i>Carex leporina</i> L. 1753
<i>Carex petricosa</i> Dewey 1836	<i>Carex macrogyna</i> Turcz. ex Steud. 1855
<i>Carex redowskiana</i> C.A. Mey. 1831	<i>Carex parallela</i> subsp. <i>redowskiana</i> (C.A. Mey.) T.V. Egorova 1973
<i>Carex rigidiooides</i> (Gorodkov) V.I. Krecz. 1935	<i>Carex bigelowii</i> subsp. <i>rigidiooides</i> (Gorodkov) T.V. Egorova 1973
<i>Carex stenocarpa</i> Turcz. ex V.I. Krecz. 1935	<i>Carex tristis</i> subsp. <i>stenocarpa</i> (Turcz. ex V.I. Krecz.) T.V.

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

	Egorova 1999
<i>Carex stenophylloides</i> V.I. Krecz. 1932	<i>Carex stenophylla</i> subsp. <i>stenophylloides</i> (V.I. Krecz.) T.V. Egorova 1972
<i>Carpoceras ceratocarpum</i> N. Busch 1913	<i>Thlaspi ceratocarpum</i> N. Busch 1931
<i>Centaurea calva</i> Ledeb. 1838	<i>Phalacrachena calva</i> (Ledeb.) Iljin 1937
<i>Cerastium bungeanum</i> Vved. 1953	<i>Cerastium falcatum</i> Bunge ex Fenzl 1842
<i>Chamaenerion angustifolium</i> (L.) Schur 1866	<i>Epilobium angustifolium</i> L. 1753
<i>Chamaenerion latifolium</i> (L.) Sweet 1830	<i>Epilobium latifolium</i> L. 1753
<i>Chartolepis intermedia</i> Boiss. 1856	<i>Centaurea chartolepis</i> Greuter 2003
<i>Chenopodium aristatum</i> L. 1753	<i>Dysphania aristata</i> (L.) Mosyakin & Clemants 2002
<i>Chenopodium botryoides</i> Smith. 1811	<i>Chenopodium chenopodioides</i> (L.) Aellen 1933
<i>Chenopodium botrys</i> L. 1753	<i>Dysphania botrys</i> (L.) Mosyakin & Clemants 2002
<i>Chenopodium prostratum</i> Bunge ex Herder 1889	<i>Chenopodium karoi</i> (Murr) Aellen 1929
<i>Chrysanthemum sinuatum</i> Ledeb. 1833	<i>Tanacetum sinuatum</i> Sch. Bip. 1844
<i>Chrysosplenium alternifolium</i> subsp. <i>sibiricum</i> (Ser.) Hulten 1971	<i>Chrysosplenium serreanum</i> Hand.-Mazz. 1931
<i>Cimicifuga dahurica</i> (Turcz. ex Fisch. & C.A. Mey.) Maxim. 1859	<i>Actaea dahurica</i> (Turcz. ex Fisch. & C.A. Mey.) Franch. 1859
<i>Cimicifuga foetida</i> L. 1767	<i>Actaea cimicifuga</i> L. 1753
<i>Cimicifuga simplex</i> (DC.) Wormsk. ex Turcz. 1842	<i>Actaea simplex</i> (DC.) Wormsk. ex Prantl 1888
<i>Circaea caulescens</i> (Kom.) Nakai 1934	<i>Circaeа alpina</i> subsp. <i>caulescens</i> (Kom.) Tatew. 1940
<i>Cirsium arvense</i> subsp. <i>setosum</i> (Willd.) Iljin 1936	<i>Cirsium arvense</i> (L.) Scop. 1772
<i>Cleistogenes foliosa</i> Keng 1938	<i>Cleistogenes festucacea</i> Honda 1936
<i>Coeloglossum viride</i> (L.) Hartm. 1820	<i>Dactylorhiza viridis</i> (L.) R.M. Bateman, Pridgeon & M.W. Chase 1997
<i>Conioselinum tataricum</i> Hoffm. 1816	<i>Conioselinum vaginatum</i> (Spreng.) Thell. 1926
<i>Convolvulus chinensis</i> Ker Gawl. 1877	<i>Convolvulus arvensis</i> L. 1753
<i>Cortusa altaica</i> Losinsk. 1937	<i>Cortusa matthioli</i> subsp. <i>altaica</i> (Losinsk.) Korobkov 1980
<i>Corydalis sibirica</i> var. <i>impatiens</i> (Pall.) Regel 1861	<i>Corydalis impatiens</i> (Pall.) Fisch. ex DC. 1821
<i>Corydalis stricta</i> subsp. <i>holosepala</i> Mikhajlova 1981	<i>Corydalis stricta</i> Stephan ex Fisch. 1821
<i>Corydalis tenella</i> Kar. & Kir. 1842	<i>Corydalis inconspicua</i> Bunge 1842
<i>Craniospermum echiooides</i> (Schrenk) Bunge	<i>Craniospermum subvillosum</i> Lehm. 1818
<i>Crepis turczaninowii</i> C.A. Mey. 1848	<i>Crepis crocea</i> (Lam.) Babc. 1941
<i>Cynanchum sibiricum</i> Willd. 1799	<i>Cynanchum acutum</i> subsp. <i>sibiricum</i> (Willd.) Rech. f. 1970
<i>Cystopteris dickieana</i> R. Sim 1848	<i>Cystopteris fragilis</i> (L.) Bernhardi 1805
<i>Dactylorhiza cruenta</i> (O. F. Mull.) Soo 1962	<i>Dactylorhiza incarnata</i> subsp. <i>cruenta</i> (O.F.Mull.) P.D.Sell 1967
<i>Dactylorhiza kotschy</i> (Rchb. f.) P.F. Hunt & Summerh. 1965	<i>Dactylorhiza umbrosa</i> (Kar. & Kir.) Nevaski 1937
<i>Dactylorhiza meyeri</i> (Rchb. f.) Aver. 1982	<i>Dactylorhiza fuchsii</i> (Druce.) Soo 1962
<i>Dasiphora parvifolia</i> (Fisch. ex Lehm.) Juz. 1941	<i>Pentaphylloides parvifolia</i> Sojak 1969
<i>Delphinium korshinskyanum</i> Nevaski 1937	<i>Delphinium crassifolium</i> Schrad. ex Spreng. 1818
<i>Dendranthema chalchingolicum</i> (Grubov) K. Bremer & Humphries 1993	<i>Chrysanthemum chalchingolicum</i> Grubov 1972
<i>Dendranthema sinuatum</i> (Ledeb.) Tzvelev 1961	<i>Tanacetum sinuatum</i> Sch. Bip. 1844
<i>Dendranthema zawadskii</i> (Herbich) Tzvelev 1961	<i>Chrysanthemum zawadskii</i> Herbich 1831
<i>Deschampsia sukatschewii</i> (Popl.) Roshev. 1934	<i>Deschampsia cespitosa</i> subsp. <i>orientalis</i> Hulten 1927
<i>Dianthus hoeltzerii</i> Winkl. 1882	<i>Dianthus superbus</i> L. 1753
<i>Dianthus versicolor</i> Fisch ex Link 1821	<i>Dianthus chinensis</i> L. 1753
<i>Dictamnus dasycarpus</i> Turcz. 1842	<i>Dictamnus albus</i> L. 1753
<i>Digraphis arundinacea</i> (L.) Trin. 1820	<i>Phalaris arundinacea</i> L. 1753

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

<i>Dimorphostemon pectinatus</i> (DC.) Golubkova 1974	<i>Dontostemon pinnatifidus</i> (Willd.) Al-Shehbaz & H. Ohba 2000
<i>Dryadanthe tetrandra</i> (Bunge) Juz. 1941	<i>Sibbaldia tetrandra</i> Bunge 1832
<i>Duschekia fruticosa</i> Pouzar 1964	<i>Alnus viridis</i> subsp. <i>fruticosa</i> (Rupr.) Nyman 1881
<i>Elaeagnus moorcroftii</i> Wall. ex Schltdl. 1860	<i>Elaeagnus angustifolia</i> L. 1753
<i>Eleocharis meridionalis</i> Zinserl. 1935	<i>Eleocharis quinqueflora</i> (F.X. Hartmann) O.Schwarz. 1849
<i>Elymus aegilopoides</i> (Drobov) Worosch 1985	<i>Elymus reflexiaristatus</i> (Nevski) Melderis 1978
<i>Elymus brachypodioides</i> (Nevski) Peschkova 1972	<i>Elymus pendulinus</i> (Nevski) Tzvelev 1968
<i>Elymus exselsus</i> Turcz. ex Griseb. 1852	<i>Elymus dahuricus</i> Turcz. ex Griseb. 1852
<i>Elymus komarovii</i> (Nevski) Tzvelev 1968	<i>Elymus uralensis</i> (Nevski) Tzvelev 1971
<i>Elymus schrenkianus</i> subsp. <i>pamiricus</i> (Tzvelev) Tzvelev 1972	<i>Elymus schrenkianus</i> (Fisch. & C.A. Mey.) Tzvelev, 1960
<i>Elytrigia geniculata</i> (Trin.) Nevski 1936	<i>Elymus bungeanus</i> (Trin.) Melderis 1978
<i>Empetrum sibiricum</i> V. Vassil. 1946	<i>Empetrum nigrum</i> subsp. <i>sibiricum</i> (V.N. Vassil.) Kuvaev 1996
<i>Enneapogon borealis</i> (Griseb.) Honda 1936	<i>Enneapogon desvauxii</i> P. Beauv. 1812
<i>Eriophorum polystachyon</i> L. 1753	<i>Eriophorum angustifolium</i> Honck. 1782
<i>Eriophorum polystachyon</i> L. subsp. <i>komarovii</i> (V.Vassil.) N. Novos. 1994	<i>Eriophorum angustifolium</i> subsp. <i>komarovii</i> (V. Vassil.) N. Novos. 2001
<i>Eriophorum scheuchzeri</i> subsp. <i>altaicum</i> (Meinsh.) N. Bondareva, 1990	<i>Eriophorum altaicum</i> Meinsh. 1901
<i>Eruca sativa</i> Mill. 1768	<i>Eruca vesicaria</i> (L.) Cav. 1802
<i>Erysimum flavum</i> (Georgi) Bobr. 1960	<i>Hesperis flava</i> Georgi 1775
<i>Erysimum kotuchovii</i> D.A. German 2004	<i>Erysimum quadrangulum</i> (L'Her.) Desf. 1804
<i>Euphorbia discolor</i> Ledeb. 1850	<i>Euphorbia esula</i> L. 1753
<i>Frankenia bucharica</i> subsp. <i>tuvonica</i> (Lomonosova) Jager 1992	<i>Frankenia tuvonica</i> Lomon. 1984
<i>Gagea emarginata</i> Kar. & Kir. 1841	<i>Gagea liotardii</i> (Sternb.) Schult. & Schult. f. 1829
<i>Galium densiflorum</i> Ledeb. 1829	<i>Galium verum</i> L. 1753
<i>Galium saurens</i> Litv. 1910	<i>Galium verum</i> L. 1753
<i>Gastrolychnis apetala</i> (L.) Tolm. & Kozhancz. 1971	<i>Silene uralensis</i> subsp. <i>apetala</i> (L.) Bocquet 1967
<i>Gentiana karelinskii</i> Griseb. 1845	<i>Gentiana prostrata</i> var. <i>karelinskii</i> (Griseb.) Kusn. 1904
<i>Gentiana pseudoaquatica</i> Kusn. 1893	<i>Gentiana aquatica</i> var. <i>pseudoaquatica</i> (Kusn.) S. Agrawal 1984
<i>Gentianella acuta</i> (Michx.) Hiitonen 1950	<i>Gentianella amarella</i> subsp. <i>acuta</i> (Michx.) J.M. Gillett 1957
<i>Gentianella tenella</i> (Rottb.) Barner 1912	<i>Comastoma tenellum</i> (Rottb.) Toyok. 1961
<i>Geranium eriostemon</i> Fisch. ex DC. 1824	<i>Geranium platyanthum</i> Duthie 1906
<i>Geranium pratense</i> subsp. <i>transbaicalicum</i> (Serg.) Gubanov 1983	<i>Geranium transbaicalicum</i> Serg. 1934
<i>Glaux maritima</i> L. 1753	<i>Lysimachia maritima</i> (L.) Galasso, Banfi & Soldano 2005
<i>Glyceria triflora</i> (Korsh.) Kom. 1934	<i>Glyceria arundinacea</i> Kunth 1829
<i>Grossularia aciculalis</i> (Sm.) Spach 1838	<i>Ribes aciculare</i> Sm. 1819
<i>Gypsophila dshungarica</i> Gerniak 1922	<i>Gypsophila capituliflora</i> Rupr. 1869
<i>Gypsophila floribunda</i> (Kar. & Kir.) Turcz. 1842	<i>Psammophiliella floribunda</i> (Kar. & Kir.) Ikonn. 1976
<i>Hackelia thymifolia</i> (A. DC.) I.M. Johnst. 1940	<i>Eritrichium thymifolium</i> (A. DC.) Y.S. Lian & J.Q. Wang 1980
<i>Hedinia altaica</i> Pobed. 1966	<i>Smelowskia altaica</i> (Pobed.) Botsch. 1968
<i>Hedysarum arbuscula</i> Maxim. 1881	<i>Hedysarum scoparium</i> Fisch. & C.A. Mey. 1841
<i>Hedysarum arcticum</i> B. Fedtsch. 1839	<i>Hedysarum hedsyroides</i> subsp. <i>arcticum</i> (B. Fedtsch.) P.W. Ball 1968
<i>Hegemone lilacina</i> (Bunge) Bunge 1841	<i>Trollius lilacinus</i> Bunge 1836
<i>Helictotrichon altaicum</i> Tzvelev 1868	<i>Helictotrichon desertorum</i> (Less.) Pilg. 1938
<i>Helictotrichon schellianum</i> (Hack.) Kitag. 1939	<i>Helictotrichon hookeri</i> (Scribn.) Henrard 1940

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

<i>Hesperis sibirica</i> L. 1753	<i>Hesperis matronalis</i> L. 1753
<i>Heteropappus hispidus</i> (Thunb.) Less. 1832	<i>Aster hispidus</i> Thunb. 1784
<i>Hieracium crocatum</i> subsp. <i>mongolicum</i> S. Braeutigam 1980	<i>Hieracium czadanense</i> Tupitz. 1994
<i>Hieracium echooides</i> Lumn. 1791	<i>Pilosella echooides</i> (Lumn.) F.W. Schultz & Sch. Bip. 1862
<i>Hieracium ganeschinii</i> Zahn 1912	<i>Hieracium subramosum</i> Lonnr. 1882
<i>Hippophae rhamnoides</i> L. 1753	<i>Hippophae rhamnoides</i> subsp. <i>mongolica</i> Rousi 1971
<i>Hymenolobus procumbens</i> (L.) Nutt. 1838	<i>Hornungia procumbens</i> (L.) Hayek 1925
<i>Hypericum gebleri</i> Ledeb. 1831	<i>Hypericum ascyron</i> subsp. <i>gebleri</i> (Ledeb.) N. Robson 2001
<i>Iris oxypetala</i> Bunge 1832	<i>Iris lactea</i> Pall. 1776
<i>Ixeridium chinense</i> (Thunb.) Tzvelev 1964	<i>Ixeris chinensis</i> (Thunb. ex Thunb.) Nakai 1920
<i>Ixeridium chinense</i> subsp. <i>graminifolium</i> (Ledeb.) Tzvelev 1967	<i>Ixeridium graminifolium</i> Tzvelev 1964
<i>Ixeris chinensis</i> subsp. <i>versicolor</i> (Fisch. ex Link) Kitam. 1935	<i>Ixeridium gramineum</i> (Fisch.) Tzvelev 1964
<i>Juncus grubovii</i> V. Novikov 1981	<i>Juncus arcticus</i> subsp. <i>grubovii</i> (Novikov) Novikov, Kirschner & Snogerup 2002
<i>Juncus leucochlamys</i> Zing. ex V.I. Krecz. 1931	<i>Juncus castaneus</i> subsp. <i>leucochlamys</i> (V.J. Zinger ex V.I. Krecz.) Hulten 1968
<i>Juncus triceps</i> Rostk 1801	<i>Juncus castaneus</i> subsp. <i>triceps</i> (Rostk.) Novikov 1979
<i>Juncus turczaninowii</i> (Buchenau) Freyn 1903	<i>Juncus articulatus</i> subsp. <i>limosus</i> (Vorosch.) Vorosch. 1985
<i>Juncus vvedenskyi</i> V.I. Krecz. 1935	<i>Juncus persicus</i> subsp. <i>libanoticus</i> (J.Thiebaut) Novikov & Snogerup 2002
<i>Juniperus davurica</i> Pall. 1778	<i>Juniperus sabina</i> var. <i>davurica</i> (Pall.) Farjon 2001
<i>Juniperus sibirica</i> Burgsd. 1787	<i>Juniperus communis</i> L. 1753
<i>Kadenia salina</i> (Turcz.) Lavrova & V.N. Tikhom. 1986	<i>Cnidium salinum</i> Turcz. 1844
<i>Kitagawia baicalensis</i> (Redowsky ex Willd.) Pimenov 1986	<i>Peucedanum baicalense</i> (Redowsky ex Willd.) Koch 1824
<i>Kitagawia terebinthacea</i> (Fisch. ex Trevir.) Pimenov 1986	<i>Peucedanum terebinthaceum</i> (Fisch. ex Trevir.) Ledeb. 1844
<i>Kochia densiflora</i> Turcz. ex Moq. 1840	<i>Bassia scoparia</i> (L.) A.J.Scott 1978
<i>Kochia iranica</i> Litv. 1908	<i>Kochia stellaris</i> Moq. 1840
<i>Kochia prostrata</i> (L.) Schrader 1809	<i>Bassia prostrata</i> (L.) Beck 1909
<i>Koeleria atrovirens</i> Domin 1907	<i>Koeleria asiatica</i> Domin 1905
<i>Koeleria cristata</i> subsp. <i>mongolica</i> (Domin) Tzvelev, 1970	<i>Koeleria macrantha</i> (Ledeb.) Schult. 1824
<i>Lappula marginata</i> var. <i>granulata</i> Krylov 1937	<i>Lappula granulata</i> (Krylov) Popov 1953
<i>Lappula redowskii</i> var. <i>patula</i> (Lehm.) A. Nelson & J.F. Macbr. 1916	<i>Lappula patula</i> (Lehm.) Asch. ex Gurke 1897
<i>Larix dahurica</i> Laws. 1836	<i>Larix gmelinii</i> (Rupr.) Kuzen. 1920
<i>Ledum decumbens</i> (Aiton) Lodd. ex Steud. 1840	<i>Ledum palustre</i> var. <i>decumbens</i> Aiton 1789
<i>Lepidium crassifolium</i> Waldst. et Kit. 1799	<i>Lepidium cartilagineum</i> (J.Mayer) Thell. 1913
<i>Leymus ovatus</i> (Trin.) Tzvelev 1960	<i>Leymus secalinus</i> (Georgi) Tzvelev 1968
<i>Lilium buschianum</i> Lodd. 1830	<i>Lilium concolor</i> var. <i>pulchellum</i> (Fisch.) Baker 1874
<i>Lilium dauricum</i> Ker Gawl. 1809	<i>Lilium pensylvanicum</i> Ker Gawl. 1805
<i>Lilium potaninii</i> Vrishcz 1968	<i>Lilium pumilum</i> Delile 1812
<i>Limonium erythrorrhizum</i> Ik.-Gal. ex Lincz. 1971	<i>Limonium aureum</i> (L.) Hill 1767
<i>Linaria acutiloba</i> Fisch. ex Rchb. 1827	<i>Linaria vulgaris</i> subsp. <i>acutiloba</i> (Fisch. ex Rchb.) D.Y. Hong 1979
<i>Listera major</i> Nakai 1914	<i>Neottia puberula</i> (Maxim.) Szlach. 1995
<i>Listera savatieri</i> Maxim. ex Kom. 1901	<i>Neottia puberula</i> (Maxim.) Szlach. 1995
<i>Londesia eriantha</i> Fisch. & C.A. Mey. 1835	<i>Bassia eriophora</i> (Schrad.) Asch. 1867
<i>Lonicera altaica</i> Pall. ex DC. 1830	<i>Lonicera caerulea</i> var. <i>altaica</i> Pall. 1789

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

<i>Luzula pallidula</i> Krischner 1990	<i>Luzula pallescens</i> Sw. 1814
<i>Luzula sibirica</i> (V.I. Krecz.) V.I. Krecz. 1931	<i>Luzula multiflora</i> subsp. <i>sibirica</i> V.I.Krecz. 1928
<i>Lycopsis orientalis</i> L. 1753	<i>Anchusa arvensis</i> subsp. <i>orientalis</i> (L.) Nordh. 1940
<i>Lysiella oligantha</i> (Turcz.) Nevski 1935	<i>Platanthera obtusata</i> subsp. <i>oligantha</i> (Turcz.) Hulten 1943
<i>Lysimachia thyrsiflora</i> (L.) Pohl 1810	<i>Lysimachia thyrsiflora</i> L. 1753
<i>Lythrum intermedium</i> Ledeb. ex Colla 1834	<i>Lythrum salicaria</i> L. 1753
<i>Medicago korshinskyi</i> (Grossh.) Kamelin & Gubanov 1992	<i>Medicago ruthenica</i> (L.) Ledeb. 1841
<i>Melandrium album</i> (Mill.) Garcke 1858	<i>Silene latifolia</i> subsp. <i>alba</i> (Mill.) Greuter & Burdet 1982
<i>Melandrium apetalum</i> (L.) Fenzl 1842	<i>Silene uralensis</i> subsp. <i>apetala</i> (L.) Bocquet 1967
<i>Melandrium apricum</i> (Turcz. ex Fisch. & C.A. Mey.) Rohrb. 1868	<i>Silene aprica</i> Turcz. 1835
<i>Melandrium brachypetala</i> (Fisch. ex Hornem.) Fenzl 1842	<i>Gastrolachnus brachypetala</i> (Hornem.) Tolm. & Kozhanczikov 1971
<i>Melandrium mongolicum</i> (Maxim.) Grubov 1955	<i>Silene songarica</i> (Fisch., C.A. Mey. & Ave-Lall.) Bocquet 1967
<i>Melandrium triste</i> (Bunge) Fenzl 1842	<i>Silene bungei</i> Bocquet 1967
<i>Melandrium viscosum</i> (L.) Celak. 1868	<i>Silene viscosa</i> Schleich. 1800
<i>Meniocetus linifolius</i> (Steph. ex Willd.) DC. 1821	<i>Alyssum linifolium</i> Stephan ex Willd. 1800
<i>Micropeltis arachnoides</i> (Moq.) Bunge 1852	<i>Halogeton arachnoideus</i> Moq. 1849
<i>Microstigma junatovii</i> Grubov 1972	<i>Microstigma brachycarpum</i> Botsch. 1959
<i>Myosotis imitata</i> Serg. 1936	<i>Myosotis alpestris</i> F.W. Schmidt 1794
<i>Myricaria alopecuroides</i> Schrenk ex Fisch. & C.A. Mey. 1841	<i>Myricaria bracteata</i> Royle 1835
<i>Najas major</i> All. 1785	<i>Najas marina</i> L. 1753
<i>Naumburgia guttata</i> Moench 1802	<i>Lysimachia thyrsiflora</i> L. 1753
<i>Nardosmia frigida</i> (L.) Hook. 1833	<i>Petasites frigidus</i> (L.) Fr. 1845
<i>Nardosmia laevigata</i> (Willd.) DC. 1836	<i>Petasites radiatus</i> (J.F. Gmel.) Toman 1972
<i>Nardosmia saxatilis</i> Turcz. 1838	<i>Petasites rubellus</i> (J.F. Gmel.) Toman 1972
<i>Neotorularia humilis</i> (C.A. Mey.) Hedge & J. Leonard 1986	<i>Braya humilis</i> (C.A. Mey.) B.L. Rob. 1895
<i>Oberna behen</i> (L.) Ikonn. 1976	<i>Silene vulgaris</i> (Moench) Garcke 1869
<i>Odontites rubra</i> Opiz 1852	<i>Odontites vulgaris</i> Moench 1794
<i>Onobrychis sibirica</i> (Syrj.) Turcz. ex Grossh	<i>Onobrychis arenaria</i> subsp. <i>sibirica</i> (Turcz. ex Besser) P.W. Ball 1968
<i>Orobanche caesia</i> Rchb. 1829	<i>Orobanche lanuginosa</i> (C.A. Mey.) Beck ex Krylov 1881
<i>Orobanche cernua</i> var. <i>cumana</i> (Wallr.) Beck 1890	<i>Orobanche cernua</i> Loefl. 1758
<i>Orobanche cumana</i> Wallr. 1825	<i>Orobanche cernua</i> Loefl. 1758
<i>Orobanche korshinskyi</i> Novopokr. 1950	<i>Orobanche coerulescens</i> Stephan 1800
<i>Oxycoccus microcarpus</i> Turcz. ex Rupr. 1845	<i>Vaccinium microcarpum</i> (Turcz. ex Rupr.) Schmalh. 1871
<i>Oxytropis komei</i> Saposhn. 1921	<i>Oxytropis eriocarpa</i> Bunge 1874
<i>Oxytropis psammocharis</i> Hance 1873	<i>Oxytropis racemosa</i> Turcz. 1832
<i>Oxytropis salina</i> Vass. 1960	<i>Oxytropis glabra</i> (Lam.) DC. 1802
<i>Padus asiatica</i> Kom. 1941	<i>Padus avium</i> var. <i>asiatica</i> (Kom.) T.C. Ku & B.M. Barthol. 2003
<i>Paeonia albiflora</i> Pall. 1789	<i>Paeonia lactiflora</i> Pall. 1776
<i>Papaver changaicum</i> Kamelin 1990	<i>Papaver rubro-aurantiacum</i> subsp. <i>changaicum</i> (Kamelin) Kamelin 1990
<i>Papaver pseudocanescens</i> Popov 1937	<i>Papaver canescens</i> Tolm. 1931
<i>Paracolpodium altaicum</i> (Trin.) Tzvelev 1965	<i>Colpodium altaicum</i> Trin. 1829
<i>Paraixeris serotina</i> (Maxim.) Tzvelev 1964	<i>Crepidiastrum sonchifolium</i> (Maxim.) Pak & Kawano 1992
<i>Parietaria micrantha</i> Ledeb. 1829	<i>Parietaria debilis</i> G. Forst. 1786
<i>Paris hexaphylla</i> Cham. 1831	<i>Paris verticillata</i> M. Bieb. 1819
<i>Paropyrum anemonoides</i> (Kar. & Kir.) O.E. Ulbr. 1925	<i>Isopyrum anemonoides</i> Kar. & Kir. 1842

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

<i>Pedicularis karoii</i> Freyn 1896	<i>Pedicularis palustris</i> subsp. <i>karoii</i> 1963
<i>Persicaria sanguarensis</i> Kitag. 1943	<i>Polygonum longisetum</i> var. <i>rotundatum</i> A.J. Li 1995
<i>Perularia fuscescens</i> (L.) Lindl. 1835	<i>Platanthera fuscescens</i> (L.) Kraenzl. 1899
<i>Phalaroides arundinacea</i> (L.) Rausch. 1969	<i>Phalaris arundinacea</i> L. 1753
<i>Phlomoides agraria</i> (Bunge) Adylov, Kamelin & Makhm. 1987	<i>Phlomis agraria</i> Bunge 1830
<i>Phlomoides alpina</i> (Pall.) Adylov, Kamelin & Makhm. 1987	<i>Phlomis alpina</i> Pall. 1783
<i>Phlomoides mongolica</i> (Turcz.) Kamelin & Makhm. 1987	<i>Phlomis mongolicus</i> Turcz. 1851
<i>Phlomoides oreophila</i> (Kar. & Kir.) Adylov, Kamelin & Makhm. 1987	<i>Phlomis oreophila</i> Kar. & Kir. 1842
<i>Phlomoides pratensis</i> (Kar. & Kir.) Adylov, Kamelin & Makhm. 1987	<i>Phlomis pratensis</i> Kar. & Kir. 1842
<i>Phlomoides tuberosa</i> (L.) Moench 1794	<i>Phlomis tuberosa</i> L. 1753
<i>Phlomoides tuvinica</i> (A.Schroet.) Kamelin, Adylov & Makhm. 1987	<i>Phlomis tuvinica</i> A. Schroet. 1980
<i>Pinus krylovii</i> Serg. & Kondr. 1953	<i>Pinus sylvestris</i> var. <i>mongolica</i> Litv. 1905
<i>Pinus sylvestris</i> subsp. <i>mongolica</i> (Litv.) Silba, 2009	<i>Pinus sylvestris</i> var. <i>mongolica</i> Litv. 1905
<i>Poa albertii</i> Regel 1880;	<i>Poa attenuata</i> Trin. 1836
<i>Poa mongolica</i> (Rendle) Keng ex Shan Chen 1983	<i>Poa alta</i> Hitchc. 1930
<i>Poa ochotensis</i> Trin. 1830	<i>Poa versicolor</i> Besser 1821
<i>Poa pratensis</i> subsp. <i>angustifolia</i> (L.) Arcang. 1882	<i>Poa pratensis</i> L. 1753
<i>Poa pratensis</i> subsp. <i>pruinosa</i> (Korotky) Dickore 1995	<i>Poa tianschanica</i> (Regel) Hackel ex O. Fedtsch. 1903
<i>Poa pruinosa</i> Korotky 1914	<i>Poa tianschanica</i> (Regel) Hackel ex O. Fedtsch. 1903
<i>Poa skvortzovii</i> Probat. 1973	<i>Poa alta</i> Hitchc. 1930
<i>Poa stepposa</i> (Krylov) Roshev. 1932	<i>Poa versicolor</i> subsp. <i>stepposa</i> (Krylov) Tzvelev 1972
<i>Poacynum pictum</i> (Schrenk) Baill. 1888	<i>Apocynum pictum</i> Schrenk 1844
<i>Polygala hybrida</i> DC. 1824	<i>Polygala comosa</i> Schkuhr 1796
<i>Polygonum calcatum</i> Lindm. 1904	<i>Polygonum arenastrum</i> Boreau 1857
<i>Polygonum ellipticum</i> Willd. ex Spreng. 1825	<i>Bistorta elliptica</i> (Willd. ex Spreng.) D.F. Murray & Elven 2008
<i>Polygonum lapathifolium</i> L. 1753	<i>Persicaria lapathifolia</i> (L.) Delarbre 1800
<i>Polygonum neglectum</i> Bess. 1822	<i>Polygonum aviculare</i> L. 1753
<i>Polygonum viviparum</i> L. 1753	<i>Persicaria vivipara</i> (L.) Ronse Decr. 1988
<i>Polypodium sibiricum</i> Sipliv. 1974	<i>Polypodium virginianum</i> L. 1753
<i>Populus diversifolia</i> Schrenk 1842	<i>Populus euphratica</i> Olivier 1807
<i>Potamogeton filiformis</i> Pers. 1805	<i>Stuckenia filiformis</i> (Pers.) Borner 1912
<i>Potamogeton pectinatus</i> L. 1753	<i>Stuckenia pectinata</i> (L.) Borner 1912
<i>Potamogeton tenuifolius</i> Raf. 1811	<i>Potamogeton alpinus</i> subsp. <i>tenuifolius</i> (Raf.) Hulten 1937
<i>Potamogeton vaginatus</i> Turcz. 1854	<i>Stuckenia vaginata</i> (Turcz.) Holub 1984
<i>Potentilla acervata</i> Sojak 1986	<i>Potentilla tanacetifolia</i> Willd. ex Schlecht. 1816
<i>Potentilla adpressa</i> (Bunge) Cardot 1916	<i>Sibbaldia adpressa</i> Bunge 1829
<i>Potentilla adpressa</i> var. <i>sericea</i> Cardot 1914	<i>Sibbaldia sericea</i> (Grubov) Sojak 1969
<i>Potentilla coriacea</i> Sojak 1970	<i>Potentilla betonicifolia</i> Poir. 1804
<i>Potentilla crebridens</i> Juz. 1955	<i>Potentilla nivea</i> var. <i>elongata</i> Th. Wolf 1908
<i>Potentilla gelida</i> subsp. <i>boreo-asiatica</i> Jurtz. et Kamelin 1984	<i>Potentilla gelida</i> C.A. Mey. 1831
<i>Potentilla leucophylla</i> Pall. 1776	<i>Potentilla betonicifolia</i> Poir. 1804
<i>Potentilla nudicaulis</i> Willd. ex Schlechl. 1816	<i>Potentilla tanacetifolia</i> Willd. ex Schlecht. 1816
<i>Potentilla orientalis</i> Juz. 1941	<i>Potentilla bifurca</i> var. <i>major</i> Ledeb. 1843
<i>Potentilla ornithopoda</i> Tausch. 1823	<i>Potentilla multifida</i> var. <i>ornithopoda</i> (Tausch) Th. Wolf 1908

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

<i>Potentilla pensylvanica</i> L. 1767	<i>Pentaphyllum pensylvanicum</i> (L.) Lunell 1916
<i>Potentilla semiglabra</i> Juz. 1934	<i>Potentilla bifurca</i> var. <i>major</i> Ledeb. 1843
<i>Prenanthes angustifolia</i> Boulos 1962	<i>Sonchella dentata</i> (Ledeb.) Sennikov 2008
<i>Prionotrichon kamelinii</i> Botsch. 1987	<i>Rhammatophyllum kamelinii</i> (Botsch.) Al-Shehbaz & O. Appel 2002
<i>Pseudosophora alopecuroides</i> (L.) Sweet 1830	<i>Sophora alopecuroides</i> L. 1753
<i>Ptilagrostis mongholica</i> (Turcz. ex Trin.) Griseb. 1852	<i>Stipa mongholica</i> Turcz. ex Trin. 1836
<i>Ptilagrostis pelliottii</i> (Danquy) Grubov 1955	<i>Stipa pelliottii</i> Danguy 1912
<i>Ptilotrichum tenuifolium</i> (Steph.) C.A. Mey. 1831	<i>Alyssum tenuifolium</i> Steph. 1800
<i>Puccinellia kreczeticoviczii</i> Bubnova 1988	<i>Puccinellia tenuiflora</i> (Griseb.) Scribner & Merr. 1910
<i>Puccinellia kulundensis</i> Serg. 1961	<i>Puccinellia manchuriensis</i> Ohwi 1935
<i>Puccinellia mongolica</i> (T.Norlindh) Bubnova 1988	<i>Puccinellia tenuiflora</i> (Griseb.) Scribner & Merr. 1910
<i>Pulsatilla flavescens</i> (Zuccar.) Juz. 1937	<i>Pulsatilla patens</i> subsp. <i>flavescens</i> (Zucc.) Zamelis 1926
<i>Pulsatilla multifida</i> (Pritz.) Juz. 1937	<i>Pulsatilla patens</i> subsp. <i>multifida</i> (Pritz.) Zamelis 1926
<i>Pyrola incarnata</i> (DC.) Freyn 1902	<i>Pyrola asarifolia</i> subsp. <i>incarnata</i> (DC.) Haber & Hir. Takah. 1988
<i>Pyrola incarnata</i> subsp. <i>dahurica</i> (Andres) Krisa 1967	<i>Pyrola dahurica</i> (Andres) Kom. 1923
<i>Ranunculus altaicus</i> Laxm. 1773	<i>Coptidium lapponicum</i> (L.) Tzvelev 1994
<i>Ranunculus japonicus</i> Thunb. 1794	<i>Ranunculus grandis</i> Honda 1929
<i>Rheum undulatum</i> L. 1762	<i>Rheum rhabarbarum</i> L. 1753
<i>Rodiola rosea</i> L. 1753	<i>Sedum rosea</i> (L.) Scop. 1771
<i>Rhododendron parvifolium</i> Adams 1834	<i>Rhododendron lapponicum</i> (L.) Wahlenb. 1812
<i>Ribes atropurpureum</i> C.A. Mey. 1829	<i>Ribes petraeum</i> Wulfen 1781
<i>Ribes pauciflorum</i> Turcz. ex Pojark. 1936	<i>Ribes nigrum</i> L. 1753
<i>Rosa pimpinellifolia</i> L. 1759	<i>Rosa spinosissima</i> L. 1753
<i>Sajanella monstrosa</i> (Willd.ex Spreng.) Pimenov 1980	<i>Sajania monstrosa</i> Pimenov 1974
<i>Salicornia herbacea</i> L. 1762	<i>Salicornia europaea</i> L. 1753
<i>Salicornia perennis</i> Willd. 1797	<i>Sarcocornia perennis</i> (Mill.) A.J.Scott 1978
<i>Salix berberifolia</i> subsp. <i>brayi</i> (Ledeb.) A. Skvortsov 1961	<i>Salix berberifolia</i> Pall. 1776
<i>Salix brachypoda</i> (Trautv. & C.A. Mey.) Kom. 1923	<i>Salix rosmarinifolia</i> var. <i>brachypoda</i> (Trautv. & C.A. Mey.) Y. L. Chou 1984
<i>Salix brayi</i> Ledeb. 1833	<i>Salix berberifolia</i> Pall. 1776
<i>Salix pentandra</i> subsp. <i>pseudopentandra</i> Flod. 1926	<i>Salix pentandra</i> var. <i>intermedia</i> Nakai 1930
<i>Salix pseudopentandra</i> Flod. 1933	<i>Salix pentandra</i> var. <i>intermedia</i> Nakai 1930
<i>Salix triandra</i> subsp. <i>nipponica</i> (Franch. & Savat.) A. Skvorts 1968	<i>Salix nipponica</i> Franch. & Sav. 1875
<i>Salsola gemmascens</i> subsp. <i>subglabra</i> Botsch. 1970	<i>Caroxylon gemmascens</i> (Pall.) Tzvelev 1993
<i>Sanguisorba officinalis</i> var. <i>glandulosa</i> (Kom.) Vorosch. 1966	<i>Sanguisorba officinalis</i> L. 1753
<i>Sanguisorba parviflora</i> (Maxim.) Takeda 1914	<i>Sanguisorba tenuifolia</i> var. <i>alba</i> Trautv. & C.A. Mey. 1856
<i>Saxifraga aestivalis</i> Fisch. & C.A. Mey. 1835	<i>Saxifraga nelsoniana</i> subsp. <i>aestivalis</i> (Fisch. & C.A.Mey.) D.A.Webb 1964
<i>Saxifraga bronchialis</i> subsp. <i>spinulosa</i> (Adams) 1929	<i>Saxifraga bronchialis</i> L. 1753
<i>Saxifraga davurica</i> Willd. 1799	<i>Micranthes davurica</i> (Willd.) Small 1905
<i>Saxifraga oppositifolia</i> subsp. <i>asiatica</i> (Hayek) Engl. & Irmsch. 1919	<i>Saxifraga oppositifolia</i> L. 1753
<i>Saxifraga spinulosa</i> Adams. 1817	<i>Saxifraga bronchialis</i> L. 1753
<i>Schizachne callosa</i> (Turcz. ex Griseb.) Ohwi 1933	<i>Schizachne purpurascens</i> subsp. <i>callosa</i> (Turcz. ex Griseb.) T. Koyama & Kawano 1964
<i>Schizonepeta annua</i> (Pall.) Schischk. 1936	<i>Nepeta annua</i> Pall. 1783

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

<i>Schizonepeta multifida</i> (L.) Briq. 1895	<i>Nepeta multifida</i> L. 1753
<i>Scirpus hippolyti</i> V.I. Krecz. 1937	<i>Schoenoplectus lacustris</i> subsp. <i>hippolytii</i> (V.I. Krecz.) Kukkonen 1998
<i>Scirpus supinus</i> L. 1753	<i>Schoenoplectus supinus</i> (L.) Palla 1888
<i>Scirpus triqueter</i> L. 1767	<i>Schoenoplectus triqueter</i> (L.) Palla 1889
<i>Scutellaria ikonnikovii</i> Juz. 1951	<i>Scutellaria regeliana</i> var. <i>ikonnikovii</i> (Juz.) C.Y. Wu & H.W. Li 1977
<i>Securinega suffruticosa</i> (Pall.) Rehder 1932	<i>Flueggea suffruticosa</i> (Pall.) Baill. 1858
<i>Sedum pallescens</i> Freyn 1895	<i>Hylotelephium pallescens</i> (Freyn) H. Ohba 1977
<i>Senecio amurensis</i> Schischk. 1961	<i>Tephroseris kirilowii</i> (Turcz. ex DC.) Holub 1977
<i>Senecio arcticus</i> Rupr. 1845	<i>Tephroseris palustris</i> (L.) Rchb. 1842
<i>Senecio asiaticus</i> Schischk. & Serg. 1961	<i>Tephroseris praticola</i> (Schischk. & Serg.) Holub 1973
<i>Senecio integrifolius</i> (L.) Clairv. 1811	<i>Tephroseris integrifolia</i> (L.) Holub 1973
<i>Senecio praticola</i> Schischk. & Serg. 1949	<i>Tephroseris praticola</i> (Schischk. & Serg.) Holub 1973
<i>Senecio resedifolius</i> Less. 1831	<i>Packera cymbalaria</i> (Pursh) W.A. Weber & A. Love 1981
<i>Senecio reverdattoi</i> Sobolevsk. 1951	<i>Tephroseris turczaninovii</i> (DC.) Holub 1973
<i>Senecio turczaninovii</i> DC. 1838	<i>Tephroseris turczaninovii</i> (DC.) Holub 1973
<i>Seseli abolinii</i> (Korovin) Schischk. 1950	<i>Libanotis abolinii</i> (Korovin) Korovin 1963
<i>Seseli buchtormense</i> (Fisch.) W.D.J. Koch 1824	<i>Libanotis buchtormensis</i> (Fisch.) DC. 1829
<i>Seseli condensatum</i> (L.) Rchb. 1867	<i>Libanotis condensata</i> (L.) Crantz 1767
<i>Seseli eriocarpum</i> (Schrenk) B.Fedtsch. 1915	<i>Libanotis eriocarpa</i> Schrenk 1843
<i>Seseli grubovii</i> V.M. Vinogr. & Sanczir 1985	<i>Libanotis grubovii</i> (V.M. Vinogr. & Sanczir) M.L. Sheh & M.F. Watson 2004
<i>Seseli seseloides</i> (Fisch. & C.A. Mey. ex Turcz.) Hiroe 1958	<i>Libanotis seseloides</i> (Fisch. & C.A. Mey. ex Turcz.) Turcz. 1844
<i>Setaria glauca</i> (L.) P.Beauv. 1812	<i>Pennisetum glaucum</i> (L.) R. Br. 1810
<i>Sibbaldianthe adpressa</i> (Bunge) Juz. 1941	<i>Sibbaldia adpressa</i> Bunge 1829
<i>Silene linnaeana</i> Vorosch. 1985; <i>Lychnis sibirica</i> L. 1753	<i>Silene samojedorum</i> (Sambuk) Oxelman 2001
<i>Sisymbrium mollissimum</i> C.A. Mey. 1831	<i>Crucihimalaya mollissima</i> (C.A. Mey.) Al-Shehbaz, O'Kane & R.A. Price 1999
<i>Solidago dahurica</i> Kitag. 1937	<i>Solidago virgaurea</i> subsp. <i>dahurica</i> (Kitag.) Kitag. 1939
<i>Sonchus arvensis</i> subsp. <i>uliginosus</i> (M.Bieb.) Nym. 1879	<i>Sonchus uliginosus</i> M. Bieb 1808
<i>Sparganium minimum</i> Wallr. 1840	<i>Sparganium natans</i> L. 1753
<i>Sparganium stoloniferum</i> (Buch.-Ham. ex Graebn.) Buch.-Ham. ex Juz. 1934	<i>Sparganium erectum</i> subsp. <i>stoloniferum</i> (Buch.-Ham. ex Graebn.) H. Hara 1976
<i>Spiraea ussuriensis</i> Pojark. 1939	<i>Spiraea chamaedryfolia</i> L. 1753
<i>Stellaria gypsophiloides</i> Fenzl 1842	<i>Stellaria dichotoma</i> var. <i>lanceolata</i> Bunge 1836
<i>Stellaria peduncularis</i> Bunge 1830	<i>Stellaria longipes</i> Goldie 1822
<i>Sterigmostemum botschanzevii</i> Grubov 1978	<i>Microstigma deflexum</i> Juz. 1939
<i>Stipa glareosa</i> P. Smirn. 1829	<i>Stipa caucasica</i> subsp. <i>glareosa</i> (P.A. Smirn.) Tzvelev 1974
<i>Stipa gobica</i> Roshev. 1924	<i>Stipa tianschanica</i> subsp. <i>gobica</i> (Roshev.) D.F. Cui, 1996
<i>Stipa klemenzii</i> Roshev. 1924	<i>Stipa tianschanica</i> var. <i>klemenzii</i> (Roshev.) Norl. 1949
<i>Stipa rubens</i> P.A. Smirn. 1925	<i>Stipa zalesskii</i> Wilensky 1925
<i>Strigosella africana</i> (L.) Botsch. 1972	<i>Malcolmia africana</i> (L.) W.T. Aiton 1812
<i>Suaeda prostrata</i> Pall. 1803	<i>Suaeda maritima</i> (L.) Dumort. 1827
<i>Swida alba</i> (L.) Opiz. 1838	<i>Cornus alba</i> L. 1767
<i>Tamarix florida</i> Bunge 1852	<i>Tamarix smyrnensis</i> Bunge 1852
<i>Tamarix hohenackeri</i> Bunge 1852	<i>Tamarix smyrnensis</i> Bunge 1852
<i>Taphrospermum altaicum</i> C.A. Mey. 1831	<i>Eutrema altaicum</i> (C.A.Mey.) Al-Shehbaz & Warwick 2005
<i>Taraxacum aksaicum</i> Schischk. 1949	<i>Taraxacum dealbatum</i> Hand-Mazz. 1907

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

<i>Taraxacum baicalense</i> Schischk. 1964	<i>Taraxacum dissectum</i> (Ledeb.) Ledeb. 1846
<i>Taraxacum chamarensis</i> Peschkova 1977	<i>Taraxacum ceratophorum</i> (Ledeb.) DC. 1838
<i>Taraxacum czuensis</i> Schischk. 1949	<i>Taraxacum borealisinense</i> Kitam. 1980
<i>Taraxacum printzii</i> Dahlst. 1921	<i>Taraxacum longicorne</i> Dahlst. 1906
<i>Taraxacum ustamenum</i> R. Doll 1973	<i>Taraxacum pawlodarskum</i> R. Doll 1973
<i>Thalictrum contortum</i> L. 1753	<i>Thalictrum aquilegiifolium</i> var. <i>sibiricum</i> Regel & Tiling 1858
<i>Thellungiella salsuginea</i> (Pall.) O. E. Schulz 1924	<i>Eutrema salsugineum</i> (Pall.) Al-Shehbaz & Warwick 2005
<i>Thermopsis lanceolata</i> subsp. <i>glabra</i> (Czebr.) Kurbatski 1991	<i>Thermopsis lanceolata</i> R. Br. 1811
<i>Thymus kitagawianus</i> (Kitag.) Czern. 1970	<i>Thymus dahuricus</i> Serg. 1938
<i>Tillaea aquatica</i> L. 1753	<i>Crassula aquatica</i> (L.) Schonland 1891
<i>Trifolium baicalense</i> Belaeva & Sipliv. 1975	<i>Trifolium lupinaster</i> L. 1753
<i>Trifolium popovii</i> (Roskov) Gubanov & Kamelin 1992	<i>Trifolium lupinaster</i> L. 1754
<i>Trisetum litwinowii</i> (Domin) Nevski 1934	<i>Koeleria litvinowii</i> Domin 1907
<i>Trollius ircuticus</i> Sipliv. 1972	<i>Trollius asiaticus</i> L. 1753
<i>Trollius kytmanovii</i> Reverd. 1943	<i>Trollius asiaticus</i> L. 1753
<i>Truellum sieboldii</i> (Miessn.) Sojak 1974	<i>Persicaria sagittata</i> (L.) H. Gross 1919
<i>Tulotis fuscescens</i> (L.) Czer. 1973	<i>Platanthera fuscescens</i> (L.) Kraenzl. 1899
<i>Ulmus japonica</i> (Rehd.) Sarg. 1907	<i>Ulmus davidiana</i> var. <i>japonica</i> (Rehder) Nakai 1932
<i>Veronica daurica</i> Steven 1817	<i>Pseudolysimachion dauricum</i> (Steven) Holub 1967
<i>Veronica linariifolia</i> Pall. ex Link 1820	<i>Pseudolysimachion linariifolium</i> (Pall. ex Link) Holub 1967
<i>Veronica longifolia</i> L. 1753	<i>Pseudolysimachion longifolium</i> (L.) Opiz 1852
<i>Veronica peregrina</i> subsp. <i>asiatica</i> Jelenevsky 1974	<i>Veronica peregrina</i> L. 1753
<i>Veronica perpusilla</i> Boiss. 1846	<i>Veronica pusilla</i> Kotschy & Boiss. 1845
<i>Veronica pinnata</i> L. 1767	<i>Pseudolysimachion pinnatum</i> (L.) Holub 1967
<i>Veronica porphyriana</i> Pavlov 1951	<i>Pseudolysimachion spicatum</i> (L.) Opiz 1852
<i>Vicia japonica</i> subsp. <i>pallida</i> (Turcz.) Worosch. 1985	<i>Vicia japonica</i> A. Gray 1858
<i>Vincetoxicum lanceolatum</i> (Grubov) Grubov 1984	<i>Cynanchum gobicum</i> Grubov 2000
<i>Vincetoxicum paniculatum</i> (Bunge) C.Y. Wu & D.Z. Li 1989	<i>Cynanchum paniculatum</i> (Bunge) Kitag. 1940
<i>Vincetoxicum sibiricum</i> (L.) Decne. 1844	<i>Cynanchum thesioides</i> (Freyn) K. Schum. 1895
<i>Viola arenaria</i> DC. 1805	<i>Viola rupestris</i> F.W.Schmidt 1791
<i>Viola brachysepala</i> Maxim. 1859	<i>Viola mirabilis</i> L. 1753
<i>Viola dissecta</i> var. <i>incisa</i> (Turcz.) Y.S. Chen 2007	<i>Viola incisa</i> Turcz. 1842
<i>Viola fissifolia</i> Kitag. 1935	<i>Viola incisa</i> Turcz. 1842
<i>Viola mirabilis</i> var. <i>subglabra</i> Ledeb. 1842	<i>Viola mirabilis</i> L. 1753
<i>Viola trichosepala</i> (W. Becker) Juz. 1949	<i>Viola tenuicornis</i> subsp. <i>trichosepala</i> W. Becker 1916
<i>Youngia altaica</i> (Babc. & Stebbins) Czerep. 1964	<i>Crepidifolium tenuifolium</i> (Willd.) Sennikov 2007
<i>Youngia flexuosa</i> (Ledeb.) Ledeb. 1845	<i>Askellia flexuosa</i> (Ledeb.) Weber, W.A. 1984
<i>Youngia nana</i> (Richardson) Kamelin 1993	<i>Askellia pygmaea</i> (Ledeb.) Sennikov 2008
<i>Youngia stenoma</i> (Turcz.) Ledeb. 1845	<i>Sonchella stenoma</i> (DC.) Sennikov 2007
<i>Youngia tenuifolia</i> (Willd.) Babc. & Stebb. 1937	<i>Crepidifolium tenuifolium</i> (Willd.) Sennikov, 2007
<i>Youngia tenuicaulis</i> (Babc. & Steb.) Czer. 1964	<i>Crepidiastrum akagii</i> (Kitag.) J.W. Zhang & N. Kilian 2011
<i>Zannichellia pedunculata</i> Rchb. 1829	<i>Zannichellia palustris</i> L. 1753
<i>Zigadenus sibiricus</i> (L.) A. Gray 1847	<i>Anticlea sibirica</i> (L.) Kunth 1843
<i>Ziziphora clinopodioides</i> subsp. <i>tomentosa</i> (Juz.) Kamelin & Gubanov 1990	<i>Ziziphora tomentosa</i> Juz. 1954
<i>Zygophyllum kaschgaricum</i> Boriss. 1949	<i>Sarcozygium kaschgaricum</i> (Boriss.) Y.X. Liou 1998
<i>Zygophyllum latifolium</i> Schrenk 1844	<i>Zygophyllum rosowii</i> var. <i>latifolium</i> (Schrenk) Popov 1925

## APPENDIX III.

**SYNONYMS OF VASCULAR PLANT GENERA**  
 (in comparison with names used in Gubanov (1996))

Old name	Accepted name (this conspectus)
<i>Achyrophorus</i> Adans. 1763	<i>Hypochaeris</i> L. 1753
<i>Achyroseris</i> Sch. Bip. 1845	<i>Scorzonera</i> L. 1753
<i>Aconogonon</i> (Meisn.) Rchb. 1837	<i>Polygonum</i> L. 1753
<i>Acroptilon</i> Cass. 1827	<i>Rhaponticum</i> Ludw. 1757
<i>Aleuritopteris</i> Fee 1850	<i>Cheilanthes</i> Sw. 1806
<i>Alsine</i> L. 1753	<i>Spergularia</i> (Pers.) J. Presl & C. Presl 1819
<i>Anagallidium</i> Griseb. 1839	<i>Swertia</i> L. 1753
<i>Anisantha</i> K. Koch 1848	<i>Bromus</i> sect. <i>Genea</i> Dumort. 1823
<i>Atragene</i> L. 1753	<i>Clematis</i> L. 1753
<i>Baeothryon</i> A. Dietr. 1833	<i>Trichophorum</i> Pers. 1805
<i>Brachyactis</i> Ledeb. 1845	<i>Symphyotrichum</i> Nees 1832
<i>Bromopsis</i> (Dumort.) Fourr. 1869	<i>Bromus</i> sect. <i>Bromopsis</i> Dumort. 1823
<i>Calloscordum</i> Herb. 1844	<i>Allium</i> subgen. <i>Calloscordum</i> (Herb.) R.M. Fritsch, 1994
<i>Chamaenerion</i> Seg. 1754	<i>Epilobium</i> L. 1753
<i>Chamerion</i> (Raf.) Raf. ex Holub 1972	<i>Epilobium</i> L. 1753
<i>Chartolepis</i> Cass. 1826	<i>Centaurea</i> L. 1753
<i>Chiazzospermum</i> Bernh. 1833	<i>Hypecoum</i> L. 1753
<i>Cimicifuga</i> L. ex Wernisch. 1763	<i>Actaea</i> L. 1753
<i>Criminalis</i> Adans. 1763	<i>Gentiana</i> L. 1753
<i>Coeloglossum</i> Hartm. 1820	<i>Dactylorhiza</i> Neck. ex Nevski 1937
<i>Digraphis</i> Trin 1820	<i>Phalaris</i> L. 1753
<i>Dimorphostemon</i> Kitag. 1939	<i>Dontostemon</i> Andr. ex Ledeb. 1831
<i>Dryadanthe</i> Endl. 1840	<i>Sibbaldia</i> L. 1753
<i>Duschekia</i> Opiz 1839	<i>Alnus</i> Mill. 1754
<i>Glaux</i> L. 1753	<i>Lysimachia</i> L. 1753
<i>Grossularia</i> Mill. 1754	<i>Ribes</i> L. 1753
<i>Hymenolobus</i> Nutt. 1838	<i>Hornungia</i> Rchb. 1837
<i>Hypopithis</i> Raf. 1810	<i>Monotropa</i> L. 1753
<i>Kadenia</i> Lavrova & V.N. Tikhom. 1986	<i>Cnidium</i> Cusson 1782
<i>Kitagawia</i> Pimenov 1986	<i>Peucedanum</i> L. 1753
<i>Listera</i> R. Br. 1813	<i>Neottia</i> Guett. 1754
<i>Londesia</i> Fisch. & C.A. Mey. 1835	<i>Bassia</i> All. 1776
<i>Lycopsis</i> L. 1753	<i>Anchusa</i> L. 1753
<i>Lysiella</i> Rydb. 1900	<i>Platanthera</i> Rich. 1817
<i>Melandrium</i> Rohl. 1812	<i>Silene</i> L. 1753
<i>Meniocus</i> Desv. 1814	<i>Alyssum</i> L. 1753
<i>Micropeplis</i> Bunge 1847	<i>Halogenetum</i> C.A. Mey. 1829
<i>Nardosmia</i> Cass. 1825	<i>Petasites</i> Mill. 1754
<i>Naumburgia</i> Moench 1802	<i>Lysimachia</i> L. 1753
<i>Oberna</i> Adans. 1763	<i>Silene</i> L. 1753
<i>Oxycoccus</i> Hill 1756	<i>Vaccinium</i> L. 1753
<i>Panzeria</i> J.F. Gmel. 1794	<i>Panzerina</i> Sojak 1981

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

<i>Paracolpodium</i> (Tzvelev) Tzvelev 1965	<i>Colpodium</i> subgen. <i>Paracolpodium</i> Tzvelev 1964
<i>Paropyrum</i> Ulbr. 1925	<i>Isopyrum</i> L. 1753
<i>Phalaroides</i> Wolf 1776	<i>Phalaris</i> L. 1753
<i>Phlomoides</i> Moench 1794	<i>Phlomis</i> L. 1753
<i>Poacynum</i> Baill. 1888	<i>Apocynum</i> L. 1753
<i>Prionotrichon</i> Botschansev & Vvedensky 1948	<i>Rhammatophyllum</i> O.E. Schulz 1933
<i>Ptilagrostis</i> Griseb. 1852	<i>Stipa</i> L. 1753
<i>Rhodococcum</i> (Rupr.) Avrorin 1958	<i>Vaccinium</i> L. 1753
<i>Sajanella</i> Sojak 1980	<i>Sajania</i> Pimenov 1974
<i>Schizonepeta</i> (Benth.) Briq. 1896	<i>Nepeta</i> L. 1753
<i>Securinega</i> Comm. ex Juss. 1789	<i>Flueggea</i> Willd. 1806
<i>Sibbaldianthe</i> Juz. 1941	<i>Sibbaldia</i> L. 1753
<i>Swida</i> Opiz 1838	<i>Cornus</i> L. 1753
<i>Taphrospermum</i> C.A. Mey. 1831	<i>Eutrema</i> R. Br. 1823
<i>Thellungiella</i> O.E. Schulz 1924	<i>Eutrema</i> R. Br. 1823
<i>Tillaea</i> L. 1753	<i>Crassula</i> L. 1753
<i>Timouria</i> Roshev. 1916	<i>Stipa</i> L. 1753
<i>Tulotis</i> Lindl. 1835	<i>Platanthera</i> Rich. 1817
<i>Vincetoxicum</i> Wolf 1776	<i>Cynanchum</i> L. 1753
<i>Zigadenus</i> Michx. 1803	<i>Anticlea</i> Kunth 1843

---

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

**APPENDIX IV.**

**VASCULAR PLANTS ENDEMIC TO MONGOLIA**

No.	Species	Family	Status	Phyto-geographical region
1	<i>Aconitum gubanovii</i> Luferov & Vorosch. 1991	Ranunculaceae	Altai	7,14
2	<i>Adenophora changaica</i> Gubanov & Kamelin, 1988	Campanulaceae	Khangai	3
3	<i>Adonis mongolica</i> Simonovicz 1968	Ranunculaceae	Mongolian	1,3,4
4	<i>Ajania grubovii</i> Muldashev 1982	Asteraceae	Altai	7,14
5	<i>Alchemilla changaica</i> V. Tichomirov 1983	Rosaceae	Khangai	3
6	<i>Alchemilla gubanovii</i> V. Tichomirov 1983	Rosaceae	Khangai	2,3
7	<i>Alchemilla pavlovii</i> Juz. 1929	Rosaceae	Khangai	2,3
8	<i>Aquilegia ganboldii</i> Kamelin & Gubanov 1991	Ranunculaceae	Foothills of Great Khingan	5
9	<i>Artemisia blepharolepis</i> Bunge 1851	Asteraceae	Gobi	11,12,13,16
10	<i>Artemisia changaica</i> Krasch. 1936	Asteraceae	Mongolian	1,3,7,8,10,11,13
11	<i>Artemisia desertorum</i> subsp. <i>pseudojaponica</i> Darijma & Kamelin 1992	Asteraceae	Mongolian	2,4,5,9,13
12	<i>Artemisia feddei</i> subsp. <i>arschantinica</i> (Darijma) Gubanov & Kamelin 1996	Asteraceae	Gobi	16
13	<i>Artemisia globosa</i> Krasch. 1922	Asteraceae	Altai	6-8,10,12,13,14
14	<i>Artemisia klementzae</i> Krasch. 1964	Asteraceae	Mongolian	3,4,7,9-14
15	<i>Artemisia mongolorum</i> subsp. <i>gobica</i> Krasch. 1937	Asteraceae	Mongolian	3,4,6-16
16	<i>Artemisia santolinifolia</i> subsp. <i>stepposa</i> Darijma 1992	Asteraceae	Mongolian	8,9
17	<i>Artemisia vulgaris</i> subsp. <i>inundata</i> Darjima 1992	Asteraceae	Khangai	2,3
18	<i>Artemisia xylorrhiza</i> Krasch. ex Filatova 1986	Asteraceae	Mongolian	3,4,7-13,16
19	<i>Asperula saxicola</i> Ehrend. 1974	Rubiaceae	Gobi	13,16
20	<i>Aster sanczirii</i> Kamelin & Gubanov 1992	Asteraceae	Foothills of Great Khingan	5
21	<i>Asterothamnus molliusculus</i> Novopokr. 1950	Asteraceae	Gobi	12
22	<i>Astragalus baitagensis</i> Sanczir ex N. Ulzij. 1990	Fabaceae	Dzungarian	14
23	<i>Astragalus banzragczii</i> N. Ulzij. 1987	Fabaceae	Dzungarian	14
24	<i>Astragalus changaicus</i> Sanczir ex N. Ulzij. 1989	Fabaceae	Khangai	3
25	<i>Astragalus chubsugulicus</i> Gontsch. ex N. Ulzij. 1990	Fabaceae	Khovsgol	1
26	<i>Astragalus gobi-altaicus</i> N. Ulzij. 1990	Fabaceae	Gobi Altai	13
27	<i>Astragalus gobicus</i> Hanelt & Davazamc 1965	Fabaceae	Gobi	14,15
28	<i>Astragalus granitovii</i> Sanczir ex N. Ulzij. 1990	Fabaceae	Altai	7,14
29	<i>Astragalus gregorii</i> B. Fedtsch. & Basil. 1930	Fabaceae	Altai	7
30	<i>Astragalus gubanovii</i> N. Ulzij. 1987	Fabaceae	Altai	7,10
31	<i>Astragalus kenteicus</i> N. Ulzij. 1990	Fabaceae	Khentei	2
32	<i>Astragalus klementzii</i> N. Ulzij. 1989	Fabaceae	Khangai	3
33	<i>Astragalus koslovii</i> B. Fedtsch. & Basil. ex N. Ulzij. 1990	Fabaceae	Gobi Altai	13
34	<i>Astragalus pavlovii</i> B. Fedtsch. & Basil. 1929	Fabaceae	Gobi	13,14,15,16
35	<i>Astragalus potaninii</i> N. Ulzij. 1990	Fabaceae	Altai	7
36	<i>Astragalus pseudovulpinus</i> Sanczir ex N. Ulzij. 1990	Fabaceae	Dzungarian	14

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

37	<i>Astragalus saichanensis</i> Sanczir 1974	Fabaceae	Gobi Altai	7,13
38	<i>Astragalus sanczirii</i> N. Ulzij. 1990	Fabaceae	Altai	7,14
39	<i>Astragalus tamiricus</i> N. Ulzij. 1989	Fabaceae	Khangai	3
40	<i>Astragalus ulziykhutagii</i> Sytin 1996	Fabaceae	Altai	7
41	<i>Astragalus urunguensis</i> N. Ulzij. 1990	Fabaceae	Dzungarian	14
42	<i>Astragalus viridiflavus</i> N. Ulzij. 1990	Fabaceae	Mongolian	1,2,3,4
43	<i>Brachanthemum mongolorum</i> Grubov 1972	Asteraceae	Mongolian	9
44	<i>Calligonum gobicum</i> Bunge ex Meissn. 1856	Polygonaceae	Gobi	14,15,16
45	<i>Caragana brachypoda</i> Pojark. 1950	Fabaceae	Gobi	12,13,14,15,16
46	+ <i>Caragana davazamcii</i> Sanczir 1974	Fabaceae	<b>Gobi</b>	<b>9,11,12,13,16</b>
47	<i>Caragana gobica</i> Sanczir 1975	Fabaceae	Gobi	12,13
48	<i>Caragana gobica</i> subsp. <i>occidentalis</i> Kamelin & Yakovlev 1988	Fabaceae	Dzungarian	7,14
49	<i>Carex selengensis</i> Ivanova 1937	Cyperaceae	Khangai	3,9
50	<i>Chesneya grubovii</i> Yakovlev 1979	Fabaceae	Gobi	15
51	<i>Chrysanthemum chalchingolicum</i> Grubov 1972	Asteraceae	Foothills of Great Khingan	5,9
52	<i>Cleome gobica</i> Grubov 1982	Cleomaceae	Gobi	15
53	<i>Corydalis grubovii</i> Mikhailova 1981	Papaveraceae	Altai	7
54	<i>Crucihimalaya rupicola</i> (Krylov) A.L. Ebel & D.A. German 2005	Brassicaceae	Altai	6,13
55	<i>Cynanchum gobicum</i> Grubov 2000	Apocynaceae	Gobi	12,13,14,15,16
56	<i>Delphinium changaicum</i> Friesen 1990	Ranunculaceae	Khangai	3,13
57	<i>Delphinium gubanovii</i> Friesen 1990	Ranunculaceae	Altai	7
58	<i>Dracocephalum junatovii</i> A. Budantzev 1987	Lamiaceae	Mongolian	4,9
59	<i>Euphorbia potaninii</i> Prokh. 1926	Euphorbiaceae	Gobi	3,6,7,10,13
60	<i>Galitzkya macrocarpa</i> (Ikonn.-Gal.) V.V. Botschantz. 1979	Brassicaceae	Gobi	13,15
61	<i>Galitzkya potaninii</i> (Maxim.) V.V. Botschantz. 1979	Brassicaceae	Altai	7,14,15
62	<i>Glycyrrhiza inflata</i> Batalin 1891	Fabaceae	Dzungarian	7,15,16
63	<i>Goldbachia ikonnikovii</i> Vass. 1936	Brassicaceae	Mongolian	6-8,10,11,13,14
64	<i>Gymnocarpos przewalskii</i> Bunge & Maxim. 1880	Caryophyllaceae	Gobi	12,14,16
65	+ <i>Hedysarum chalchorum</i> N. Ulzij. 1989	Fabaceae	<b>Mongolian</b>	<b>3,4,8</b>
66	<i>Hedysarum kamelinii</i> N. Ulzij. 1992	Fabaceae	Altai	7
67	<i>Hieracium czadanense</i> Tupitz. 1994	Asteraceae	Mongolian	1,10
68	<i>Hippolytia trifida</i> (Turcz.) Poljak. 1957	Asteraceae	Gobi	3,6,7-13,16
69	<i>Incarvillea potaninii</i> Batalin 1891	Bignoniaceae	Gobi	13,15,16
70	<i>Juncus arcticus</i> subsp. <i>grubovii</i> (Novikov) Novikov, Kirschner & Snogerup 2002	Juncaceae	Khangai	1,2,3
71	+ <i>Lagopsis darwiniana</i> Pyak 2007	Lamiaceae	<b>Altai</b>	<b>7</b>
72	<i>Leonurus pseudopanzerioides</i> Krestovsk. 1984	Lamiaceae	Altai	7,14
73	<i>Limonium gobicum</i> Iк.-Gal. 1936	Plumbaginaceae	Gobi	12
74	<i>Limonium grubovii</i> Lincz. 1971	Plumbaginaceae	Mongolian	9
75	<i>Limonium klementzii</i> Iк.-Gal. 1936	Plumbaginaceae	Gobi	7,10,15
76	<i>Luzula changaica</i> V.S. Novikov 1989	Juncaceae	Khangai	3
77	<i>Luzula spicata</i> subsp. <i>mongolica</i> V.Novikov 1989	Juncaceae	Altai	1,2,3,7,13
78	<i>Lycium truncatum</i> Y.C. Wang 1934	Solanaceae	Gobi	10,12,15,16
79	<i>Microstigma brachycarpum</i> Botsch. 1959	Brassicaceae	Altai	6,7,15,16
80	<i>Nanophyton grubovii</i> Pratov. 1982	Amaranthaceae	Gobi	10
81	<i>Nanophyton mongolicum</i> Pratov. 1982	Amaranthaceae	Altai	7,14
82	<i>Neotorularia grubovii</i> (Botsch.) Botsch. 1988	Brassicaceae	Khovsgol	1

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

83	<i>Neotorularia mongolica</i> Botsch. & Gubanov 1988	Brassicaceae	Khovsgol	1
84	<i>Oxytropis bungei</i> Kom. 1914	Fabaceae	Mongolian	3,6,7,8,10-14
85	<i>Oxytropis diantha</i> Bunge ex Maxim. 1880	Fabaceae	Mongolian	1,3
86	<i>Oxytropis fragilifolia</i> N. Ulzij. 1979	Fabaceae	Gobi Altai	7,13
87	<i>Oxytropis junatovii</i> Sanczir, 1985	Fabaceae	Gobi Altai	13
88	<i>Oxytropis klementzii</i> N. Ulzij. 1971	Fabaceae	Mongolian	2,3,4,8
89	<i>Oxytropis lavrenkoi</i> N. Ulzij. 1987	Fabaceae	Gobi	12
90	<i>Oxytropis micrantha</i> Bunge ex Maxim. 1830	Fabaceae	Mongolian	3,6,7,10,11
91	<i>Oxytropis monophylla</i> Grubov 1978	Fabaceae	Gobi	12,13
92	<i>Oxytropis nitens</i> Turcz. 1842	Fabaceae	Mongolian	1,2,3,4,9
93	<i>Oxytropis pavlovii</i> B. Fedtsch. & Basil. 1929	Fabaceae	Mongolian	3,8,11,12,13
94	<i>Oxytropis potaninii</i> Bunge ex Palub. 1908	Fabaceae	Altai	7,10
95	<i>Oxytropis pseudoglandulosa</i> Gontsch. ex Grubov 1955	Fabaceae	Mongolian	1-4,8,9,12,13
96	<i>Oxytropis rhizantha</i> Palib. 1908	Fabaceae	Altai	6,7,10
97	<i>Oxytropis sacciformis</i> H.C. Fu 1982	Fabaceae	Gobi	12
98	<i>Oxytropis sutaica</i> N. Ulzij. 1979	Fabaceae	Altai	3,7
99	<i>Oxytropis tenuis</i> Palib. 1908	Fabaceae	Altai	6,7
100	<i>Oxytropis ulzijchutagii</i> Sanczir 1989	Fabaceae	Altai	7
101	<i>Oxytropis viridiflava</i> Kom. 1914	Fabaceae	Mongolian	1-4,7,8,9,11,13
102	<i>Papaver baitagense</i> Kamelin & Gubanov 1990	Papaveraceae	Altai	6,7,14
103	<i>Papaver pseudotenellum</i> Grubov 1955	Papaveraceae	Gobi	7,10,13,14
104	<i>Papaver rubro-aurantiacum</i> subsp. <i>chalchorum</i> Kamelin 1990	Papaveraceae	Gobi	8
105	<i>Papaver rubro-aurantiacum</i> subsp. <i>changaicum</i> (Kamelin) Kamelin 1990	Papaveraceae	Khangai	3
106	<i>Papaver rubro-aurantiacum</i> subsp. <i>saichanense</i> (Grubov) Kamelin & Gubanov 1990	Papaveraceae	Gobi Altai	13
107	<i>Pedicularis moschata</i> Maxim. 1881	Orobanchaceae	Altai	6,7,10
108	<i>Physochlaina albiflora</i> Grubov 1955	Solanaceae	Khangai	3,4
109	<i>Potaninia mongolica</i> Maxim. 1881	Rosaceae	Gobi	11,12,13,16
110	<i>Potentilla chenteica</i> Sojak 1970	Rosaceae	Khentei	2,3
111	<i>Potentilla drymeja</i> Sojak 1970	Rosaceae	Mongolian	2,3,13
112	+ <i>Potentilla gobica</i> Sojak 2006	Rosaceae	Altai	7
113	<i>Potentilla hilbigii</i> Sojak 1986	Rosaceae	Khangai	3
114	+ <i>Potentilla hubsugulica</i> Sojak 1986	Rosaceae	<b>Khovsgol</b>	1
115	<i>Potentilla ikonnikovii</i> Juz. 1955	Rosaceae	Gobi Altai	13
116	<i>Potentilla inopinata</i> Sojak 1986	Rosaceae	Altai	6
117	<i>Potentilla laevipes</i> Sojak 1986	Rosaceae	Altai	7
118	<i>Potentilla laevissima</i> Kamelin 1995	Rosaceae	Altai	7
119	<i>Potentilla mongolica</i> Krasch. 1926	Rosaceae	Khangai	3
120	<i>Potentilla rhipidophylla</i> Sojak 1986	Rosaceae	Altai	7
121	<i>Potentilla serrata</i> Sojak 1986	Rosaceae	Khangai	3
122	<i>Pyrethrum changaicum</i> Krasch. ex Grubov 1955	Asteraceae	Mongolian	3,7,10
123	+ <i>Ranunculus sapozhnikovii</i> Schegoleva 2006	Ranunculaceae	Altai	7
124	<i>Rhinactinidia eremophila</i> subsp. <i>grubovii</i> Botsch. 1986	Asteraceae	Altai	7
125	<i>Rosa baitagensis</i> Kamelin & Gubanov 1988	Rosaceae	Dzungarian	14
126	<i>Saussurea catharinae</i> Lipsch. 1974	Asteraceae	Gobi	15
127	<i>Saussurea gubanovii</i> Kamelin 1988	Asteraceae	Gobi	15
128	<i>Saussurea klementzii</i> Lipsch. 1954	Asteraceae	Altai	7

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

---

129	<i>Saussurea ramosa</i> Lipsch. 1954	Asteraceae	Gobi	3,10,11,15
130	<i>Saussurea saichanensis</i> Kom. ex Lipsch. 1960	Asteraceae	Mongolian	1,2,3,6,7,13,14
131	<i>Scorzonera grubovii</i> Lipsch. 1981	Asteraceae	Dzungarian	14
132	<i>Scrophularia hilbigii</i> Jaeger. 1985	Scrophulariaceae	Altai	13,14
133	<i>Scutellaria grandiflora</i> subsp. <i>gymnosperma</i> Kamelin & Gubanov 1989	Lamiaceae	Altai	7,13
134	<i>Scutellaria paulsenii</i> Briq. 1908	Lamiaceae	Altai	7
135	<i>Senecio kenteicus</i> Grubov 1982	Asteraceae	Khentei	2
136	<i>Seriphidium assurgens</i> (Filat.) K. Bremer & Humphries ex Y.R. Ling 1991	Asteraceae	Altai	7,11,13,14,15
137	<i>Silene iche-bogdo</i> Grubov 1955	Caryophyllaceae	Gobi Altai	13
138	<i>Silene mongolica</i> Maxim. 1899	Caryophyllaceae	Gobi	10,13
139	<i>Silene songarica</i> (Fisch., C.A. Mey. & Ave-Lall.) Bocquet 1967	Caryophyllaceae	Khangai	2,3,4
140	<i>Smelowskia mongolica</i> Kom. 1911	Brassicaceae	Khangai	3
141	<i>Stellaria pulvinata</i> Grubov 1972	Caryophyllaceae	Altai	6,7
142	<i>Swertia banzragczii</i> Sanczir 1984	Gentianaceae	Altai	6,7
143	<i>Taraxacum bornuurense</i> R. Doll 1975	Asteraceae	Mongolian	3,4,6,7
144	+ <i>Taraxacum inimitabile</i> Kirschn. et Step. 2006	Asteraceae	Gobi Altai	13
145	<i>Taraxacum junatovii</i> Tzvelev 1987	Asteraceae	Altai	3,7,13,14
146	<i>Taraxacum selengensis</i> Tzvelev 1991	Asteraceae	Khangai	3
147	<i>Taraxacum submacilentum</i> Tzvelev 1991	Asteraceae	Altai	7
148	+ <i>Thalictrum minus</i> subsp. <i>appendiculatum</i> (C.A. Mey.) Gubanov 1983	Ranunculaceae	Khangai	3
149	<i>Thymus gobi-altaicus</i> (N. Ulzij.) Kamelin & A.L. Budantzev 1990	Lamiaceae	Gobi Altai	13
150	<i>Valeriana saichanensis</i> Kom. 1931	Caprifoliaceae	Gobi Altai	13
151	+ <i>Veronica sapozhnikovii</i> Kossatschev 2003	Plantaginaceae	Altai	7,14
152	+ <i>Veronica smirnovii</i> Kossatschev 2009	Plantaginaceae	Altai	7
153	<i>Zygophyllum neglectum</i> Grubov 1982	Zygophyllaceae	Gobi	14,16

+ new added

## APPENDIX V.

**VERY RARE PLANT SPECIES OF MONGOLIA**  
 (according to Mongolian Law on Natural Plant 1995)

Species name	Species name
<i>Abies sibirica</i>	<i>Dryopteris dilatata</i>
<i>Aconitum kuznezoffii</i>	<i>Elaeagnus moorcroftii</i> (= <i>E. angustifolia</i> L.)
<i>Acorus calamus</i>	<i>Ephedra equisetina</i>
<i>Adonis mongolica</i>	<i>Ephedra fedtschenkoae</i>
<i>Allium macrostemon</i>	<i>Epipogium aphyllum</i>
<i>Allium obliquum</i>	<i>Ferula feruloides</i>
<i>Ammopiptanthus mongolicus</i>	<i>Gagea hiensis</i>
<i>Anabasis aphylla</i>	<i>Gentiana macrophylla</i>
<i>Anabasis eripoda</i>	<i>Gentiana pulmonaria</i> (= <i>Comastoma pulmonarium</i> (Turcz.) Toyok)
<i>Androsace longifolia</i>	<i>Glycyrrhiza squamulosa</i>
<i>Anemarrhena asphodeloides</i>	<i>Gueldenstaedtia monophyla</i>
<i>Aquilegia ganboldii</i>	<i>Gymnocarpos przewalskii</i>
<i>Arnebia guttata</i>	<i>Halimodendron halodendron</i>
<i>Arnica iljinii</i> (= <i>A. angustifolia</i> subsp. <i>iljinii</i> )	<i>Hedysarum fruticosum</i>
<i>Artemisia lithophila</i> (= <i>A. lagocephala</i> subsp. <i>lithophila</i> Malyshev)	<i>Hedysarum sangilense</i>
<i>Artemisia tomentella</i>	<i>Helichrysum arenarium</i>
<i>Artemisia xanthochroa</i> (= <i>A. xanthochloa</i> Krasch)	<i>Iljinia regelii</i>
<i>Asperula esculenta</i>	<i>Incarvillea potaninii</i>
<i>Asterothamnus centralasiaticus</i>	<i>Juniperus sabina</i>
<i>Biebersteinia odora</i>	<i>Jurinea mongolica</i>
<i>Botrychium lanceolatum</i>	<i>Lancea tibetica</i>
<i>Brachanthemum gobicum</i>	<i>Lilium martagon</i>
<i>Brachanthemum mongolorum</i>	<i>Lilium pensylvanicum</i>
<i>Calypso bulbosa</i>	<i>Limonium aureum</i>
<i>Cardamine parviflora</i>	<i>Lycopodium alpinum</i> (= <i>Diphasiastrum alpinum</i> (L.) Holub)
<i>Caragana brachypoda</i>	<i>Lycopodium clavatum</i>
<i>Caragana gobica</i>	<i>Maianthemum dilatatum</i>
<i>Caragana tibetica</i>	<i>Malva mauritiana</i> (= <i>M. sylvestris</i> L.)
<i>Centaurea pulchella</i> (= <i>Hyalea pulchella</i> (Ledeb.) K. Koch)	<i>Mitella nuda</i>
<i>Chesneya mongolica</i>	<i>Nematonostoc flagelliforme</i>
<i>Chrysanthemum sinuatum</i> (= <i>Taraxacum sinuatum</i> Sch. Bip.)	<i>Neottia camtschatea</i>
<i>Cistanche deserticola</i>	<i>Neottianthe cucullata</i>
<i>Clematis glauca</i>	<i>Nuphar pumila</i>
<i>Codonopsis clematidea</i>	<i>Nymphaea candida</i>
<i>Convallaria keiskei</i>	<i>Olgaea leucophylla</i>

**CONSPECTUS OF VASCULAR PLANTS TO THE FLORA OF MONGOLIA (2014)**

<i>Corallorrhiza trifida</i>	<i>Orchis fuchsii</i> (= <i>Dactylorhiza fuchsii</i> (Druce.) Soo)
<i>Cypripedium calceolus</i>	<i>Orchis militaris</i>
<i>Cypripedium macranthum</i>	<i>Oxycoccus microcarpus</i> (= <i>Vaccinium microcarpum</i> (Turcz. ex Rupr.) Schmalh.)
<i>Dasiphora lactiflora</i>	<i>Oxytropis acanthacea</i>
<i>Dictamnus dasycarpus</i> (= <i>D. albus</i> L.)	<i>Oxytropis fragilifolia</i>
<i>Drosera anglica</i>	<i>Oxytropis grubovii</i> (= <i>Spongiocarpella grubovii</i> (N. Ulzij.) Yakovlev)
<i>Drosera rotundifolia</i>	<i>Paeonia lactiflora</i>
<i>Paris verticillata</i>	<i>Sanguisorba alpina</i>
<i>Pedicularis abrotanifolia</i>	<i>Saussurea involucrata</i>
<i>Pedicularis altaica</i>	<i>Saxifraga hirculus</i>
<i>Peganum harmala</i>	<i>Scheuchzeria palustris</i>
<i>Phlomis oreophila</i>	<i>Sedum palescens</i> (= <i>Hylotelephium palescens</i> (Freyn) H. Ohba)
<i>Physochlaina albiflora</i>	<i>Swertia banzragczii</i>
<i>Platanthera bifolia</i>	<i>Solidago dahurica</i> (= <i>S. virgaurea</i> subsp. <i>dahurica</i> (Kitag.) Kitag.)
<i>Polygonatum humile</i>	<i>Sophora flavescens</i>
<i>Populus diversifolia</i> (= <i>P. euphratica</i> Olivier)	<i>Sorbaria sorbifolia</i>
<i>Potaninia mongolica</i>	<i>Tofieldia coccinea</i>
<i>Rhamnus parvifolia</i>	<i>Trollius sajanense</i>
<i>Rhamnus ussuriensis</i>	<i>Tugarinovia mongolica</i>
<i>Rhaponticum carthamoides</i>	<i>Tulipa uniflora</i>
<i>Rheum uninerve</i>	<i>Typha minima</i>
<i>Rhodiola rosea</i>	<i>Vaccinium myrtillus</i>
<i>Rhododendron adamsii</i>	<i>Valeriana saichanensis</i>
<i>Rhododendron aureum</i>	<i>Viburnum mongolicum</i>
<i>Rhododendron dahuricum</i>	<i>Viburnum sargentii</i>
<i>Rhododendron ledebourii</i>	<i>Vicia tsydenii</i>
<i>Rhododendron parvifolium</i>	<i>Vincetoxicum sibiricum</i> (= <i>Cynanchum thesioides</i> (Freyn) K. Schum)
<i>Rosa kokanica</i>	<i>Viola brachyceras</i>
<i>Rosa laxa</i>	<i>Zigadenus sibiricus</i> (= <i>Anticlea sibirica</i> (L.) Kunth)
<i>Sagittaria natans</i>	<i>Zizania latifolia</i>
<i>Salvia deserta</i>	<i>Zygophyllum potaninii</i>
<i>Sambucus manshurica</i>	<b>total 133 species</b>