



# **Index seminarum**

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# *Index Seminum*

*Utrecht University  
Botanic Gardens  
The Netherlands*



Universiteit Utrecht

*No. 55-2013-14*

UNIVERSITEITSBIBLIOTHEEK UTRECHT



4216 3463

# *Utrecht University*

## *Botanic Gardens*

P.O. Box 80.162  
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The Netherlands

### *Index Seminum No. 55 - 2013-14*

Internet Orders: <http://botgard.bio.uu.nl>  
(including many pictures)

In response to the Convention on Biological Diversity (**CBD**), the Utrecht University Botanic Gardens supplies seeds and other plant material in accordance with the Code of Conduct for Botanic Gardens and similar collections. We are **IPEN**-member (**I**nternational **P**lant **E**xchange **N**etwork) and can exchange material with other IPEN-members without bi-lateral agreements

For a list of current IPEN-members check the web-site of BGCI (**B**otanic **G**ardens **C**onservation **I**nternational).

[http://www.bgci.org/resources/History\\_of\\_IPEN/](http://www.bgci.org/resources/History_of_IPEN/)

Non **IPEN**-members have to return the "Agreement on the supply of living plant material for non-commercial purposes leaving the International Plant Exchange Network (IPEN version 2b)" which must be signed by **authorized staff**. This agreement can be made valid for 1, 3 or 5 years and is printed on the back-side of the order form.

#### *Notes on ordering:*

- Correspondents are asked to use the order-form provided, **which must be signed by authorised staff**, and send it to the address mentioned upon it. Furthermore, they should check with their own authorities concerning import-regulations and include any necessary permits with their order.
- The first distribution will be shortly after **March 1, 2014**. Many seeds of limited amount will be out of stock shortly afterward, so please order before this date. Requests, with a maximum of 25 packets will be handled in sequence of entry.
- Our Fax no. is +31 30 2535177 (do not use e-mail).

## Staff

### General Department:

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## Garden location

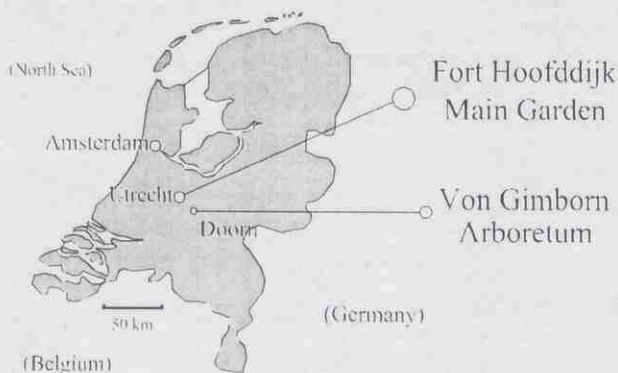
Utrecht: Fort Hoofddijk (University Centre)

Further (collecting) gardeners for Utrecht: G.E. Bruinenberg, I. van Capel, A. Jacobs, W. Jansen, A.A. Jongerius, R. Koops, , H.W.M. Noordman, H.B. Spoor and B. Valstar.

### Situation and climate:

Geographical position of the Main Garden	52° 06' N : 5° 11' E
Altitude	2 m above sea level
Geographical position of the Von Gimborn Arboretum	52° 00' N : 5° 20' E
Altitude	3 m above sea level
Mean daily minimum of the coldest month	- 0,6°C
Mean daily maximum of the warmest month	+ 21,6°C
Highest temperature	+ 36,8°C *
Lowest temperature	- 24,8°C *
Average rainfall	803 mm

\*Monitored since 1849



## From the Curator's Department

With the presentation of this Index Seminum No. 55-2013-14 we take the opportunity, as usual, to inform you on the latest developments in Utrecht University Botanic Gardens.

In general, the activities of the curators are divided in the following main groups:

- Hans Persoon [HP]: Systematic Garden, Theme Garden, Central Route and student courses.
- Eric Gouda [EG]: Greenhouse Collections (focal point: Neotropical Collections) and the Rock Garden

### Specializations:

In the framework of the National Plant Collection (NP), Utrecht University Botanic Gardens are maintaining specializations on the following groups and taxa:

- Flora of the Neotropics: [EG] Flora of the Guianas, with special emphasis on:  
*Bromeliaceae*      *Orchidaceae*      *Costaceae*
  
- *Annonaceae* (Research Collection) [EG]
- *Cecropiaceae* [EG]
- *Rhipsalis* [EG]
- *Aeonium* [EG]
- Alpines [EG]
- *Penstemon* [EG]
- *Eriogonum* [EG]
- selected woodland plants (*Arisaema*, *Asarum*, & *Trillium*) [EG]

These specializations are given extra attention regarding verification, nomenclature, wild source material, etc.

We are especially interested in material from natural sources of the groups and taxa mentioned above. We seek cooperation with gardens with identical specializations. If you are interested, please contact us and we will provide additional information.

***Bromeliaceae:***

Study and development in the *Bromeliaceae* collection has several focus points. In the first place the *Bromeliaceae* research project for the "Flora of the Guianas" and for the Flora of Ecuador: we try to grow all possible species from this area. Beside this, the *Tillandsioideae* collection (as Subfamily of the *Bromeliaceae*) is part of the National Plant Collection (NP). The genus *Tillandsia* of the Andian countries (especially Bolivia & Equador) has a special attention because of the various taxonomic problems on species level in these areas. To increase the general knowledge about the recognised genera in the Family we try to grow representatives from all genera. It is evident that our Bromeliaceae Collections will increase dramatically in both size and quality.

***Arisaema:***

The last few years we have been very active with this group, increasing the number of wild collected species in the collection. Some areas, like the Peat Garden, have been improved to grow more Arisaemas. International contact with various *Arisaema* (*Araceae*) specialists caused considerable improvement of the collection.

Last but not least, the living collections have been enriched this year. Many new accessions from natural sources replaced accessions from cultivated origin, as part of the long-term collection strategy to replace plants of cultivated origin for wild-collected stock.



## Codes used

### Verification:

The seeds in this list have been taken from verified plants and only if we were reasonably sure that cross-pollination with related species would be unlikely.

Verification codes used:

- 0= not been determined by any authority;
- 1= determined by comparison with other named plants;
- 2= determined by a taxonomist or other competent person;
- 3= determined by a specialist (taxonomist working on that group)

### Explanation of provenance codes of the plants:

**W=** Accession of wild source (treat as 'Z' because the donor plant is cultivated in our B.G., except W\*, which is wild collected seed, distributed as such.)

**Z=** from a wild source plant in cultivation.

**G=** Garden origin.

### IPEN-Number:

The first two positions are the iso-code of the country of origin. xx means: country of origin unknown.

The next position is a digit meaning: special restrictions (1) or not (0).

The next position is the abbreviation of the garden introducing the material in IPEN (in this seed-list only).

The rest consists of the internal accession number:

The first four digits of it indicate the year of registration, (1900 = unknown year of entry).

The next two characters are coding for the garden location or specific group of plants: **GR**=Green houses; **BL**=Rock Garden; **ZG**=Orig. Von Gimborn Arboretum; **RD**=Woody Plants; **SL**= Seedlist only; **ZE**=Annuals and Biennials; **ZS** and **ZB**= Perennials.

The other five digits are a sequence number within a year.

The IPEN-number as a whole stays attached to the accession, wherever it may go, so that it is always possible to trace back its origin.

The \* at the end of the description is followed by the seed-list collecting year.

Agavaceae

1. 2G *Doryanthes palmeri* A.W.Hill  
[IPEN xx0u-1973GR00602] \*2013
2. 2G *Phormium tenax* J.R. & G.Forst.  
[IPEN xx0u-1973GR00695] \*2013

Apiaceae

3. 1G *Molopospermum peloponnesiacum* (L.) W.D.J.Koch  
[IPEN xx0u-1997BL01030] \*2013
4. 2G *Olymposciadium caespitosum* (J.E.Sm.) Wolff  
[IPEN xx0u-1969BL00242] \*2013

Araceae

5. 2G *Aglaonema crispum* (Pitcher & Manda) Nicolson  
[IPEN xx0u-1974GR00664] \*2013
6. 2G *Arisaema amurense* Maxim.  
[IPEN xx0u-1986BL00211] \*2012
7. 2G *Arisaema ciliatum* var. *liubaense* Gusman & Gouda  
[IPEN xx0u-1987BL00172] \*2013
8. 3W *Arisaema ciliatum* var. *liubaense* Gusman & Gouda  
[IPEN cn0u-1989BL00077] China, China  
South-Central, Sichuan , Liuba , Alt.: 3600 m. , Coll.:  
Teune, C. 369 14/09/1981 \*2013
9. 2G *Arisaema flavum* var. *flavum*  
[IPEN xx0u-1996BL01189] \*2012
10. 2W *Arisaema tortuosum* (Wall.) Schott  
[IPEN in0u-1997BL00004] India, Uttar Pradesh ,  
Kumaon area, C.Himalaya , Alt.: 1500 -2800 m. ,  
Coll.: Chadwell, C. et al. CC-1760 \*2013
11. 2G *Nephtythis afzelii* Schott  
[IPEN xx0u-1968GR00913] \*2013
12. 2W *Pinellia ternata* (Thunb.) Breit.  
[IPEN kr0u-1996BL00736] Korea, Republic of,  
South Korea , S Korea, Pilye Medicinal Spring, Mt.  
Sorak, Inje-Gun, Kangwon-Do. \*2013

Arecaceae

13. 2G *Caryota mitis* Lour.  
[IPEN xx0u-1998GR00723] \*2013

Aristolochiaceae

14. 2Z *Aristolochia littoralis* Parodi  
[IPEN sv0u-1992GR00988] El Salvador , Acajutla.  
\*2013
15. 2W *Aristolochia trilobata* L.  
[IPEN gf0u-1992GR00904] French Guiana , Saül ,  
Coll.: Mori, S. 22351 \*2013

Asteraceae

16. 2Z *Aster pyrenaeus* Desf. ex DC.  
[IPEN fr0u-2002BL00804] France , Dept. Haut  
Pyrenees, Centre d'Ecologie, Montagnarde, Gabas ,  
Coll.: Ern,H. 7249 \*2013
17. 1Z *Berkheya purpurea* Benth., Hook.f. & Mast.  
[IPEN za0u-2005BL01021] South Africa ,  
Drakensberge \*2013
18. 2G *Leontopodium alpinum* subsp. *nivale* (Ten.) Tutin  
[IPEN xx0u-1992BL00809] \*2012

Berberidaceae

19. 1W *Diphylleia cymosa* Michx.  
[IPEN us0u-2001BL00058] United States, North  
Carolina , Haywood County, Pisgah Nat. Forest, State  
Highway 215, shade. , Alt.: 1000 m. 14/09/2000  
\*2013

Betulaceae

20. 2W *Betula lenta* subsp. *lenta*  
[IPEN ca0u-1986RD00002] Canada, Ontario,  
Niagara Reg., Louth Tp., only verified population in  
Canada, steep slope above Lake Ontario; 1985. , Alt.:  
88 m. \*2011

Brassicaceae

21. 1W *Pachyphragma macrophyllum* (Hoffm.) N. Busch  
[IPEN xx0u-1998BL00720] Caucasus , NW. \*2013

Bromeliaceae

22. 3W *Aechmea angustifolia* Poepp. & Endl.  
[IPEN pe0u-2011GR00868] Peru , without locality ,  
Coll.: Karel Knize (Peru) s.n. \*2013
23. 3W *Aechmea angustifolia* Poepp. & Endl.  
[IPEN ec0u-2012GR00300] Ecuador , Alt.: 1154 m. ,  
Coll.: Jan Verkade \*2013
24. 3Z *Aechmea coelestis* var. *coelestis*  
[IPEN br0u-2006GR01066] Brazil, Brazil Southeast,  
Rio de Janeiro , Teresopolis , Coll.: Leme, E. 1922  
\*2012
25. 3Z *Aechmea coelestis* var. *coelestis*  
[IPEN br0u-2004GR00485] Brazil , Coll.: Kuzma  
\*2013
26. 3G *Aechmea dactylina* Baker  
[IPEN xx0B-1151283] \*2012
27. 2Z *Aechmea nudicaulis* var. *nudicaulis*  
[IPEN br0u-1996GR00653] Brazil, Brazil Northeast,  
Bahia , Mun. Camaca, Estrada BR101, 2 km S  
Camaca, ""mata higrofila"" with Cacao. , Coll.:  
Leuenberger et all. 3096 23/04/1983 \*2011
28. 3G *Aechmea weberbaueri* Harms  
[IPEN xx0u-2006GR01088] \*2012
29. 3G *Alcantarea geniculata* (Wawra) J.R. Grant  
[IPEN xx0u-2005GR01551] \*2012

Bromeliaceae (cont.)

30. 3W *Brocchinia tatei* L.B.Sm.  
[IPEN ve0u-2005GR01567] Venezuela \*2010
31. 3W *Dyckia ferox* Mez  
[IPEN py0u-1997GR00647] Paraguay , Dept.  
Cordillera, hills W of Tobati , Alt.: 450 m. , Coll.:  
Till, W. 6050 09/02/1991 \*2013
32. 3W *Dyckia milagrensis* Leme  
[IPEN br0u-1998GR00896] Brazil, Brazil Northeast,  
Bahia , large Morro near Milagres , Alt.: 750 m. ,  
Coll.: Helmut & Lieselotte Hromadnik (Kritzendorf,  
Austria) 20084 03/01/1996 \*2013
33. 2G *Dyckia velascana* Mez  
[IPEN xx0u-1990GR00444] \*2013
34. 3W *Fosterella penduliflora* (C.H.Wright) L.B.Sm.  
[IPEN bo0u-1996GR00123] Bolivia , near  
Lawuinillas, Monte Agudo. , Coll.: Gouda, C.S.  
95-32b \*2011
35. 3G *Fosterella spectabilis* H.Luther  
[IPEN xx0b-2900800] \*2012
36. 3W *Guzmania monostachia* (L.) Rusby ex Mez  
[IPEN cr0u-2010GR00755] Costa Rica , Coll.: Leo  
Dijkgraaf (BCG) s.n. \*2012
37. 3G *Guzmania monostachia* var. *alba* Ariza-Julia  
[IPEN xx0frp-17793] \*2013
38. 3G *Guzmania osyana* (E.Morren) Mez  
[IPEN xx0u-2007GR00669] \*2012
39. 3Z *Guzmania roezlii* (E.Morren) Mez  
[IPEN xx0u-2004GR01095] Ecuador , Alt.: 500 m. ,  
Coll.: Rauh, W. 34701 08/1973 \*2013
40. 2G *Guzmania wittmackii* (André) André ex Mez  
[IPEN xx0u-1996GR01170] \*2013
41. 3W *Mezobromelia capituligera* (Griseb.) J.R.Grant  
[IPEN ec0u-2006GR00061] Ecuador, Prov. Napo ,  
Road Quito - Baeza , Alt.: 1960 m. , Coll.: E.J.Gouda  
& J.Manzanares 05-11 19/11/2005 \*2013

Bromeliaceae (cont.)

42. 3W *Pitcairnia altensteinii* (Link, Klotzsch & Otto) Lem.  
 [IPEN ve0u-2006GR01032] Venezuela ,  
 N.-Venezuela, rancher station National Park Henri  
 Pittier near Aragua and Carabobo \*2013
43. 3W *Pitcairnia aureobrunnea* Rauh  
 [IPEN ec1u-2006GR00038] Ecuador, Prov. El Oro ,  
 Road Passaje - Catamayo (not main road) , Alt.: 1020  
 m. , Coll.: E.J.Gouda & J.Manzanares 05-29  
 23/11/2005 \*2013
44. 3W *Pitcairnia echinata* Hook.f.  
 [IPEN ec0u-2008GR01065] Ecuador, Prov.  
 Morona-Santiago , N of Tres Ranchos, road to  
 Paraiso , Alt.: 1140 m. , Coll.: E.J.Gouda,  
 J.Manzanares & B.Patterson 08-46 01/04/2008 \*2013
45. 3Z *Pitcairnia flammea* var. *glabrior* L.B.Sm.  
 [IPEN br0u-2001GR00086] Brazil , Teresopolis  
 \*2012
46. 3W *Pitcairnia flammea* var. *roezlii* (E.Morr.) L.B.Sm.  
 [IPEN br0u-2000GR00771] Brazil, Brazil Southeast,  
 Guanabara , Rio de Janeiro City , Coll.: Leme, E. s.n.  
 \*2013
47. 3Z *Pitcairnia hitchcockiana* L.B.Sm.  
 [IPEN ec0u-2006GR01008] Ecuador , Mera , Alt.:  
 1300 m. , Coll.: Fläschendräger, A. s.n. 20/04/1995  
 \*2013
48. 3Z *Pitcairnia imbricata* (Brongn.) Regel  
 [IPEN gt0u-2005GR00894] Guatemala , 20 km from  
 Guatemala City towards el Rancho , Alt.: 800 m. ,  
 Coll.: Radtke/Moldenhauer 183 \*2013
49. 3W *Pitcairnia imbricata* (Brongn.) Regel  
 [IPEN gt0b-2794993] Guatemala , dept. Guatemala,  
 CA9 to El Rancho, 24 km behind ciudad de  
 Guatemala , Alt.: 750 m. , Coll.: Radtke &  
 Moldenhauer 167 \*2011

Bromeliaceae (cont.)

50. 3W *Pitcairnia scepstrigera* Mez  
 [IPEN ec1u-2006GR00034] Ecuador, Prov. Azuay ,  
 Road Cuenca - Passaje , Alt.: 700 m. , Coll.:  
 E.J.Gouda & J.Manzanares 05-24 22/11/2005 \*2013
51. 3W *Pitcairnia scepstrigera* Mez  
 [IPEN ec0u-2009GR01341] Ecuador , Magdalena ,  
 Alt.: 1000 m. , Coll.: Doug Binns (Aus) 11/2008  
 \*2013
52. 3W *Pitcairnia villetaensis* Rauh  
 [IPEN co0u-2000GR00646] Colombia , Bogota -  
 Villeta , Alt.: 900 m. , Coll.: Rauh, W. 37089 \*2013
53. 3G *Puya mirabilis* (Mez) L.B.Sm.  
 [IPEN xx0u-2001GR00867] \*2013
54. 3G *Racinaea fraseri* (Baker) Spencer & L.B.Sm.  
 [IPEN xx0u-2007GR01052] \*2011
55. 3Z *Racinaea fraseri* (Baker) Spencer & L.B.Sm.  
 [IPEN ec0u-2011GR00563] Ecuador , Coll.: Elly Bak  
 (NL) 1990 \*2012
56. 3W *Racinaea rothschuhiana* (Mez) M.A.Spencer & L.B.Sm.  
 [IPEN cr0u-2012GR00292] Costa Rica \*2013
57. 3W *Tillandsia aeranthos* (Loisel.) L.B.Sm.  
 [IPEN br0u-2008GR01719] Brazil , Santana \*2011
58. 3W *Tillandsia capillaris* Ruiz & Pav.  
 [IPEN bo0u-1996GR01251] Bolivia, Prov. Tarija , S  
 Tarija , Alt.: 2000 m. , Coll.: Gouda, C.S. 96-35  
 11/1996 \*2011
59. 3W *Tillandsia capillaris* Ruiz & Pav.  
 [IPEN bo0u-1996GR01249] Bolivia , Bolivia, prov.  
 Tarija, Mnt. Tarija. , Coll.: Gouda, C.S. 96-33  
 11/1996 \*2012
60. 3Z *Tillandsia chapailillaensis* Ehlers  
 [IPEN mx0u-1997GR00664] Mexico \*2011
61. 3W *Tillandsia polystachia* (L.) L.  
 [IPEN mx0u-2007GR01372] Mexico , Cd. Valles to  
 Cd.Maute, Near Gustavo Garmendia 1985 \*2013

Bromeliaceae (cont.)

62. 3G *Tillandsia rauhii* L.B.Sm.  
[IPEN xx0x-1996GR00627] \*2012
63. 3W *Tillandsia spiralisflora* Rauh  
[IPEN pe0u-2007GR01373] Peru \*2012
64. 3U *Tillandsia straminea* Humb., Bonpl. & Kunth  
[IPEN xx0u-1998GR01215] \*2013
65. 3W *Vriesea hitchcockiana* (L.B.Sm.) L.B.Sm.  
[IPEN ec0u-1998GR01453] Ecuador , without  
locality \*2013
66. 1W *Vriesea procera* (Mart. ex Schult.f.) Wittm.  
[IPEN ec0u-2010GR00361] Ecuador Elly Bak 1986  
\*2013
67. 3G *Vriesea rubra* (Ruiz & Pav.) Beer  
[IPEN xx0u-2007GR01408] \*2012
68. 3G *Vriesea saundersii* (Carr.) E.Morr. ex Mez  
[IPEN xx0u-2006GR01612] \*2013
69. 3G *Vriesea unilateralis* (Baker) Mez  
[IPEN xx0u-2010GR00406] \*2012

Cactaceae

70. 3W *Rhipsalis baccifera* (J.Mill.) Stearn  
[IPEN sr1u-1975GR00357] Suriname , no further  
details! , Coll.: Lindeman,J.C. 09/1975 \*2013
71. 3G *Rhipsalis floccosa* Salm-Dyck ex Pfeiff.  
[IPEN xx0u-1980GR00435] \*2013
72. 3G *Rhipsalis megalantha* Loefgr.  
[IPEN xx0u-1980GR00421] \*2013

Campanulaceae

73. 2Z *Campanula primulifolia* Brot.  
[IPEN pt0u-1997BL00455] Portugal , Algarve, Serra de  
Monchique, Perna de Negra; 94-08-00 \*2009
74. 2W *Campanula takesimana* Nakai  
[IPEN kr0u-1992BL01300] , South Korea, Ullung  
Isl., Chonbu-ri \*2013



Campanulaceae (cont.)

75. 1W *Laurentia longiflora* (L.) Endl.  
[IPEN cu0u-2004GR00447] Cuba , above Trinidad ,  
Coll.: Peter Bak s.n. \*2013
76. 1W *Lobelia siphilitica* L.  
[IPEN us0u-2006BL00742] United States, Michigan,  
Clinton county, S Shrub-Carr, Rose Lake Fen 2-track  
Alt.: 256 m. \*2009
77. 2W *Lobelia thapsoides* Schott  
[IPEN br1u-2009GR01315] Brazil, Brazil Southeast,  
Espírito Santo , Santa Teresa , Coll.: Maas, P.J.M. et  
al. s.n. 04/05/2009 \*2013

Capparaceae

78. 2W *Cleome viridiflora* Schreb.  
[IPEN bo1u-1999GR00209] Bolivia , Coll.: Maas,  
P.J.M. et al. 8803 \*2013

Caryophyllaceae

79. 1W *Dianthus japonicus* Thunb.  
[IPEN jp0u-2008BL00360] Japan , Tsukuba, Ibaraki  
2006 \*2013
80. 1W *Drypis spinosa* L.  
[IPEN hr0u-2005BL00106] Croatia , Velebit  
Bot. Garden , Coll.: S. Kováčik s.n. 10/09/2002  
\*2010

Cistaceae

81. 2W *Helianthemum nummularium* subsp. *grandiflorum* (Scop.)  
Schinz & Thell.  
[IPEN it0u-2002BL01324] Italy , Dolomites, Canazei  
- Caprile, Mnt. Marmolada. , Alt.: 1750 m. , Coll.:  
Gouda, E.J. 2002-82 09/08/2002 \*2013
82. 2W *Helianthemum nummularium* subsp. *obscurum* (Celak.) Holub  
[IPEN hu0u-1987BL00348] Hungary \*2013

Crassulaceae

83. 3W *Aeonium haworthii* Salm-Dyck ex Webb & Berthel.  
[IPEN es0u-1992HR31893] Spain, Canary Is.,  
Tenerife, Teno region, NE of Portela Alta, along the  
road, Alt.: 690 m., Coll.: Thiede 04/09/1989 \*2012
84. 3W *Aeonium arboreum* var. *rubrolineatum* (Svent.) H.-Y.Liu  
[IPEN es0u-1992HR31856] Spain, Canary Is.,  
Gomera, Barranco del Agua, along the road from Las  
Hayas to El Cercado, Alt.: 850 m., Coll.:  
Poppendieck 89-7 20/07/1989 \*2012
85. 3W *Aeonium sedifolium* (Webb ex Bolle) Pitard & Proust  
[IPEN es0u-1992HR31479] Spain, Canary Is.,  
Tenerife, Teno region, exact provenience unknown,  
Coll.: H.'t Hart (also HTH) HRT-31479 \*2012
86. 3W *Aeonium simsii* (Sweet) Stearn  
[IPEN es0u-1992HR30440] \*2012
87. 1W *Sedum ewersii* Ledeb.  
[IPEN in0u-2006BL00191] India, Himachal Pradesh,  
Borderlands of W.Tibet (from Lahoul), Chandra  
Valley, Alt.: 4450 m., Coll.: Chadwell, C. et al.  
5288 2005 \*2013
88. 2W *Sedum stoloniferum* S.G.Gmel.  
[IPEN ge0u-1977BL00127] Georgia, Abkhazia  
(Caucasus), Awadchara. \*2013

Cupressaceae

89. 2W *Cupressus torulosa* D.Don  
[IPEN np0u-2002RD00103] Nepal, Himalaya,  
Mustang, Tukuche area, Forest zone., Coll.:  
Chadwell, C. et al. 4046 2001 \*2011

Dipsacaceae

90. 2Z *Scabiosa argentea* L.  
[IPEN ro0u-1999BL00569] Romania, Rumania,  
Cistr. Constanza, Vama Veche (1997). \*2013

Dipsacaceae (cont.)

91. 2W *Scabiosa cinerea* subsp. *cinerea* Lapeyr. ex Lam.  
[IPEN it0u-1994BL00090] Italy , Puglia,  
Promontorio del Gargano, NE Coast, ca. 2 km. ESE  
Coppo dei Fossi, Macchie , Alt.: 150 -200 m. , Coll.:  
Gigerl, P. 09/1992 \*2009

Ericaceae

92. 3W *Sphrospermum buxifolium* Poepp. & Endl.  
[IPEN ec1u-1984GR00467] Ecuador , without  
locality. , Coll.: Gouda, C.S. s.n. \*2013

Fabaceae

93. 1G *Cassia senna* L.  
[IPEN xx0u-1994GR00355] \*2013
94. 1W *Hippocrepis comosa* L.  
[IPEN fr0u-1991BL00416] France , Torpes, talus de  
route, sol cacaire. , Alt.: 250 m. \*2013

Gesneriaceae

95. 2G *Paliavana prasinata* (Ker-Gawl.) Benth. & J.D.Hook.  
[IPEN xx0u-1966GR01547] \*2013

Iridaceae

96. 2Z *Iris orientalis* Mill.  
[IPEN tr0u-1995BL00188] Turkey , Turkey, Prov.  
Samsun, near Ladik. \*2013
97. 2W *Iris sintenisii* subsp. *sintenisii* Janka  
[IPEN bg0u-2003BL01006] Bulgaria , Black Sea  
coast, Perla N of Primorsko village. , Alt.: 2 m. \*2013
98. 1Z *Iris spuria* subsp. *sogdiana* (Bunge) Mathews  
[IPEN ru0u-1982BL00251] Russian Federation,  
Asiatic Russia , exact location not known 1981 \*2009

Lamiaceae

99. 2W *Horminum pyrenaicum* L.  
[IPEN it0u-2002BL01250] Alps , Dolomites, Selva -  
Canazei, Passo di Sella. , Alt.: 1900 m. , Coll.:  
Gouda, E.J. 2002-12 04/08/2002 \*2013
100. 1Z *Nepeta sibthorpii* Benth.  
[IPEN gr0u-2000BL01105] Greece , Peloponnes,  
Nomos Arkadias, Mandinia, Kardara/ Mt.Menalon. ,  
Alt.: 820 m. M 5869 \*2013
101. 2W *Stachys pradica* (Zanted.) Greuter & Pignatti  
[IPEN ch0u-1988BL00339] Switzerland ,  
Switzerland, Valais, Gd. St. Bernard. , Alt.: 2300 m.  
\*2013

Liliaceae

102. 2G *Arthropodium cirrhatum* (G.Forst.) R.Br.  
[IPEN xx0u-1972GR00215] \*2013
103. 1W *Camassia scilloides* (Raf.) Cory  
[IPEN us0u-1987BL00430] United States,  
Pennsylvania , Wildflower Preserve. \*2013
104. 1G *Helonias bullata* L.  
[IPEN xx0u-1998BL00254] \*2013
105. 0G *Lilium martagon* L.  
[IPEN xx0u-2013BL00791] \*2013
106. 0G *Lilium monadelphum* M.Bieb.  
[IPEN xx0u-2013BL00790] \*2013
107. 2W *Maianthemum racemosum* (L.) Link  
[IPEN us0u-1999BL00238] United States, Michigan,  
Ingham County, Mesic S Forest; 98-09-23. , Alt.: 265  
m. \*2013
108. 2Z *Trillium angustipetalum* (Torrey) Freeman  
[IPEN us0u-2007BL01615] Northern America \*2013
109. 2G *Trillium chloropetalum* var. *giganteum* (Hook. & Arn.)  
A.E.Murray  
[IPEN xx0u-2007BL01368] \*2013

Liliaceae (cont.)

110. 2W *Trillium flexipes* Raf.  
[IPEN us0u-2008BL01795] United States, Tennessee  
\*2013
111. 2W *Trillium grandiflorum* (Michx.) Salisb.  
[IPEN ca0u-2002BL00632] Canada, Québec ,  
Vudreuil co., Ile Perrot. 14/07/2001 \*2013
112. 2W *Trillium grandiflorum* (Michx.) Salisb.  
[IPEN us0u-1997BL00184] United States, Michigan,  
Ingham County, Mesic Southern Forest, sitename:  
Bear lake Dunkel Roadbank South. , Alt.: 250 m.  
\*2013
113. 2G *Trillium kurabayashii* Freeman  
[IPEN xx0u-2000BL00131] \*2013
114. 2G *Trillium pusillum* Michaux  
[IPEN xx0u-2002BL00817] \*2013
115. 2G *Trillium x erectum* 'hybride' L.  
[IPEN xx0u-1986BL00072] \*2013

Magnoliaceae

116. 2G *Magnolia kobus* var. *borealis* Sarg.  
[IPEN xx0u-1991RD01837] \*2013
117. 2G *Magnolia tripetala* (L.) L.  
[IPEN xx0u-1900ZG00209] \*2013

Menispermaceae

118. 2W *Menispermum canadense* L.  
[IPEN us0u-1997RD00161] United States, Michigan,  
Ingham County, Mesic Southern Forest, Sitename:  
Sanford Woodlot, coll.: 96-10-16. , Alt.: 253 m.  
\*2010

Myrsinaceae

119. 2G *Ardisia solanacea* Roxb.  
[IPEN xx0u-1974GR00008] \*2013

Onagraceae

120. 1G *Fuchsia boliviana* var. *boliviana*  
[IPEN xx0u-2007GR00871] \*2013
121. 3W *Fuchsia paniculata* Lindl.  
[IPEN pa0u-1980GR00318] Panama, Panamá,  
Panama , Chiriqui Mt. wood near Guadeloupe, 2 km N  
of Cerro Punta. , Alt.: 1800 m. , Coll.: Maas, P.J.M.  
et al. 4985 21/10/1980 \*2013

Paeoniaceae

122. 1G *Paeonia japonica* (Makino) Miyabe & Takeda  
[IPEN xx0u-2006BL01459] \*2011

Papaveraceae

123. 2G *Meconopsis betonicifolia* Franch.  
[IPEN xx0u-1964BL00209] \*2011

Passifloraceae

124. 1G *Passiflora morifolia* Mast.  
[IPEN xx0u-2008GR00801] \*2012

Plumbaginaceae

125. 2G *Limonium minutum* (L.) Fourn.  
[IPEN xx0u-1984BL00199] \*2011

Poaceae

126. 1W *Bouteloua gracilis* (Willd. ex Kunth) Lag. ex Griffiths  
[IPEN us0u-2002BL00753] United States, South  
Dakota \*2013

Polemoniaceae

127. 1W *Polemonium pauciflorum* S. Watson  
[IPEN us0u-2009BL00514] United States, Arizona ,  
Cochise Co. , Alt.: 2073 m. , Coll.: Alan Bradshaw  
(Alplains) 70095.17 \*2012

Polygonaceae

128. 1W *Eriogonum umbellatum* var. *umbellatum*  
[IPEN us0u-1994BL01273] United States, Colorado ,  
Jefferson County, South Table Mtn. , Alt.: 1859 m.  
\*2013

Primulaceae

129. 2W *Androsace sarmentosa* Wall.  
[IPEN np0u-2010BL00252] Nepal , E Nepal,  
Himalaya (Jaljala and Kanchenchunga Himals) , Alt.:  
3900 m. , Coll.: Til Jung Rai et all. for C. Chadwell  
6754 10/2009 \*2013
130. 2W *Dodecatheon pulchellum* subsp. *pulchellum* (Raf.) Merr.  
[IPEN us0u-1983BL00281] United States, Oregon ,  
N.W. 1982 \*2013

Ranunculaceae

131. 2W *Clematis songorica* var. *songorica* Hook. & Arn.  
[IPEN mn0u-2010BL00552] China, Inner Mongolia  
\*2012

Rosaceae

132. 2Z *Potentilla arguta* Pursh  
[IPEN ca0u-2008BL00500] Canada, British  
Columbia \*2013
133. 2G *Rhaphiolepis umbellata* (Thunb.) Makino  
[IPEN xx0u-1973GR00527] \*2013

Saxifragaceae

134. 2W *Saxifraga cherlerioides* var. *rebunshirensis* (Engl. & Irmsch.)  
Hara  
[IPEN jp0u-1997BL00485] Japan , Hokkaido, Mt.  
Nishi-kumaneschiri-dake, Katoh-gun. \*2013

Scrophulariaceae

135. 2W *Antirrhinum majus* subsp. *majus*  
[IPEN it0u-2006BL00424] Italy , Mesina, Taormina  
07/2001 \*2011
136. 1W *Asarina erubescens* (D.Don) Pennell  
[IPEN bo0u-2005GR01250] Bolivia, Prov. Santa  
Cruz , direction of Samaipata, near Ayacucho , Coll.:  
Gouda, C.S. s.n. \*2009
137. 2W *Digitalis ferruginea* L.  
[IPEN gr0u-2006BL00502] Greece, Peloponesos ,  
Mt. Killini \*2012
138. 2Z *Digitalis ferruginea* subsp. *ferruginea*  
[IPEN tr0u-2000BL00393] Turkey , N.-Anatolia,  
Bithynia: Ala-Dag, Kartalkaya 10 km before ski  
station. , Alt.: 1600 m. \*2011
139. 2W *Digitalis obscura* L.  
[IPEN es0u-2008BL00641] Spain , Sierra Nevada ,  
Alt.: 1700 m. \*2011
140. 2W *Digitalis viridiflora* Lindl.  
[IPEN bg0u-2002BL01044] Bulgaria , Eastern  
Rodopi. , Alt.: 1700 m. 25503 2002 \*2012
141. 1W *Penstemon cardwellii* T.J.Howell  
[IPEN us0u-1991BL00700] United States, Oregon ,  
Multnomah Co., no further details! , Alt.: 1080 m.  
\*2013
142. 2W *Penstemon digitalis* Nutt.  
[IPEN us0u-1995BL01112] United States, Michigan,  
Ingham county, roadbank above seep , Alt.: 259 m.  
\*2013



Scrophulariaceae (cont.)

143. 2W *Penstemon euglaucus* English  
[IPEN us0u-1999BL01169] United States, Oregon ,  
USA, Oregon, Santiam Pass. \*2013
144. 2Z *Penstemon tubiflorus* Nutt.  
[IPEN us0u-2011BL00995] United States, Missouri ,  
Rock Hill \*2013
145. 1W *Penstemon whippleanus* A.Gray  
[IPEN us0u-2008BL01665] United States, California,  
Mineral Co. , Alt.: 3311 m. \*2011
146. 1Z *Phygелиus aequalis* Harv. ex Hiern  
[IPEN za0u-2004BL01363] South Africa, Free State ,  
Mt. Aux-Sources, Witsiehoek Mt. Resort , Alt.: 2300  
m. , Coll.: Lesotho-Edinburgh-Gothenburg Botanical  
Expedition 315 \*2011

Sterculiaceae

147. 1G *Abroma augusta* (L.) L.f.  
[IPEN xx0u-1987GR00028] \*2013
148. 1G *Fremontodendron californicum* subsp. *californicum*  
[IPEN xx0u-1991GR01354] \*2013

Verbenaceae

149. 2G *Phyla nodiflora* (Kunth) Green  
[IPEN xx0u-2008BL01557] \*2013

Zamiaceae

150. 2G *Encephalartos villosus* Lem.  
[IPEN xx0u-1975GR00125] \*2012



