

# INDEX SEMINUM 2010



*Digitalis obscura* by Ann Fleming

DENVER BOTANIC  
**GARDENS**

## DENVER BOTANIC GARDENS' BOTANICAL ART AND ILLUSTRATION PROGRAM

Denver Botanic Gardens has a long tradition in botanical art and illustration. The discipline was first taught in 1980 and the certificate program was established in 1990. Today, the program offers a comprehensive education in the scientific illustration of plants and fungi and the professional instructors continue the strong tradition. Nearly 100 courses are offered each year to students at all levels of art experience. The curriculum can lead to a Certificate in Botanical Art and Illustration, a recognition that is obtainable at only a few locations worldwide. The program has more than 500 active students, and since 2000, 107 graduates have received the certificate.

### ABOUT THE COVER ARTIST

Ann Fleming is a graduate of Edinburgh College of Art in Scotland and the Botanical Art and Illustration program at Denver Botanic Gardens. Her botanical illustrations and carved lead glass sculptures are in private and museum collections and have been exhibited throughout North America and Europe.

The illustrations of *Digitalis obscura* and *Rhamnus smithii*, executed in colored and graphite pencil, were produced for the 2009 publication "Durable Plants for the Garden." This guide covers ten years of the plants chosen for the Plant Select® program, a plant introduction and promotion program in the Rocky Mountain and plains states.



*Rhamnus smithii* Greene by Ann Fleming

Ann's website is: [www.AnnAFleming.com](http://www.AnnAFleming.com)

Seeds from cultivated plants collected by Katy Wilcox and volunteers.  
Seed requests fulfilled by Barry Levene and data tracked by Gary Waggoner.

Please make requests for seeds before June 30, 2011.

# SEED OF CULTIVATED PLANTS

The Following seeds are from cultivation and open pollination.

▶ Indicates seed collected from accession with known wild origin; original collection information follows.

ORDER #	NAME/FAMILY	ACC #	SOURCE	COLLECTION INFO
<b>AIZOACEAE</b>				
▶ 1	<i>Delosperma cooperi</i> (Hook. f.) L. Bolus	050842	KEL	Lesotho: Oxbow: 9800 ft. High altitude race. Kelaidis, Panayoti. PKSA112. 15 Feb 2005.
2	<i>Delosperma deleeuwiae</i> Hort	050522	ALP	
▶ 3	<i>Delosperma dyeri</i> L. Bolus	010956	SPI	South Africa: Nico Manan Pass.
4	<i>Delosperma karrooicum</i> L. Bolus	051256	TMG	
5	<i>Delosperma</i> 'Lesotho Pink'	051490	HCG	
▶ 6	<i>Delosperma</i> sp.	061516	TMG	South Africa: Sani Pass.
<b>ALLIACEAE</b>				
7	<i>Allium sphaerocephalum</i> L.	002750	IBC	
8	<i>Dichelostemma ida-maia</i> (Wood) Greene	060002	BBB	
9	<i>Triteleia ixioides</i> (Ait.f.) Greene 'Starlight'	042597	BBB	
<b>ANACARDIACEAE</b>				
10	<i>Rhus trilobata</i> Nutt. ex Torr. & A. Gray	833070	LVN	
<b>ANTHERICACEAE</b>				
11	<i>Anthericum liliago</i> L.	800211	NAR	
<b>APIACEAE</b>				
12	<i>Bupleurum spinosum</i> Gouan	840739	B	
13	<i>Eryngium agavifolium</i> Griseb.	051910	TMG	
14	<i>Eryngium amethystinum</i> L.	023709	BBN	
15	<i>Ferula gumosa</i> Boiss.	980578	PAL	
16	<i>Heracleum lehmannianum</i> Bunge	962713	PAU	
17	<i>Lomatium grayi</i> (Coul. & Rose) Coul. & Rose	082427	KEL	
▶ 18	<i>Peucedanum litorale</i> Vorosch. & Gorovoj	991284	BER	Russian Federation: Siberia. Berkutenko, A. s.n. 1 Jul 1998.
19	<i>Peucedanum terebinthaceum</i> (Fischer ex Treviranus) Ledebour var. <i>terebinthaceum</i>	041622	BBN	
<b>ARALIACEAE</b>				
20	<i>Aralia cachemirica</i> Decne.	930649	MNC	
<b>ASCLEPIADACEAE</b>				
21	<i>Asclepias asperula</i> (Decne.) Woodson	931316	SUN	
22	<i>Asclepias fascicularis</i> Decne.	030092	TPF	
▶ 23	<i>Asclepias pumila</i> (A. Gray) Vail.	040661	JOH	United States: Colorado: Morrison: Development site. Edge of foothills, prairie. 6500 ft. Johnson, Dan. s.n. 1 Jul 1999.
<b>ASPHODELACEAE</b>				
24	<i>Asphodeline lutea</i> (L.) Rchb.	022712	PAU	
▶ 25	<i>Asphodelus albus</i> Miller	023983	JOH	Spain: Sierra Cumbria. Johnson, Dan. AUSAES-422. 15 Oct 2001.
26	<i>Eremurus stenophyllus</i> (Boiss. & Buhse) Bak.	022876	BBB	
▶ 27	<i>Kniphofia stricta</i> Codd	940342	KEL	South Africa: S. Africa, 2 km. out of Rhodes. 1800 m. Seed not quite ripe. A great kniphofia. Kelaidis, Panayoti. s.n. 15 Jan 1994.

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ORDER #	NAME/FAMILY	ACC #	SOURCE	COLLECTION INFO
<b>ASTERACEAE</b>				
▶ 28	<i>Ajania pallasiana</i> (Fisch. ex Bess.) Poljak.	042830	KEL	Russian Federation: Siberia.
29	<i>Antennaria rosea</i> Greene	011329	WTH	
30	<i>Aster flaccidus</i> Bunge	970234	ROG	
31	<i>Berkheya purpurea</i> (DC.) Mast.	031938	SVS	
32	<i>Berlandiera lyrata</i> Benth.	870408	GRA	
▶ 33	<i>Catananche caerulea</i> L.	061989	KIN	Morocco: Lake Tislit. 32°07'04.69"N, 5°23'06.29"W. Way point #15. Blue flowers 15-18" tall. Kintgen, Mike 52. 15 Jul 2006.
34	<i>Echinacea angustifolia</i> DC.	032042	BBN	
35	<i>Echinacea tennesseensis</i> (Beadle) Small	032370	MAD	
36	<i>Echinacea tennesseensis</i> (Beadle) Small	991521	BBN	
▶ 37	<i>Echinops sphaerocephalus</i> L.	020755	JOH	Spain: Sierra Magina: 4000 ft. Johnson, Dan AUSAES-353. 15 Sep 2001.
38	<i>Engelmannia peristenia</i> (Rafinesque) Goodman & C. A. Lawson	990306	PSW	
39	<i>Erigeron compositus</i> Pursh	002369	LPA	
40	<i>Erigeron compositus</i> Pursh 'Red Desert'	050557	KEL	
41	<i>Erigeron compositus</i> Pursh 'Red Desert'	100614	LPA	
42	<i>Erigeron leiomerus</i> A. Gray	024062	WHI	
43	<i>Erigeron ochroleucus</i> Nutt.	071174	LPA	
44	<i>Erigeron pinnatisectus</i> (A. Gray) A. Nelson	040928	LPA	
45	<i>Erigeron pinnatisectus</i> (A. Gray) A. Nelson	050895	LPA	
46	<i>Erigeron simplex</i> Greene	040313	WNS	
47	<i>Erigeron ursinus</i> D.C. Eaton	090884	UNK	
48	<i>Erigeron vagus</i> Payson	040926	LPA	
49	<i>Erigeron vetensis</i> Rydberg	023716	LVN	
50	<i>Gaillardia pinnatifida</i> Torr.	861705	OFN	
51	<i>Helianthus pauciflorus</i> Nutt. ssp. <i>subrhomboideus</i> (Rydb.) O. Spring & E. Schill.	051904	UNK	
▶ 52	<i>Helianthus pumilus</i> Nutt.	861286	BRU	United States: Colorado: Jefferson County: Green Mountain. Brune, R. s.n.
53	<i>Helichrysum amorginum</i> Boiss. & Orph. 'Pink Sapphire'	090908	BLB	
▶ 54	<i>Helichrysum praecurrens</i> Hilliard	970472	BAD	South Africa.
55	<i>Heterotheca villosa</i> (Pursh) Shinnars x <i>jonesii</i> (S.K. Blake) S.L. Welsh & N.D. Atwood	090956	DAU	
56	<i>Heterotheca villosa</i> (Pursh) Shinnars var. <i>villosa</i>	860923	NAR	
57	<i>Hieracium pilosella</i> L.	840433	HAL	
58	<i>Hieracium tardans</i> Peter	031188	ARA	
▶ 59	<i>Hymenopappus newberryi</i> (A. Gray) I.M. Johnston	062929	KIN	United States: Colorado: Saguache County: Cochetopa Pass along Road NN-14. Dry, rocky roadcut. With <i>Aliciella (Gilia) pinnatifida</i> . 9200 ft. Kintgen, Mike s.n. 28 Aug 2006.
60	<i>Hymenoxys hoopesii</i> (A. Gray) Bierner	002270	GRA	
▶ 61	<i>Leucanthemum atlanticum</i> (Ball) Maire	062014	KIN	Morocco: Above Rufuge at Toubkal. Rock crevices. 10300 ft. No way point. In rock crevices. This plant only set seed where the goats couldn't find it. The flowers were white with a yellow center and the petals would turn reddish pink as the flower faded (this appears more like <i>Rhodanthemum atlanticum</i> ). Kintgen, Mike 81. 15 Jul 2006.
62	<i>Liatris punctata</i> Hook.	011207	UNK	
63	<i>Ligularia dentata</i> (A. Gray) Hara 'Desdemona'	032229	MON	
64	<i>Machaeranthera coloradoensis</i> (Gray) Osterhout	024039	ADA	

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ORDER #	NAME/FAMILY	ACC #	SOURCE	COLLECTION INFO
▶ 65	<i>Marshallia grandiflora</i> Beadle & F.E. Boynt.	861608	WDN	
▶ 66	<i>Rhodanthemum</i> sp.	062028	KIN	Morocco: Base of Jebel Erdouz. 7000 ft. 31°03'02.20"N, 8°13'59"W. Way point #18. Hopefully this is the good form that Rod photographed. The goats had gone through here grazing almost everything. Very few seed, perhaps only 2 or 3. Kintgen, Mike 97. 15 Jul 2006.
67	<i>Silphium terebinthinaceum</i> Jacq.	910236	PRN	
68	<i>Solidago</i> 'Wichita Mountains'	023132	SSN	
▶ 69	<i>Solidago</i> sp.	081555	SRP	United States: Oklahoma: Wichita Mountains.
70	<i>Tanacetum albipannosum</i> Huber-Morath & Grierson	982210	KEX	Turkey: Turkey. s.n. 1 Jul 1997.
▶ 71	<i>Tetraneuris acaulis</i> (Pursh) Greene	100012	KIN	United States: Wyoming: Albany County: Twin Buttes Lake. Wind swept cushion plant community. 7000 ft. Kintgen, Mike s.n. 5 Jul 2009.
72	<i>Tetraneuris acaulis</i> (Pursh) Greene var. <i>acaulis</i>	030267	MSN	
73	<i>Tetraneuris argentea</i> (A. Gray) Greene	024058	KEL	
74	<i>Tetraneuris brandegeei</i> (Porter ex Gray) Parker	033146	LPA	
75	<i>Tetraneuris torreyana</i> (Pursh) Green	030060	UNK	
76	<i>Thelesperma megapotamicum</i> (Sprengel) Kuntze	970331	PSW	
77	<i>Townsendia glabella</i> A. Gray	024023	LPA	
78	<i>Townsendia parryi</i> D.C. Eaton	002378	LPA	
79	<i>Zinnia grandiflora</i> Nutt.	002540	GRA	
<b>BALSAMINACEAE</b>				
80	<i>Impatiens balfourii</i> Hook. f.	970659	MUN	
▶ 81	<i>Impatiens bicolor</i> Royle	020707	JOH	Pakistan: Khagan Valley. 4800 ft. Johnson, Dan AUSAEP-3. 15 Sep 2001.
<b>BERBERIDACEAE</b>				
▶ 82	<i>Mahonia fremontii</i> (Torr.) Fedde	842391	WEI	United States: Colorado: Delta County: Delta. Weinstein, W. s.n.
83	<i>Mahonia haematocarpa</i> (Wooton) Fedde	850822	WEG	
84	<i>Podophyllum hexandrum</i> Royle	003031	LPA	
<b>BIGNONIACEAE</b>				
▶ 85	<i>Chilopsis linearis</i> (Cav.) Sweet	042386	TAY	United States: Texas: Alpine. Taylor, A. s.n.
86	<i>Incarvillea olgae</i> Reg.	091540	LPA	
87	<i>Incarvillea sinensis</i> Lam. var. <i>przewalskii</i> (Batalin) C.Y. Wu & W.Q. Yin	002944	BBN	
<b>BRASSICACEAE</b>				
88	<i>Alyssoides utriculata</i> (L.) Medicus	802722	PLF	
89	<i>Alyssum markgrafii</i> O.E. Schulz	961696	FCN	
▶ 90	<i>Alyssum spinosum</i> L.	061976	KIN	Morocco: Top of pass above Imilchil. <i>Cytisus balansae</i> & <i>Erinacea anthyllis</i> . 8600 ft. 32°07'29.24"N, 5°16'21.86"W. Way point #14. A land of giant cushions, very striking. Lots of goats grazing here. Kintgen, Mike 39. 15 Jul 2006.
91	<i>Degenia velebitica</i> (Degen) Hayek	070128	RMR	
92	<i>Draba alpina</i> L. var. <i>glacialis</i> (Adams) Dickie	071172	LPA	
▶ 93	<i>Draba atlantica</i> Pomel	070611	ALP	Morocco: Jbel Toubkal: High Atlas. 2200 m. Rosettes of whitish-tipped, linear leaves packed into tight cushions bear globose clusters of yellow flowers on short scapes.

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ORDER #	NAME/FAMILY	ACC #	SOURCE	COLLECTION INFO
94	<i>Draba bruniifolia</i> Steven ssp. <i>heterocoma</i> (Fenzl) Coode & Cullen var. <i>nana</i> (Stapf) Schulz	081557	SRP	
▶ 95	<i>Draba bruniifolia</i> Stev. ssp. <i>olympica</i> (Sibth. ex DC.) Coode & Cullen	070518	PAV	Turkey: Kaz Dag: Limestone stony slopes. 1600 m. Dwarf compact cushions, almost stemless big yellow flowers. Pavelka, Mojmir s.n.
96	<i>Draba dedeana</i> Boiss. & Reut.	861301	SIR	
97	<i>Draba hispanica</i> Boiss.	030309	JEL	
98	<i>Draba hoppeana</i> Rchb.	020887	SIR	
99	<i>Draba mongolica</i> Turcz.	081463	MTH	
100	<i>Draba oligosperma</i> Hook.	002370	LPA	
101	<i>Erysimum capitatum</i> (Douglas ex Hook.) Greene	040922	LPA	
102	<i>Lesquerella ovalifolia</i> Rydb. ex Britt. ssp. <i>ovalifolia</i>	024046	ADA	
103	<i>Noccaea montana</i> (L.) F.K. Meyer	032037	LPA	
▶ 104	<i>Physaria bellii</i> Mulligan	911057	DAW	United States: Colorado: Boulder County. Dawson, C. s.n.
105	<i>Physaria eburniflora</i> R.C. Rollins	050580	KEL	
106	<i>Ptilotrichum lapeyrousianum</i> Jordan	820393	B	
107	<i>Schivereckia podolica</i> (Bess.) Andr. ex DC.	941735	MCG	
108	<i>Thlaspi stylosum</i> (Ten.) Mutel	080125	NEL	
<b>CACTACEAE</b>				
109	<i>Cylindropuntia kleiniae</i> (DC.) F.M. Knuth	861782	HAE	
▶ 110	<i>Echinocereus fendleri</i> (Engelm.) F. Seitz	012247	WTH	United States: New Mexico: La Cieniga.
111	<i>Echinocereus reichenbachii</i> (Walpers) Haage ex Britton & Rose	962602	UNK	
112	<i>Echinocereus reichenbachii</i> (Terscheck ex Walp.) hort. ex Haage ssp. <i>reichenbachii</i>	042666	DBG	
113	<i>Echinocereus triglochidiatus</i> Engelm.	041820	MAR	
▶ 114	<i>Echinocereus viridiflorus</i> Engelm. var. <i>cylindricus</i> (Engelmann) Rümpler	991043	MES	United States: New Mexico: Lincoln County. Tall in age. SB352.
▶ 115	<i>Escobaria sneedii</i> Britton & Rose ssp. <i>orcuttii</i> (Boed.) Lüthy	991035	MES	United States: New Mexico: Bishops Cap. Pure white spines.
116	<i>Escobaria sneedii</i> Britt. & Rose. var. <i>sneedii</i> x <i>guadalupensis</i> S. Brack & K.D. Heil	051686	CAM	
117	<i>Escobaria vivipara</i> (Nutt.) F. Buxb.	981275	HCG	
▶ 118	<i>Escobaria vivipara</i> (Nutt.) F. Buxb.	990475	RMR	United States: Colorado: Front Range. 1427.
▶ 119	<i>Escobaria vivipara</i> (Nutt.) F. Buxb. var. <i>radiosa</i> (Engelm.) D.R. Hunt	991095	MES	United States: Texas: Kimble County. Big magenta flowers. SB388.
▶ 120	<i>Opuntia trichophora</i>	991101	MES	United States: New Mexico: Manzano Mtns. Upright pads. SB1765.
<b>CAMPANULACEAE</b>				
▶ 121	<i>Campanula alpina</i> Jacq.	070511	PAV	Bulgaria: Pirin Mts. Alpine meadows. 2000 m. Monocarpic plant 10-20cm, many blue flowers on branched scape, 2004 seed. Pavelka, Mojmir s.n. 1 Jul 2004.
122	<i>Campanula incurva</i> Aucher ex A. DC.	022551	KEL	
▶ 123	<i>Campanula kirpicznikovii</i> Fed.	061012	EUR	Russian Federation: Central Caucasus. Vertical limestone rock crevices. 1300 m. 2004 seed. Beautiful plant, dark green dentate leaves, stems 15-25cm, very big creamy flowers, buds yellowish 157.
▶ 124	<i>Campanula thyrsoides</i> L.	081143	SCR	Switzerland.
125	<i>Campanula topaliana</i> Beauv.	071538	SRP	
126	<i>Edraianthus tenuifolius</i> (Waldst. & Kit.) A. DC.	790378	G	

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ORDER #	NAME/FAMILY	ACC #	SOURCE	COLLECTION INFO
127	<i>Lobelia siphilitica</i> L.	800373	FUC	
▶ 128	<i>Michauxia tchihatchewii</i> Fisch. & C.A. Mey.	861944	ARC	Turkey. 800 m. Archibald, J. s.n.
129	<i>Phyteuma sieberi</i> Spreng.	021956	LPA	
130	<i>Symphyandra hofmannii</i> Pant.	800382	FUC	
131	<i>Symphyandra zangezura</i> Lipsky	930479	KIEL	
▶ 132	<i>Trachelium jacquinii</i> (Sieber) Boiss. ssp. <i>rumelianum</i> (Hampe) T.G. Tutin	920570	JUR	Greece: Mt. Olympus: Mt. Olympus, Greece. May be <i>T. jacquinii</i> . Jurasek, J. s.n. 1 Jul 1991.
<b>CAPPARACEAE</b>				
▶ 133	<i>Cleome serrulata</i> Pursh	980554	JOH	United States: Adams County: Rocky Mountain Arsenal. Johnson, Dan s.n. 18 Sep 1997.
<b>CAPRIFOLIACEAE</b>				
134	<i>Sambucus nigra</i> L.	841741	UNK	
<b>CARYOPHYLLACEAE</b>				
135	<i>Arenaria griffithii</i> Boiss.	062274	RMR	
136	<i>Dianthus cruentus</i> Griseb.	830221	ALL	
137	<i>Dianthus furcatus</i> Balb.	071029	O	
138	<i>Dianthus gratianopolitanus</i> Vill.	062898	UNK	
139	<i>Dianthus haematocalyx</i> Boiss. & Heldr. ssp. <i>pindicola</i> (Vierh.) Hayek	091428	LPA	
140	<i>Dianthus knappii</i> (Pant.) Asch. & Kanitz ex Borbas	960008	DBG	
141	<i>Dianthus kusnezovii</i> Marcow.	081085	RMR	
142	<i>Dianthus nardiformis</i> Janka	800503	G	
143	<i>Dianthus nivalis</i>	081307	LPA	
144	<i>Dianthus petraeus</i> Waldst. & Kit. ssp. <i>noeanus</i> (Boiss.) Tutin	802809	PLF	
145	<i>Dianthus plumarius</i> L.	821456	OXF	
146	<i>Dianthus seguieri</i> Vill.	070867	PAR	
147	<i>Dianthus spiculifolius</i> Schur	071030	O	
▶ 148	<i>Dianthus subacaulis</i> Vill. ssp. <i>brachyanthus</i> (Boiss.) P. Fourn.	851325	COA	Spain; Granada.
▶ 149	<i>Dianthus sylvestris</i> Wulfen ssp. <i>boissieri</i> (Willk.) Dobignard	062010	KIN	Morocco: Trail to Toubkal. 8500 ft. No way point. Growing out of a boulder. Pink starry flowers. I only saw this species growing out of boulders where the goats couldn't get it. Kintgen, Mike 76. 15 Jul 2006.
150	<i>Silene saxatilis</i> Sims.	990388	BGT	
151	<i>Silene schafta</i> S.G. Gmel. ex Hohen.	790618	B	
<b>CHENOPODIACEAE</b>				
152	<i>Atriplex gardneri</i> (Moquin) D. Dietrich	941068	SUN	
<b>CISTACEAE</b>				
153	<i>Cistus laurifolius</i> L.	970665	BGT	
<b>CONVOLVULACEAE</b>				
154	<i>Ipomoea leptophylla</i> Torr.	920335	WTH	
<b>CRASSULACEAE</b>				
155	<i>Phedimus kamtschaticus</i> (Fisch.) 't Hart	023513	BBN	
156	<i>Rosularia rechingeri</i> Jansson	900001	MUE	
157	<i>Sedum litorale</i> Komar.	060481	PFF	

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ORDER #	NAME/FAMILY	ACC #	SOURCE	COLLECTION INFO
<b>CUCURBITACEAE</b>				
▶ 158	<i>Cucurbita foetidissima</i> Kunth	002458	FCN	United States: Colorado: Walsenburg area. Seed collected.
▶ 159	<i>Ecballium elaterium</i> (L.) A. Rich.	821757	TAY	Crete; Macheroi. Taylor, A. s.n.
<b>DATISCAEAE</b>				
160	<i>Datisca cannabina</i> L.	021136	CHS	
<b>DIPSACACEAE</b>				
161	<i>Pterocephalus pinardii</i> Boiss.	931089	RMR	
<b>EBENACEAE</b>				
162	<i>Diospyros virginiana</i> L.	960921	WHF	
<b>EPHEDRACEAE</b>				
163	<i>Ephedra equisetina</i> Bunge	043081	DBG	
▶ 164	<i>Ephedra major</i> Host	831032	MHA	Georgia.
▶ 165	<i>Ephedra monosperma</i> J.G. Gmel. ex C.A. Mey.	951444	RMR; HAJ	Tajikistan. Halda, J. s.n. 1 Jul 1993.
<b>FABACEAE</b>				
▶ 166	<i>Amorpha canescens</i> Pursh	870540	BOR	United States: Oklahoma: Cimarron County: Black Mesa State Park: Borland, J. s.n.
167	<i>Baptisia alba</i> (L.) Vent. var. <i>macrophylla</i> (Larisey) Isely	051381	BBN	
168	<i>Chamaecytisus rochelii</i> (Wierzb.) Rothm.	820504	GAG	
169	<i>Colutea arborescens</i> L.	022355	UNK	
170	<i>Dalea purpurea</i> Vent. 'Stephanie'	022630	BBN	
▶ 171	<i>Desmanthus illinoensis</i> (Michx.) MacMill. ex B.L. Rob & Fernald	980449	JOH	United States: Colorado: Baca County: Cottonwood Creek (Carrizo Canyon Network). Sand bars along streams. Johnson, D. s.n. 15 Feb 1998.
172	<i>Lupinus albifrons</i> Benth. var. <i>collinus</i> Greene	082323	SCN	United States: California: Monterey County: Nacimiento-Ferguson Rd.; Santa Lucia Mtns. Collected from nursery stock.
173	<i>Lupinus densiflorus</i> Benth. var. <i>aureus</i> (Kellogg) Munz	091691	LAR	
174	<i>Lupinus neomexicanus</i> Greene	010120	PSW	
175	<i>Oxytropis multiceps</i> Nutt. ex Torr. & A. Gray	091395	LAP	
176	<i>Thermopsis lupinoides</i> (L.) Link	052458	LVN	
177	<i>Thermopsis montana</i> Nutt.	002538	GRA	
178	<i>Thermopsis rhombifolia</i> Nutt. ex Richards.	980776	COP	
<b>FAGACEAE</b>				
179	<i>Quercus gambelii</i> Nutt.	982108	PAU	
180	<i>Quercus shumardii</i> Buckl.	900580	UNK	
181	<i>Quercus texana</i> Buckl.	880695	MOR	
182	<i>Quercus turbinella</i> Greene	822282	LVN	
<b>GENTIANACEAE</b>				
183	<i>Gentiana asclepiadea</i> L.	060614	SHP	
<b>GLOBULARIACEAE</b>				
184	<i>Globularia bisnagarica</i> L.	070871	PAR	

# SEED OF CULTIVATED PLANTS

ORDER #	NAME/FAMILY	ACC #	SOURCE	COLLECTION INFO
185	<i>Globularia cordifolia</i> L.	802362	SIR	
186	<i>Globularia stygia</i> Orph.	081470	MTH	
<b>HYDRANGEACEAE</b>				
187	<i>Fendlera rupicola</i> Engelm. & A. Gray	861155	WEG	
188	<i>Jamesia americana</i> Torr. & A. Gray	000292	NGC	
<b>HYDROPHYLLACEAE</b>				
▶ 189	<i>Phacelia crenulata</i> Torr.	050736	JOH	United States: California: Death Valley. Roadside gravel. Johnson, Dan s.n. 10 Mar 2005.
<b>IRIDACEAE</b>				
190	<i>Iris foetidissima</i> L.	950197	SAU	
191	<i>Iris missouriensis</i> Nutt.	003188	RMN	
192	<i>Iris schachtii</i> Markgraf	071565	MTH	
<b>JUNCAGINACEAE</b>				
193	<i>Triglochin maritima</i> L.	032104	RMN	
<b>LAMIACEAE</b>				
194	<i>Dracocephalum argunense</i> Fisch. ex Link 'Fuji Blue'	051382	BBN	
195	<i>Dracocephalum ruyschianum</i> L.	051181	KEL	
▶ 196	<i>Lavandula lanata</i> Boiss.	020742	JOH	Spain: Sierra Nevada Range: Dry chaparral (higher). 6000 ft. Johnson, Dan AUSAES-341. 15 Sep 2001.
197	<i>Leonotis nepetifolia</i> (L.) R. Br.	021110	UNK	
198	<i>Monarda fistulosa</i> L.	011215	GRA	
▶ 199	<i>Monarda fistulosa</i> L. var. <i>menthifolia</i> (R. Graham) Fernald	002123	PSW	United States: Colorado: Pecos County: Sangre de Cristo: Sangre de Cristo Mountains near Pecos.
200	<i>Monardella odoratissima</i> Benth.	001054	PWS	
▶ 201	<i>Salvia argentea</i> L.	061947	KIN	Morocco: Edge of woods. 33°15'47.66"N, 5°01'59"W. Way point #3. Along dirt track near edge of woods. Tall robust white species almost like <i>S. argentea</i> but without the silvery leaves. Kintgen, Mike 8. 15 Jul 2006.
202	<i>Salvia columbariae</i> Benth.	030097	TPF	
203	<i>Salvia frigida</i> Boiss.	081107	RMR	
204	<i>Salvia hypargeia</i> Fisch. & C.A. Mey.	082121	NEL	
▶ 205	<i>Salvia multicaulis</i> Vahl	910022	ARC	Turkey. Archibald, J. s.n. 1 Jul 1989.
▶ 206	<i>Salvia nubicola</i> Wall. ex Sweet	020727	JOH	Pakistan: Chillam: 9000 ft. Johnson, Dan AUSAEP-150. 15 Sep 2001.
▶ 207	<i>Scutellaria orientalis</i> L.	050260	HOL	Russian Federation: Caucasus. Larger prostrate plant, 10-40cm wide, grey finely lobate leaves, large yellow flower in short spikes, spring/autumn flowering.
208	<i>Scutellaria scordiifolia</i> Fisch. ex Schrank 'Mongolian Skies'	032429	BBN	
209	<i>Stachys discolor</i> Benth.	840361	PLE	
210	<i>Stachys inflata</i> Benth.	950049	DBG	
211	<i>Teucrium hircanicum</i> L.	023518	BBN	
▶ 212	<i>Ziziphora bungeana</i> Juz.	980177	LOW	Russian Federation: Altai. 850 m. 15 cm, loose mat. 95.

# SEED OF CULTIVATED PLANTS

ORDER #	NAME/FAMILY	ACC #	SOURCE	COLLECTION INFO
<b>LILIACEAE</b>				
213	<i>Calochortus luteus</i> Douglas ex Lindl. 'Golden Orb'	012331	HOD	
214	<i>Fritillaria acmopetala</i> Boiss.	022649	MCG	
215	<i>Lilium henryi</i> Bak.	023164	BBB	
216	<i>Lilium martagon</i> L. var. <i>album</i> Weston	972024	SWC	
217	<i>Lilium pardalinum</i> Kellogg	090902	LPA	
218	<i>Tulipa sprengeri</i> Baker	941340	DAF	
219	<i>Tulipa vvedenskyi</i> Z. Botsch. 'Tangerine Beauty'	022872	BBB	
<b>LINACEAE</b>				
220	<i>Linum lewisii</i> Pursh	002527	GRA	
221	<i>Linum narbonense</i> L.	980625	ZSS	
<b>LOASACEAE</b>				
▶ 222	<i>Mentzelia decapetala</i> (Pursh ex Sims) Urb. & Gilg ex Gilg	980059	JOH	United States: Colorado: Pawnee Buttes. Johnson, Dan s.n. 15 Aug 1997.
<b>MALVACEAE</b>				
223	<i>Callirhoe involucrata</i> (Torr. & A. Gray) A. Gray	002507	LVN	
224	<i>Sphaeralcea incana</i> Torr. ex A. Gray	041816	KEL	
<b>MELANTHIACEAE</b>				
▶ 225	<i>Zigadenus venenosus</i> S. Watson	081695	DAU	United States: Colorado: Adams County: NW 1/4 of NE 1/4 of section 17, T-2-S, R-66-W, 4 mi E of Chambers on the S of 104th. Plains grasslands. 1582 m. Daugherty, Ray s.n. 5 Jul 2008.
<b>NYCTAGINACEAE</b>				
226	<i>Mirabilis multiflora</i> (Torr.) A. Gray var. <i>glandulosa</i> (Standl.) J.F. Macbr.	002268	GRA	
▶ 227	<i>Mirabilis rotundifolia</i> (Greene) Standl.	911056	DAW	United States: Colorado: Fremont County. Dawson, C. s.n.
<b>OLEACEAE</b>				
228	<i>Syringa reticulata</i> (Bloom) H. Hara ssp. <i>pekinensis</i> (Rupr.) P. S. Green & M. C. Chang	861063	LVN	
<b>ONAGRACEAE</b>				
▶ 229	<i>Gaura coccinea</i> Nutt. ex Pursh	852295	WEI	United States: Colorado: Weld County: Roggen. Weinstein, G. s.n.
230	<i>Gaura lindheimeri</i> Engelm. & Gray.	011343	GRA	
231	<i>Oenothera caespitosa</i> Nutt.	010865	WNS	
▶ 232	<i>Oenothera pallida</i> Lindl.	041817	JOH	United States: New Mexico: Aztec: Very sandy area. Johnson, Dan s.n. 15 May 2004.
<b>PAPAVERACEAE</b>				
▶ 233	<i>Argemone polyanthemos</i> (Fedde) Ownb.	980595	BRU	United States: Colorado: Jefferson County: White Ranch Open Space. Brune, R. s.n. 15 Aug 1995.
234	<i>Papaver nudicaule</i> L. var. <i>aquilegioides</i> Fedde	081118	KIN	
<b>PEDALIACEAE</b>				
235	<i>Ceratotheca triloba</i> (Bernh.) E. Mey. ex Hook. f.	080045	SES	
<b>PHYTOLACCACEAE</b>				
236	<i>Phytolacca americana</i> L.	030335	BOH	
237	<i>Phytolacca americana</i> L. 'Silberstein'	022147	SHP	

# SEED OF CULTIVATED PLANTS

ORDER #	NAME/FAMILY	ACC #	SOURCE	COLLECTION INFO
<b>PLUMBAGINACEAE</b>				
238	<i>Acantholimon acerosum</i> (Willd.) Boiss.	840542	LOW	
239	<i>Acantholimon araxanum</i> Bunge	802405	SIR	
▶ 240	<i>Acantholimon caryophyllaceum</i> Boiss.	060999	EUR	Turkey: Gokyar Dag: 1500 m. Bigger silver cushions of narrow leaves to 5cm, pink flowers 10-15cm.
▶ 241	<i>Acantholimon kotschyi</i> (Jaub. & Spach) Boiss. ssp. <i>laxispicatum</i> Bokheri	070503	PAV	Turkey: Kop Pass. 1800 m. Silver-grey pulvinate cushions, rose-pink flowers on scapes 10-20cm. Pavelka, Mojmir s.n.
242	<i>Acantholimon litvinovii</i> Lincz.	900213	TASH	
▶ 243	<i>Acantholimon venustum</i> Boiss.	060545	KEL	Turkey: Emil Deresi: Stony areas. <i>Abies cilicica</i> . 2000 m. Zvolanek, Zdenek s.n. 15 Sep 1995.
▶ 244	<i>Armeria choulettiana</i> Pomel	062035	KIN	Morocco: Near Ifrane. 33°15'47.66"N, 5°01'59"W. Way point #3. Growing in the grass. Kintgen, Mike 105. 15 Jul 2006.
245	<i>Armeria maritima</i> (Mill.) Willd. 'Rubrifolia'	022707	PAU	
▶ 246	<i>Bukiniczia cabulica</i> (Boiss.) Linchevski	020730	JOH	Pakistan: Sadpara Lake. 9500 ft. Johnson, Dan AUSAEP-201.
247	<i>Goniolimon speciosum</i> (L.) Boiss.	930238	GOET	
248	<i>Goniolimon tataricum</i> (L.) Boiss.	941107	GRA	
249	<i>Limonium binervosum</i> (G.E. Sm.) C.E. Salmon	941112	GRA	
250	<i>Limonium gmelinii</i> (Willd.) Kuntze	101385	TMG	
251	<i>Limonium gmelinii</i> (Willd.) Kuntze	930471	PAU	
252	<i>Limonium minutum</i> (L.) O. Kuntze	081015	KIN	
<b>POACEAE</b>				
▶ 253	<i>Aristida purpurea</i> Nutt.	861668	UNK	United States: Colorado; Pueblo County.
254	<i>Briza media</i> L.	061880	SWF	
255	<i>Elymus solandri</i> (Steud.) Connor	031309	CHS	
256	<i>Harpochloa falx</i> (L.f.) Kuntze	020111	BAR	
257	<i>Melica ciliata</i> L.	920671	UNK	
258	<i>Muhlenbergia reverchonii</i> Vasey & Scribn.	101646	SRP	
259	<i>Nassella tenuissima</i> (Trin.) Barkworth	000257	SFG	
260	<i>Schizachyrium scoparium</i> (Michx.) Nash 'Blaze'	002561	BBN	
261	<i>Sporobolus wrightii</i> Munro ex Scribn.	022634	UNK	
262	<i>Stipa barbata</i> Desf.	051045	CHS	
263	<i>Stipa pulcherrima</i> K. Koch	941659	TO	
264	<i>Stipa ucrainica</i> P.A. Smirn.	951831	SVER	
▶ 265	<i>Themeda triandra</i> Forssk.	060847	MCM	South Africa: East Cape: Above Balloch. High meadows. 8000 ft. black awns. McMaster, C. DJ25. 15 Feb 2006.
<b>POLEMONIACEAE</b>				
266	<i>Ipomopsis aggregata</i> (Pursh) V. Grant	002269	GRA	
267	<i>Polemonium caeruleum</i> L.	002534	GRA	
268	<i>Polemonium pauciflorum</i> S. Watson	062938	RMR	
269	<i>Polemonium viscosum</i> Nutt.	033447	LPA	
<b>POLYGONACEAE</b>				
270	<i>Atraphaxis buxifolia</i> Jaub. & Spach	081758	RMC:SRP	
271	<i>Atraphaxis caucasica</i> (Hoffm.) Pavlov	920882	MUG	
272	<i>Atraphaxis muschetowii</i> Krasn.	950952	LZ	
273	<i>Eriogonum allenii</i> S. Wats.	052035	TMG	
274	<i>Eriogonum arcuatum</i> Greene var. <i>arcuatum</i>	070199	RMR	

# SEED OF CULTIVATED PLANTS

ORDER #	NAME/FAMILY	ACC #	SOURCE	COLLECTION INFO
▶ 275	<i>Eriogonum flavum</i> Nutt.	060536	KIN	United States: Montana: Pondera County: 12 miles W of Conrad along Hwy 89. Slight rise above short grass prairie. <i>Juniperus horizontalis</i> . 4000 ft. KIN s.n. 15 Jul 2005.
276	<i>Eriogonum jamesii</i> Benth.	002714	RMN	
277	<i>Eriogonum jamesii</i> Benth. var. <i>jamesii</i>	941105	GRA	
▶ 278	<i>Eriogonum ovalifolium</i> Nutt.	060658	ALP	United States: Utah: Carbon County: 5700 ft. Best and most colorful form, dozens of scapes (60-80 on the largest plants) with huge poms over an inch wide form a dense canopy over the gray cushions. Flowers are multicolored yellow, red, pink and/or cream.
▶ 279	<i>Eriogonum ovalifolium</i> Nutt.	080984	KIN	United States: Wyoming: Carbon County: Seminoe Reservoir. Rocky hogback above reservoir. 6500 ft. some forms at this location were less than 1" tall & most faded to pink as the seeds mature. Kintgen, Mike s.n. 15 Jun 2007.
▶ 280	<i>Eriogonum pharnaceoides</i> Torr.	032096	DBG	United States: Arizona: Navajo City
▶ 281	<i>Eriogonum racemosum</i> Nutt.	072349	KIN	United States: Colorado: Gunnison County: Just outside the park boundary of Black Canyon of the Gunnison, N rim. Open woodland. <i>Quercus gambelii</i> . 7500 ft. Kintgen, Mike s.n. 25 Aug 2006.
282	<i>Eriogonum saxatile</i> S. Watson	101640	SRP	
283	<i>Eriogonum umbellatum</i> Torr.	011189	UNK	
▶ 284	<i>Eriogonum wrightii</i> Torr. ex Benth. var. <i>subscaposum</i> S. Watson	070579	NNS	United States: California: San Bernardino County: San Bernardino Mountains. 8750 ft.
285	<i>Eriogonum wrightii</i> Torr. ex Benth. var. <i>wrightii</i>	941408	RMR	
<b>PORTULACACEAE</b>				
286	<i>Lewisia cotyledon</i> (S. Wats.) B.L. Robinson x <i>columbiana</i> (Howell ex A. Gray) B.L. Rob. var. <i>rupicola</i> (English) C.L. Hitchcock	061927	RPR	
287	<i>Lewisia</i> 'Little Plum'	090852	BBN	
288	<i>Lewisia nevadensis</i> (A. Gray) B.L. Robinson	100653	LPA	
289	<i>Phemeranthus calycinus</i> (Engelmann) Kiger	052293	BBN	
290	<i>Phemeranthus spinescens</i> (Torrey) Hershkovitz	081483	MTH	
291	<i>Talinum parviflorum</i> Nutt. 'Wyo'	052462	LVN	
<b>PRIMULACEAE</b>				
292	<i>Androsace hedraeantha</i> Griseb.	090892	LPA	
293	<i>Androsace septentrionalis</i> L.	024020	LPA	
<b>RANUNCULACEAE</b>				
294	<i>Aquilegia caerulea</i> E. James	002259	LVN	
295	<i>Aquilegia flabellata</i> Sieb. & Zucc. 'Nana'	023166	LPA	
▶ 296	<i>Aquilegia micrantha</i> Eastw.	072655	KIN	United States: Colorado: Delta County: Cottonwood Spring; waypoint Mim East. Slope of dripping cave. 5178 ft. 38°34'55.98"N, 108°20'22.14"W. Kintgen, Mike 6. 27 Jun 2007.
297	<i>Clematis columbiana</i> (Nutt.) Torr. & A. Gray var. <i>tenuiloba</i> (A. Gray in H. Newton & W.P. Jenney) J.S. Pringle	011178	LPA	
298	<i>Clematis fremontii</i> S. Wats.	981061	UNE	
299	<i>Clematis hirsutissima</i> Pursh	011179	LPA	

# SEED OF CULTIVATED PLANTS

ORDER #	NAME/FAMILY	ACC #	SOURCE	COLLECTION INFO
300	<i>Clematis hirsutissima</i> Pursh var. <i>scottii</i> (Porter) R.O. Ericksen	002385	LPA	
301	<i>Clematis hirsutissima</i> Pursh var. <i>scottii</i> (Porter) R.O. Ericksen	002572	LPA	
302	<i>Clematis integrifolia</i> L.	023529	BBN	
303	<i>Clematis ochroleuca</i> Ait.	060612	SHP	
304	<i>Clematis texensis</i> Buckl.	990816	REG	
305	<i>Delphinium grandiflorum</i> L. 'Blauer Zwerg'	091541	LPA	
306	<i>Pulsatilla campanella</i> Fisch. ex Krylov	060524	KEL	
307	<i>Pulsatilla pratensis</i> (L.) Mill.	070159	ROG	
308	<i>Pulsatilla pratensis</i> (L.) Mill. ssp. <i>bohemica</i> Skalický	071573	MTH	
309	<i>Pulsatilla regeliana</i> (Maxim.) Krylov	911023	BOE	
310	<i>Pulsatilla vulgaris</i> Mill.	051257	LPA	
311	<i>Ranunculus gramineus</i> L.	790633	B	
312	<i>Thalictrum isopyroides</i> C. A. Mey.	022767	LPA	
<b>RHAMNACEAE</b>				
313	<i>Rhamnus smithii</i> Greene	800712	WEG	
<b>ROSACEAE</b>				
314	<i>Acaena saccaticupula</i> Bitter	023714	LPA	
315	<i>Cercocarpus intricatus</i> S. Watson	861691	UNK	
316	<i>Chamaebatiaria millefolium</i> (Torr.) Maxim.	941173	LVN:DBG	
317	<i>Cotoneaster multiflorus</i> Bunge	020980	FOF	
318	<i>Dryas octopetala</i> L.	040931	LPA	
319	<i>Dryas x suendermannii</i> Kellerer ex Sunderm.	100723	MTH	
320	<i>Fallugia paradoxa</i> (D. Don) Endl. ex Torr.	861753	OFN	
321	<i>Holodiscus dumosus</i> (Nutt. ex Hook.) A. Heller	951411	CLA	
322	<i>Purshia mexicana</i> (D. Don) Henrickson	030263	MSN	
323	<i>Purshia mexicana</i> (D. Don) Henrickson	861767	LVN:LAW	
324	<i>Sorbus scopulina</i> Greene	811595	WEG	
325	<i>Vauquelinia californica</i> (Torr.) Sarg.	022802	ALN	
<b>SAXIFRAGACEAE</b>				
326	<i>Heuchera bracteata</i> (Torr.) Ser.	023702	LPA	
327	<i>Heuchera hallii</i> A. Gray	003024	LPA	
328	<i>Saxifraga x apiculata</i> Engl. 'Alba'	801477	KEL	
<b>SCROPHULARIACEAE</b>				
329	<i>Calceolaria arachnoidea</i> Graham	090958	ANN	
▶ 330	<i>Digitalis ferruginea</i> L. ssp. <i>ferruginea</i>	861920	ARC	Greece: 1500 m. Archibald, J. s.n.
▶ 331	<i>Digitalis lanata</i> J.F. Ehrh.	030561	DBG	Greece: Oros Pangeo
332	<i>Digitalis obscura</i> L.	001179	PAU	
▶ 333	<i>Digitalis purpurea</i> L. ssp. <i>purpurea</i>	051528	JOH	Spain: Sierra Nevada. 7656 ft. Johnson, D. 311.5. 15 Sep 2001.
334	<i>Erinus alpinus</i> L.	070158	ROG	
335	<i>Penstemon albertinus</i> Greene	050571	RMR	
336	<i>Penstemon amphorellae</i> Crosswh.	071952	MSN	
▶ 337	<i>Penstemon angustifolius</i> Nutt. ex Pursh var. <i>venosus</i> (Keck) N. Holmgren	070034	APS	United States: Colorado: Garfield County.

# SEED OF CULTIVATED PLANTS

ORDER #	NAME/FAMILY	ACC #	SOURCE	COLLECTION INFO
▶ 338	<i>Penstemon attenuatus</i> Douglas ex Lindl. var. <i>attenuatus</i>	050430	NNS	United States: Oregon: Umatilla County: Blue Mtns.: Gravelly roadsides and embankments. Ponderosa pine, Douglas fir, white fir. 4640 ft. Small mats of narrow leaves in large rosettes. Similar in habit to <i>P. procerus</i> but more floriferous with much larger flowers. The 6+ congested whorls of intense blue and violet flowers are crowded into spike-like inflorescences on 12- 16" stems. Ratko, R. s.n.
▶ 339	<i>Penstemon barrettiae</i> A. Gray	050433	NNS	United States: Washington: Klickitat County: Cascade Ranges: West facing basalt boulder slopes. 1200 ft. The contrast in foliage and flower color can only be matched by <i>P. rupicola</i> . 12-18" stems from a much-branched, woody caudex with the large, thick, glaucous blue-gray leaves primarily in basal sterile shoots. The stems leaves are much reduced. The large rose to rose-purple flowers in 6" racemes are typical. Ratko, R. s.n.
340	<i>Penstemon confertus</i> Douglas ex Lindl.	011362	UNK	
341	<i>Penstemon cyananthus</i> Hook.	072728	WTH	
▶ 342	<i>Penstemon euglaucus</i> English	070024	APS	Lunn s.n.
343	<i>Penstemon glaber</i> Pursh var. <i>brandegeei</i> (Porter) Freeman	070050	APS	
344	<i>Penstemon hirsutus</i> (L.) Willd.	032033	KEL	
345	<i>Penstemon laricifolius</i> Hook. & Arn. ssp. <i>laricifolius</i>	050982	AFN	
346	<i>Penstemon nitidus</i> Douglas ex Benth.	071192	LPA	
▶ 347	<i>Penstemon pachyphyllus</i> Gray var. <i>mucronatus</i> (N. Holmgren) Neese	070031	APS	United States: Colorado: Moffat County.
348	<i>Penstemon procerus</i> Douglas ex Graham	081548	LPA	
349	<i>Penstemon rydbergii</i> A. Nels.	032101	RMN	
350	<i>Penstemon superbus</i> A. Nels.	050978	SRP	
351	<i>Penstemon utahensis</i> Eastw.	081622	SRP	
352	<i>Penstemon virgatus</i> A. Gray	000918	UNK	
353	<i>Scrophularia grandiflora</i> DC.	002191	ER	
▶ 354	<i>Verbascum roripifolium</i> (Halacsy) I.K. Ferguson	931159	B	Greece: 400 m.
355	<i>Verbascum wiedemannianum</i> Fisch. & Mey.	050572	KEL	
<b>SOLANACEAE</b>				
▶ 356	<i>Datura wrightii</i> Regel	031900	BAY	United States: Utah: Moab: Kane Creek Rd., near Hunters Canyon. Bayne, D. s.n. 16 May 2003.
357	<i>Physochlaina physaloides</i> (L.) G. Don	972111	UFR	
<b>VERBENACEAE</b>				
▶ 358	<i>Glandularia bipinnatifida</i> (Nuttall) Nuttall	861673	BOR	United States: Colorado: Pueblo County: Pueblo. Borland, J. s.n.
<b>VIOLACEAE</b>				
359	<i>Viola adunca</i> J. E. Smith	023593	MTH	

# WILD COLLECTED SEEDS

All Seeds were collected in Colorado, United States, unless otherwise noted.

ORDER #	SCIENTIFIC NAME	ACC #	COLLECTION INFORMATION
<b>APIACEAE</b>			
360	<i>Angelica grayi</i> (Coul. & Rose) Coul. & Rose	110138	Clear Creek County: Mount Evans, Arapaho National Forest. Kintgen, Mike s.n. 3 Sep 2010.
<b>ASTERACEAE</b>			
361	<i>Achillea millefolium</i> L.	110136	Clear Creek County: Mount Evans, Arapaho National Forest. Schneider, Amy s.n. 3 Sep 2010.
362	<i>Artemisia scopulorum</i> A. Gray	110143	Clear Creek County: Mount Evans, Arapaho National Forest. Schneider, Amy s.n. 3 Sep 2010.
363	<i>Artemisia scopulorum</i> A. Gray	110144	Clear Creek County: Mount Evans, Arapaho National Forest. Kintgen, Mike s.n. 3 Sep 2010.
364	<i>Brickellia grandiflora</i> (Hook.) Nutt.	110147	Ouray County: Red Mountain Pass overlook above town of Red Mountain. Kintgen, Mike s.n. 27 Aug 2010.
365	<i>Cirsium scopulorum</i> (Greene) Cockerell ex Daniels	110150	Clear Creek County: Mount Evans, Arapaho National Forest. Cutler, Lindsay s.n. 3 Sep 2010.
366	<i>Erigeron elatior</i> (A. Gray) Greene	110155	Routt County: Wildflower Ranch. ca 8000 ft. Kintgen, Mike s.n. 8 Aug 2010.
367	<i>Hymenoxys grandiflora</i> (Torr. & A. Gray) K.L. Parker	110205	Archuleta County: Lookout above Wolf Creek Pass. Kintgen, Mike s.n. 26 Aug 2010.
368	<i>Hymenoxys hoopesii</i> (A. Gray) Bierner	101922	Routt County: Wildflower Ranch. Seasonally moist meadows. 8100 ft. Kintgen, Mike s.n. 22 Aug 2010.
369	<i>Machaeranthera begelovii</i> (A. Gray) Greene var. <i>bigelovii</i>	110172	Clear Creek County: Mount Evans, Arapaho National Forest. Kintgen, Mike s.n. 3 Sep 2010.
370	<i>Rudbeckia montana</i> A. Gray	101924	Gunnison County: Kebler Pass Road. Moist meadows with <i>Heracleum</i> . 9000 ft. Kintgen, Mike s.n. 27 Aug 2010.
371	<i>Senecio fremontii</i> Torr. & A. Gray	110199	Clear Creek County: Summit Lake: Mount Evans, Arapaho National Forest. Schneider, Amy s.n. 12 Sep 2010.
372	<i>Senecio spartioides</i> Torr. & A. Gray	110198	Adams County: Bennett: Hwy 79, east end of city of Bennett, Colorado; 39°45.389, 104°25.185. Bone, Mike s.n. 3 Oct 2010.
373	<i>Solidago simplex</i> Humboldt, Bonpland, & Kunth	110204	Clear Creek County: Mount Evans, Arapaho National Forest. Schneider, Amy s.n. 3 Sep 2010.
374	<i>Tetranneuris grandiflora</i> (Torr. & A. Gray) K.F. Parker	101925	Clear Creek County: Loveland Pass. N facing tundra in meadow community. 12000 ft. Kintgen, Mike s.n. 5 Aug 2010.
<b>BRASSICACEAE</b>			
375	<i>Erysimum capitatum</i> (Douglas ex Hook.) Greene	110161	Clear Creek County: Mount Evans, Arapaho National Forest. Kintgen, Mike s.n. 3 Sep 2010.
<b>BORAGINACEAE</b>			
376	<i>Hackelia floribunda</i> (Lehm.) I.M. Johnst.	110165	Routt County: Wildflower Ranch. Kintgen, Mike s.n. 22 Aug 2010.
<b>CARYOPHYLLACEAE</b>			
377	<i>Minuartia obtusiloba</i> (Rydb.) House	110174	Clear Creek County: Mount Evans, Arapaho National Forest. Schneider, Amy s.n. 9 Sep 2010.
378	<i>Minuartia obtusiloba</i> (Rydb.) House	110175	Clear Creek County: Mount Evans, Arapaho National Forest. Cutler, Lindsay s.n. 3 Sep 2010.
<b>CHENOPODIACEAE</b>			
379	<i>Atriplex canescens</i> (Pursh) Nutt.	110146	Fremont County: Shelf Road. Wilcox, Katy s.n. 22 Oct 2010.
380	<i>Krascheninnikovia lanata</i> (Pursh) A. Meeuse & A. Smit	110169	Fremont County: Shelf Road. Wilcox, Katy s.n. 22 Oct 2010.

# WILD COLLECTED SEEDS

ORDER #	SCIENTIFIC NAME	ACC #	COLLECTION INFORMATION
<b>CRASSULACEAE</b>			
381	<i>Sedum lanceolatum</i> Torr.	110196	Clear Creek County: Mount Evans, Arapaho National Forest. Kintgen, Mike s.n. 3 Sep 2010.
<b>FABACEAE</b>			
382	<i>Oxytropis parryi</i> A. Gray	110179	Jefferson County: Deer Creek Canyon. Wilcox, Katy s.n. 24 Jun 2010.
383	<i>Thermopsis montana</i> Nutt.	101919	Huerfano County: Cordova Pass at Farley Overlook. Seasonally moist meadows. 10000 ft. Kintgen, Mike s.n. 25 Aug 2010.
384	<i>Thermopsis montana</i> Nutt.	110206	Larimer County: 4 miles east of Estes Park. Open mountain meadow. 8600 ft. Kintgen, Mike s.n. 6 Sep 2010.
<b>GENTIANACEAE</b>			
385	<i>Gentiana parryi</i> Engelm.	101921	Routt County: Wildflower Ranch. Moist meadows. 8100 ft. Kintgen, Mike s.n. 18 Sep 2010.
<b>LAMIACEAE</b>			
386	<i>Monarda fistulosa</i> L.	110176	Larimer County: 4 miles east of Estes Park. Open mountain meadows. 8600 ft. Kintgen, Mike s.n. 27 Aug 2010.
<b>LOASACEAE</b>			
387	<i>Mentzelia densa</i> Greene	110178	Fremont County: Shelf Road. Wilcox, Katy s.n. 22 Oct 2010.
<b>POACEAE</b>			
388	<i>Calamagrostis canadensis</i> (Michx.) P. Beauv.	110148	Routt County: Wildflower Ranch. Kintgen, Mike s.n. 19 Sep 2010.
389	<i>Deschampsia cespitosa</i> (L.) P. Beauv.	101927	Routt County: Wildflower Ranch. Seasonally moist meadows. 8100 ft. Kintgen, Mike s.n. 18 Sep 2010.
390	<i>Trisetum spicatum</i> (L.) K. Richt.	110211	Clear Creek County: Mount Evans, Arapaho National Forest. Kintgen, Mike s.n. 3 Sep 2010.
<b>POLYGONACEAE</b>			
391	<i>Eriogonum jamesii</i> Benth.	101928	Costilla County: W side of La Veta Pass. Dry rocky road cut, more rock than soil. 8000 ft. Kintgen, Mike s.n. 25 Aug 2010.
392	<i>Eriogonum</i> sp.	110159	Fremont County: Shelf Road. Wilcox, Katy s.n. 22 Oct 2010.
393	<i>Eriogonum umbellatum</i> Torr. var. <i>majus</i> Hook.	110160	Routt County: Wildflower Ranch. Kintgen, Mike s.n. 15 Sep 2010.
<b>RANUNCULACEAE</b>			
394	<i>Clematis hirsutissima</i> Pursh	101918	Routt County: Wildflower Ranch. Dry hillside with <i>Artemisia cana</i> , <i>tridentata</i> . 8100 ft. Kintgen, Mike s.n. 22 Aug 2010.
<b>ROSACEAE</b>			
395	<i>Potentilla arguta</i> Pursh ssp. <i>arguta</i>	101923	Routt County: Wildflower Ranch. Dry hillside with <i>Artemisia cana</i> , <i>Bromus</i> & <i>Viguiera</i> . 8150 ft. Kintgen, Mike s.n. 22 Aug 2010.
<b>SAXIFRAGACEAE</b>			
396	<i>Saxifraga rhomboidea</i> Greene	110194	Clear Creek County: Mount Evans, Arapaho National Forest. Schneider, Amy s.n. 9 Sep 2010.
397	<i>Saxifraga rhomboidea</i> Greene	110195	Clear Creek County: Summit Lake: Mount Evans, Arapaho National Forest. Schneider, Amy s.n. 12 Sep 2010.
<b>SCROPHULARIACEAE</b>			
398	<i>Castilleja sulphurea</i> Rydb.	101920	Routt County: Wildflower Ranch. Seasonally moist meadows with <i>Wyethia</i> , <i>Artemisia cana</i> & <i>Bistorta</i> . 8150 ft. Kintgen, Mike s.n. 22 Aug 2010.
399	<i>Pedicularis groenlandica</i> Retz.	110181	Clear Creek County: Mount Evans, Arapaho National Forest. Kintgen, Mike s.n. 18 Jun 2010.
400	<i>Pedicularis groenlandica</i> Retz.	110182	Clear Creek County: Mount Evans, Arapaho National Forest. Cutler, Lindsay s.n. 10 Sep 2010.
401	<i>Scrophularia lanceolata</i> Pursh	101926	Costilla County: W side La Veta Pass. Seasonally wet swale with <i>Alnus</i> , <i>Salix</i> , <i>Carex</i> , <i>Delphinium</i> . 9500 ft. Kintgen, Mike s.n. 25 Aug 2010.

# PLANT SOURCE ABBREVIATIONS

ADA	Adams, Bill, Colorado, US	GAG	Jardin Alpine Commune de Meyrin, CH
AFN	Agua Fria Nursery, Inc., New Mexico, US	GOET	Neuer Botanischer Garten, DE
ALL	Allende, S., DE	GRA	Green Acres Nursery, Colorado, US
ALN	Alta Nursery, California, US	HAE	Haenni, R., Colorado, US
ALP	Alplains Nursery, Colorado, US	HAI	Halda, J., CZ
ANN	Annie's Annuals & Perennials, California, US	HAL	Halladin, P., New Jersey, US
APS	American Penstemon Society, Colorado, US	HCG	A High County Garden, New Mexico, US
ARA	Arrowhead Alpines, Michigan, US	HOD	Hoog & Dix, NL
ARC	Archibald, J. & J., GB	HOL	Holubec, V., CZ
B	Botanischer Garten Berlin-Dahlem Zentraleinrichtung der Freien Universität Berlin, DE	IBC	International Bloembollen Centrum, NL
BAD	Bartlett, A. & D., Colorado, US	JEL	Jelitto Seeds, DE
BAR	Barnhill, C., Colorado, US	JOH	Johnson, D., Colorado, US
BAY	Bayne, D., US	JUR	Jurasek, J., CZ
BBB	Brent & Becky's Bulbs, Virginia, US	KEL	Kelaidis, P., Colorado, US
BBN	Bluebird Nursery, Nebraska, US	KEX	Karmic Exotix Nursery, CA
BER	Berkutenko, A., RU	KIEL	Botanischer Garten der Christian-Albrechts Universität, DE
BGT	Botanischer Garten der Universität Tübingen, DE	KIN	Kintgen, M., Colorado, US
BLB	Blooms of Bressingham, Michigan, US	LAR	Larner Seeds, California, US
BOE	Boehme, G., DE	LAW	Lawyer Nursery, Montana, US
BOH	Bohlander, D., Colorado, US	LOW	Lowry, B., Washington, US
BOR	Borland, J., Colorado, US	LPA	LaPorte Avenue Alpine Nursery, Colorado, US
BRU	Brune, R., Colorado, US	LVN	Little Valley Nurseries, Colorado, US
CAM	Campbell, D., Colorado, US	LZ	Universität Leipzig Botanischer Garten, DE
CHS	Chiltern Seeds, GB	MAD	Madrone Nursery, Texas, US
CLA	Country Lane, Colorado, US	MAR	Martin, D., Colorado, US
COA	Jardín Botánico de Córdoba, ES	MCG	McGary, Jane, Oregon, US
COP	Country Perennials, Colorado, US	MCM	McMaster, C., ZA
DAF	Daffodil Mart, Virginia, US	MES	Mesa Garden, New Mexico, US
DAN	Daniel, N., Colorado, US	MHA	Russian Academy of Science, RU
DAU	Daugherty, R., Colorado, US	MNC	Montrose Nursery, North Carolina, US
DAW	Dawson, C., Colorado, US	MON	Monrovia Nursery, California, US
DBG	Denver Botanic Gardens, Colorado, US	MOR	Morton Arboretum, Illinois, US
ER	Universität Erlangen-Nürnberg Botanischer Garten, DE	MSN	Mountain States Nursery, Arizona, US
EUR	Euroseeds, CZ	MTH	Mount Tahoma Nursery, Washington, US
FCN	Fort Collins Nursery, Colorado, US	MUE	Mueller, Clare, Pennsylvania, US
FOF	Forest Farm, Oregon, US	MUG	Muhlhausen Botanischer Garten, DE
FUC	Fuchs, H., DE	MUN	Botanischer Garten München-Nymphenburg, DE
G	Conservatoire et Jardin Botaniques de la Ville Genève, CH	NAR	North American Rock Garden Society, US
		NEL	Nelson, H., Colorado, US

# PLANT SOURCE ABBREVIATIONS

NGC	Nick's Garden Center, Colorado, US	SHP	Seneca Hills Perennials, New York, US
NNS	Northwest Native Seed, California, US	SIR	Siskiyou Rare Plant Nursery, Oregon, US
O	University of Oslo Botanic Garden, NO	SPI	Sphairoid Institute, California, US
OFN	Old Farm Nursery, Colorado, US	SRP	Sunscapes Rare Plant Nursery, Colorado, US
OXF	University of Oxford Botanic Garden, GB	SSN	Sunshine Nursery, Oklahoma, US
PAL	Palermo Botanic Garden, IT	SUN	Sun Chaser Natives, Colorado, US
PAR	Parco Nazionale Gran Paradizo, IT	SVER	Ural Centre, Russian Academy of Sciences, RU
PAU	Paulino's Gardens, Inc., Colorado, US	SVS	Silverhill Seeds, ZA
PAV	Pavelka, M., CZ	SWC	Swart & Company, NL
PFF	The Perennial Flower Farm, Iowa, US	SWF	Southwest Farms, Inc., Colorado, US
PLE	Plestil, Vaclav, CZ	TASH	National Academy of Science, Tashkent, UZ
PLF	Plant Farm, Washington, US	TAY	Taylor, A., Colorado, US
PRN	Prairie Nursery, Wisconsin, US	TMG	Timberline Gardens, Colorado, US
PSW	Plants of the Southwest, New Mexico, US	TO	Universita di Torino, IT
REG	Universität Regensburg, DE	TPF	Theodore Payne Foundation, California, US
RMC	Rocky Mountain Chapter, North American Rock Garden Society, Colorado, US	UFR	Botanischer Garten der Universität Frankfurt, DE
RMN	Rocky Mountain Native Plants Company, Colorado, US	UNE	Nebraska Statewide Arboretum, Nebraska, US
RMR	Rocky Mountain Rare Plants, Colorado, US	UNK	Unknown provenance
ROG	Rennsteiggarten Oberhof, DE	WDN	We-Du Nurseries, North Carolina, US
RPR	Rare Plant Research, Oregon, US	WEG	Western Evergreens Nursery, Colorado, US
SAU	Sauter, H. & L., Washington, US	WEI	Weinstein, G., Colorado, US
SCN	Suncrest Nurseries, California, US	WHF	Whitman Farms, Oregon, US
SCR	Scottish Rock Garden Society, UK	WHI	Whitford, E., Colorado, US
SES	Select Seed, Connecticut, US	WNS	Western Native Seed, Colorado, US
SFG	Santa Fe Greenhouses, New Mexico, US	WTH	Wild Things, Colorado, US
		ZSS	Sukkulenten-Sammlung Zürich, CH

## GENERAL INFORMATION

In response to the International Convention on Biological Diversity (Rio de Janeiro, 1992), Denver Botanic Gardens supplies its seeds on the condition that:

- The seeds are used for the common good in the area of research, education, conservation and the development of botanical gardens.
- Commercial use is prohibited without permission from Denver Botanic Gardens.
- Denver Botanic Gardens requests acknowledgement in any publications resulting from the use of the distributed seeds as well as a copy of the publication.

### PLEASE NOTE

- Seeds of some species are in short supply and will be distributed in order of request.
- Seeds are the result of open pollination and may be hybridized.
- We give no warranty as to the quality, productiveness or any other matter for any seeds we supply.
- Species are chosen for their performance in Denver, Colorado's climate; we cannot speak to qualities such as invasiveness in other climates, but request any data pertaining to invasiveness of these species in other regions be communicated to Denver Botanic Gardens for future reference. We will not knowingly distribute seed to places where a taxon has been identified as invasive.

## GEOGRAPHICAL DATA

Denver Botanic Gardens is situated at Latitude 39°45'N, Longitude 104°52'W, at an elevation of 5277 feet (1609 meters). The Gardens include 23 acres of display including a tropical conservatory, alpine garden, Japanese garden, native plant gardens and water gardens.

### CLIMATIC CONDITIONS IN DENVER (1971-2000):

Average annual precipitation	15.68 inches	Mean minimum July temperature	58.8° F/14.9°C
Average temperature	50.5° F/10.3°C	Mean January temperature	30.2° F/-1°C
Mean July temperature	73.5° F/23.1°C	Mean maximum January temperature	43.3° F/6.3°C
Mean maximum July temperature	88.1° F/31.2°C	Mean minimum January temperature	17.1° F/-8.3°C

### MEAN PRECIPITATION

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
inches	0.46	0.48	1.24	1.87	2.37	1.58	2.20	1.77	1.14	0.99	0.95	0.61	15.68

### 2010 PRECIPITATION

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
inches	0.31	0.57	0.80	2.00	1.76	1.85	0.99	1.44	0.11	0.47	0.55	0.31	11.697

### MONTHLY HIGH TEMPERATURES 2010

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
° F	64.8	57.2	69.3	80.1	95.4	99.3	103.2	98.4	96.4	77.1	79.7	69.3

### MONTHLY LOW TEMPERATURES 2010

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
° F	-2.9	8.6	4.5	31.5	32.2	48.4	54.1	56.8	47.3	46.2	16.5	4.5

### MONTHLY AVERAGE TEMPERATURES 2010

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
° F	34.5	32.0	37.6	51.1	58.1	72.4	76.7	76.2	70.0	60.3	40.8	37.6

Lowest temperature recorded (1921-2009) -25° F/-3.9° C  
Highest temperature recorded (1921-2009) 105° F/40.6° C

Source: [www.denverwx.com](http://www.denverwx.com)