

Wild Seeds



Primula agleniana

Vojtech Solubec, Czech Republic

2016/2017

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Dear rock-garden friends,

Welcome to the 24th seed list 2016/17. The seeds were collected mainly in Tibet, Pamir, Alai, Tien Shan, Yunnan, Kamchatka, Sechuan, Kunlun, Karakoram, Sakhalin, Patagonia, Turkey and others. Selected pictures are in my photogallery <http://holubec.wbs.cz/>. There is a lot of items that were regenerated in the garden. They are as valuable as the natural collections and can be collected exactly when become ripe. These species proved to be growable in rock gardens in Central Europe. Those items are clearly marked with ex. Some items come from other collectors: Jiri Papousek (JP), Zdenek Obrdlik (ZO) and Jaro Horacek (JH).

The plants were determined according to Floras, in case of the recent collections Fl. China, Fl Tajikistan, Fl Kyrgyzstan, Key to the vascular plants of Kamchatka. Some plants were not seen in flowers and therefore it is not possible to guarantee all determination. From previous expeditions there are still available many good items. All seeds are marked with a collecting year. Older ones were stored in refrigerator and they keep a good germination ability (some of them germinate even better the second year). Several abbreviations were used in descriptions: pl-plant, lv, lvs-leaves, fl, fls-flowers, infl-inflorescence.

Please, order by both numbers and names to avoid mistakes. Seeds from another locality will be sent when the ordered item is gone. Please, list more substitutes, some items (especially marked with *) are in a very limited supply (less than 10 packets). It is possible to verify availability by e-mail. Minimum order is 25 EUR. I am sorry but there can be no refunds.

Price categories: A €2.00 B €2.50 C €3.00 D €3.50 E €4.00 F €4.50

Orders over € 100 take a 5 % discount. Postage and share on charges € 5.00. All orders receive bonus seed.

Payment by PayPal (attached to e-mail vojtech.holubec@tiscali.cz), cheques incl. personal, preferably in EUR or equivalent amount in USD or other European convertible currency, no postal cheques. Cash is possible, in nontransparent registered letter, no regional/Scottish bills. IBAN payment is possible rather for larger orders or add 12 € for commission.

Several notes on seed sowing

Use clay or plastic pots with a good drainage hole, put a good drainage on the bottom followed by a layer of light sandy-peaty soil, smooth and press surface, sow seeds thinly, cover with 1-3 mm fine sandy soil, dress surface with 5 mm coarse sand or chippings of 1-2 mm grains, soak the pots and leave them outside, glass protection is recommended against heavy rains but not against snow.

Some seeds need to be sown immediately after maturity, most seeds require vernalization over winter and germinate early in spring. Add some snow on top of them (if you have some). For experts: dormant seeds can be treated with gibberelins: make 0.03 % solution of GA3 (in a bit - 3 ml of alcohol and add water), soak the seeds in little Petri dishes for 6 h and sow them. It is good for late sown seeds to replace vernalization and for some old ones. However, overwintering/vernalization is sufficient or even better. Keep the seed pots at least for two years, some germinate slowly, the second or third spring. For more info see also N.Deno instructions.

Drawings: by my daughter Klára.

The Caucasus and its Flowers by Vojtěch Holubec and Pavel Křivka

The book was printed in December 2006. General chapters: history of botanical research, orography, geology, climate, flora and vegetation, touristic notes. The special part describes 509 species of the Caucasian origin. Format A4, hardcover, 910 high quality pictures, distribution maps, drawings. Price for seed customers 35 € plus 12 € postage, in total 47 €. Bulk order can get additional discount. It is a good Christmas gift. If you are interested, please order by e-mail.

The Flowers of Tian Shan by Vojtech Holubec will be published during 2017.

Pre-publication price is 50 € plus 12 € postage. Orders will be accepted.

3rd Czech International Conference, Pruhonice nr. Prague, in May 10-15, 2017.

Famous world speakers. Info and Registration: www.czrns.cz. The last 30

Seed list 2016

- 1 *Abelia corymbosa*** **Aceraceae**
Kyrgyzstan: Kyrgyz Ala Tau, 1700 m, rocky river bank, shrub or small tree, pale yellow fls, decorative, 2015, B
- 2 *Abies cilicica*** **Pinaceae**
ex Turkey: Ala Dag, 2016, C
- 3 *Acantholimon alatavicum*** **Plumbaginaceae**
Kyrgyzstan: Kyzyl Ompul, Kyrgyz AT, 2200 m, mountain steppe, hard xeric grey cushion, 10 cm high, 20-40 cm wide, triangular spiny lvs, rose fls in sessile spikes, 2013, C
Kazakhstan: W Ketmen, 2050 m, white loess, 2013, C
- 5 *Acantholimon albertii*** **Plumbaginaceae**
Kyrgyzstan: Trans Alai, Lenin Pk, 3000 m, dry steppe, river deposits, semihard cushion, 5 cm high, 10-20 cm wide, linear green lvs, rose fls in spikes, 5 cm long stems, 2015, C
- 6 *Acantholimon diapensioides*** **Plumbaginaceae**
Tajikistan: BulunKul, Pamir, 4300 m, alpine scree, very dense cushion, 10-60 cm wide, linear 5 mm long lvs, sessile spiklets, pink/rose fls, 2015, D
Tajikistan: Akbaital, Pamir, 4500 m, alpine scree, 2015, D
Tajikistan: Alichur, Pamir, 4200 m, alpine scree, 2015, D
Tajikistan: Targakaty, Pamir, 4200 m, alpine scree, 2015, D
- 10 *Acantholimon diapensioides x pamiricus*** **Plumbaginaceae**
Tajikistan: Mamasary, Pamir, 3900 m, dry alpine steppe, occasional hybrid, 50 cm wide cushion, intermediate, grey lvs, 2015, D
- 11 *Acantholimon hedinii*** **Plumbaginaceae**
Kyrgyzstan: Trans Alai, Lenin Pk, 3300 m, dry moraine, dense cushion, 5-30 cm wide, grey linear lvs, 1 cm long, sessile spiklets, white calyx, white/pink fls, 2015, E
Kyrgyzstan: Kyzylart, TransAlai, 3800 m, alpine scree, 2015, E
- 13 *Acantholimon pamiricum*** **Plumbaginaceae**
Tajikistan: Murgab, Pamir, 3700 m, dry rocky steppe, rounded large cushion, 10-70 cm wide, green linear lvs, 2-3 cm long, short spikes, pink fls, 2015, D
Tajikistan: Targakaty, Pamir, 4200 m, dry alpine steppe, white fls, 2015, D
Tajikistan: Bulun Kul, Pamir, 4000 m, dry alpine steppe, 2015, D
- 16 *Acantholimon tianshanicus*** **Plumbaginaceae**
Kyrgyzstan: Alai Mts, 3700 m, limestone crevices, compact cushion, 5-15 cm wide, grey triangular lvs, 1 cm long, sessile spiklets, purple calyx, pink fls, 2015, E
- 18 *Acis nicaensis*** **Amarylidaceae**
ex cult: bulb pl, 8-12 cm high, linear lvs, white pinkish fls, 1 cm long, 2016, D
- 19 *Aconitum gymrandrum*** **Ranunculaceae**
China: Rawu, Tibet, 3800 m, dry rocky slope, perennial pl, 20-50 cm high, pinnatisect lvs, purple blue fls in racemes, 2016, C
- 20 *Aconitum pulchellum*** **Ranunculaceae**
China: HongShan, Yunnan, 4400 m, alpine grassland, caespitose pl, 5-12 cm high, palmatisect lvs, 3 cm wide, 1-2 elegant blue fls, 2014, D

- 21 *Aconitum taronense* **Ranunculaceae**
China: GalungLa, Tibet, 3700 m, mountain shrubland, perennial pl, 50-100 cm high, pentagonal 3-parted lvs, dark blue fls in long racemes, 2016, C
- 22 *Adesmia pinnifolia* **Fabaceae**
Argentina: Aconcagua, Mendoza, 3300 m, alpine shrubland, spiny shrub, 30-40 cm high, pinnate lvs, yellow fls, 2014, C
- 23 *Aethionema sp.* **Brassicaceae**
ex Turkey: caespitose pl 10-15 cm, grey linear lvs, lilac fls, 2016, B
- 24 *Ajania cf. sharnhorstii* **Asteraceae**
Tajikistan: Akbaital, Pamir, 4400 m, dry alpine steppe, caespitose pl, 10-15 cm high, finely incised tomentose lvs, yellow fls, 2-5 terminal capituli, 2015, C
Kyrgyzstan: Kyzylart, TransAlai, 3800 m, dry steppe, 2015, C
- 26 *Ajania kokanica* **Asteraceae**
Kyrgyzstan: Alai Mts, 3600 m, limestone scree, caespitose pl, 15 cm high, grey tomentose incised lvs, cymose infl, yellow fls, capituli 13 mm wide, 2015, B
- 27 *Ajania trilobata* **Asteraceae**
Tajikistan: Karakul, Pamir, 3900 m, dry alpine steppe, caespitose pl, 10-15 cm high, finely incised tomentose lvs, yellow fls, single capituli, 15 mm wide, 2015, C
- 28 *Alectris gracilis* **Liliaceae**
China: SerkymLa, Tibet, 4400 m, Kobresia grassland, Tofieldia-like pl, 5-10 cm high, linear lvs in ground rosettes, 2016, D
- 29 *Alectris pauciflora* **Liliaceae**
China: Lulang, Tibet, 3200 m, mountain grassland, Tofieldia-like pl, 10-20 cm high, linear lvs, 2016, D
- 30 *Allium altaicum* **Alliaceae**
ex Mongolia: Chorgo, bulb pl 30-40 cm high, ancestor of onion, 2016, B
- 31 *Allium carolinianum* **Alliaceae**
Kyrgyzstan: Trans Alai, Lenin Pk, 3800 m, mountain grassland, caespitose pl, 15-30 cm high, grey imbricate lvs, pink fls, 2015, D
- 32 *Allium coeruleum* **Alliaceae**
Kyrgyzstan: Alamedin, Kyrgyz AT, 2300 m, mountain steppe, medium bulb pl, 40-60 cm high, green linear lvs, dark sky-blue fls in umbells, 4 cm wide, 2013, C
- 33 *Allium fedtschenkoanum* **Alliaceae**
Kyrgyzstan: Kyrgyz Ala Tau, 3200 m, mountain grassland, caespitose pl, 20 cm high, pink fls, 2015, C
- 34 *Allium galanthum* **Alliaceae**
Kazakhstan: Ketmen, 1200 m, dry scree, caespitose pl, 20-40 cm high, white fls, onion ancestor, 2016, C
- 35 *Allium insubricum* **Alliaceae**
ex Italy: Orobie Alps, 1800 m, limestone scree, decorative bulb pl, 15-20 cm, grey lvs, large purple nodding fls, 15 mm long stems, 2016, C
- 36 *Allium oschanini* **Alliaceae**
exTajikista: Yazgulem, Pamir, 2100 m, rocky slope, bulb pl, 50 cm high, ancestor to onion, white fls, 5 cm wide umbells, 2016, C
- 37 *Allium platyspathum* **Alliaceae**
Kyrgyzstan: Trans Alai, Lenin Pk, 3800 m, mountain grassland, bulb pl, 20-40 cm high, 2 cm wide lvs, rose fls, 4 cm wide umbells, 2015, C
- 39 *Allium suworowii* **Alliaceae**
Kyrgyzstan: Ferganski AT, 2200 m, rocky slope, bulb pl, 1 m high, large bulbs, white fls, dense umbells, 12 cm wide, 2015, C
- 40 *Allium tenuifolium* **Alliaceae**
ex China: Kunlun, bulb pl, 5-12 cm high, linear lvs, rose fls, 2015, C
- 41 *Allium victorialis ssp. platyphyllum* **Alliaceae**
ex Japan: Hotaka Dake, Honsu, 2000 m, woodland, bulb pl, 30-40 cm high, broadly ovate lvs in ground rosette, white fls, 2016, B
- 42 *Allium vigunculae* **Alliaceae**
ex Japan: Nagasaki, dwarf bulb pl, 10-12 cm high, very fine linear

- lvs, rose fls, 2015, C
- 43 *Anaphalis flavescens* Asteraceae**
China: Chomolangma, Tibet, 5000 m, alpine scree, perennial pl, 10 cm high, grey tomentose lvs, 3-5 capituli, brownish fls, 2016, D
- 44 *Anaphalis nepalensis* var. *monocephala* Asteraceae**
China: SerkymLa, Tibet, 4400 m, alpine scree, perennial pl, 10-15 cm high, grey tomentose lvs, white tomentose bracts, one capitula, 2016, D
- 45 *Androsace adenocephala* Primulaceae**
China: SerkymLa, Tibet, 4500 m, alpine grassland, cushion pl, 3-10 cm high, ovate lanceolate green lvs, 1 cm long, 3-7 pink fls in umbells, 2016, F
- 46 *Androsace* aff. *dasyphylla* Primulaceae**
Tajikistan: Alichur Range, Naizatash, Pamir, 4200 m, alpine grassland, limestone, prostrate lax mat, 10-15 cm wide, hairy rosettes, 1-3 cm long stems, 4-6 white fls, 2015, E
- 47 *Androsace* aff. *pavlovskyi* Primulaceae**
Kyrgyzstan: Trans Alai, Lenin Pk, 3300 m, dry moraine, dense prostrate mat, 3-15 cm wide, small hairy rosettes, sessile caducous umbells, 1-2 white fls, 2015, E
- 48 *Androsace* aff. *zayulensis* Primulaceae**
China: DoyaLa, Tibet, 4400 m, dry scree, large compact cushions, 10-30 cm wide, spatulate lvs, 2 cm long, white fls in umbells on stems, 1-2 cm long, 2016, F
- 49 *Androsace akbaitalensis* Primulaceae**
Tajikistan: Akbaital, Pamir, 4300 m, northern rocky slope, prostrate lax mat, 5-40 cm wide, green hairy rosettes, 1-3 cm long stems, 3-7 creamy fls, 2015, E
Kyrgyzstan: Trans Alai, Lenin Pk, 3700 m, dry moraine, , 2015, E
- 51 *Androsace bisulca* v. *brahmaputrae* Primulaceae**
China: Basumtso, Tibet, 3300 m, mountain Kobresia grassland, cushion, 3-8 cm high, compact hairy rosettes, 4-8 red fls in umbells, 2016, F
China: Gynda, Tibet, 3300 m, 2016, F
- 53 *Androsace dasyphylla*/A. *acrolasia* Primulaceae**
Kyrgyzstan: Sary Bulak, Kungei AT, 3000 m, alpine grassland, E Issykkul form, compact flat cushion, 5-10 cm wide, white sericeous lvs, white sessile fls, red eye, 2013, D
- 54 *Androsace delavayi* Primulaceae**
China: Rawu, Tibet, 4400 m, alpine scree and grassland, compact hairy cushion, 5-10 cm wide, soft closed rosettes, 8 mm wide, pink sessile fls, 2016, F
- 55 *Androsace flavescens* Primulaceae**
China: Keng Tau, Karakoram, 2800 m, mountain scree, lax prostrate mat, 10-30 cm wide, pubescent lvs 15x3 mm, in flat rosettes, yellowish fls in umbells, 3-5 cm stems, 2011, E
- 56 *Androsace graminifolia* Primulaceae**
China: Lhasa East, Tibet, 3700 m, Kobresia grassland, dwarf caespitose pl, 3-5 cm high, 15 mm wide rosettes, linear lvs, 3-8 pink fls in umbells, 2016, F
- 57 *Androsace helvetica* Primulaceae**
Italy: Dolomites, 2400 m, limestone crevices, JP, 2016, E
- 58 *Androsace lehmanniana* Primulaceae**
Kyrgyzstan: Kyrgyz Ala Tau, 3100 m, alpine grassland, prostrate lax mat, 10-30 cm wide, green densely hairy rosettes, 1-3 cm long stems, 3-7 white/pinkish fls, 2015, E
- 59 *Androsace mathildae* Primulaceae**
ex cult.: 2016, C
- 60 *Androsace pavlovskyi* Primulaceae**
Tajikistan: Kyzylart, TransAlai, 4300 m, fine slate scree, dense rounded cushion, 5-10 cm wide, small rosettes, sessile caducous umbells, 1-2 white fls, 2015, E
- 61 *Androsace spinulifera* Primulaceae**
China: YaDing, Sechuan, 4000 m, limestone scree, compact winter rosettes, larger lax leafy summer rosettes, stems 10-20 cm, rich umbells of prominent rose fls, 2014, C

- 62 *Androsace squarrosula* **Primulaceae**
China: Kunlun, 3700 m, fine alpine scree and grassland, very compact cushion, 5-50 cm wide, imbricate lingulate ciliate lvs, rosettes 3-5 mm wide, solitary sessile white fls, 2011, E
- 63 *Androsace yargongensis* **Primulaceae**
China: MiLa, Tibet, 4900 m, fine scree, soft cushion, 5-15 cm wide, small hairy rosettes, 8-10 mm wide, white-pink fls in umbells, on stems, 1 cm long, 2016, F
- 64 *Androsace zayulensis* **Primulaceae**
China: Rawu, Tibet, 4400 m, rocky outcrops, lax cushion, 5-15 cm wide, spatulate lvs, 2 cm long, pink fls in umbells on stems, 2 cm long, 2016, F
- 65 *Arenaria capillaris* **Caryophyllaceae**
Russia: Avacha volcano, Kamchatka, volcanic ash, cushions 20 cm wide, grey lvs, white fls, 2014, B
- 66 *Arisaema consanguineum* **Araceae**
ex China: Yunnan, woodland, tuberose pl, 1 m high, 10-15 palmatisect lvs, brown-green fls, 10 cm long, 2016, B
- 67 *Arisaema flavum* **Araceae**
China: Lhasa, Tibet, 3600 m, shrubland, tuberose pl, 50 cm high, palmatilobate lvs, yellow fls, 2016, C
- 68 *Arisaema thunbergii* ssp. *urashima* **Araceae**
ex Japan: tuberose pl, 40 cm high, pedate lvs, dark violett fls, 15 cm long, spadix 30-40 cm long, 2016, D
- 69 *Arisaema wilsonii* **Araceae**
China: GalungLa, Tibet, 3700 m, Rhododendron shrubland, tuberose pl, 50-80 cm high, palmatilobate lvs, large purple-brown fls, very decorative, 2016, D
- 70 *Arnebia tibetana* **Boraginaceae**
Tajikistan: Murgab, Pamir, 3700 m, dry steppe, caespitose pl, 10-20 cm high, yellow fls with brown spots, in cymose infl, 2015, D
- 71 *Arum conophalloides* **Araceae**
ex Turkey: tuberose pl, 50-70 cm high, purple long fls, 2016, C
- 72 *Asarum caudatum* **Aristolochiaceae**
ex USA: caespitose odoriferous plant 10-15cm high, purple fls, 2016, B
- 73 *Asarum marmoreum* **Aristolochiaceae**
ex USA: woodland, caespitose pl, 10 cm high, marmorate lvs, 2016, C
- 74 *Asphodeline taurica* **Liliaceae**
ex Turkey: Bolkar Dag, 2100 m, limestone scree, xeric monocarpic pl, 30-40 cm high, large rosettes of grey linear lvs, long spike of hundreds white fls, 2015, A
- 75 *Aster coloradensis* **Asteraceae**
ex USA: caespitose pl, 10-15 cm high, rose fls, 2016, B
- 76 *Astragalus arnottianus* **Fabaceae**
Argentina: Aconcagua, Mendoza, 3100 m, alpine grassland, prostrate cushion, 3 cm high, 30 cm wide, 2 cm long pinnate lvs, blue sessile fls, inflated marmorate pods, 2014, C
- 77 *Azorella monantha* **Apiaceae**
Argentina: Vulcan Batea, 1800 m, volcanic rocks, hard prostrate cushion, 30-150 cm wide, greenish sessile solitary fls, 2013, C
- 78 *Berberis empetriformis* **Berberidaceae**
ex Argentin: Cabo Virgines, small shrub 10-20 cm hgh, yellow fls, 2016, C
- 79 *Besseya calthifolia* **Saxifragaceae**
ex China: caespitose pl, 15-25 cm high, cordate glossy leather-like lvs, white fls in racemes, 2016, C
- 80 *Betonica grandiflora* **Lamiaceae**
ex Russia: W Caucasus, 1900 m, limestone scree, caespitose meadow pl 20 cm high, extremely large rose infl, 2016, B
- 81 *Blumenbachia prietea/Caiphora* **Loasaceae**
Argentina: Vulcan Batea, 1700 m, pumice, caespitose pl, 15 cm high, green ground rosette, ovate lvs, white large fl terminal on stems, 2013, C

- 82 *Caiphora coronata*** **Loasaceae**
 Argentina: Aconcagua, Mendoza, 3300 m, fine scree, caespitose pl, 10 cm high, lanceolate pinnatisect spinulose lvs, 5 cm large campanulate white fls, 2014, C
- 83 *Calandrinia graminifolia*** **Portulacaceae**
 Argentina: Cerro Punto Negro, Mendoza, 3600 m, alpine scree, caespitose pl, 3-5 cm high, linear lvs, 2-3 cm long, rose fls on 3 cm long stems, 2014, D
- 84 *Calceolaria cf. luxurians*** **Scrophulariaceae**
 Argentina: Villa Vicencio, Mendoza, 2000 m, along stream, caespitose pl, 15-20 cm high, large ground rosettes, rounded lvs with large dents, large yellow fls, 1-5 fls on stem, 2014, C
- 85 *Calceolaria luxurians*** **Scrophulariaceae**
 Argentina: Aconcagua, Mendoza, 3400 m, along stream, caespitose pl, 10-15 cm high, dark green rugose dentate lvs, yellow fls, 2014, C
- 86 *Caltha palustris var. himalaica*** **Ranunculaceae**
 China: GalungLa, Tibet, 3900 m, alpine boggy meadow, caespitose pl, 15-25 cm high, rounded lvs, 5-7 cm wide, large yellow-orange fls, 2016,D
- 87 *Caltha scaposa*** **Ranunculaceae**
 China: Lulang, Tibet, 3300 m, alpine bogs, caespitose pl, 5-10 cm high, rounded lanceolate lvs, 2-3 cm long, yellow fls, 2016, D
- 88 *Caltha sinogracilis f. rubriflora*** **Ranunculaceae**
 China: GalungLa, Tibet, 4100 m, alpine boggy grassland, caespitose pl, 5-10 cm high, rounded dentate lvs, 2-3 cm wide, aniline-rose fls, 2016,F
- 89 *Campanula betulaeifolia*** **Campanulaceae**
 ex Turkey: Kavussahap, m, limestone crevices, hanging prostrate pl, 6-12 cm high, dark green birch like lvs, large nodding white fls, 2016,B
- 90 *Campanula choruhensis*** **Campanulaceae**
 ex Turkey: Tortum, caespitose pl, 5-12 cm high, grey hairy ovate dentate lvs, white-rose bells, 3 cm long, 2016, D
- 91 *Campanula ledebouriana*** **Campanulaceae**
 ex Turkey: Aras, m, , small xeric caespitose pl, 10 cm high, linear leathery lvs, creamy small fls, 2016, D
- 92 *Campanula raddeana*** **Campanulaceae**
 ex cult.: prostrate pl 10 cm high, white creamy fls, 2016, C
- 93 *Campanula trogerae*** **Campanulaceae**
 ex Turkey: limestone crevices, overhangs, hanging caespitose pl, 10-15 cm high, grey hairy ovate lanceolate lvs, large white open flat bells, 2016, D
- 94 *Campanula trogerae x choruhensis*** **Campanulaceae**
 ex cult.: intermediate plant, 2016, D
- 95 *Campanula waldsteiniana*** **Campanulaceae**
 ex Croatia: Velebit, prostrate cushion, leafy stems, triangular green lvs, 1 cm long, flat blue bells, 12 mm wide, 2016, D
- 96 *Cancrinia tianshanica*** **Asteraceae**
 China: Shengli Daban, Borohoroshan, 3600 m, alpine sandy deposits, caespitose pl, 3-7 cm high, hairy pinnate lvs, 2-3 cm long, ball-like capituli, 15 mm wide, yellow fls, 2011, C
- 97 *Caragana aurea*** **Fabaceae**
 Kyrgyzstan: Kyrgyz Ala Tau, 2500 m, rocky slope, small spiny shrub, 40-60 cm high, linear lvs, 2 cm long, yellow fls, 2015, B
- 98 *Cassiope fastigiata*** **Ericaceae**
 China: SerkymLa, Tibet, 4500 m, mossy rocky cold slope, caespitose pl, 10-15 cm high, rectangular densely leafy stems, not hairy lvs, white campanulate fls, 2016, D
- 99 *Cassiope selaginoides*** **Ericaceae**
 China: GalungLa, Tibet, 3700 m, cold northern grassland, caespitose pl, 5-12 cm high, slender densely leafy stems, sparsely pubescent lvs, white campanulate fls, 2016, D
 China: Rawu, Tibet, 4300 m, 2016, D
- 101 *Cassiope tetragona*** **Ericaceae**
 Norway: Colesdalen, Svalb, m, arctic cold boulders, low subshrub, 10-15 cm high, tetragonal hairy branches, 5-7 mm wide, white fls, 2016, D
 Norway: Longyear, Svalb, m, arctic cold bouldrs, , 2016, D

- 103 *Ceratostigma minus* **Plumbaginaceae**
China: Lhasa, Tibet, 3700 m, dry rocky slope, large cushions, 15-30 cm wide, small lanceolate lvs, large dark blue fls, 2016, D
- 104 *Chamaecytisus pygmaeus* **Fabaceae**
ex Greece: prostrate pl 5-10 cm high, yellow brownish fls, 2016, C
- 105 *Chorispora bungeana* **Brassicaceae**
ex Kazakhst: Ketmen, 3000 m, slate scree, prostrate caespitose pl, 5 cm high, green pinnatifid lvs, 5 cm long, purple emarginate fls, 15 mm wide, 2016, D
- 106 *Chorispora macropoda* **Brassicaceae**
Kyrgyzstan: Trans Alai, Lenin Pk, 3800 m, cold limestone scree, small caespitose pl, 5 cm high, flat rosettes, pinnatifid lvs, 5 cm long, yellow fls, 2015, C
- 107 *Christolleea flabellata* **Brassicaceae**
Kyrgyzstan: Trans Alai, Lenin Pk, 3800 m, slate scree, caespitose pl, 5-10 cm high, densely white hairy lvs, large lilac fls, 2015, C
- 108 *Christolleea pamirica* **Brassicaceae**
Tajikistan: Karakul, Pamir, 3900 m, salty bank, caespitose pl, 10-20 cm high, succulent green lvs, small white fls, 2015, B
- 109 *Cimicifuga yunnanensis* **Ranunculaceae**
China: GalungLa, Tibet, 3800 m, Rhododendron shrubland, perennial pl, 150 cm high, palmatifid lvs, creamy-white fls in long not branched racemes, 2016, C
- 110 *Cirsium eriophoroides* **Asteraceae**
China: GalungLa, Tibet, 3800 m, among rocks, perennial pl, 30-50 cm high, spinely lvs, 10-15 cm long, terminal capituli, 12 cm high, rose fls, 2016, D
- 111 *Clematis aff. akebioides* **Ranunculaceae**
Tajikistan: Murgab, Pamir, 3900 m, dry rocky slope, prostrate/creeping vine, 20-70 cm high, green ternate lvs, large yellow succulent fls, 2015, B
- 112 *Clematis tibetana v. vernayi* **Ranunculaceae**
China: Lhasa, Tibet, 3200 m, mountain shrubland, low vine, ternate lvs, 3-4 cm long leaflets, dark purple fls, 2016, D
- 113 *Clementsia semenovii (Rhodiola)* **Crassulaceae**
Kyrgyzstan: Kyrgyz Ala Tau, 2500 m, river bank, caespitose pl, 30-50 cm high, densely leafy stems, linear lvs, 3 cm long, yellow fls in spikes, 10 cm, 2015, B
- 114 *Codonopsis convolvulacea v. grey-wilsonii* **Campanulaceae**
China: Lulang, Tibet, 3300 m, mountain shrubland, tuberose pl, 50 cm high, creeping stems, lanceolate lvs, 3 cm long, flat blue fls, 2016, D
- 115 *Codonopsis convolvulacea v. vinciflora* **Campanulaceae**
China: Gynda, Tibet, 3200 m, mountain shrubland, tuberose pl, 50-80 cm high, creeping stems, narrow lanceolate lvs, 3 cm long, flat blue fls, 2016, D
- 116 *Codonopsis vinciflora* **Campanulaceae**
China: Rutok, Tibet, 3900 m, rocky slope, tuberose vine, 50 cm high, campanula-like lvs, flat blue fls, 3 cm wide, 2010, B
- 117 *Colchicum aff. triphyllum* **Liliaceae**
ex Turkey: Horasan, 1800 m, dry steppe, bulb pl 5-10 cm high, prostrate linear lvs, rose fls, 2015, D
- 118 *Colchicum cf. kotschyi* **Liliaceae**
Turkey: Abant, 1300 m, dry rocky slope, bulb pl 10-13 cm high, lanceolate lvs, white fls, 2016, C
- 119 *Colchicum sp.* **Liliaceae**
Turkey: Yedigeler, 1500 m, woodland on limestone, bulb pl 10-20 cm high, lanceolate lvs, rose fls, 2016, C
- 120 *Colchicum szowitzii* **Liliaceae**
Turkey: Bolu, 1500 m, wet grassland, bulb pl 5-10 cm high, prostrate oblong lvs, rose fls, 2016, D
- 121 *Comarum salesowianum* **Rosaceae**
Kyrgyzstan: Turgenashu, Terski AT, 2900 m, rocky slope, small shrub, 40-70 cm high, pinnate lvs, 2 cm long leaflets, large white fls, 2013, A
- 122 *Corallo-discus flabellatus* **Gesneriaceae**

- China: Lhasa, Tibet, 3700 m, rock crevices, flat Ramonda-like rosettes, ovate rugose lvs, 4-8 cm long, pale blue fls, 2016, E
- 123 *Corallo-discus kingii* Gesneriaceae**
 China: Lhasa East, Tibet, 3700 m, cold rock crevices, flat Ramonda-like rosettes, lanceolate glabrous lvs, blue fls, 2016, E
 China: Lhasa West, Tibet, 4100 m, 2016, E
 China: WahaShan, Yunnan, 3200 m, limestone rocks, caespitose pl, ground rosettes, triangular lanceolate flat lvs, blue fls on stems, 5-10 cm long, 2014, D
- 126 *Coriaria terminalis* Coriariaceae**
 China: GalungLa, Tibet, 3700 m, cold northern rocky slope, small shrub, 60 cm high, ovate cordate lvs, 5 cm long, red berries in racemes, 2016, D
- 127 *Cortiella caespitosa* Apiaceae**
 China: MiLa, Tibet, 5000 m, alpine screes, caespitose pl, 5 cm high, prostrate rosettes, finely incised lvs, purple fls in umbells, 2016, D
- 128 *Cortusa brotheri* Primulaceae**
 Kyrgyzstan: Chong Aksu, Kungei AT, 2000 m, woodland, caespitose pl, 15-20 cm high, palmate dentate lvs, 4-5 cm wide, red fls in umbells, 2013, C
- 129 *Cortusa turkestanica* Primulaceae**
 Kyrgyzstan: Kyrgyz Ala Tau, 2500 m, subalpine shrubland, caespitose pl 20 cm high, rounded rugose hairy lvs, purple fls in umbells, 2015, C
- 130 *Corydalis stricta* Fumariaceae**
 Tajikistan: Yazgulem, Pamir, 2000 m, limestone crevices, caespitose pl, 10-20 cm high, small grey lvs, yellow fls in terminal racemes, 2015, C
- 131 *Cremanthodium aff. ellisii* Asteraceae**
 China: DaXueShan, Yunnan, 4300 m, alpine grassland, caespitose pl, 20-25 cm high, ovate lvs in ground rosettes, large solitary yellow fls, 5 cm wide capituli, 2014, B
 China: YulongShan, Yunnan, 3600 m, alpine grassland, 2014, B
- 133 *Cremanthodium calcicola* Asteraceae**
 China: GalungLa, Tibet, 3800 m, alpine screes and meadows, caespitose pl, 20-40 cm high, dark green leaf rosettes, dark brown fls, 3 cm long, 2016, D
- 134 *Cremanthodium rhodocephalum* Asteraceae**
 China: GalungLa, Tibet, 3700 m, fine pioneer scree, caespitose pl, 10-20 cm high, rounded dark green lvs, 2-3 cm wide, pink fls. 3 cm long, 2016, D
- 135 *Crocus cf. olivierii* Iridaceae**
 Turkey: Abant, 1500 m, alpine grassland, spring bulb pl 5-10 cm high, yellow fls, 2016, D
- 136 *Crocus speciosus* Iridaceae**
 Turkey: Abant, 1300 m, autumn bulb pl 8-15 cm high, lilac fls, 2016, C
 Turkey: Bolu, 1300 m, 2016, C
- 138 *Cyananthus flavus* Campanulaceae**
 China: SerkymLa, Tibet, 4400 m, alpine grassland, caespitose pl, 2-5 cm high, small lvs on prostrate stems, yellow solitary fls, 2016, E
- 139 *Cyclamen cilicium* Primulaceae**
 ex Turkey: tuberose pl, 5-10 cm high, reniform shallowly crenate lvs, prominent marking, pink fls, autumn flowering, 2016, C
 ex Turkey: Küpe D., 2016, C
 Turkey: Akseki, 1800 m, open forest, 2016, C
- 142 *Cyclamen cilicium album* Primulaceae**
 ex cult.: tuberose pl, 5-10 cm high, white lvs, white fls, 2016, C
- 143 *Cyclamen coum* Primulaceae**
 ex cult.: , white lvs, 2016, C
 ex Turkey: Ordu, red fls, 2016, C
 ex Turkey: Ovit, rose fls, 2016, C
 ex Turkey: Zigana, tuberose pl, 5-12 cm high, reniform entire lvs, pink fls, spring flowering, 2016, C
- 147 *Cyclamen cyprium* Primulaceae**
 ex cult.: , 2016, D
- 148 *Cyclamen hederifolium album* Primulaceae**
 ex cult.: white fls, 2016, C
- 149 *Cyclamen parviflorum* Primulaceae**

- ex Turkey: Zigana Pass, 2800 m, , tuberose pl, 3-5 cm high, small reniform lvs, lilac fls, spring flowering, 2016, E
- 151 *Cyclamen purpurascens*** **Primulaceae**
ex Slovenia: Julian Alps, tuberose pl, 8-15 cm high, large reniform lvs, rose fls, summer flowering, 2016, B
- 152 *Cyclamen repandum*** **Primulaceae**
ex Croatia: Velebit, limestone scree, tuberose pl, 8-13 cm high, ovate dentate lvs, rose fls, 2016, D
- 153 *Cyclamen trochopteranthum*** **Primulaceae**
ex Turkey: Yarpuz, tuberose pl, 5-10 cm high, cordate lvs, rose fls, spring flowering, 2016, D
ex Turkey: Altynyaka, open forest, 2016, D
- 155 *Daphne aff. malyana*** **Thymeleaceae**
ex Bosnia: small shrub, characters between *D. oleoides* and *D. malyana*, 2016, E
- 156 *Daphne kosaninii*** **Thymeleaceae**
ex Bulgaria: Pirin, small shrub, 15 cm high, closed rose fls, 2016, D
- 157 *Daphne limprichtii**** **Thymeleaceae**
ex China: Min Shan, close to *D. tangutica*, 2016, D
- 158 *Daphne longilobata*** **Thymeleaceae**
China: Nambula, Tibet, 3600 m, open woodland and shrubland, small shrub, 60-120 cm high, lanceolate lvs, 4-7 cm long, pale yellow star-like fls, 15 mm wide, 2016, D
- 159 *Daphne oleoides*** **Thymeleaceae**
ex Bulgaria: Pirin, small shrub, 15-20 cm high, white open fls, 2016, D
- 160 *Daphne oleoides Palermo*** **Thymeleaceae**
ex cult.: robust form of *D. oleoides*, 2016, B
- 161 *Delphinium aff. dasyphorum*** **Ranunculaceae**
China: DoyaLa, Tibet, 4400 m, cold rocky slope, perennial pl, 40-50 cm high, palmatilobed lvs, blue fls 25-30 mm long, in racemes, 2016, D
- 164 *Delphinium cf. confusum*** **Ranunculaceae**
Kyrgyzstan: Chon Kemin, Kungei AT, 2500 m, alpine grassland, caespitose pl, 30-40 cm high, large palmatilobed lvs, 3-5 dark blue fls in racemes, black nectararia, 2013, C
- 165 *Delphinium grandiflorum*** **Ranunculaceae**
ex cult.: caespitose pl 20-30 cm high, dark blue fls in lax racemes, 2016, C
- 166 *Denmosa rhodantha*** **Cactaceae**
Argentina: Villa Vicencio, Mendoza, 2000 m, dry shrubland, cactus, 50-100 cm high, 30-40 cm wide, white spines, large red fls, 2014, C
- 167 *Dianthus nitidus*** **Caryophyllaceae**
Bosnia: Maglic, limestone crevices, lax cushions, 5-10 cm high, rose fls, 2016, C
- 168 *Dianthus petraeus*** **Caryophyllaceae**
ex Bulgaria: lax cushions, 8-15 cm high, white incised fls, 2016, C
- 169 *Diapensia obovata*** **Diapensiaceae**
Russia: Avacha, Kamchatka, 1100 m, volcanic ash, large compact cushion, 5-50 cm wide, small ovate glossy lvs, white fls on stems 2 cm long, 2013, D
- 170 *Diplarche multiflora*** **Ericaceae**
China: GalungLa, Tibet, 3700 m, cold mossy rocky slope, caespitose pl, 10-15 cm high, densely leafy stems, needle-like lvs, 15-20 mm long, rose fls in terminal racemes, 2016, D
- 171 *Draba bruniifolia*** **Brassicaceae**
ex Turkey: Ala Dag, prostrate cushion, 3-5 cm high, yellow fls, 2016, B
- 172 *Draba cf. lichiangensis*** **Brassicaceae**
China: Chomolangma, Tibet, 5200 m, fine scree, caespitose pl, 2-3 cm high, grey tomentose lvs, white fls in sessile racemes, 2016, E
- 173 *Draba norvegica*** **Brassicaceae**
Norway: Longyear, Svalb, caespitose pl 10 cm high, white fls,

- 2016, C
- 174 *Draba* sp.** **Brassicaceae**
ex Turkey: Ala D., caespitose pl 5-10 cm high, yellow fls, 2016, B
- 175 *Dracocephalum poulsenii*** **Lamiaceae**
Tajikistan: Mamasary, Pamir, 4200 m, dry alpine scree, prostrate pl, 5-8 cm high, green crenate lvs, 1 cm long, prostrate rosettes, blue fls in short dense racemes, 2015, D
Tajikistan: Bulun Kul, Pamir, 4400 m, alpine scree, , 2015, D
Kyrgyzstan: Trans Alai, Lenin Pk, 3700 m, dry moraine, , 2015, D
Kyrgyzstan: Sary Bulak, Kungei AT, 3000 m, rock crevices, , 2013, D
- 179 *Dracocephalum stamineum*** **Lamiaceae**
Kyrgyzstan: Chonashu, Terski AT, 3300 m, slate scree, prostrate pl, 5-12 cm high, hairy crenate lvs, 1 cm long, purple fls in short dense racemes, 2013, C
- 180 *Dryas octopetala*** **Rosaceae**
Norway: Colesdalen, Svalb, 100 m, arctic fine scree, prostrate mats, small lvs up to 15.20 mm long, white fls, 2016, D
- 181 *Dryas punctata*** **Rosaceae**
Russia: Avacha, Kamchatka, 800 m, volcanic ash, prostrate pl, 10 cm high, oblong crenate whitish lvs, creamy fls, 2013, D
- 182 *Edraianthus horwathii*** **Campanulaceae**
ex Slovenia: low caespitose pl, 5-8 cm high, 3-8 blue fls in umbells, 2016, C
- 183 *Edraianthus montenegrinus*** **Campanulaceae**
ex Mt Negro: caespitose pl 10-12 cm high, 3-5 blue long fls, 2016, C
- 184 *Edraianthus niveus*** **Campanulaceae**
ex Bosnia: Vranica, small caespitose pl, 5-10 cm high, creamy fls, 2015, E
- 185 *Edraianthus tenuifolius*** **Campanulaceae**
Mt Negro: Sutjeska, limestone crevices, cushions, 5-10 cm wide, stems 10-15 cm long, 3-7 blue fls, 2016, C
ex Mt Negro: 2016, C
- 187 *Ephedra fedtschenkoana*** **Ephedraceae**
ex Kyrgyzst: Talasski Ala Tau, granit crevices, dwarf rhizomatic creeping subshrub, 2-3 cm high, grey-green stems, 8 mm large bright red berries, 2016, B
- 188 *Ephedra regeliana*** **Ephedraceae**
Tajikistan: Sasyk Kul, Pamir, 3900 m, rock crevices, caespitose pl, 3-10 cm high, branched green stems, green/yellow fls, red berries, 2015, C
- 189 *Eremurus altaicus*** **Liliaceae**
ex Kazach: rhizomatic pl, 150 cm high, creamy fls in long racemes, 2016, B
- 190 *Eremurus olgae*** **Liliaceae**
Tajikistan: ex Darwas Ridge, Pamir, rhizomatic pl, 1 m high, grey-green linear lvs, dense long racemes with pink fls, peduncles, 5 cm long, 2016, C
- 191 *Eremurus robustus*** **Liliaceae**
exKazakhsta: Trans Illy Ala Tau, 1700 m, dry subalpine grassland, tuberose pl, 150-200 cm high, linear lvs 2-3 cm wide, large white-pinkish fls in long racemes, 2016, B
- 192 *Eremurus stenophyllus*** **Liliaceae**
exTajikista: Pamir, dry screes, rhizomatic pl 100- 150 cm high, orange yellow fls in long racemes, 2013, B
- 193 *Erigeron aurantiacus*** **Asteraceae**
Kyrgyzstan: Chon Kemin, Kungei AT, 2700 m, alpine grassland, caespitose pl, 10-20 cm high, dark green lanceolate lvs, prominent orange fls in capituli, 20-30 mm wide, 2013, C
Kyrgyzstan: Chonashu, Terski AT, 3300 m, alpine grassland, 2013, C
- 195 *Erigeron cabulicus*** **Asteraceae**
Tajikistan: Mamasary, Pamir, 4600 m, slate scree, caespitose pl, 5-15 cm high, linear green lvs, 3-5 cm long, yellow fls, 15-20 mm wide, capituli, 2015, D
- 196 *Eriophyton wallichii*** **Lamiaceae**

China: Rawu, Tibet, 4500 m, mineral scree, caespitose pl, 10-20 cm high, green tomentose lvs, large white/pinkish fls, 2016, E
China: HongShan, Yunnan, 4500 m, moving slate scree, caespitose pl, 5-15 cm high, densely tomentose broadly lanceolate lvs, pink fls in whorls, 2014, E

- 198 *Eritrichium rupestre* Boraginaceae**
exKazachsta: Tian Shan, caespitose pl, 5-12 cm high, light blue fls, 2016, C
- 199 *Eritrichium sachalinense* Boraginaceae**
Russia: Zhdanko, Sakhalin, 500 m, rock crevices and scree, cushion, 10-20 cm wide, linear hairy lvs, 12 x 4 mm, blue fls on leafy stems, 10 cm long, endemic, 2012, D
- 200 *Eritrichium tianshanicum* Boraginaceae**
Kyrgyzstan: Trans Alai, Lenin Pk, 3800 m, alpine grassland, flat hairy cushion, 5-10 cm wide, 1 cm wide lv rosettes, 5-10 cm long stems, white fls in cymes, 2015, E
Kyrgyzstan: Chonashu, Terski AT, 3700 m, alpine scree, flat hairy cushion, 5-10 cm wide, 1 cm wide lv rosettes, 5-10 cm long stems, white fls in cymes, 2013, E
- 202 *Erysimum humillinum* Brassicaceae**
Tajikistan: Mamazair, Pamir, 4100 m, dry alpine steppe, small caespitose pl, 5-15 cm high, linear lvs in rosettes, 3-4 cm long, yellow fls in racemes, 2015, C
- 203 *Erysimum kotschyianum* Brassicaceae**
ex Turkey: Bolkar Dag, small cushions, 5-10 cm high, linear gray lvs, yellow fls in racemes, 2015, E
- 204 *Erysimum* sp. Brassicaceae**
ex Turkey: Sipikor, black purple, 2016, C
- 205 *Erythronium dens-canis* Liliaceae**
ex cult.: tuberosa pl 10-15 cm high, dark rose fls, 2016, C
ex Italy: Mt Alben, open woodland, white pinkish fls, 2016, D
- 207 *Fritillaria armena* Liliaceae**
ex Turkey: Kop, bulb pl 15 cm high, black purple narrow fls, 2016, C
- 208 *Fritillaria* cf. *fleischerii* Liliaceae**
ex Turkey: Akyarma, bulb pl 10-15 cm high, aff. *F. pinnardii*, deep yellow fls, 2016, D
- 209 *Fritillaria crassifolia* Liliaceae**
ex Turkey: Kop, bulb pl 10 cm high, brown yellow campanulate fls, 2016, D
- 210 *Fritillaria ferganica* Liliaceae**
Kyrgyzstan: Kyrgyz Ala Tau, 1900 m, dry shrubland along river, bulb pl, 20-40 cm high, linear lvs, purple/brown fls, 4-5 cm long, 2015, D
- 211 *Fritillaria kurdica* Liliaceae**
ex Turkey: A van, bulb pl 10 cm high, aff. *F. crassifolia*, 2016, D
- 212 *Fritillaria tubiformis* Liliaceae**
ex cult: bulb pl 15-20 cm high, black purple large fls, 2016, D
- 213 *Galanthus elwesii* Amaryllidaceae**
ex Turkey: Yarpuz, 2700 m, bulb pl, 15 cm high, broad linear lvs, large white fls, 2016, C
ex Turkey: Hadim, 2200 m, bulb pl, 15-20 cm high, broad linear lvs, large white fls, 2016, C
- 215 *Galanthus koenenianus* Amaryllidaceae**
ex Turkey: hasel nut screes, like smaller *G. nivalis*, grey lvs, 2016, F
- 216 *Galanthus nivalis* Amaryllidaceae**
ex Italy: Mt. Alben, bulb pl, 15 cm high, grey linear lvs, large white fls, 2016, C
- 217 *Galanthus plicatus plicatus* Amaryllidaceae**
ex Turkey: Abant, 1500 m, open forest, bulb pl, 15 cm high, broad lvs, large white fls, 2016, D
ex Turkey: Mudurnu, 2016, D
ex Turkey: Yedigöller, 2016, D
- 220 *Galanthus trojanus* Amaryllidaceae**
ex Turkey: bulb pl, 10-15 cm high, green linear lvs, white fls,

- 2016, F
- 221 *Galanthus woronowii*** **Amaryllidaceae**
Turkey: Arpali Koy, 500 m, bulb pl, 10-15 cm high, green wide lvs, white fls, 2015, C
- 222 *Gaultheria dolichopoda*** **Ericaceae**
China: GalungLa, Tibet, 3800 m, cold open slope, prostrate pl, 2 cm high, leather-like lanceolate lvs, 8 mm long, bright blue berries, 10-12 cm wide, 2016, E
- 223 *Gaultheria miqueliana*** **Ericaceae**
ex USA: prostrate shrub, 10-12 cm high, ovate leathery lvs, white fruits, 2016, C
- 224 *Gaultheria trichophylla*** **Ericaceae**
ex Himal: 4200 m, among small rhododendrons, dwarf prostrate shrub, 2 cm high, 10-60 cm wide, linear leathery lvs, 1 cm long, cyan blue berries, 1 cm, 2016, D
- 225 *Genista cf. depressa*** **Fabaceae**
ex Slovenia: Velebit, 2000 m, limestone scree, prostrate shrub, 5-10 cm high, green branches, lanceolate lvs, 1-2 cm long, large yellow fls, 2016, D
- 226 *Genista cf. germanica*** **Fabaceae**
ex Greece: Kapaonik, more compact than *G. germanica*, 2016, C
- 227 *Genista germanica*** **Fabaceae**
ex Italy: Apeniny, prostrate subshrub, 5-10 cm high, lanceolate lvs, 15 mm long, yellow fls, 2016, C
- 228 *Genista horrida*** **Fabaceae**
ex Spain: large cushion, 50-100 cm wide, grey/green spiny branches, yellow fls, 2016, C
- 229 *Genista lydia*** **Fabaceae**
ex Turkey: Abant, prostrate shrub, 5-10 cm high, green branches, linear lvs, yellow fls, 2016, D
- 230 *Genista sagittalis var. demisa*** **Fabaceae**
ex Bulgaria: Rhodops, prostrate shrub, 5-10 cm high, 15-50 cm wide, small form of *G. sagittalis*, yellow fls, 2015, C
- 232 *Gentiana arethusae*** **Gentianaceae**
China: DaXueShan, Yunnan, 4300 m, fine alpine scree, caespitose pl, 5-10 cm high, linear lvs with awns in whorles by 6, pale blue fls, 2014, D
- 233 *Gentiana atuntsiensis*** **Gentianaceae**
China: BowaShan, Sechuan, 4900 m, alpine grassland, caespitose pl, 20-30 cm high, lanceolate lvs, closed blue fls in whorls, 2014, C
China: DaXueShan, Yunnan, 4300 m, alpine grassland, 2014, C
- 235 *Gentiana clusii*** **Gentianaceae**
ex Slovakia: caespitose pl, 10 cm high, grey lanceolate lvs, 2-4 cm long, dark blue fls with green dots, 2016, C
- 236 *Gentiana crassicaulis*** **Gentianaceae**
ex China: Zhongdian, Yunnan, 3700 m, mountain grassland, caespitose pl, 20-30 cm high, lanceolate lvs, 15 cm long, blue fls in sessile umbells, 2015, A
- 238 *Gentiana kyrilovii*** **Gentianaceae**
Kyrgyzstan: Chon Kemin, Kungei AT, 2600 m, alpine grassland, caespitose pl, 10-20 cm high, linear lanceolate lvs in rosettes, 5 cm long, 2-5 dark blue fls, 2013, C
- 239 *Gentiana lhasica*** **Gentianaceae**
China: MiLa, Tibet, 4800 m, Kobresia grassland, caespitose pl, 3-8 cm high, small prostrate rosettes, blue fls, 3 cm long, on ascendent stems, 2016, E
- 242 *Gentiana occidentalis*** **Gentianaceae**
ex Spain: Picos, smaller than *G. acaulis*, 2015, C
- 244 *Gentiana paradoxa*** **Gentianaceae**
ex cult.: Caucasus, a good form, 15 cm high, narrowly linear leaves, single to 3 terminal fls, 2016, C
- 245 *Gentiana paradoxa hybrid*** **Gentianaceae**
ex cult.: 2016, A
- 246 *Gentiana purdomii*** **Gentianaceae**
China: SerkymLa, Tibet, 4400 m, alpine grassland, caespitose pl, 10-13

- cm high, lanceolate lvs, 8 cm long, white fls, 2016, D
- 247 *Gentiana straminea* Gentianaceae**
China: Rutok, Tibet, 4100 m, mountain grassland, caespitose pl, 15-20 cm high, ascendent stems, creamy yellowish fls in terminal racemes, 2016, C
- 248 *Gentiana urnula* Gentianaceae**
China: MiLa, Tibet, 4900 m, fine scree, caespitose pl, 1-3 cm high, rectangular rosettes, white sessile funnel-form fls with dark dots, 2016, F
- 250 *Gentiana waltonii* Gentianaceae**
China: Lhasa East, Tibet, 3700 m, mountain grassland, caespitose pl, 10-20 cm high, prostrate rosettes, lanceolate lvs, 5-10 cm long, dark blue fls in terminal racemes, 2016, E
- 251 *Gentiana wardii* Gentianaceae**
China: GalungLa, Tibet, 3800 m, cold alpine rocky slope, prostrate pl, 1-3 cm high, small rosettes, 15 mm wide, solitary sessile blue fls, 2016, F
- 252 *Glaucidium palmatum* Ranunculaceae**
ex Japan: rhizomatic pl, 30-40 cm high, palmatilobed lvs, 10 cm wide, large lilac fls, 5 cm wide, 2016, C
- 253 *Globularia meridionalis* Globulariaceae**
ex Bulgaria: S Pirin, like *Globularia repens*, prostrate mats, 2-3 cm high, 2016, C
- 254 *Gypsophila capituliflora* Caryophyllaceae**
Tajikistan: Murgab, Pamir, 4000 m, dry erosion ravines, very compact cushion, 5-15 cm wide, succulent linear lvs, 3 cm long, pink fls in umbells, 2015, E
- 255 *Gypsophila tenuifolia* Caryophyllaceae**
ex Russia: W. Caucasus, 2100 m, limestone crevices, compact green cushions, 15 cm wide, linear juicy lvs, white or pinkish fls on ascendent stems, 2016, B
- 256 *Haplopappus marginalis* Asteraceae**
Argentina: Las Lenas, Mendoza, 2800 m, fine scree, prostrate mats, small rosettes, 3 cm high, grey lanceolate dentate lvs, yellow fls on 5 cm long stems, 2014, C
- 257 *Haplopappus paucidentata* Asteraceae**
Argentina: Aconcagua, Mendoza, 3400 m, mountain grassland, prostrate pl, up to 10 cm high, ground rosettes, 3 cm wide, green lanceolate lvs, large orange capituli, 2014, C
Argentina: Las Lenas, Mendoza, 2700 m, mountain steppe, , 2014, C
ex Argentin: prostrate pl, 10-15 cm high, sharpely dentate lvs, 2 cm long, yellow fls, 2016, C
- 260 *Hedysarum cephalotes* Fabaceae**
Tajikistan: Targakaty, Pamir, 4300 m, rocks and screes, prostrate cushion, 15-40 cm wide, green pinnate lvs, 10 cm long, purple fls in umbells, 1seed pods, 2015, D
- 261 *Hegemone lilacina* Ranunculaceae**
Kyrgyzstan: Chonashu, Terski AT, 3600 m, wet alpine grassland, Trollius-like caespitose pl, 10-20 cm high, palmatisect lvs, 3-5 cm wide, full white-lilac fls, 3 cm wide, 2013, E
- 262 *Helleborus multifidus* Ranunculaceae**
Mt Negro: Maglic, rocky grassland, limestones, caespitose pl, 20-30 cm high, narrow palmate linear lvs, brown-green fls, 3 cm wide, 2016, D
- 263 *Helleborus orientalis* Ranunculaceae**
ex Turkey: caespitose pl, 20-30 cm high, palmate lvs, ovate lobes, large creamy fls, 2016, B
- 264 *Helleborus torquatus* Ranunculaceae**
Mt Negro: Sutjeska, mountain grassland, caespitose pl, 30-40 cm high, palmate lvs, cream fls, 2016, C
- 265 *Hepatica maxima* Ranunculaceae**
ex cult.: caespitose pl, 15 cm high, large glossy trifoliolate lvs, white-pinkish fls, 2016, D
- 266 *Hoffmannseggia glauca* Fabaceae**
Argentina: Media Aqua, Parana, 500 m, dry steppe, caespitose pl, 20 cm high, pinnate lvs, yellow-orange fls in panicles, 2014, C

- 267 *Incarvillea cf. zhongdianensis* **Bigoniaceae**
China: YaDing, Sechuan, 3900 m, alpine grassland, rhizomatic pl, 20 cm high, lyrate lvs, large rose fls, 2014, C
- 268 *Incarvillea delavayi var. alba* **Bigoniaceae**
ex cult: white fls, 2015, B
- 269 *Incarvillea forrestii* **Bigoniaceae**
China: WahaShan, Yunnan, 3600 m, limestone scree, caespitose pl, 40 cm high, rounded entire lvs, 6-10 cm long, large rose fls, 5-8 cm long, 2014, D
- 271 *Iris bulleyana* **Iridaceae**
China: TianBaoShan, Yunnan, 3200 m, wet grassland, rhizomatic pl, 40 cm high, linear lvs, 1,5 cm wide, dark blue-purple fls, yellow marking, 2014, C
China: Lulang, Tibet, 3200 m, mountain grassland, rhizomatic pl, 20-30 cm high, pale green lvs, purple-blue fls with yellow brushes, 2016, D
- 273 *Iris chrysographes* **Iridaceae**
ex China: rhizomatic pl, 40 cm high, dark purple-blue fls, 2016, B
- 274 *Iris galatica* **Iridaceae**
ex Turkey: Sakaltutan, Juno, bulb pl with succulent roots, 10 cm high, 2015, E
- 275 *Iris henryi* **Iridaceae**
China: Lulang, Tibet, 3300 m, boggy shrubland, rhizomatic pl, 30-40 cm high, pale green lvs, dark blue fls, 2016, D
- 276 *Iris imbricata* **Iridaceae**
ex Azerbaijan: Chaikent, rhizomatic pl, 40 cm high, pale yellow large fls, 2016, C
- 277 *Iris junonia lilac* **Iridaceae**
ex Turkey: lilac fls, 2016, C
- 278 *Iris junonia yellow* **Iridaceae**
ex Turkey: Kupedag, rhizomatic pl, 30 cm high, yellow fls, 2015, C
- 279 *Iris missouriensis* **Iridaceae**
ex USA: rhizomatic pl, 15-20 cm high, leather-like linear lvs, 5 mm wide, blue fls, 2016, C
- 280 *Iris pumila* **Iridaceae**
ex Turkey: rhizomatic pl 10-15 cm, blue or yellow fls, 2016, C
ex Czechia: Pálava, 2016, C
- 282 *Iris purpureobracteata* **Iridaceae**
ex Turkey: rhizomatic pl, 20 cm high, purple bracts, yellow fls, 2016, C
- 283 *Iris sibirica alba* **Iridaceae**
ex cult.: rhizomatic pl, 30 cm high, white fls, 2016, B
- 284 *Iris sintenisii* **Iridaceae**
ex Turkey: Abant, small rhizomatic pl, 20 cm high, narrow linear lvs, dark blue fls, 2016, C
- 285 *Iris sogdiana* **Iridaceae**
Kazakhstan: Ketmen, 2600 m, alpine grassland, rhizomatic pl, 30-50 cm high, linear erect lvs, 1 cm wide, pale blue fls, 2016, B
- 286 *Iris variegata* **Iridaceae**
ex Moravia: rhizomatic pl, 40 cm high, yellow brown fls, 2016, B
- 287 *Iris vicaria* **Iridaceae**
ex Tajikista: Gushari, Hissar Range, 1700 m, granite scree, Juno, medium bulb pl, leaf rosette 15-30 cm high, bluish or white fls, 2015, C
- 288 *Jeffersonia diphylla* **Papaveraceae**
ex cult.: caespitose pl, 20 cm high, pale blue fls, 2016, C
- 289 *Junellia bisulcata* **Verbenaceae**
Argentina: Villa Vicencio, Mendoza, 2600 m, mountain steppe, caespitose cushion-like pl, 5 cm high, linear lvs, lilac fls in umbells on 5-10 cm long stems, 2014, C
- 290 *Korolkowia sewertzowii* **Liliaceae**
Kyrgyzstan: Fergana Ala Tau, 2000 m, rock crevices, bulb pl, 30-40 cm high, purple green fls, 2016, C
- 291 *Lagochillus seravshanicus* **Lamiaceae**
Tajikistan: Sasyk Kul, Pamir, 3900 m, rocky slope, caespitose spiny pl, 15-20 cm high, green pinnate lvs, 2-3 cm long, white/pinkish fls, large

- funelform calyx, 2015, D
- 292 *Lagopsis marubiastrum* Lamiaceae**
Kyrgyzstan: Sary Bulak, Kungei AT, 3000 m, dry alpine scree, caespitose scenty pl, 10-15 cm high, white hairy dentate rounded lvs, brown fls in candle-like racemes, 2013, D
- 293 *Lagotis alutacea* Scrophulariaceae**
China: DaXueShan, Yunnan, 4500 m, limestone scree, caespitose pl, 5-10 cm high, pale green crunchy lanceolate lvs, bluish-white fls in compact racemes, 2014, D
- 294 *Lagotis integrifolia* Scrophulariaceae**
Tajikistan: Bulun Kul, Pamir, 4400 m, alpine scree, caespitose pl, 12-20 cm high, lanceolate crenate lvs, white fls in dense racemes, 2015, C
- 295 *Lamiophlomis rotata* Lamiaceae**
China: MiLa, Tibet, 4900 m, alpine grassland, caespitose pl, 3 cm high, prostrate lvs rosettes, 8-12 cm wide, blue fls in congested sessile racemes, 2016, E
- 296 *Laretia acaulis* Apiaceae**
Chile: Aconcagua, Mendoza, 3400 m, alpine grassland, prostrate mats, 3 cm high, 30 cm wide, linear lvs, 3 cm long, 15-20 mm long sessile fruits, 2014, D
- 298 *Leontopodium calocephalum* Asteraceae**
China: DaXueShan, Yunnan, 4300 m, alpine grassland, caespitose pl, 10-20 cm high, white tomentose lvs, rich infl supported by star-like tomentose bract, 5 cm wide, 2014, C
- 299 *Leontopodium fedtschenkoanum* Asteraceae**
Kyrgyzstan: Chonashu, Terski AT, 3300 m, alpine grassland, caespitose pl, 10-15 cm high, white tomentose lvs, triangular bracts, 2013, C
- 300 *Leontopodium forrestianum* Asteraceae**
China: GalungLa, Tibet, 3800 m, alpine scree, caespitose slender pl, 3-5 cm high, short tomentose lvs, 1-3 brown capituli, small white tomentose bracts or absent, 2016, E
- 301 *Leontopodium franchettii* Asteraceae**
China: Zhongdian, Yunnan, 3200 m, grassland, caespitose pl, 20-30 cm high, densely leafy stems, terminal infl, grey tomentose bracts, 2014, C
- 302 *Leontopodium himalayanum* Asteraceae**
China: Rutok, Tibet, 4100 m, Kobresia grassland, large prostrate mats, 10-40 cm wide, green/white tomentose lvs, stems 3-5 cm long, long white bracts, 2016, D
- 303 *Leontopodium ochroleucum* Asteraceae**
Tajikistan: Alichur Range, Pamir, 4300 m, slate scree, caespitose pl, 10-20 cm high, creamy infl, 2015, C
- 304 *Leontopodium pusillum* Asteraceae**
China: MiLa, Tibet, 4900 m, alpine scree, caespitose stoloniferous pl, 3 cm high, white tomentose lvs, 3-5 capituli abov white tomentose bracts, 2016, F
- 305 *Leontopodium stracheyi* Asteraceae**
China: Lhasa East, Tibet, 3700 m, mountain grassland, caespitose pl, 15-20 cm high, green/white tomentose lvs, prominent large infls, white bracts, 2016, C
China: Zhongdian, Yunnan, 3500 m, limestone crevices, caespitose pl, 10-20 cm high, leaves with cordate base, large tomentose infl, 2014, C
- 307 *Leucojum vernalis* Amaryllidaceae**
ex Czechia: bulb pl, 10-15 cm high, 7-8 tepals, white fls, 2016, B
- 308 *Lilium lophophorum* Liliaceae**
China: SerkymLa, Tibet, 4400 m, alpine grassland, bulb pl, 10-12 cm high, linear lvs, large closed yellow fls, 7 cm long, 2016, E
- 310 *Lilium nanum* Liliaceae**
China: GalungLa, Tibet, 3800 m, low Rhododendron shrubland, bulb pl, 12-20 cm high, narrow linear lvs, campanulate purple fls, 4 cm long, 2016, E
- 311 *Lilium saccatum* Liliaceae**
China: GalungLa, Tibet, 3800 m, Rhododendron shrubland, bulb pl, 15-40 cm high, lanceolate lvs, 1-4 terminal orange fls, 3-4 cm long, 2016, E
- 312 *Linaria tibetica* Scrophulariaceae**

- China: Gynda, Tibet, 4300 m, mountain shrubland, perennial pl, 40-60 cm high, yellow fls in dense terminal spikes, 2016, B
- 313 *Linum capitatum* Linaceae**
ex Bulgaria: caespitose pl, 15-20 cm high, yellow fls, 2016, C
- 314 *Linum heterosepalum* Linaceae**
Kyrgyzstan: Alamedin, Kyrgyz AT, 2600 m, mountain grassland, caespitose pl, 20-30 cm high, leafy unbranched stems, lanceolate lvs, 1 cm long, rose fls in terminal cymes, 2013, C
- 315 *Lonicera semenovii* Caprifoliaceae**
Kyrgyzstan: Kyrgyz Ala Tau, 3300 m, alpine slate scree, prostrate shrub, 5-10 cm high, dark green ovate lvs, yellow fls, 2 cm long, prominent red berries, 12 mm long, 2015, D
- 316 *Lonicera tianshanica* Caprifoliaceae**
ex Kyrgyz: TalasAla Tau, small shrub, 30-50 cm high, pale green ovate lvs, orange berries, 2016, B
- 317 *Lysichiton camtschaticense* Araceae**
Russia: Korsakov, Sakhalin, 5 m, boggy woodland, perennial pl, 70 cm high, ovate lanceolate lvs, 70 cm long, large white sessile fls, 2011, A
- 318 *Maihuenia patagonica* Cactaceae**
Argentina: Las Lenas, Mendoza, 2300 m, mountain steppe, cactus, 5 cm high, ovate spiny stems, large yellow fls, ovate fruits, 2014, C
- 319 *Maihueniopsis darwinii* Cactaceae**
Argentina: Villa Vicencio, Mendoza, 2600 m, mountain steppe, cactus, 7 cm high, ovate spiny stems, large orange fls, campanulate fruits, 2014, C
- 320 *Meconopsis horridula* Papaveraceae**
China: HongShan, Yunnan, 4400 m, granite scree, caespitose prickly pl, 10-15 cm high branched stems, 8 cm long lvs, large sky blue fls, 2014, D
- 321 *Meconopsis integrifolia* Papaveraceae**
China: HongShan, Yunnan, 4400 m, alpine grassland, large caespitose pl, 30-70 cm high, densely hairy lanceolate lvs, large yellow terminal fls, 2014, C
- 322 *Meconopsis prainiana* v. *prainiana* Papaveraceae**
China: SerkymLa, Tibet, 4400 m, rocky alpine slope, caespitose pl, 20-30 cm high, lanceolate lvs with large bristles, several blue fls in terminal racemes, 2016, D
- 323 *Meconopsis punicea* Papaveraceae**
China: Balang Shan, Sechuan, 4300 m, rough scree, larger caespitose pl, 30-50 cm high, hairy lvs 12-15 cm long, large red drooping fls, 10 cm long, 2012, D
- 324 *Meconopsis speciosa* Papaveraceae**
China: GalungLa, Tibet, 3900 m, rocky alpine slope, caespitose pl, 15-30 cm high, lanceolate ciliate lobate lvs, 7-12 cm long, several pale blue fls in terminal racemes, 2016, D
- 325 *Megacodon stylophorum* Gentianaceae**
China: TianBaoShan, Yunnan, 3500 m, slate scree, giant gentiana, 100-150 cm high, broadly ovate lvs, 20 cm long, 5 cm large yellow fls in whorls, 2014, D
- 327 *Microula tibetica* Boraginaceae**
China: Chomolangma, Tibet, 5200 m, mineral scree, prostrate rosettes, 3 cm high, lanceolate rugged lvs, 3-7 cm long, miniature blue fls in sessile racemes, 2016, D
- 328 *Minuartia parnassica* Caryophyllaceae**
ex Greece: large compact cushions, 20-50 cm wide, white sessile fls, 2016, B
- 329 *Minuartia stellata* Caryophyllaceae**
ex Greece: large cushions, 30-70 cm wide, white sessile fls, 2016, B
- 330 *Moltkaea aurea* Boraginaceae**
ex Turkey: Karaman, 1200 m, dry steppe, caespitose pl, 15-20 cm high, yellow fls, 2016, D
- 331 *Moltkaea petraea* Boraginaceae**
ex Croatia: Biokovo, caespitose pl, 15 cm high, blue fls, 2016, D
- 332 *Mulinum albobaginatium* Apiaceae**
Argentina: Cerro Punto Negro, Mendoza, 3700 m, alpine grassland, hard

- large prostrate mats, 50 cm wide, sessile winged fruit, 2014, C
Argentina: Las Lenas, Mendoza, 2900 m, fine scree, 2014, C
- 334 *Muscari massayanum*** **Liliaceae**
exTurkey: Artvin, bulb pl, 10-30 cm high, blue/yellow bicolored
fls in racemes, 2016, C
- 336 *Mutisia spinosa*** **Asteraceae**
Argentina: Villa Pehuenia, 1500 m, shrubland, herbaceous vine, 1-2 m
high, ovate lvs with supporting appendages, violet ray fls, yellow
tubular fls in capituli, 5 cm, 2013, C
- 337 *Narcissus obesus*** **Liliaceae**
ex Portugal: Arabida, bulb pl, 15 cm high, linear setiform lvs,
large yellow fls, 2016, C
- 338 *Nassauvia araucana*** **Asteraceae**
Argentina: Las Lenas, Mendoza, 3200 m, moving scree, caespitose pl, 10
cm high, triangular spiny lvs appressed to stems, white fls in umbells,
2014, D
- 339 *Nassauvia glomerata*** **Asteraceae**
Argentina: Las Lenas, Mendoza, 3200 m, alpine scree, prostrate green
rosettes, 3 cm high, triangular incised lvs, densely leafy stem, 5 cm
high, white fls in umbelles, 2014, D
- 340 *Nassauvia pinnigera*** **Asteraceae**
Argentina: Aconcagua, Mendoza, 3400 m, rough scree, caespitose pl, 10-15
cm high, triangular spiny lvs, white fls on condensed spikes, 2014, C
- 341 *Nassauvia uniflora*** **Asteraceae**
Argentina: Aconcagua, Mendoza, 3200 m, alpine grassland, prostrate green
mats, 2 cm high, 30 cm wide, linear lvs, 5 mm long, solitary white
sessile fls, 2014, D
- 342 *Nepeta pamirensis*** **Lamiaceae**
Tajikistan: Bulun Kul, Pamir, 4300 m, dry rocky slope, caespitose pl,
15-20 cm high, grey tomentose lvs, sky blue fls in terminal racemes,
2015, C
Tajikistan: Mamasary, Pamir, 4200 m, dry rocky slope, 2015, C
- 344 *Notholirion bulbiferum*** **Liliaceae**
China: Lulang, Tibet, 3300 m, shrubland or open woodland, bulb pl,
150-200 cm high, lanceolate linear lvs, 12 cm long, large white fls,
2016, D
- 345 *Omphalogramma delavayi*** **Primulaceae**
China: Cangshan, Yunnan, 3900 m, alpine grassland, caespitose pl, 10-15
cm high, ovate lvs, 3-5 cm long, large violet fls 3-4 cm long, petals
dentate, 2014, E
- 346 *Omphalogramma tibeticum*** **Primulaceae**
China: GalungLa, Tibet, 3800 m, alpine grassland and shrubland,
caespitose pl, 10-15 cm high, ovate lvs, 5-12 cm long, solitary large
rose-purple fls, 2 cm wide, 2016, E
- 347 *Onosma nanum*** **Boraginaceae**
ex Turkey; caespitose pl, 15-20 cm high, white fls, 2016, A
- 348 *Oreosolon wattii*** **Lamiaceae**
China: Chomolangma, Tibet, 5200 m, alpine scree, prostrate rosettes, 3
cm high, ovate rugged lvs, 5-7 cm long, yellow fls in sessile congested
racemes, 2016, E
- 349 *Oxytropis cf. coelestis*** **Fabaceae**
Tajikistan: Jalandy, Pamir, 3800 m, river bank, caespitose pl, 10 cm
high, pinnate lvs, purple fls, flat umbells, 2015, C
- 350 *Oxytropis cf. incanescens*** **Fabaceae**
Tajikistan: Bulun Kul, Pamir, 4200 m, alpine grassland, caespitose pl,
5-10 cm high, white tomentose pinnate lvs, purple fls in umbells,
densely hairy congested pods, 2015, C
- 351 *Oxytropis chilliophylla*** **Fabaceae**
Tajikistan: Karakul, Pamir, 3900 m, salty lake bank, prostrate
caespitose pl, 15-30 cm wide, pinnate lvs, 10 cm long, whorled leaflet,
purple fls, 2015, D
- 352 *Oxytropis platonychia*** **Fabaceae**
Tajikistan: Akbaital, Pamir, 4100 m, fine alpine scree, prostrate mat,
2-4 cm high, 10-40 cm wide, pinnate lvs, 3 cm long, blue fls inflated

- pods, 3 cm long, 2015, D
 Tajikistan: Targakaty, Pamir, 4300 m, fine alpine scree, 2015, D
- 354 *Paeonia caucasica*** **Paeoniaceae**
 ex Georgia: caespitose pl, 50-70 cm high, large red fls, 2016, C
- 355 *Paeonia mascula*** **Paeoniaceae**
 ex Turkey: caespitose pl, 40-60 cm high, larg rose fls, 2016, C
- 356 *Paeonia peregrina*** **Paeoniaceae**
 ex Turkey: caespitose pl, 40-60 cm high, deeply incised lvs,
 bright red color, 2016, D
- 357 *Paeonia rockii*** **Paeoniaceae**
 ex China: woody shrub, 60 cm high, pale-lilac fls, dark spot,
 2016, D
- 358 *Papaver dahlianum*** **Papaveraceae**
 Norway: Longyear, Svalb, arctic mineral scree, caespitose pl, 10-15
 cm high, hairy lvs, white-creamy fls, 2016, D
- 359 *Paraquilegia microphylla*** **Ranunculaceae**
 Kyrgyzstan: Alai Mts, 3600 m, limestone crevices, caespitose pl, 10-15
 cm high, rose bluish fls, 2015, E
- 360 *Parrya eriocalyx*** **Brassicaceae**
 Kyrgyzstan: Trans Alai, Lenin Pk, 3600 m, gravel river deposit,
 prostrate small rosettes, 2-4 cm high, green/purple succulent linear
 lvs, large rose fls, stemless, 2015, E
 Tajikistan: Kyzylart, TransAlai, 3800 m, slate scree, 2015, E
- 362 *Parrya pamirica*** **Brassicaceae**
 Tajikistan: Akbaital, Pamir, 4600 m, slate scree, caespitose pl, 15 cm
 high, linear dentate lvs, lilac fls in short racemes, 2 cm wide, 2015, D
- 363 *Parrya pinnatifida*** **Brassicaceae**
 Kyrgyzstan: Alai Mts, 3600 m, limestone crevices, caespitose pl, 10 cm
 high, linear pinnatifide lvs, lilac fls in short racemes, 2 cm wide,
 2015, E
- 364 *Parrya turkestanica*** **Brassicaceae**
 Tajikistan: Mamasary, Pamir, 4400 m, granit rock, caespitose pl, 20 cm
 high, linear dentate lvs, pale lilac fls, 2 cm wide, 2015, D
- 365 *Patrinia intermedia*** **Caprifoliaceae**
 Kazakhstan: Ketmen, 2000 m, mountain steppe, caespitose pl, 20-30 cm
 high, dark green lyrate lvs, yellow fls in numerous terminal cymes,
 2016, A
- 366 *Pedicularis longiflora*** **Scrophulariaceae**
 China: Lulang, Tibet, 3400 m, alpine bogs, caespitose pl, 5-12 cm high,
 finely pinnatisect lvs, yellow fls with very long tube in short racemes,
 2016, E
- 367 *Pedicularis trichoglosa*** **Scrophulariaceae**
 China: SerkymLa, Tibet, 4400 m, alpine grassland, caespitose pl, 15-30
 cm high, pinnate lvs, rose-wine fls with prominent hairs in whorls,
 2016, E
- 368 *Penstemon crandallii*** **Scrophulariaceae**
 ex USA: caespitose pl, 5-10 cm high, linear green lvs, pale blue
 fls in racemes, 2016, C
- 369 *Penstemon linarioides* var. *coloradensis*** **Scrophulariaceae**
 ex USA: caespitose pl, 7-12 cm high, grey linear lvs, blue fls
 in racemes, 2016, C
- 370 *Penstemon rupicola* Carla** **Scrophulariaceae**
 ex cult.: caespitose pl, 15 cm high, grey ovate lvs, deep lilac
 fls, 2016, C
- 371 *Phyllophyton complanatum*** **Lamiaceae**
 China: Rawu, Tibet, 4300 m, mineral scree, caespitose pl, 10-20 cm high,
 widely lanceolate serrate lvs, 3-4 cm long, white-blue fls in whorls,
 2016, D
 China: Chomolangma, Tibet, 5000 m, 2016, D
- 373 *Potentilla biflora*** **Rosaceae**
 Kyrgyzstan: Alamedin, Kyrgyz AT, 3300 m, cold rock crevices, prostrate
 mat, 10-40 cm wide, dark green 5-foliolate lvs, 2 cm long, large yellow
 fls on stems, 1 cm long, 2013, D
- 374 *Potentilla biflora* v. *tsarongensis*** **Rosaceae**

- China: MiLa, Tibet, 4900 m, alpine scree, large rounded hard cushions, 10-30 cm high, hard pinnate linear lvs, 10-15 mm long, yellow sessile fls, 2016, E
- 375 *Potentilla porphyrantha*** **Rosaceae**
exArmenia: Nagorny Karabakh, 2000 m, limestone crevices, prostrate cushion 5 cm high, white tomentose lvs, prostrate stems, rose fls, 2016, C
- 376 *Potentilla pulvinaris*** **Rosaceae**
ex Turkey: compact caespitose pl, 5 cm high, trifoliate white tomentose lvs, yellow fls on stems, 2-3 cm long, 2016, C
- 377 *Primula acaulis*** **Primulaceae**
Mt Negro: Piva, mountain grassland, caespitose pl, 10 cm high, yellow fls, 2016, C
- 378 *Primula agleniana*** **Primulaceae**
China: GalungLa, Tibet, 3900 m, alpine rocky slopes, caespitose pl, 20-30 cm high, lanceolate crenate lvs, 10-13 cm long, several large rose fls in umbells, 2016, E
- 379 *Primula algida*** **Primulaceae**
Kyrgyzstan: Kyrgyz Ala Tau, 3300 m, alpine grassland, caespitose pl, 5-10 cm high, flat pale green rosettes, farinose ovate serrate lvs, rose fls in umbells, 2015, D
- 380 *Primula alpicola*** **Primulaceae**
China: Lulang, Tibet, 3200 m, boggy meadows, caespitose pl, 30-50 cm high, oblong lvs with prominent nerves, 8-13 cm long, pale yellow fls in 1-3 umbells, 2016, D
China: GalungLa, Tibet, 3600 m, 2016, D
- 382 *Primula alpicola v. luna*** **Primulaceae**
China: SerkymLa, Tibet, 4900 m, alpine meadow, smaller than *P. alpicola*, 2016, D
- 383 *Primula blinii*** **Primulaceae**
China: HongShan, Yunnan, 4400 m, alpine grassland, rocks, caespitose pl, 5-15 cm high, crenate to incised ovate lvs, lilac fls, 2014, D
China: DaXueShan, Yunnan, 4500 m, alpine grassland, 2014, D
- 385 *Primula calliantha*** **Primulaceae**
China: CangShan, Yunnan, 4000 m, subalpine grassland, caespitose pl, 10-15 cm high, lanceolate finely dentate lvs, large rose fls in umbells, 2014, E
- 386 *Primula cf. jonardunii /dryadifolia*** **Primulaceae**
China: GalungLa, Tibet, 3800 m, in moss on cold rocks, prostrate mats, 3 cm high, 20-30 cm wide, small rounded to dryadiform lvs, rose single sessile fls, 2016, F
- 387 *Primula chionantha*** **Primulaceae**
China: HongShan, Yunnan, 4400 m, alpine grassland, sect. Nivalis, caespitose pl, 15-20 cm high, farinose lanceolate lvs, 10-15 cm long, lilac fls, 2014, D
- 388 *Primula florindae*** **Primulaceae**
China: Lulang, Tibet, 3300 m, boggy meadows, giant caespitose *Primula*, 40-80 cm high, large oblong lvs, large yellow fls in 1-3 umbells, 2016, D
- 389 *Primula forrestii*** **Primulaceae**
China: Yangtse, Lijiang, Yunnan, 3500 m, limestone scree, caespitose pl, 15-20 cm high, spatulate lanceolate serrate lvs, large golden-yellow fls in umbells, large bract, 2014, D
- 390 *Primula graminifolia*** **Primulaceae**
China: HongShan, Yunnan, 4400 m, slate scree, caespitose pl, 8-12 cm high, linear lvs, 5-8 mm wide, rose fls in umbells, 2014, D
- 391 *Primula lilacina*** **Primulaceae**
China: YaDing, Sechuan, 4200 m, subalpine grassland, caespitose pl, 10-20 cm high, lanceolate lvs farinose below, large pink fls in rich umbells, 2014, D
- 392 *Primula littledalei*** **Primulaceae**
China: Chomolangma, Tibet, 5200 m, shady crevices, under boulders, caespitose pl, 5-10 cm high, small ovate serrate lvs, 1-2 cm long, several pink fls in umbells, 2016, F
- 393 *Primula morsheadiana/prenantha*** **Primulaceae**
China: GalungLa, Tibet, 3900 m, cold rocky slopes, caespitose pl, 15-20

- cm high, green oblong serrate lvs, 5-10 cm long, yellow fls in umbells, 2016, E
- 394 *Primula muscarioides*** **Primulaceae**
China: GalungLa, Tibet, 3700 m, fine scree, prostrate rosettes, 3-5 cm wide, small serrate lvs, dark purple farinose fls in dens umbells, 2016, E
- 395 *Primula nivalis*** **Primulaceae**
Kyrgyzstan: Chon Aksu, Kungei AT, 3600 m, along stream, sect. Nivalis, caespitose pl, 30-40 cm high, linear lanceolate glabrous lvs, 10-15 cm long, large rose fls in umbells, 2013, D
- 396 *Primula orbicularis*** **Primulaceae**
China: Bowa Shan, Sechuan, 3800 m, along stream, caespitose pl, 15-20 cm high, linear crenulate lvs, 8-12 cm long, pale yellow fls in rich umbells, 2014, D
- 397 *Primula pamirica*** **Primulaceae**
Tajikistan: Sasyk Kul, Pamir, 3900 m, salty bog, grassland, caespitose pl, 10-15 cm high, spatulate green lvs, 5 cm long, lilac fls in umbells, 2015, D
- 398 *Primula poissonii*** **Primulaceae**
China: Bowa Shan, Sechuan, 4300 m, slate along stream, caespitose pl, 20-30 cm high, flat ground rosettes, ovate lvs, intensive rose fls in 1-4 whorls, 2014, C
China: YaDing, Sechuan, 4400 m, wet grassland, 2014, C
- 400 *Primula pseudosikkimensis*** **Primulaceae**
China: HongShan, Yunnan, 4400 m, wet grassland, scree, small form of *P. sikkimensis*, 2014, C
- 401 *Primula pulchella*** **Primulaceae**
China: Zhongdian, Yunnan, 3200 m, limestone scree, caespitose pl, 8-12 cm high, oblong farinose lvs, 5 cm long, rose fls, 2014, C
- 402 *Primula secundiflora*** **Primulaceae**
China: Zhongdian, Yunnan, 3200 m, wet grassland, caespitose larger pl, 30 cm high, linear lanceolate lvs 12 cm long, purple nodding fls in rich umbells, 2014, C
China: TianBaoShan, Yunnan, 3400 m, wet grassland, 2014, C
- 404 *Primula serratifolia*** **Primulaceae**
China: CangShan, Yunnan, 3900 m, subalpine grassland, caespitose pl, 15-30 cm high, lanceolate serrate lvs, 8-10 cm long, rose fls in 2 levels, 2014, D
- 405 *Primula sikkimensis*** **Primulaceae**
China: GalungLa, Tibet, 3700 m, alpine grassland, caespitose pl, 20-40 cm high, pale green oblong lvs, 10-13 cm long, yellow fls in umbells, 2016, D
China: Bowa Shan, Sechuan, 4400 m, wet grassland, caespitose pl, 40 cm high, yellow fls, 2014, C
- 407 *Primula sinopurpurea*** **Primulaceae**
China: DaXueShan, Yunnan, 4300 m, alpine grassland, caespitose pl, 40 cm high, rose fls in umbells, 2014, D
- 408 *Primula tanneri* var. *tsariensis*** **Primulaceae**
China: GalungLa, Tibet, 3900 m, alpine grassland, caespitose pl, 12-20 cm high, rough serrate lvs, 5-12 cm long, prominent large red-purple fls, 2016, E
- 410 *Pterocephalus pinnardii*** **Dipsacaceae**
ex Turkey: Ala Dag, prostrate pl, 5 cm high, 10-20 cm wide, grey pinnatifide lvs, lilac fls, 2016, C
- 411 *Pulsatilla albana*** **Ranunculaceae**
ex Russia: Caucasus, caespitose pl, 15-20 cm high, pinnatisect lvs, white to purple fls, 2016, C
- 412 *Pulsatilla campanella*** **Ranunculaceae**
Kyrgyzstan: Alai Mts, 3600 m, alpine grassland, limestone, caespitose pl, 10-20 cm high, grey blue fls, 25-30 mm long, 2015, C
- 413 *Pulsatilla occidentalis*** **Ranunculaceae**
Canada: Highwood Pass, Kananaskis, Alberta, m, alpine grassland, caespitose pl, 20-30 cm high, lilac fls, JH, 2015, D
- 414 *Pulsatilla subslavica*** **Ranunculaceae**

- ex Slovakia: Muran, 800 m, mountain meadow, caespitose pl, 15-25 cm high, pinnatisect lvs, fine leaflets, very large lilac fls, 7 cm long, 2015, C
- 415 *Pyrethrum karelinii* Asteraceae**
Tajikistan: Bulun Kul, Pamir, 4200 m, alpine grassland, caespitose pl, 10-20 cm high, green bipinnate, finely incised lvs, white daisies, 3 cm wide, 2015, B
- 416 *Pyrethrum leontopodium* Asteraceae**
Kyrgyzstan: Kyrgyz Ala Tau, 3400 m, rock crevices, caespitose white wooly pl, 5-10 cm high, pinnatisect lvs, 3-5 cm long, white daisies, capituli 28 mm wide, 2015, E
Kyrgyzstan: Sary Bulak, Kungei AT, 3800 m, rock crevices, , 2013, E
- 418 *Pyrethrum sp.* Asteraceae**
ex Turkey: Akyarma, caespitose pl, 10-15 cm high, rich white fls, 2016, B
- 419 *Pyrethrum tatsiense* Asteraceae**
China: GalungLa, Tibet, 3700 m, alpine grassland, caespitose pl, 10-15 cm high, finely pinnatisect lvs, 5 cm long, single terminal orange capituli, 2016, D
China: DaXueShan, Yunnan, 4300 m, alpine grassland, prostrate mats, 40 cm high, finely incised green foliage, large red /orange fls on 15-20 cm long stems, 2014, C
- 421 *Ranunculus dongrergensis* Ranunculaceae**
China: GalungLa, Tibet, 4000 m, cold northern rocks, prostrate caespitose pl, 3-5 cm high, palmately dentate lvs, 5-10 mm wide, yellow fls, 2016, D
- 422 *Ranunculus niveus* Ranunculaceae**
Norway: Bjornsdaalen, Svalb, arctic mossy tundra, caespitose pl, 5-10 cm high, rounded palmatilobed lvs, solitary yellow fls, 2016, C
- 423 *Ranunculus rufosepalus* Ranunculaceae**
Kyrgyzstan: Chonashu, Terski AT, 3700 m, fine alpine scree, caespitose pl, 4-12 cm high, palmatilobe lvs, 1 cm wide, large yellow fls, 2013, C
- 424 *Ranunculus uniflorus* Ranunculaceae**
Argentina: Las Lenas, Mendoza, 2600 m, along stream, dwarf prostrate pl, 5 cm high, entire rounded lvs, yellow fls, 2014, C
- 425 *Reamuria soongarica* Tamaricaceae**
Kyrgyzstan: Kyzyl Tu, Terski AT, 2000 m, semidesert scree, xeric dwarf pl, 5-10 cm high, small grey lvs, 1 mm long, small rose fls in congested panicles, 2013, C
- 426 *Rhamnus microcarpa* Rhamnaceae**
ex Russia: Caucasus, Mt. Fisht, dwarf shrub, appressed to rocks, 10 cm high, broadly ovate lvs, 4-6 cm long, black berries, 4 mm wide, 2016, C
- 427 *Rheum alexandre* Polygonaceae**
China: Haizi Shan, Sechuan, 4400 m, along stream, perennial pl, 60-100 cm high, thick rhizomes, ovate lvs, 10-30 cm, stems with decorative white bracts, redish fruits, 2012, C
- 428 *Rheum nobile* Polygonaceae**
China: SerkymLa, Tibet, 4500 m, cold northern rocks, large rhubarb rosettes, 150-200 cm long stems, fls covered by white bracts, 2016, E
- 429 *Rhodiola algida* Crassulaceae**
Kyrgyzstan: Chonashu, Terski AT, 3500 m, slate scree, caespitose pl, 5-15 cm high, succulent triangulr lvs, yellow fls in terminal cymes, 2013, C
- 430 *Rhodiola atuntsiensis* Crassulaceae**
China: SerkymLa, Tibet, 4400 m, alpine scree, caespitose pl, 15 cm high, stems with linear lvs, 2 cm long, terminal cymes of yellow fls, red fruits, 2016, D
- 431 *Rhodiola recticaulis* Crassulaceae**
Tajikistan: Bulun Kul, Pamir, 4400 m, granit scree, caespitose pl, 20 cm high, light green ovate lvs, 2 cm long, yellow fls, red fruits, 2015, C
Tajikistan: Mamasary, Pamir, 4500 m, alpine scree, 2015, C
- 433 *Rhodiola tibetica* Crassulaceae**
China: GalungLa, Tibet, 3800 m, rocky alpine slopes, caespitose pl,

- 20-30 cm high, stems with linear lanceolate lvs, large terminal cymes, red fruits, 2016, D
- 434 *Rhododendron campylogynum* Ericaceae**
China: GalungLa, Tibet, 3800 m, cold rocky slopes, small shrub, 10-20 cm high, ovate lvs, 2 cm long, black-purple campanulate fls, 2 cm long pedicels, 2016, D
- 435 *Rhododendron cf. mekongense* Ericaceae**
China: GalungLa, Tibet, 3800 m, cold rocky slopes, small shrub, 40-60 cm high, grey ovate lvs, 3-4 cm long, ciliate margin, greenish pale yellow fls, 2016, D
- 436 *Rhododendron cf. venator* Ericaceae**
China: GalungLa, Tibet, 3700 m, cold rocky slopes, small shrub, 30-50 cm high, grey ovate lvs, 4 cm long, red fls, 2016, E
- 437 *Rhododendron chamaethomsonii* Ericaceae**
China: GalungLa, Tibet, 3800 m, cold rocky slopes, prostrate shrub, 10-20 cm high, like *R. forrestii*, ovate lvs, 4-8 cm long, prominent red fls, 2016, E
- 438 *Rhododendron pumilum* Ericaceae**
China: GalungLa, Tibet, 3700 m, cold rocky slopes, small shrub, 10-15 cm high, ovate lvs, 2 cm long, pink fls, 2016, E
- 439 *Rhododendron viridescens* Ericaceae**
China: GalungLa, Tibet, 3800 m, cold rocky slopes, small shrub, 30-40 cm high, grey ovate lvs, 2-3 cm long, greenish pale yellow fls, 2016, D
- 440 *Rhodophiala andicola* Liliaceae**
Argentina: Las Lenas, Mendoza, 2600 m, mountain steppe, bulb pl, 15-25 cm high, linear lvs, lilac wine large erect fls, 2014, D
- 441 *Roscoea tibetica* Zingiberaceae**
China: Zhongdian, Yunnan, 3500 m, mountain grassland, small rhizomatic pl, 5-10 cm high, prostrate lvs, sessile purple red fls, 2016, C
- 442 *Rosularia platyphylla* Crassulaceae**
Kazakhstan: Ketmen, 1600 m, rock crevices, flat rosettes, 3-5 cm wide, broadly ovate lvs, stems 10 cm long, several white fls in lax racemes, 2013, D
- 443 *Salvia albimarginata* Lamiaceae**
ex Turkey: Ermenek, caespitose pl, 20 cm high, soft pale tomentose lvs, white fls with dark marking, 2016, A
- 444 *Salvia blepharochlaena* Lamiaceae**
ex Turkey: Sipikor, caespitose pl, 20-30 cm high, grey tomentose lvs, blue fls, 2016, C
- 445 *Salvia cf. caespitosa* Lamiaceae**
ex Turkey: Karaman, prostrate pl, 5-15 cm high, tomentose lvs, white fls, 2016, D
- 446 *Salvia guererii* Lamiaceae**
ex Turkey: Bolkar D, prostrate pl, 5-15 cm high, tomentose lvs, white fls with purple dots, 2016, D
- 447 *Saponaria pulvinaris* Caryophyllaceae**
ex Turkey: Bolkar Dag, 2800 m, limestone scree, large mats like *Silene acaulis*, 20 x 3 cm, 1-5 pink or red fls on 2 cm shorts stems, difficult, wonderful, 2015, C
- 448 *Saussurea aff. gnaphalodes* Asteraceae**
China: Balang Shan, Sechuan, 4400 m, moving scree, a form with characters between *S. gnaphalodes* and *S. depsangensis*, 2012, D
- 449 *Saussurea aff. leontodontoides* Asteraceae**
China: Chomolangma, Tibet, 5200 m, fine scree, dwarf caespitose pl, 2-4 cm high, linear lobate lvs, 7-10 cm long, many small sessile capitulas, blue fls, 2016, D
- 450 *Saussurea coriacea* Asteraceae**
China: Chomolangma, Tibet, 5200 m, fine scree, caespitose pl, 3-10 cm high, lanceolate lobate lvs, 10 cm long, one larger capitula on stem, 2016, D
- 451 *Saussurea faminziniana* Asteraceae**
Tajikistan: Karakul, Pamir, 3400 m, salty sandy bank, prostrate caespitose pl, 5 cm high, 20 cm wide, grey dentate lvs, pink fls in cymose infl around cushion, 2015, D

- 452 *Saussurea gnaphalodes* **Asteraceae**
Tajikistan: Akbaital, Pamir, 4700 m, fine slate scree, caespitose pl, 5-10 cm high, silver lvs, rose fls in terminal compact head, 2015, D
Kyrgyzstan: Sary Bulak, Kungei AT, 3800 m, alpine scree, 2013, D
- 454 *Saussurea gossypiphora* **Asteraceae**
China: SerkymLa, Tibet, 5000 m, mineral rocks on ridges, large rosettes, 20 cm wide, 20-30 cm high, white densely tomentose capitula with small blue fls, 2016, E
- 455 *Saussurea involucrata* **Asteraceae**
China: Shengli Daban, Borohososhan, 3200 m, among boulders, caespitose pl, 20 cm high, large lettuce-like infl, large white membranaceous bracts, 2013, E
- 456 *Saussurea kuschakewiczii* **Asteraceae**
Kyrgyzstan: Alai Mts, 3600 m, limestone scree, prostrate caespitose pl, 5 cm high, grey ovate dentate lvs, rose fls in flat cymes, 2015, D
- 457 *Saussurea leontodontoides* **Asteraceae**
China: Rawu, Tibet, 4400 m, fine scree, caespitose pl, 2-4 cm high, llinear lobate lvs, 10-12 cm long, many sessile capitulas with blue fls, 2016, D
- 458 *Saussurea leucophylla* **Asteraceae**
Tajikistan: Kyzylart, TransAlai, 4200 m, fine slate scree, caespitose pl, 15 cm high, linear lvs, 5 cm long, lilac fls in solitary large capituli, 2015, D
- 459 *Saussurea nidularis* **Asteraceae**
China: SerkymLa, Tibet, 4500 m, among boulders, caespitose pl, 20-40 cm high, laceolate lvs, ifls covered by red bracts, 2016, D
- 460 *Saussurea obvallata* **Asteraceae**
China: GalungLa, Tibet, 4000 m, among boulders, caespitose pl, 20-50 cm high, lanceolate serrate lvs, infls covered by white yellowish large bracts, 2016, D
China: SerkymLa, Tibet, 4500 m, 2016, D
- 462 *Saussurea quercifolia* **Asteraceae**
China: HongShan, Yunnan, 4500 m, slate scree, caespitose pl, 5-15 cm high, serrate lanceolate lvs in rosettes, capituli 4-5 cm wide, 2014, D
- 463 *Saussurea salsa var. pamirica* **Asteraceae**
Tajikistan: Sasyk Kul, Pamir, 3900 m, salty sandy lake bank, caespitose bouquet-like pl, 30 cm high, large cymes of rose fls, 2015, D
- 464 *Saussurea stella* **Asteraceae**
China: Lulang, Tibet, 3300 m, wet meadows, prostrate rosette, 10-15 cm wide, linear lvs, blue fls supported by red linear bracts, 2016, D
- 465 *Saxifraga bergeniioides* **Saxifragaceae**
China: MiLa, Tibet, 5000 m, fine alpine scree, sect. Ciliatae, caespitose pl, 10 cm high, ovate lvs, rose-wine fls, 2016, F
- 466 *Saxifraga caespitosa* **Saxifragaceae**
Norway: Longyear, Svalb, arctic fine scree, cushion pl, 5-15 cm wide, white sessile fls, 2016, C
- 467 *Saxifraga callosa* **Saxifragaceae**
ex Italy: Gran Sasso, prostrate pl, 4-15 cm high, silver cuneate lvs, 2 cm long, white fls in panicles, 2016, C
- 468 *Saxifraga cartilaginea* **Saxifragaceae**
ex Russia: Krasnaja Poljana, Caucasus, caespitose pl, 10-20 cm high, large rosettes, white fls in panicles, 2016, C
ex Russia: Caucasus, pink form, 2016, C
- 470 *Saxifraga cf. sinomontana* **Saxifragaceae**
China: Lulang, Tibet, 3300 m, mountain boggy meadows, sect. Ciliatae, caespitose pl, 15 cm high, ovate lvs, large yellow fls in panicles, 2016, D
- 471 *Saxifraga engleriana* **Saxifragaceae**
China: MiLa, Tibet, 5000 m, fine alpine scree, sec. Ciliatae, cushion pl, 5-10 cm wide, light green hard rosettes, yellow fls on stems, 2 cm long, red fruits, 2016, E
- 472 *Saxifraga hirculus* **Saxifragaceae**
Kyrgyzstan: Trans Alai, Lenin Pk, 3800 m, fine alpine scree, sect. Hirculus, cushion pl, 10-12 cm high, linear lvs, 15 cm long, terminal

- yellow fls, 2015, C
- 474 *Saxifraga longifolia*** **Saxifragaceae**
ex France: rosette pl, 40 cm long infl, white fls, 2016, C
- 475 *Saxifraga magellanica*** **Saxifragaceae**
ex Argentina: sect. *Dactyloides*, cushion, 10-20 cm wide, white fls, 2016, C
- 476 *Saxifraga nigroglanduligera*** **Saxifragaceae**
China: YaDing, Sechuan, 4400 m, alpine grassland, sect. *Ciliatae*, spatulate lvs, yellow fls in side racemes, 2014, C
- 477 *Saxifraga nivalis*** **Saxifragaceae**
Norway: Colesdalen, Svalb, 50 m, arctic grassland, caespitose pl, 10 cm high, prostrate lv rosettes, ovate lvs, white fls in congested racemes, 2016, D
Norway: Bjornsdalen, Svalb, 2016, D
Norway: Longyear, Svalb, 2016, D
- 480 *Saxifraga nutans*** **Saxifragaceae**
China: Bowa Shan, Sechuan, 4400 m, alpine grassland, sect. *Ciliatae*, aff. *S. nigroglandulosa*, 2014, C
- 481 *Saxifraga oppositifolia*** **Saxifragaceae**
Norway: Colesdalen, Svalb, 130 m, arctic fine scree, very lax mats, 3 cm high, 10-30 cm wide, large rose fls, 2016, C
Norway: Longyear, Svalb, 150 m, 2016, C
- 484 *Saxifraga pseudohirculus*** **Saxifragaceae**
China: MiLa, Tibet, 4900 m, fine scree, sect. *Ciliatae*, lax cushions, 5-10 cm high, dark green linear lvs, yellow fls in terminal racemes, 2016, D
- 485 *Saxifraga punctulata*** **Saxifragaceae**
China: MiLa, Tibet, 4900 m, fine scree, sect. *Ciliatae*, small sessile rosettes, 1-2 cm wide, rose buds, white fls with dark dots, 2016, E
- 486 *Saxifraga rufescens*** **Saxifragaceae**
China: TianBaoShan, Yunnan, 3500 m, subalpine rocks, caespitose pl, 15-20 cm high, rounded lvs, 3 cm wide, white ray fls in panicles, 2014, D
- 487 *Saxifraga sinomontana/drabiformis*** **Saxifragaceae**
China: DaXueShan, Yunnan, 4300 m, alpine grassland, sect. *Ciliatae*, more fls, 2014, C
- 488 *Saxifraga stibrnyi*** **Saxifragaceae**
ex Bulgaria: Rodopi, sect. *Porophyllum*, silver rosette, 2-3 cm wide, purple fls in terminal racemes on stems, 10 cm long, 2016, D
- 489 *Saxifraga tangutica*** **Saxifragaceae**
China: MiLa, Tibet, 5000 m, alpine grassland, sect. *Ciliatae*, cushions, 10-12 cm wide, dark green linear lvs, yellow fls in terminal cymes on stems, 10 cm long, 2016, D
- 490 *Saxifraga wardii*** **Saxifragaceae**
China: SerkymLa, Tibet, 4400 m, alpine grassland, sect. *Ciliatae*, caespitose pl, 10 cm high, leafy stems, lanceolate lvs 10-15 mm long, single yellow fls, red ovary, 2016, F
- 491 *Schizanthus grahamii*** **Solanaceae**
Argentina: Las Lenas, Mendoza, 2700 m, fine scree, caespitose pl, 20 cm high, erodium-like lvs, lilac orange bicolor zygomorphic fls, 2 cm long, 2014, C
- 492 *Scilla autumnalis*** **Liliaceae**
ex Greece: bulb pl, 3-10 cm high, linear lvs, pink fls, autumn flowering, 2016, B
- 493 *Scutellaria orientalis*** **Lamiaceae**
ex Turkey: prostrate pl, 5-10 cm high, ovate serrate lvs, 3 cm long, yellow fls in racemes, 2016, B
- 494 *Scutellaria przewalskyi*** **Lamiaceae**
ex Kyrgyz: prostrate pl, 5-15 cm high, ovate dentate lvs, 3 cm long, pale yellow fls with dark dots, 2016, B
- 495 *Scutellaria suffruticosa Texas Rose*** **Lamiaceae**
ex USA: caespitose pl, 10-15 cm high, ovate lvs, 10-15 mm long, prominent red fls in autumn, 2016, D
- 496 *Sedum obtusilobum*** **Crassulaceae**
ex USA: caespitose pl, 10 cm high, rounded fleshy lvs, 2 cm long

- in rosettes, creamy fls in racemes, 2016, C
- 497 *Senecio argyreus* Asteraceae**
ex Argentin: caespitose pl, 10-15 cm high, white tomentose lvs,
yellow fls, 2016, C
- 498 *Senecio crithmoides* Asteraceae**
Argentina: Cerro Punto Negro, Mendoza, 3800 m, fine scree, caespitose
pl, 10-12 cm high, juicy lanceolate dentate lvs 2 cm long, yellow
discoideus capituli, 2014, C
Argentina: Las Lenas, Mendoza, 3000 m, fine scree, caespitose pl, 15-20
cm high, lvs juicy cylindrical, 3 dents apex, prominent yellow capituli,
2014, C
- 500 *Senecio gilliesii* Asteraceae**
Argentina: Las Lenas, Mendoza, 2800 m, fine scree, caespitose pl, 20 cm
high, white tomentose ovate lvs, 1-3 terminal capituli with orange fls,
2014, D
- 501 *Senecio subdiscoideus* Asteraceae**
Argentina: Cerro Punto Negro, Mendoza, 3800 m, rough alpine scree,
prostrate cushion, 10-20 cm wide, bipinnatisect lvs, 3-5 cm long, large
orange fls, 2014, E
- 502 *Senecio triodon* Asteraceae**
Argentina: Angostura, Laguna Verde, 1100 m, mountain steppe, flat
cushions, 10-20 cm wide, green lvs with 3 dents in rosettes, 3 cm wide,
yellow tubular fls in capituli, 15 mm wide, 2013, C
- 503 *Serratula procumbens* Asteraceae**
Tajikistan: Sasyk Kul, Pamir, 3900 m, fine scree, prostrate caespitose
pl, 5 cm high, ovate serrate leathery lvs, 5 cm long, rose fls in
capituli, 5 cm wide, 2015, D
- 504 *Sibiraea angustata* Rosaceae**
China: MiLa, Tibet, 4100 m, mountain shrubland, low shrub, 60-120 cm
high, linear grey leathery lvs, white fls in congested panicles, 2016, C
- 505 *Siewersia pentapetala* Rosaceae**
Russia: Vachkazec, Kamchatka, 400 m, mountain grassland, prostrate
caespitose pl, 8-12 cm high, pinnate lvs, 4 cm long, large white
terminal fls on short stems, 2013, C
- 506 *Silene falcata* Caryophyllaceae**
ex Turkey: Ulu Dag, 2000 m, limestone scree, prostrate mats, 5-15 cm
wide, falcate linear green lvs, 2 cm long, solitary white fls on 6 - 12
cm stems, black capsule, 2016, C
- 507 *Silene microphylla* Caryophyllaceae**
Tajikistan: Mamazair, Pamir, 4400 m, rocky slope, caespitose pl, 5-15 cm
high, linear lvs, 15 mm long, prominent white fls, 2 cm wide, 2015, C
- 508 *Sinocrassula cf. densirosulata* Crassulaceae**
China: Lhasa, Tibet, 3700 m, cold shady rock walls, compact ground
rosettes, triangular fleshy lvs, 15-20 mm long, white fls in terminal
cymes on stems, 10 cm long, 2016, E
- 509 *Sinopodophyllum hexandrum* Berberidaceae**
China: SerkymLa, Tibet, 3700 m, open woodland, tuberose pl, 40-50 cm
high, large palmately lobate lvs, large single white/pink fls, red
fleshy fruits, 2016, D
- 510 *Sisyrinchium laetum* Iridaceae**
Argentina: Villa Vicencio, Mendoza, 2400 m, rough scree, caespitose pl,
7-12 cm high, large yellow fls, 2014, C
- 511 *Sisyrinchium patagonicum* Iridaceae**
ex Argentin: Cabo Verde, caespitose pl, 10-12 cm high, linear lvs,
large yellow fls, 2013, C
- 512 *Solmslaubachia eurycarpa* Brassicaceae**
China: Rawu, Tibet, 3700 m, limestone crevices, caespitose pl, 4-6 cm
high, grey-green oblong lvs, 4-7 cm long, pink fls, 5 cm long siliques,
2016, E
- 513 *Solmslaubachia xerophyta* Brassicaceae**
China: DaXueShan, Yunnan, 4200 m, limestone scree, compact cushions,
5-10 cm wide, linear green-purple lvs, 2-3 cm long, large rose sessile
fls, 2 cm wide, 2014, E
- 514 *Sorozeris umbrella* Asteraceae**

- China: HongShan, Yunnan, 4500 m, slate scree, sessile rosettes, 10-13 cm wide, dark green lanceolate lvs, white-creamy sessile fls, 2014, C
- 515 *Stachys inflata*** **Lamiaceae**
ex Iran: Elborz, Baladeh, 1600 m, mountain steppe, caespitose pl, 20 cm high, white hairy ovate lvs 10-20 mm, pink fls in terminal racemes, 2016, A
- 516 *Stachys lavandulifolia*** **Lamiaceae**
ex Iran: Kandovan, prostrate stoloneferous pl, 10 cm high, hairy lanceolate lvs, purple fls in hairy racemes, 2016, B
- 517 *Sternbergia colchiciflora*** **Liliaceae**
ex Turkey: Sultan Dag, bulb pl, 5-10 cm high, linear twisted lvs, bright yellow fls, autumn flowering, 2016, D
- 518 *Swertia marginata*** **Gentianaceae**
Kyrgyzstan: Alai Mts, 3600 m, limestone scree, caespitose pl, 12-20 cm high, lanceolate lvs, 10 cm long, white fls, marginated purple, 15 mm long, 2015, C
Tajikistan: Akbaital, Pamir, 4400 m, alpine grassland, 2015, C
Kyrgyzstan: Chonashu, Terski AT, 3300 m, wet alpine grassland, 2013, C
- 521 *Syncalathium roseum*** **Asteraceae**
China: Rutok, Tibet, 4100 m, mineral scree, caespitose pl, 3 cm high, ground rosette, 5-10 cm wide, linear pinnatilobate lvs, rose sessile fls, 2016, E
- 522 *Syncalathium souliei*** **Asteraceae**
China: Rawu, Tibet, 4200 m, mineral scree, caespitose pl, 3 cm high, ground rosette, 5-10 cm wide, linear pinnatilobate lvs, blue sessile fls, 2016, E
- 523 *Thalictrum delavayi*** **Ranunculaceae**
China: CangShan, Yunnan, 3900 m, subalpine grassland, caespitose pl, 40-80 cm high, small dark green lobate leaflet, 5-10 mm wide, large rose fls in panicles, 2014, C
- 524 *Thlaspi bellidifolium*** **Brassicaceae**
ex Macedon: Galicica, caespitose pl 5-8 cm high, pale pink fls, 2016, C
ex Albania: Korab, 2016, C
ex Bulgaria: Pirin Mts., 2015, C
- 527 *Thlaspi stylosum*** **Brassicaceae**
ex Italy: Majella, flat cushions 3 cm high, small rosettes, rose fls, 2016, C
- 528 *Trichanthemis paradoxos*** **Asteraceae**
Tajikistan: Mamazair, Pamir, 4100 m, dry alpine steppe, dwarf shrub, 15-20 cm high, yellow fls in small capituli, 2015, B
- 529 *Trillium camtschaticense*** **Liliaceae**
Russia: Mt. Chekhova, Sakhalin, 200 m, forest, rhizomatic pl, 30-40 cm high, trifoliolate lvs, 12-15 cm wide, large white fls, 2016, C
- 530 *Trollius komarovii*** **Ranunculaceae**
Kyrgyzstan: Alai Mts, 3600 m, alpine grassland, caespitose pl, 20-30 cm high, palmate leathery lvs, 5-8 cm wide, yellow full fls, 3 cm wide, 2015, C
- 531 *Tulipa dasystemon*** **Liliaceae**
Kyrgyzstan: Kyrgyz Ala Tau, 1900 m, dry rocky steppe, bulb pl, 10-15 cm high, yellow fls, 2015, C
- 532 *Tulipa ferganica*** **Liliaceae**
Kyrgyzstan: Fergana Ala Tau, 3100 m, alpine grassland, bulb pl, 15 cm high, undulate lvs, 8-12 cm long, yellow red bicolored fls, 2015, D
- 533 *Tulipa heterophylla*** **Liliaceae**
Kyrgyzstan: Chonashu, Terski AT, 3300 m, alpine grassland, dwarf bulb pl, 10 cm high, linear lvs, yellow narrow funnel form fls, reddish green outside, 2013, D
- 534 *Tulipa kaufmanniana*** **Liliaceae**
ex Uzbek: Sukok, bulb pl, 30 cm high, large red fls, 2016, C
- 535 *Tulipa zenaidae*** **Liliaceae**
Kyrgyzstan: Alamedin, Kyrgyz AT, 2200 m, mountain steppe, small bulb pl, 10-15 cm high, linear lvs, yellow broadly campanulate fls, 2013, D
- 536 *Veratrum babilonii*** **Gentianaceae**

	Postage, handling		5.00
	Total		

Ordered by: