| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake floating islands, ■ = on the way to | | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| **Ferns and seed plants** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Abies sibirica Ledeb. | Pinaceae | 1 | | 3 | 4 | | 6 | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | | | high light demand, slow growth |
| Acer negundo L. * | Aceraceae | 1 | 2 | | | 5 | 6 | | | | | | | | | | | | ● | | | | | | | | | | | | | | | ● | planted for wind protection and in parks, widely naturalized |
| Achillea cf. asiatica Serg. | Asteraceae | 1 | | 3 | 4 | 5 | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Achillea millefolium L. | Asteraceae | 1 | | 3 | | 5a | | | ● | | ● | | | ● | | ● | | | | | | | | ● | | | | | | | | | | | |
| Achnatherum sibiricum (L.) Keng ex Tzvel. | Poaceae | | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Achnatherum splendens (Trin.) Nevski = Lasiagrostis splendens (Trin.) Kunth | Poaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | Siberian pampa gras; little salted places in Gobi Altai |
| Aconitum anthora L. | Ranunculaceae | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Aconitum baicalense Turcz. ex Rapaics | Ranunculaceae | | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Aconitum barbatum Pers. | Ranunculaceae | | | 3 | 4 | 5 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | ● | SE Onguday; yellow flowers, corolla haired, steppe indicator |
| Aconitum krylovii Steinb. | Ranunculaceae | | | 3 | 4 | | | | | | | | | | | | | | ● | ● | | | ● | | | | | | | | | | | | yellow flowers |
| Aconitum septentrionale Koelle | Ranunculaceae | 1 | | 3 | 4 | | | | ● | | | | ● | | ● | | | | ● | | | | ● | | | | | | | | | | | | |
| Aconitum volubile Pall. ex Koelle | Ranunculaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | ● | | | ● | | | | | | | | | | | | | climber |
| Aconogonon alpinum (All.) Schur = Polygonum alpinum All. | Polygonaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Acorus calamus L. | Araceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | |
| Actaea erythrocarpa Fisch. | Ranunculaceae | 1 | | 3 | 4 | 5 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Actaea spicata L. | Ranunculaceae | 1 | 2 | 3 | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Adenophora lilifolia (L.) A. DC. | Campanulaceae | 1 | | 3 | | | 6 | | ● | | | | ● | | | ● | | | | | | | | | | | | | | | | | | | |
| Adonis sibirica Patrin ex Ledeb. = A. apennina auct. | Ranunculaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Adoxa moschatellina L. | Adoxaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Aegopodium alpestre Ledeb. | Apiaceae | | | 3 | 4 | 5 | 6 | | | | | | | | | | | | ● | ● | | | | ● | | | | | | | | | | | |
| Aegopodium podagraria L. | Apiaceae | 1 | 2 | 3 | 4 | | | ● | ● | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Agrimonia pilosa Ledeb. | Rosaceae | 1 | | 3 | 4 | 5 | | | ● | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Agropyron cristatum (L.) Beauv. | Poaceae | 1 | | 3 | 4 | 5a | 6 | | | | | | | | | ● | | ■ | | | | | | | | ■ | | | | ● | | | | | |
| Agrostis gigantea Roth | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alchemilla vulgaris L. s.l. | Rosaceae | - | - | - | - | - | - | | | | | | | | | | | | | ● | | ● | ● | | | | | | | | | | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Alfredia cernua (L.) Cass. | Asteraceae | | | 3 | | | 6 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | 3 m, dentate winged petioles |
| Alisma lanceolatum With. | Alismataceae | 1 | 2 | | | | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Alisma plantago-aquatica L. | Alismataceae | 1 | 2 | 3 | 4 | 5 | 6 | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Allium "rubrum" | Alliaceae | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Allium bidentatum Fisch. ex Prokh. | Alliaceae | | | | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Allium microdictyon Prokh. | Alliaceae | 1 | | 3 | 4 | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | much used especially in spring |
| Allium mongolicum Regel | Alliaceae | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Allium obliquum L. | Alliaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | wild garlic, yellow flowers |
| Allium schoenoprasum L. | Alliaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | ● | | | | | | | | | | ● | | | |
| Allium strictum Schrad. | Alliaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Alopecurus aequalis Sobol. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Alopecurus alpinus Smith | Poaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | ● | | | | | | | | ● | | | |
| Alopecurus arundinaceus Poir. = A. ventricosus Pers. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Alopecurus pratensis L. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | |
| Alyssum obovatum (C.A. Mey.) Turcz. | Brassicaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Amaranthus blitoides S. Wats. | Amaranthaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | |
| Amaranthus retroflexus L. | Amaranthaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | ● | | | | | | | | | | | | | | | | | |
| Anabasis brevifolia C.A. Mey. | Chenopodiaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | adapted to cold and dry conditions |
| Anagallidium dichotomum (L.) Griseb. | Gentianaceae | | | 3 | 4 | | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Ancathia igniaria (Spreng.) DC. | Asteraceae | | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | leaves cactus-like |
| Androsace filiformis Retz. | Primulaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Androsace maxima L. | Primulaceae | 1 | 2 | 3 | 4 | | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Anemonastrum crinitum (Juz.) Holub = Anemone crinita Juz. | Ranunculaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Anemonastrum sibiricum (L.) Holub = Anemone sibirica L. | Ranunculaceae | | | | 4 | 5 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Anemone sylvestris L. | Ranunculaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Anemonoides altaica (C.A. Mey.) Holub = Anemone altaica Fisch. ex C.A. Mey. | Ranunculaceae | | | 3 | 4 | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Anemonoides caerulea (DC.) Holub = Anemone caerulea DC. | Ranunculaceae | | | 3 | 4 | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Anethum graveolens L. * | Apiaceae | 1 | 2 | | | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | cultivated in gardens |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake floating islands, ■ = on the way to | | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Angelica decurrens (Ledeb.) B. Fedtsch. = A. archangelica L. subsp. archangelica var. decurrens (Ledeb.) Weinert, A. archangelica subsp. decurrens (Ledeb.) | Apiaceae | 1? | | 3 | 4 | | | | | | | | | | ■ | | | | | | | ● | | | | | | | | | | | | | | |
| Angelica sylvestris L. | Apiaceae | 1 | 2 | 3 | 4 | | | ● | ● | | | | | | ● | | | | | | ● | | | | | | | | | | | | | | |
| Antennaria dioica (L.) Gaertn. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | ● | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Anthemis subtinctoria Dobrocz. | Asteraceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| Anthoxanthum alpinum A. et D. Löve | Poaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Anthriscus sylvestris (L.) Hoffm. | Apiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | ● | | | | | ● | | | | | | | | | | | | | | | |
| Aquilegia glandulosa Fisch. ex Link | Ranunculaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Aquilegia sibirica Lam. | Ranunculaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Arabis pendula L. | Brassicaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | ● | also Cherga |
| Arctium tomentosum Mill. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | | ■ | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Arctopoa tibetica (Munro ex Stapf) Probat. = Poa tibetica Munro ex Stapf | Poaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | |
| Artemisia austriaca Jacq. | Asteraceae | 1 | 2 | 3 | | 5 | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | ● | also Chike-Taman pass; leaves blue silver |
| Artemisia caespitosa Ledeb. | Asteraceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | ● | | | S Siberian distribution |
| Artemisia commutata Bess. | Asteraceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Artemisia dracunculus L. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | ● | | | | | | | | | | | | | | ● | | ● | | | |
| Artemisia frigida Willd. | Asteraceae | 1 | | 3 | 4 | 5 | 6 | | | | ● | | | | | ● | | | | | | | | | | ● | | | | ● | | ● | | ● | also SE Onguday; delicate leaves, grazing indicator |
| Artemisia glauca Pall. ex Willd. | Asteraceae | 1 | | 3 | 4 | | 6 | | | | ● | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Artemisia gmelinii Web. | Asteraceae | | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | semi-shrub |
| Artemisia laciniata Willd. | Asteraceae | 1 | | 3 | 4 | 5 | | | | | ● | | | | | | | | | | ● | | | | | ● | | ● | | | | ● | | | basal rosette of leaves |
| Artemisia latifolia Ledeb. | Asteraceae | 1 | | 3 | 4 | 5 | 6 | | | | | | ● | | | ● | | | | | | | | | | | | | | | | | | | |
| Artemisia macrantha Ledeb. | Asteraceae | 1 | | 3 | 4 | | 6 | | ● | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Artemisia macrocephala Jacq. ex Bess. | Asteraceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | annual species |
| Artemisia nitrosa Web. | Asteraceae | 1 | | 3 | 4 | | 6 | | | | ● | | | | | | | | | | | | | | | ● | | | | | | | | | leaves light blue |
| Artemisia obtusiloba Ledeb. | Asteraceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | ● | | | ● | | | strong unpleasent smell |
| Artemisia rupestris L. | Asteraceae | 1 | | 3 | 4 | | 6 | | | | ● | | | | | | | | | | | | | | | ● | | | | | | | | | flower heads quite large |
| Artemisia rutifolia Steph. ex Spreng. | Asteraceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | bluish shrub |
| Artemisia santolinifolia Turcz. ex Bess. | Asteraceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | ■ | ● | | | | ● | | | | | |
| Artemisia schrenkiana Ledeb. | Asteraceae | | | | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | Menthol scent |
| Artemisia scoparia Waldst. et Kit. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | ● | also SE Onguday; annual species |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake floating islands, ■ = on the way to | | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Artemisia sieversiana Willd. | Asteraceae | 1 | | 3 | 4 | 5 | 6 | | | ■ | ● | | | | | | | | | | | | | | | | | | | | | | | | also Bolotnoie, SE Onguday; biennial, disturbed places |
| Artemisia vulgaris L. | Asteraceae | 1 | 2 | 3 | 4 | | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asarum europaeum L. | Aristolochiaceae | 1 | | 3 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aster alpinus L. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | | | | | | | | ● | | | | | | |
| Astragalus adsurgens Pall. | Fabaceae | | | | 4 | 5 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Astragalus alopecurus Pall. | Fabaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | |
| Astragalus cicer L. | Fabaceae | 1 | 2 | | | | | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| Astragalus frigidus (L.) A. Gray | Fabaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| Astragalus glycyphyllos L. | Fabaceae | 1 | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Salair mountains to Barnaul |
| Astragalus laguroides Pall. | Fabaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Astragalus testiculatus Pall. | Fabaceae | 1 | 2 | 3 | 4 | | 6 | | | | ● | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Athyrium filix-femina (L.) Roth | P: Athyriaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | ● | | | | ● | | | | | | | | | | | | | | | | |
| Atragene sibirica L. = Clematis alpina (L.) Mill. subsp. sibirica (L.) O. Kuntze | Ranunculaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| Atragene speciosa Weinm. (Clematis) | Ranunculaceae | - | - | - | - | - | - | | | | | | | | ● | | | | | | | | ● | | | | | | | | | | | | IPNI, not in Flora USSR |
| Atraphaxis pungens (Bieb.) Jaub. et Spach | Polygonaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Atriplex littoralis L. | Chenopodiaceae | 1 | 2 | 3 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Atriplex sagittata Borkh. = A. nitens Schkuhr | Chenopodiaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Toguchin |
| Aulacospermum anomalum (Ledeb.) Ledeb. | Apiaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Avena fatua L. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | |
| Avena sativa L. * | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | ● | main crop |
| Axyris amaranthoides L. | Chenopodiaceae | 1 | | 3 | 4 | 5 | 6 | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | | |
| Axyris prostrata L. | Chenopodiaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | |
| Baeothryon pumilum (Vahl) A. et D. Löve = Trichophorum pumilum (Vahl) Schinz et Thell. | Cyperaceae | | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | ● | | | | ● | | | | |
| Beckmannia syzigachne (Steud.) Fern. | Poaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | ● | | | | | | | ● | | | | | | | | | | | | | | |
| Berberis sibirica Pall. | Berberidaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Bergenia crassifolia (L.) Fritsch | Saxifragaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | last-year leaves for tea; stony places |
| Berteroa incana (L.) DC. | Brassicaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Betula fruticosa Pall. | Betulaceae | | | | 4 | 5 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Betula microphylla Bunge | Betulaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | at Chuja river between Aktash and Chagan-Uzun |
| Betula pendula Roth | Betulaceae | 1 | 2 | 3 | 4 | | 6 | ● | ● | | | ● | | | ● | ● | | | | | | | | | | | | | | | | | | | |
| Betula pubescens Ehrh. | Betulaceae | 1 | 2 | 3 | 4 | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Betula rotundifolia Spach = B. nana L. subsp. rotundifolia (Spach) Malysch. | Betulaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | ● | ● | | | | | | | | ● | | | |
| Bistorta major S.F. Gray = Polygonum bistorta L. | Polygonaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | ● | | ● | ● | | | | | | | | ● | | | |
| Bistorta vivipara (L.) S.F. Gray = Polygonum viviparum L. | Polygonaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | ● | | | | | | | ● | ● | | | |
| Blysmus rufus (Huds.) Link | Cyperaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | |
| Bolboschoenus maritimus (L.) Palla | Cyperaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | |
| Brachypodium pinnatum (L.) Beauv. | Poaceae | 1 | 2 | 3 | 4 | | 6 | | ● | | | | ● | | | | | | ● | ● | | | | | | | | | | | | | | | |
| Brassica napus L. | Brassicaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| Bromopsis inermis (Leyss.) Holub = Bromus inermis Leyss. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | ● | | ●■ | | ● | | | | | | | | | | | | | | | |
| Bupleurum bicaule Helm | Apiaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | ■ | | | ● | ● | | | | | |
| Bupleurum longifolium L. subsp. aureum (Fisch. ex Hoffm.) Soó = B. aureum Fisch. ex Hoffm. | Apiaceae | 1 | | 3 | 4 | | 6 | | ● | | | | ● | | ● | | | | | ● | | | ● | ● | | | | | | | | | | | |
| Bupleurum multinerve DC. | Apiaceae | 1 | | 3 | 4 | | | | | | | | | | | | | | | | ● | | | | | | ● | | | | | | | | |
| Butomus umbellatus L. | Butomaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | ● | | | | | | | | | | | | | | | | | ● | also Toguchin |
| Cacalia hastata L. | Asteraceae | 1 | | 3 | 4 | 5 | | | ● | | | | | | ● | | | | ● | ● | | | | | | | | | | | | | | | |
| Calamagrostis arundinacea (L.) Roth | Poaceae | 1 | 2 | 3 | 4 | | | ● | ● | | | | ● | | | | | | ● | ● | ● | | | | | | | | | | | | | | |
| Calamagrostis canescens (Web.) Roth | Poaceae | 1 | 2 | 3 | 4 | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Calamagrostis epigejos (L.) Roth | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | ● | | | | | ● | | | | | | | | | | | | | | | | | | | | | |
| Calamagrostis langsdorffii (Link) Trin . | Poaceae | 1 | | 3 | 4 | 5 | | | | | | | | | ● | | | | | | | | | ● | | | | | | | | | | | |
| Calamagrostis neglecta (Ehrh.) Gaertn., Mey. et Scherb. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | ● | | | | |
| Calamagrostis obtusata Trin. | Poaceae | 1 | | 3 | 4 | 5 | | | | | | | | | ● | | | | | | | ● | ● | | | | | | | | | | | | |
| Calamagrostis pavlovii Roshev. | Poaceae | | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | C Asian species |
| Caltha palustris L. | Ranunculaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Campanula altaica Ledeb. | Campanulaceae | 1 | | 3 | | | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Campanula bononiensis L. | Campanulaceae | 1 | 2 | 3 | | | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Campanula glomerata L. | Campanulaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Campanula sibirica L. | Campanulaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Cannabis sativa L. | Cannabaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | ● | also Cherga |
| Caragana arborescens Lam. | Fabaceae | | | 3 | 4 | 5c | 6 | | | | | | ● | | ● | | | | | | | | | | | | ● | | | | | | | | |
| Caragana bungei Ledeb. | Fabaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Caragana pygmaea (L.) DC. = C. splendens Schischk. ex K. Sobol. | Fabaceae | | | 3 | 4 | | | | | | | | | | | | | | | | ● | | | | | ■ | | | ● | ● | | | | | "Chinese golden birch", used in ornamental floristic |
| Cardamine impatiens L. | Brassicaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | ● | | | | | | | ● | | | | | | | | | | | | | |
| Cardamine macrophilla Willd. | Brassicaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Cardamine trifida (Poir.) B.M.G. Jones | Brassicaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Carduus nutans L. | Asteraceae | 1 | 2 | 3 | | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | ● | also between Toguchin and Yurty |
| Carex altaica (Gorodk.) V. Krecz. = C. bigelowii Torr. ex Schwein. subsp. altaica (Gorodk.) Malysch. | Cyperaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | ● | | | | | | | ● | ● | | | |
| Carex arnellii Christ | Cyperaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | close to C. sylvatica |
| Carex aterrima Hoppe = C. atrata L. subsp. aterrima (Hoppe) Celak. | Cyperaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | ● | | | spikes pendulous |
| Carex brunnescens (Pers.) Poir. | Cyperaceae | 1 | 2? | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Carex buxbaumii Wahlenb. | Cyperaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | |
| Carex capillaris L. | Cyperaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | ● | | | | | ● | | | | | | | | |
| Carex cespitosa L. | Cyperaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Carex chordorrhiza Ehrh. | Cyperaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Carex cinerea Poll. = canescens auct. | Cyperaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Carex curaica Kunth | Cyperaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | ● | | | | ● | | | | close to C. disticha |
| Carex diandra Schrank | Cyperaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| Carex dioica L. | Cyperaceae | 1 | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| Carex disticha Huds. | Cyperaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Carex duriuscula C.A. Mey. | Cyperaceae | | | 3 | 4 | 5 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Carex enervis C.A. Mey. | Cyperaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | ● | ● | | | |
| Carex humilis Leyss. | Cyperaceae | 1 | 2 | 3 | 4 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Carex lachenalii Schkuhr = C. tripartita auct. | Cyperaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Carex ledebouriana C.A. Mey. ex Trev. = C. capillaris L. subsp. ledebouriana (C.A. Mey. ex Trev.) Worosch. | Cyperaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | ● | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Carex macroura Meinsh. | Cyperaceae | 1 | | 3 | 4 | 5 | 6 | | ● | | | | ● | | ● | | | | | | | | | | | | | | | | | | | ● | also S Biysk, Novi Posyelok |
| Carex melanocarpa Cham. ex Trautv. | Cyperaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Carex microglochin Wahlenb. | Cyperaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | close to C. pauciflora |
| Carex paupercula Michx. = C. magellanica auct. | Cyperaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | ● | | | | | | | | ● | | | close to C. limosa |
| Carex pseudocyperus L. | Cyperaceae | 1 | 2 | 3 | 4 | | 6 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |
| Carex rostrata Stokes | Cyperaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | ● | | | | | | | | | | | | ● | | ● | | | ● | | | | | | | | |
| Carex sempervirens Vill. | Cyperaceae | 1 | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Carex songorica Kar. et Kir. | Cyperaceae | | 2 | 3 | 4 | | 6 | | | | ● | | | | | | | | | | | | | | | | ● | | | | ● | | | | brown spikes |
| Carex supina Willd. ex Wahlenb. | Cyperaceae | 1 | 2 | 3 | 4 | | 6 | | | | ● | | | | | | | | | | | | | | | | | | ● | | | | | | |
| Carex vesicaria L. | Cyperaceae | 1 | 2 | 3 | 4 | | 6 | ■ | | | | | | | | | ● | | | | | ● | | | | | | | | | | | | | |
| Carlina biebersteinii Bernh. ex Hornem. | Asteraceae | 1 | 2 | 3 | 4 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carum carvi L. | Apiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Catabrosa aquatica (L.) Beauv. | Poaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | mentioned as "C. altaica", but not in Czerepanow 1995 nor Flora of Siberia 2 |
| Cenolophium denudatum (Hornem.) Tutin = C. fischeri (Spreng.) Koch | Apiaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | forest species |
| Centaurea jacea L. | Asteraceae | 1 | 2a | 3a | 4a | 5a | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Centaurea scabiosa L. | Asteraceae | 1 | | 3 | 4 | 5a | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | ● | also Cherga |
| Centaurea sibirica L. | Asteraceae | 1 | | 3 | | | | | | | | | | | | | | | | | ● | | | | | | | | ● | | | | | | |
| Cerastium arvense L. | Caryophyllaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Cerastium cf. lithospermifolium Fisch. = "C. ledebourianum" | Caryophyllaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | large flowers |
| Cerastium davuricum Fisch. ex Spreng. | Caryophyllaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | ● | | | | | ● | | | | | | | | | | | | | | | |
| Cerastium pauciflorum Stev. ex Ser. | Caryophyllaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| Ceratocarpus arenarius L. | Chenopodiaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | ● | ● | | ● | | | |
| Chamaenerion angustifolium (L.) Holub = Epilobium angustifolium L. | Onagraceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | | | | | ● | | | | | | | | | | ● | ● | | | ● | | | | | | | | |
| Chamaenerion latifolium (L.) Th. Fries et Lange = Epilobium latifolium | Onagraceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Chelidonium majus L. | Papaveraceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Katun terraces |
| Chenopodium album L. | Chenopodiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | ● | | | | | | | | | | | | | | ● | | | |
| Chenopodium ficifolium Smith | Chenopodiaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Barnaul |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Chenopodium foliosum Aschers. | Chenopodiaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | cultivated als "Erdbeerspinat" in former times |
| Chenopodium frutescens C.A. Mey. | Chenopodiaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | smell of dead fish |
| Chenopodium glaucum L. | Chenopodiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | ● | ● | also Bolotnoie |
| Chenopodium rubrum L. | Chenopodiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | |
| Chimaphila umbellata (L.) W. Barton | Pyrolaceae | 1 | | 3 | 4 | 5 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Cimicifuga foetida L. | Ranunculaceae | | | 3 | 4 | | | | ● | | | | | | | | | | ● | | | | | | | | ● | | | | | | | | unpleasant smell |
| Cinna latifolia (Trev.) Griseb. | Poaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | ●■ | | | | | | | | | | | | | | | | | | | | ancient genus |
| Circaea alpina L. | Onagraceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | ● | | | | ● | | | | | | | | | | | | | | | | |
| Circaea lutetiana L. | Onagraceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Cirsium esculentum (Siev.) C.A. Mey. = C. acaule Scop. subsp. esculentum (Siev.) Werner | Asteraceae | 1 | | 3 | 4 | | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | ● | | | | grazing indicator, "not eatable" |
| Cirsium helenioides (L.) Hill | Asteraceae | 1 | | 3 | 4 | 5 | 6 | | ● | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Cirsium serratuloides (L.) Hill | Asteraceae | | | 3 | 4 | 5 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | |
| Cirsium setosum (Willd.) Bess. ex M. Bieb. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | = C. arvense (L.) Scop. according to Flora Europaea practice |
| Clausia aprica (Steph.) Korn.-Tr. | Brassicaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | blue flowers |
| Claytonia joanneana Schult. | Portulacaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Cleistogenes squarrosa (Trin.) Keng | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Comarum palustre L. | Rosaceae | 1 | 2 | 3 | 4 | | | | | ● | | ● | | | | | | | | | | | | ● | | | | | | | | | | | |
| Conioselinum tataricum Hoffm. | Apiaceae | 1 | | 3 | 4 | | 6 | | | | | | | | ● | | | | | ● | | | | | | | | | | | | | | | |
| Convallaria majalis L. | Convallariaceae | 1 | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulus ammanii Desr. | Convolvulaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Convolvulus arvensis L. | Convolvulaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | ● | | ● | | | | | | | | | | | | | | | | | |
| Cortusa altaica Losinsk. | Primulaceae | 1 | | 3 | 4 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Corydalis bracteata (Steph.) Pers. | Fumariaceae | | | 3 | 4 | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Corydalis stricta Steph. | Fumariaceae | | | 3 | | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Corylus avellana L. | Betulaceae | 1 | 2 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coryspermum cf. mongolicum Iljin | Chenopodiaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | ● | | |
| Cosmos bipinnatus Cav. * | Asteraceae | 1 | 2 | | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | cultivated in gardens as an ornamental |
| Cotoneaster melanocarpus Fisch. ex Blytt | Rosaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | ● | | | | | | | | ● | | | | | | | | | | | | | | |
| Cotoneaster uniflorus Bunge | Rosaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | ● | | | red fruits |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Crataegus sanguinea Pall. | Rosaceae | 1 | | 3 | 4 | | 6 | | | | | | ● | | | ● | | | | | | | | | | | | | | | | | | | |
| Crepis chrysantha (Ledeb.) Turcz. | Asteraceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | ● | | | |
| Crepis lyrata (L.) Froel. | Asteraceae | | | 3 | 4 | | | | | | | | | | | | | | ● | ● | | | ● | | | | | | | | | | | | flowers earlier than C. sibirica |
| Crepis sibirica L. | Asteraceae | 1 | 2 | 3 | 4 | | 6 | | ● | | | | | | ● | | | | ● | ● | | | | | | | | | | | | | | | |
| Cruciata krylovii (Iljin) Pobed. | Rubiaceae | | | 3 | 4 | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | | | | | S Siberian endemic |
| Cynosurus cristatus L. | Poaceae | 1 | 2 | | 4a | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperus fuscus L. | Cyperaceae | 1 | 2 | 3 | 4 | 5a | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | ● | also Katun river bank N Gorno-Altaisk |
| Cypripedium guttatum Sw. | Orchidaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | endangered species |
| Dactylis glomerata L. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | ● | | | | | | | ● | | ■ | ● | ● | | | | | | | | | | | | | | | |
| Daphne mezereum L. | Thymelaeaceae | 1 | 2 | 3 | | | | ● | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Delphinium elatum L. | Ranunculaceae | 1 | | 3 | 4 | | 6 | | ● | | | | | | ● | | | | | | | | | ● | | | | | | | | | | | |
| Dendranthema sinuatum (Ledeb.) Tzvel. = Chrysanthemum sinuatum | Asteraceae | | | 3 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Dendranthema zawadskii (Herbich) Tzvel. | Asteraceae | 1 | | 3 | 4 | 5 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | pink flowers |
| Deschampsia cespitosa (L.) Beauv. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | | | | | | | ● | | ● | | | | | | | | ● | | | |
| Dianthus deltoides L. | Caryophyllaceae | 1 | | 3 | | 5a | | | | | | | | | ■ | | | | | | | | | | | | | | | | | | | | |
| Dianthus superbus L. | Caryophyllaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | ● | | | ● | ● | ● | | | | | | | | | | | |
| Dianthus versicolor Fisch. ex Link | Caryophyllaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | ● | | | | | ● | | | | | | | | | | | | | | |
| Dichostylis micheliana (L.) Nees | Cyperaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | |
| Diphasiastrum alpinum (L.) Holub | Lycopodiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Dracocephalum grandiflorum L. = D. altaiense Laxm. | Lamiaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | ● | ● | | | | | | | | ● | | | |
| Dracocephalum nutans L. | Lamiaceae | 1 | | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Dracocephalum peregrinum L. | Lamiaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | ● | | ● | | ● | | | |
| Dryas octopetala L. subsp. subincisa Jurtz. | Rosaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | ● | ● | | | | | | | | ● | | | |
| Dryopteris carthusiana (Vill.) H.P. Fuchs | P: Dryopteridaceae | 1 | 2 | 3 | 4 | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Dryopteris dilatata (Hoffm.) A. Gray = D. austriaca (Jacq.) Woynar p.p. | P: Dryopteridaceae | 1 | 2 | 3 | 4 | | | | | | | | | | ● | | | | ● | | | | | | | | | | | | | | | | |
| Dryopteris filix-mas (L.) Schott | P: Dryopteridaceae | 1 | 2 | 3 | 4 | | 6 | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Echinochloa crus-galli (L.) Beauv. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | ● | | | | | | | | | | | | | | | ● | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Echinocystis lobata (Michx.) Torr. et Gray | Cucurbitaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | often around villages; first seen in Toguchin |
| Echinops | Asteraceae | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | SE Onguday |
| Eleocharis acicularis (L.) Roem. et Schult. | Cyperaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | small turions |
| Eleocharis palustris (L.) Roem. et Schult. | Cyperaceae | 1 | 2 | 3 | 4 | 5 | 6 | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elodea canadensis Michx. | Hydrocharitaceae | 1 | | 3 | | | | ■ | | ● | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elsholtzia ciliata (Thunb.) Hyl. | Lamiaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Cherga |
| Elymus brachypodioides (Nevski) Peschkova | Poaceae | | | 3 | 4 | 5 | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Elymus caninus (L.) L. | Poaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | ● | ● | | | | | | | | | | | | | | | |
| Elymus dahuricus Turcz. ex Griseb. | Poaceae | 1a | | 3 | 4 | 5 | 6 | | | | | | | | | | | ■ | | | | | | | | | | | | ● | | | | | |
| Elymus gmelinii (Ledeb.) Tzvel. = E. turczaninovii ined. | Poaceae | | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | | | |
| Elymus sibiricus L. | Poaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | ● | | | | ■ | | | | | | | | | | | | | | | | | |
| Elytrigia repens (L.) Nevski | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | ● | | | | | | | | | ● | | | | | | | | | | | | | | | |
| Empetrum nigrum L. | Empetraceae | 1 | | 3 | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Ephedra dahurica Turcz. = E. distachya auct. non L. | Ephedraceae | | | | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | synonymy acc. to Flora Siberia 1 |
| Ephedra monosperma C.A. Mey. | Ephedraceae | | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | ● | ● | | | | | |
| Epilobium ciliatum Rafin. | Onagraceae | 1 | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epilobium palustre L. | Onagraceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | ● | | | | |
| Equisetum arvense L. | P: Equisetaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Equisetum fluviatile L. | P: Equisetaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | ● | | ● | | | | | ● | | | | | | | | | | | | | | | | | | |
| Equisetum palustre L. | P: Equisetaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Equisetum pratense Ehrh. | P: Equisetaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | |
| Equisetum scirpoides Michx. | P: Equisetaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| Equisetum sylvaticum L. | P: Equisetaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | ● | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Eragrostis minor Host | Poaceae | 1 | 2 | 3 | 4 | 5a | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | |
| Erigeron acris L. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Eriophorum humile Turcz. ex Steud. | Cyperaceae | | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Eriophorum polystachion L. = angustifolium Honck. | Cyperaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Eriophorum scheuchzeri Hoppe | Cyperaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Eritrichium jenisseense Turcz. ex A. DC. | Boraginaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | |
| Eritrichium villosum (Ledeb.) Bunge | Boraginaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Eryngium planum L. | Apiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | ● | | | | | | | | | | | | | | | | | ● | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake floating islands, ■ = on the way to | | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside meadow and mire | | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Erysimum cheiranthoides L. | Brassicaceae | 1 | 2a | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | ● | | |
| Erythronium sibiricum (Fisch. et C.A. Mey.) Kryl. | Liliaceae | | | 3 | 4 | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Euphorbia discolor Ledeb. | Euphorbiaceae | | | 3 | 4 | 5 | | | ● | | | | ● | | | | | | | | | | | | | | | | | | | | | | E. esula group |
| Euphorbia pilosa L. = E. lutescens C.A. Mey. | Euphorbiaceae | | | 3 | 4 | | 6 | | ● | | | | | | ● | | | | | | | | | ● | | | | | | | | | | | synonymy acc. to Flora USSR 14 |
| Euphorbia tshuiensis (Prokh.) Serg. | Euphorbiaceae | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Euphorbia virgata Waldst. et Kit. | Euphorbiaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Euphrasia officinalis L. s.l. | Scrophulariaceae | - | - | - | - | - | - | | ● | | ● | | | ● | | | | | | | | | | | | | | | | | ● | | | | |
| Fagopyrum esculentum Moench * | Polygonaceae | - | - | - | - | - | - | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | ● | Barnaul/Biysk |
| Fallopia convolvulus (L.) A. Löve | Polygonaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | ● | | | ■ | | | | | | | | | | | | | | |
| Festuca extremiorientalis Ohwi | Poaceae | | | 3 | 4 | 5 | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Festuca gigantea (L.) Vill. | Poaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Festuca ovina L. s.str. | Poaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Festuca pratensis Huds. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Festuca pseudovina Hack. ex Wiesb. | Poaceae | 1 | 2 | 3 | | | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Festuca rubra L. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | |
| Festuca valesiaca Gaudin | Poaceae | 1 | 2 | 3 | 4 | 5a | 6 | | | | ● | | | | | ● | | | | | | | | | | | | | ● | | | | | | |
| Filipendula stepposa Juz. | Rosaceae | 1 | | 3 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Filipendula ulmaria (L.) Maxim. | Rosaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | ● | | | | | | ● | ● | | | | | | ● | | | | | | | | | | | | | |
| Filipendula vulgaris Moench = F. hexapetala | Rosaceae | 1 | 2 | 3 | 4 | | | | ● | | ● | | | ● | | ● | | | | | ● | | | | | | | | | | | | | | |
| Fragaria vesca L. | Rosaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | | |
| Frangula alnus Mill. | Rhamnaceae | 1 | 2 | 3 | 4 | | 6 | ● | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Galatella angustissima (Tausch) Novopokr. | Asteraceae | 1 | | 3 | 4 | | 6 | | | | ● | | | | | | | | | | | | | | | ● | | | | | | | | | genus close to Aster |
| Galatella biflora (L.) Nees | Asteraceae | 1 | | 3 | 4 | | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Galega orientalis Lam. | Fabaceae | | 2 | | | | | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| Galeopsis ladanum L. | Lamiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | |
| Galium aparine L. | Rubiaceae | 1 | 2 | 3 | 4 | 5a | 6 | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | |
| Galium boreale L. | Rubiaceae | 1 | 2 | 3 | 4 | 5 | | | ● | | | | ● | | ● | | | | ● | ● | | ● | | ● | | | | | | | | | | | |
| Galium mollugo L. | Rubiaceae | 1 | 2 | 3 | | 5a | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Galium odoratum (L.) Scop. | Rubiaceae | 1 | 2 | 3 | 4 | 5 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Galium ruthenicum Willd. = G. verum L. subsp. ruthenicum (Willd.) P. Fourn. | Rubiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | stem with short hairs |
| Galium uliginosum L. | Rubiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Galium verum L. | Rubiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | ● | | | | | | ● | | | | | | | | | | ● | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | general travel observations, localities see under comments | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Gastrolychnis apetala (L.) Tolm. et Kozhanczikov | Caryophyllaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Gentiana algida Pall. | Gentianaceae | | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Gentiana aquatica L. | Gentianaceae | | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Gentiana decumbens L. fil. | Gentianaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | ● | | | | large flowers |
| Gentiana fischeri P. Smirn. | Gentianaceae | | | 3 | | | 6 | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Gentiana macrophylla Pall. | Gentianaceae | | | 3 | 4 | 5 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | ● | Katun near Platovo |
| Gentiana uniflora Georgi | Gentianaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Gentianella lingulata (Agardh) Pritchard = Gentiana lingulata Agardh | Gentianaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Gentianella sibirica (Kusn.) Holub = Gentiana sibirica (Kusn.) Grossh. | Gentianaceae | | | 3 | | | 6 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | |
| Gentianopsis barbata (Froel.) Ma = Gentiana barbata Froel. | Gentianaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | ● | | | | | | | ● | | | | | | | | | ● | | | | | |
| Geranium bifolium Patrin | Geraniaceae | | | 3 | 4 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Geranium pratense L. | Geraniaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | ● | ● | | | | | | | | | | | | | | ● | also between Toguchin and Yurty |
| Geranium sibiricum L. | Geraniaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | ● | | | | | | | | | | | | ● | | | | |
| Geranium sylvaticum L. | Geraniaceae | 1 | 2 | 3 | 4 | | 6 | | ● | | | | ● | | | | | | ● | | | | | | | | | | | | | | | | |
| Geum aleppicum Jacq. | Rosaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | ● | | | | | | | ● | ● | | | | | | | | | | | | | | | |
| Geum urbanum L. | Rosaceae | 1 | 2 | 3 | | 5 | 6 | ● | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Glaux maritima L. | Primulaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | ● | | | | |
| Glechoma hederacea L. | Lamiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Glyceria triflora (Korsh.) Kom. | Poaceae | 1 | | 3 | 4 | 5 | | | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | |
| Goniolimon speciosum (L.) Boiss. | Limoniaceae | 1 | | 3 | 4 | | 6 | | | | ● | | | | | | | | | | | | | | | | | | | ● | | ● | | | |
| Goodyera repens (L.) R. Br. | Orchidaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| Gymnocarpium dryopteris (L.) Newm. | P: Athyriaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Gypsophila altissima L. | Caryophyllaceae | 1 | 2 | 3 | 4 | | 6 | | ● | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Gypsophila patrinii Sér. | Caryophyllaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | ● | | ● | | | | | |
| Halerpestes salsuginosa (Pall. ex Georgi) Greene = H. ruthenica (Jacq.) Ovcz. | Ranunculaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | wet salty places |
| Halogeton glomeratus C.A. Mey. | Chenopodiaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Hedysarum austrosibiricum B. Fedtsch. | Fabaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Hedysarum neglectum Ledeb. | Fabaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Helianthus annuus L. * | Asteraceae | 1 | 2 | | | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | small patches in gardens and in fields, e.g. Barnaul/Biysk |
| Helictotrichon desertorum (Less.) Nevsk | Poaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | |
| Helictotrichon pubescens (Huds.) Pilg. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Helictotrichon schellianum (Hack..) Kitag. | Poaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | | ● | | | | | | | | | | | | |
| Heracleum dissectum Ledeb. | Apiaceae | | | 3 | 4 | 5 | 6 | | ● | | | | | | ●■ | | | | | | | | | | | | | | | | | | | | |
| Heracleum sibiricum L. = H. sphondylium L. subsp. sibiricum (L.) Simonk. | Apiaceae | 1 | 2 | 3 | | 5a | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Hesperis sibirica L. | Brassicaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | ● | ● | | | | | | | | | | | | | | |
| Heteropappus altaicus (Willd.) Novopokr. | Asteraceae | | | 3 | 4 | | 6 | | | | ● | | | | | | | | | | ● | | | | | | | | | | | | | | "Altai-Steppenaster" |
| Hieracium umbellatum L. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | ● | | | ● | | | | | | | | | | | | | | | | | | | |
| Hieracium virosum Pall. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Hierochloe alpina (Sw.) Roem. et Schult. | Poaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Hippophae rhamnoides L. | Elaeagnaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | ● | also Katun river bank N Gorno-Altaisk |
| Hippuris vulgaris L. | Hippuridaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |
| Hordeum brevisubulatum (Trin.) Link | Poaceae | 1a | | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | ● | ● | | | somewhat salty places |
| Humulus lupulus L. | Cannabaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | ● | rarely cultivated |
| Hydrocharis morsus-ranae L. | Hydrocharitaceae | 1 | 2 | 3 | 4 | | 6 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |
| Hyoscyamus niger L. | Solanaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Cherga; Aktash |
| Hypericum ascyron L. | Hypericaceae | | | 3 | 4 | 5 | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Hypopitys monotropa Crantz = Monotropa hypopitys L. | Monotropaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | ● | | | | | | | | | | | | | | ● | | | | | | | | |
| Impatiens glandulifera Royle | Balsaminaceae | 1 | | | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | in and around villages |
| Impatiens noli-tangere L. | Balsaminaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Inula britannica L. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Inula salicina L. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Iris humilis Georgi | Iridaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | yellow flowers, in spring |
| Iris potaninii Maxim. | Iridaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | |
| Iris pumila L. | Iridaceae | 1 | 2 | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | |
| Iris ruthenica Ker-Gawl. | Iridaceae | | | 3 | 4 | 5 | 6 | | | | | | ● | | | ● | | | | | | | ● | | | | ● | | | | | | | | |
| Isatis oblongata DC. | Brassicaceae | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Chike-Taman pass |
| Juglans mandshurica Maxim. | Juglandaceae | | | | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Barnaul, cultivated |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Juncus alpino-articulatus Chaix | Juncaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | |
| Juncus castaneus Smith | Juncaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | subalpine meadows |
| Juncus filiformis L. | Juncaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Juncus gerardii Loisel. | Juncaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Juncus tenuis Willd. | Juncaceae | 1 | 2 | | 4 | 5 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Juniperus pseudosabina Fisch. et C.A. Mey. | Cupressaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | |
| Juniperus sibirica Burgsd. = J. communis L. subsp. alpina (Suter) Celak. | Cupressaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Jurinea multiflora (L.) B. Fedtsch. | Asteraceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Kadenia dubia (Schkuhr) Lavrova et V. Tichomirov = Cnidium dubium (Schkuhr) Thell. | Apiaceae | 1 | | 3 | 4 | | 6 | | | | | | ● | | | | | | | | | | | | | | | | | | | | | ● | also between Toguchin and Yurty |
| Knautia arvensis (L.) Coult. | Dipsacaceae | 1 | 2 | 3a | 4a | 5a | 6 | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kobresia myosuroides (Vill.) Fiori | Cyperaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | ● | ● | | | |
| Kochia prostrata (L.) Schrad. | Chenopodiaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | ● | | | | | | | | | | | | | | ● | | | | | |
| Koeleria altaica (Domin) Kryl. | Poaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Koeleria cristata (L.) Pers. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | ● | | | | | | | | | | | | | ● | | | | | | |
| Koeleria delavignei Czern. ex Domin | Poaceae | 1 | | 3 | 4 | 5a | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | |
| Koenigia islandica L. | Polygonaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | rare species in the Altai mountains |
| Krascheninnikovia ceratoides (L.) Gueldenst. = Ceratoides papposa Botsch. et Ikonn. | Chenopodiaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | ● | | | | | | | | | | | | | | ● | | | | | |
| Lactuca tatarica (L.) C.A. Mey. | Asteraceae | 1 | 2 | 3 | 4 | 5a | 6 | | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | | |
| Lagotis integrifolia (Willd.) Schischk. | Scrophulariaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | ● | | | flowers with vanilla smell, used as spice |
| Lamium album L. | Lamiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | ● | | | | ● | | | | | | | | | | | | | | | | |
| Lappula redowskii (Hornem.) Greene | Boraginaceae | | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Lappula squarrosa (Retz.) Dumort. | Boraginaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | ● | | | | | | | | |
| Larix sibirica Ledeb. | Pinaceae | 1 | | 3 | 4 | | 6 | | | | | | ● | | | | | | | ● | | | ● | | | | ● | | | | | ● | ● | | | timber very durable;high light demand |
| Lathyrus frolovii Rupr. | Fabaceae | | | 3 | 4 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Lathyrus gmelinii Fritsch | Fabaceae | 1 | | 3 | 4 | | 6 | | ● | | | | ● | | ● | | | | | | | | | | | | | | | | | | | | |
| Lathyrus humilis (Ser.) Spreng. | Fabaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | character species of Scotch pine forest |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Lathyrus pisiformis L. | Fabaceae | 1 | 2 | 3 | 4 | | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lathyrus pratensis L. | Fabaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lathyrus vernus (L.) Bernh. | Fabaceae | 1 | 2 | 3 | 4 | | | | ● | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Lavatera thuringiaca L. | Malvaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Leontopodium leontopodioides (Willd.) Beauverd | Asteraceae | | | | 4 | 5 | | | | | | | | | | | | | | | ● | | | | | | | | | | | ● | | | |
| Leonurus sibiricus L. | Lamiaceae | | | 3? | 4 | 5 | | | | | | | | | | | | | | | ■ | | | | | | | | | | | | | | |
| Leonurus tataricus L. | Lamiaceae | | | 3 | 4 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |
| Lepidium densiflorum Schrad. | Brassicaceae | 1 | | 3 | 4 | 5 | 6 | | | | ● | | | ● | | | | | | | | | | | | | | | | | ● | | | | |
| Leucanthemum vulgare Lam. | Asteraceae | 1 | 2 | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ligularia glauca (L.) O. Hoffm. | Asteraceae | | | 3 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Ligularia sibirica (L.) Cass. | Asteraceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | | | |
| Lilium pilosiusculum (Freyn) Miscz. | Liliaceae | 1 | | 3 | 4 | | | | ● | | | | ● | | | | | | ● | | | | | | | | | | | | | | | | |
| Limosella aquatica L. | Scrophulariaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | |
| Linaria altaica Fisch. ex Kuprian. | Scrophulariaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ? | | | | | |
| Linaria vulgaris L. | Scrophulariaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Linnaea borealis L. | Caprifoliaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Linum altaicum Ledeb. ex Juz. | Linaceae | | | 3 | | | 6 | | | | | | | | | | | | | | ● | | | | | | | | | ● | | | | | |
| Lithospermum officinale L. | Boraginaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Lloydia serotina (L.) Reichenb. | Liliaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Lomatogonium sp. | Gentianaceae | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | ● | ● | | | |
| Lonicera altaica Pall. = L. caerulea L. subsp. altaica (Pall.) Gladkova | Caprifoliaceae | 1 | | 3 | 4 | | | | | | | | | | | | | | | | | ● | ● | ● | | | | | | | | | | | |
| Lonicera xylosteum L. | Caprifoliaceae | 1 | | 3 | | | | ● | | | | | ● | | ● | | | | | | | | | | | | | | | | | | | | |
| Lupinaster pentaphyllus Moench = Trifolium lupinaster L. | Fabaceae | | | 3 | 4 | 5 | 6 | | ● | | | | ● | | | ● | | | | | ● | | | | | | | | | | | | | | |
| Luzula confusa Lindeb. | Juncaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Luzula pilosa (L.) Willd. | Juncaceae | 1 | 2 | 3 | 4 | | 6 | ● | ● | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Luzula sibirica V. Krecz. | Juncaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | looks like L. mutiflora |
| Lychnis chalcedonica L. | Caryophyllaceae | 1 | | 3 | 4 | | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lychnis sibirica L. | Caryophyllaceae | | | 3 | 4 | 5 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | white flowers |
| Lycopersicon esculentum Mill. * | Solanaceae | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | cultivated in small greenhouses, also yellow fruits on markets |
| Lycopodium annotinum L. | P: Lycopodiaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Lycopus europaeus L. | Lamiaceae | 1 | 2 | 3 | 4 | | 6 | ■ | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |
| Lycopus exaltatus L. fil. | Lamiaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake floating islands, ■ = on the way to | | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | **28.7.** | **29.-30.7.** | | **31.7.** | **1.8.** | **1.8.** | **1.8.** | **2.8.** | **3.-4.8.** | | | **5.8.** | **6.8.** | | | **7.8.** | **8.8.** | **15.8.** | **10.8.** | | **14.8.** | **10.8.** | **11.-13.8.** | | **12.-13.8.** | **16.8.** | **28.7.-18.8.** | **Date** |
| Lysimachia nummularia L. | Primulaceae | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Katun river bank N Gorno-Altaisk |
| Maianthemum bifolium (L.) F.W. Schmidt | Convallariaceae | 1 | 2 | 3 | 4 | 5 | | ● | | | | | ● | | ● | | | | | | | | | | | | | | | | | | | | |
| Malva neglecta Wallr. | Malvaceae | 1 | 2 | | | 5a | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | |
| Matteuccia struthiopteris (L.) Tod. | P: Onocleaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | ● | | | | ● | | | | | | | | | | | | | | | | |
| Medicago falcata L. | Fabaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | ● | | | | | | | | | | | | | | ● | | | | | |
| Medicago sativa L. | Fabaceae | 1 | 2 | 3 | | 5 | 6 | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| Melampyrum nemorosum L. | Scrophulariaceae | 1 | | | 4a | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Melica nutans L. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Melilotus albus Medik. | Fabaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | ■ | | | | ● | | | | ■ | | | | | | | | | ● | ● | | | | | | | |
| Melilotus officinalis (L.) Pall. | Fabaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | ■ | | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| Menyanthes trifoliata L. | Menyanthaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | |
| Milium effusum L. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | ● | | | | ● | ● | | | | | | | | | | | | | | | |
| Minuartia kryloviana Schischk. ("grenovii") | Caryophyllaceae | | | 3 | | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Moneses uniflora (L.) A. Gray | Pyrolaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Myosotis krylovii Serg. | Boraginaceae | | | 3 | 4 | | 6 | | | | | | | | ● | | | | | ● | | | ● | | | | | | | | | | | | |
| Myosotis nemorosa Bess. = M. scorpioides L. agg. | Boraginaceae | 1 | | 3 | 4 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Naumburgia thyrsiflora (L.) Reichenb. = Lysimachia thyrsiflora L. | Primulaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | |
| Neottia camtschatea (L.) Reichenb. fil. | Orchidaceae | | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| Neottianthe cucullata (L.) Schlechter | Orchidaceae | 1 | | 3 | 4 | 5 | | | | | | | ● | | | | | | ● | | | | | | | | | | | | | | | ● | also S Biysk; blue flowers |
| Nepeta pannonica L. | Lamiaceae | 1 | 2 | 3 | 4 | | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nepeta sibirica L. | Lamiaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | ● | | | | | | | ● | | | ● | | | ● | also Katun near Platovo, SE Onguday |
| Neslia paniculata (L.) Desv. | Brassicaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nonea rossica Stev. = N. pulla DC. subsp. rossica (Stev.) Soó | Boraginaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | ● | | | | | | | | | | | | | | | | | | ● | also between Toguchin and Yurty |
| Odontites vulgaris Moench | Scrophulariaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | ● | | | ● | | | | | | | | | | | | | | | | | | | | | |
| Omalotheca norvegica (Gunn.) Sch. Bip. et F. Schultz = Gnaphalium norvegicum Gunn. | Asteraceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Onobrychis arenaria (Kit.) DC. | Fabaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Salair mountains to Barnaul |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Origanum vulgare L. | Lamiaceae | 1 | 2 | 3 | 4 | 5a | 6 | ● | ● | | | | ● | | | ● | | | | | ● | | | | | | | | | | | | | | |
| Orostachys spinosa (L.) C.A. Mey. | Crassulaceae | 1 | | 3 | 4 | 5 | 6 | | | | ● | | | | | ● | | | | | ● | | | | | | | | | | | | | | used as "fountain of youth" |
| Orostachys thyrsiflora Fisch. | Crassulaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Orthilia obtusata (Turcz.) Hara = Pyrola obtusata (Turcz.) Pavlov | Pyrolaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| Orthilia secunda (L.) House | Pyrolaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Oxalis acetosella L. | Oxalidaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Oxyria digyna (L.) Hill | Polygonaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Oxytropis aciphylla Ledeb. | Fabaceae | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Oxytropis campanulata Vass. | Fabaceae | | | 3 | 4 | | | | ● | | ● | | | | | | | | | | | | | | | | | | | | | | | | blue flowers |
| Oxytropis sp. ("multicaulis") | Fabaceae | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | |
| Oxytropis pilosa (L.) DC. | Fabaceae | 1 | 2 | 3 | 4 | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | ● | also Salair mountains to Barnaul |
| Oxytropis pumila Fisch. ex DC. | Fabaceae | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | blue flowers |
| Oxytropis tragacanthoides Fisch. | Fabaceae | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Pachypleurum alpinum Ledeb. | Apiaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Padus avium Mill. = Prunus padus L. | Rosaceae | 1 | 2 | 3 | | | 6 | | | | | | ● | | ● | | | | ● | | | | | | | | | | | | | | | | |
| Paeonia anomala L. | Paeoniaceae | 1 | | 3 | 4 | | 6 | | | | | | | | ● | | | | | ● | | | | | | | | | | | | | | | stratification necessary |
| Panicum miliaceum L. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | ●■ | | | | | | | | | | | | | | | | | |
| Panzerina canescens (Bunge) Sojak = Panzeria canescens Bunge | Lamiaceae | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Papaver nudicaule L. = P. alpinum L. var. xanthopetalum Trautv. | Papaveraceae | | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | yellow flowers |
| Paris quadrifolia L. | Trilliaceae | 1 | 2 | 3 | 4 | | | | | | | | | | ● | | | | ● | | | | | | | | | | | | | | | | |
| Parnassia palustris L. | Parnassiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | ● | | | | | | | | ● | ● | | | | | | | | ● | | | | |
| Patrinia sibirica (L.) Juss. | Valerianaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | ● | | | |
| Pedicularis amoena Adams ex Stev. | Scrophulariaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Pedicularis incarnata L. | Scrophulariaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Pedicularis oederi Vahl | Scrophulariaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Pedicularis sibirica Vved. | Scrophulariaceae | 1 | | 3 | 4 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Pennisetum americanum (L.) Leeke | Poaceae | 1 | 2 | | | | 6 | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| Pentaphylloides fruticosa (L.) Schwarz = Potentilla fruticosa L. subsp. floribunda (Pursh) Elkington | Rosaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | ● | | | | | | ● | | | | | | | "Kurilen tea" from young stems |
| Persicaria amphibia (L.) S.F. Gray = Polygonum amphibium L. | Polygonaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Petasites radiatus (J.F. Gmel.) Toman = P. laevigatus (Willd.) Reichenb. | Asteraceae | 1 | | 3 | 4 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | ● | also Cherga |
| Peucedanum morisonii Bess. ex Spreng. | Apiaceae | | | 3 | | | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | ● | also between Toguchin and Yurty |
| Peucedanum vaginatum Ledeb. | Apiaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Phalaroides arundinacea (L.) Rauschert = Phalaris arundinacea | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | ■ | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| Phleum alpinum L. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Phleum phleoides (L.) Karst. | Poaceae | 1 | 2 | 3 | 4 | 5a | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Phleum pratense L. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | | | ■ | | ● | | | | | | | | | | | | | | | |
| Phlomoides tuberosa (L.) Moench = Phlomis tuberosa L. | Lamiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | ● | | | ● | | | ● | | | | | | | | | | | | | | | | ● | Katun near Platovo |
| Phlomoides tuvinica (A. Schroeter) R. Kam. et Machmedov = Phlomis tuvinica A. Schroeter | Lamiaceae | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | ? | | | | | |
| Phragmites australis (Cav.) Trin. ex Steud. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |
| Picea abies (L.) Karst. | Pinaceae | 1 | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Picea obovata Ledeb. | Pinaceae | 1 | | 3 | 4 | 5 | | | | | | | | | ● | | | | | ● | | ● | | ● | | | ● | | | | | | | | |
| Picris davurica Fisch. | Asteraceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Picris hieracioides L. | Asteraceae | 1 | 2 | 3 | | | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pimpinella saxifraga L. | Apiaceae | 1 | 2 | 3 | 4 | 5a | | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pinus sibirica Du Tour = P. cembra L. subsp. sibirica (Du Tour) E. Murr. | Pinaceae | 1 | | 3 | 4 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Pinus sylvestris L. | Pinaceae | 1 | | 3 | 4 | 5 | | | ● | | | | ● | | | | | | ● | | | | | | | | | | | | | | | | |
| Pisum sativum L. * | Fabaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | ● | main crop |
| Plantago media L. | Plantaginaceae | 1 | | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Plantago urvillei Opiz | Plantaginaceae | 1 | 2 | 3 | 4 | | 6 | | | | ● | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Pleurospermum uralense Hoffm. | Apiaceae | 1 | | 3 | 4 | 5 | | | | | | | ● | | ● | | | | | ● | | | ● | | | | | | | | | | | | |
| Poa alpigena (Blytt) Lindm. = P. pratensis L. agg. | Poaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Poa alpina L. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Poa angustifolia L. = P. pratensis agg. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Poa argunensis Roshev. = P. attenuata Trin. subsp. argunensis (Roshev.) Tzvel. | Poaceae | | | | 4 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Poa attenuata Trin. | Poaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Poa insignis Litv. ex Roshev. | Poaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | close to P. sibirica |
| Poa palustris L. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Poa transbaicalica Roshev. = P. stepposa (Kryl.) Roshev. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | |
| Poa urssulensis Trin. | Poaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Polemonium caeruleum L. | Polemoniaceae | 1 | | 3 | 4 | | | | | | | | | | ● | | | | | ● | | | ● | | | | | | | | | | | | |
| Polygala comosa Schkuhr = P. hybrida DC. | Polygalaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Polygonatum humile Fisch. ex Maxim. | Convallariaceae | | | 3 | 4 | 5 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | green beneath |
| Polygonatum odoratum (Mill.) Druce | Convallariaceae | 1 | 2 | 3 | 4 | 5 | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonum aviculare L. | Polygonaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | ● | | | | ● | | | | | | | | | | | | ● | | | | | |
| Polypodium vulgare L. | P: Polypodiaceae | 1 | 2 | 3 | | 5 | 6 | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| Polystichum braunii (Spenn.) Fee | P: Dryopteridaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Populus alba L. | Salicaceae | 1 | 2 | 3 | | | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Populus balsamifera L. * | Salicaceae | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | in villages and wind protection woodlands, e.g. Toguchin, Barnaul/Biysk |
| Populus laurifolia Ledeb. | Salicaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | ● | | | ● | | | ● | | ● | | C Asian species |
| Populus tremula L. | Salicaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | ● | | | | ● | | ● | ● | | | | | | | | | | | | | | | | | | | |
| Populus x canescens (Ait.) Smith | Salicaceae | 1 | 2 | 3 | | | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Potamogeton pectinatus L. | Potamogetonaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| Potentilla acaulis L. | Rosaceae | | | 3 | 4 | 5? | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Potentilla anserina L. | Rosaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | ● | | | | |
| Potentilla argentea L. | Rosaceae | 1 | 2 | 3 | 4 | 5 | | | ● | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Potentilla bifurca L. | Rosaceae | 1 | | 3 | 4 | 5 | | | | | ● | | | | | ● | | | | | | | | | | | | | ● | ● | | | | | |
| Potentilla conferta Bunge | Rosaceae | 1 | | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | long hairs on petiole |
| Potentilla erecta (L.) Raeusch. | Rosaceae | 1 | 2 | 3 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Potentilla fragarioides L. | Rosaceae | | | 3 | 4 | 5 | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Potentilla gelida C.A. Mey. | Rosaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | ● | | | |
| Potentilla humifusa Willd. ex Schlecht. | Rosaceae | 1 | 2 | 3 | 4 | | 6 | | | | ● | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Potentilla longifolia Willd. ex Schlecht. | Rosaceae | 1 | | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | ● | also SE Onguday; upper 3 leaflets connected at base |
| Potentilla nudicaulis Willd. ex Schlecht | Rosaceae | | | | 4 | 5 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Potentilla sericea L. | Rosaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | |
| Potentilla tergemina Sojak | Rosaceae | 1a | | 3 | 4 | 5a | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Primula nivalis Pall. | Primulaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Primula pallasii Lehm. | Primulaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | ● | ● | | | | | | | | | | | | | | | close to P. elatior |
| Prunella vulgaris L. | Lamiaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Psathyrostachys juncea (Fisch.) Nevsk | Poaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | ● | | ■ | | | | | | | | ● | | | | ● | | | | | |
| Ptarmica impatiens (L.) DC. = Achillea impatiens L. | Asteraceae | | | 3 | 4 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pteridium aquilinum (L.) Kuhn | P: Hypolepidaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | ● | | | | | | ● | | | | | | | | | | | | | | | | |
| Ptilagrostis mongholica (Turcz. ex Trin.) Griseb. | Poaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Ptilotrichum canescens (DC.) C.A. Mey. | Brassicaceae | | | 3 | | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Puccinellia distans (Jacq.) Parl. | Poaceae | 1 | 2 | 3 | 4a | 5a | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Puccinellia tenuissima Litv. ex V. Krecz | Poaceae | 1 | | 3 | 4 | 5a | 6 | | | | ● | | | | | | | | | | | | | | | ● | | | | | | | | | |
| Pulmonaria mollis Wulf. ex Hornem. = P. dacica (Simonk.) Simonk. | Boraginaceae | 1 | 2 | 3 | 4 | | 6 | | ● | | | | ● | | ● | ● | | | | ● | | | | | | | | | | | | | | | |
| Pulsatilla patens (L.) Mill. | Ranunculaceae | 1 | | 3 | 4 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Pulsatilla turczaninovii Kryl. et Serg. | Ranunculaceae | | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | |
| Pyrola chlorantha Sw. | Pyrolaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Pyrola rotundifolia L. | Pyrolaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Quercus robur L. | Fagaceae | 1 | 2 | 3c | | | 6c | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ranunculus grandifolius C.A. Mey. | Ranunculaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | ● | ● | | | | | | | | | | | | | | | |
| Ranunculus longicaulis C.A. Mey. var. pulchellus (C.A. Mey.) Gubanov = R. pulchellus C.A. Mey. | Ranunculaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | |
| Ranunculus monophyllus Ovcz. | Ranunculaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | ● | | | | | ● | | | | | | | | | | | | | | | |
| Ranunculus natans C.A. Mey. | Ranunculaceae | | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | ● | | | | ● | ● | | | |
| Ranunculus reptans L. | Ranunculaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Reaumuria songarica (Pall.) Maxim. | Tamaricaceae | | | 3 | | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Rhinanthus vernalis (N. Zing.) Schischk. et Serg. | Scrophulariaceae | 1 | 2 | 3 | 4 | 5 | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rhizomatopteris sudetica (A. Br. et Milde) A. Khokhr. = Cystopteris sudetica A. Br. et Milde | P: Athyriaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Rhodiola coccinea (Royle) Boriss. | Crassulaceae | | | | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Rhodiola rosea L. | Crassulaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | ● | | | stimulator like Ginseng |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake floating islands, ■ = on the way to | | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside meadow and mire at Sema river | | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Rhododendron dauricum L. | Ericaceae | | | | 4 | 5 | | | | | | | | | | | | | ● | | | | | | | | ● | | | | | | | | pink flowers, sommer-green |
| Ribes atropurpureum C.A. Mey. | Grossulariaceae | | | 3 | 4 | | 6 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Ribes hispidulum (Jancz.) Pojark. | Grossulariaceae | 1 | | 3 | 4 | | 6 | | | | | | ● | | | | | | | ● | | | | | | | | | | | | | | | |
| Rorippa palustris (L.) Bess. | Brassicaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | |
| Rosa acicularis Lindl. | Rosaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | |
| Rosa majalis Herrm. | Rosaceae | 1 | | 3 | 4 | | | | | | | | ● | | | ● | | | ● | | | | | | | | | | | | | | | | |
| Rubus caesius L. | Rosaceae | 1 | 2 | 3 | | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Katun near Platovo |
| Rubus idaeus L. | Rosaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Rubus saxatilis L. | Rosaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | ● | | | | ● | | | | | | ● | | | | | | | | | | | | | | | ● | also between Toguchin and Yurty |
| Rumex alpestris Jacq. | Polygonaceae | 1 | 2 | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | ● | | | |
| Rumex maritimus L. | Polygonaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | ● | | |
| Salix bebbiana Sarg. | Salicaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Salix berberifolia Pall. | Salicaceae | | | | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Salix caprea L. | Salicaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | ● | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Salix cinerea L. | Salicaceae | 1 | 2 | 3 | | | 6 | ● | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |
| Salix dasyclados Wimm. | Salicaceae | 1 | | 3 | 4 | | 6 | | | | | ● | | | | | | | | | | | | | ● | | | | | | | | | | |
| Salix glauca L. | Salicaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | ● | | | | | | | | ● | | | |
| Salix krylovii E. Wolf = S. helvetica Vill. subsp. krylovii (E. Wolf) B. Floder. | Salicaceae | | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | ● | | | | | | | | ● | | | |
| Salix ledebouriana Trautv. | Salicaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | |
| Salix myrtilloides L. | Salicaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | ● | | | | ● | ● | | | |
| Salix pentandra L. | Salicaceae | 1 | | 3 | 4 | | 6 | | | | | ● | | ● | | | | | | | | ● | | | | | | | | | | | | | |
| Salix pyrolifolia Ledeb. | Salicaceae | 1 | | 3 | 4 | 5 | 6 | | | | | ● | | | | | | | | | | | | | | | ● | | | | ● | | | | |
| Salix reticulata L. | Salicaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Salix rorida Laksch. | Salicaceae | | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | riverside SE Onguday; tree, twigs with wax cover, C Asian species |
| Salix rotundifolia Trautv. | Salicaceae | | | | | 5 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Salix viminalis L. | Salicaceae | 1 | | 3 | 4 | | 6 | | | | | ● | | | | | | | | | | ● | | | | | | | | | ● | | | | |
| Salsola collina Pall. | Chenopodiaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | ■ | | | | | | | | ● | Salair/Barnaul (vegetative) |
| Salsola jacquemontii Moq. | Chenopodiaceae | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Salsola rosacea L. | Chenopodiaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Salvia pratensis L. | Lamiaceae | 1 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Sambucus sibirica Nakai = S. racemosa L. subsp. sibirica (Nakai) Hara | Sambucaceae (Caprifoliaceae s.l.) | 1 | | 3 | 4 | 5 | | | | | | | | | ● | | | | ● | | | | | | | | | | | | | | | | |
| Sanguisorba alpina Bunge | Rosaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Sanguisorba officinalis L. | Rosaceae | 1 | | 3 | 4 | 5 | 6 | | ● | | | | ● | | | ● | | | ● | ● | | ● | ● | | | | | | | | | | | | on Sarlik introduced with horses |
| Sanicula giraldii H. Wolff | Apiaceae | 1 | | 3 | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | in Engl. Pflanzenreich, Umbellif. Sanicul. 60 (1913), China (Shensi); probably new (relict) species |
| Saponaria officinalis L. | Caryophyllaceae | 1 | | 3 | 4 | 5a | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Barnaul |
| Saussurea amara (L.) DC. | Asteraceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | ● | | | | ● | | | | | |
| Saussurea controversa DC. | Asteraceae | 1 | | 3 | 4 | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | | | | | open forests |
| Saussurea latifolia Ledeb. | Asteraceae | | | 3 | 4 | | 6 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Saussurea parviflora (Poir.) DC. | Asteraceae | 1 | | 3 | 4 | | | | | | | | | | | | | | | ● | | ● | | ● | | | ● | | | | | ● | | | |
| Saussurea pricei Simps. | Asteraceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | semishrub? |
| Saussurea salicifolia (L.) DC. | Asteraceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Saxifraga hirculus L. | Saxifragaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Saxifraga melaleuca Fisch. ex Spreng. | Saxifragaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Saxifraga nelsoniana D. Don | Saxifragaceae | | | | 4 | 5 | | | | | | | | | | | | | | | | ● | | ● | | | | | | | | | | | leaves roundish |
| Saxifraga oppositifolia L. | Saxifragaceae | 1 | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Saxifraga sibirica L. | Saxifragaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Scabiosa ochroleuca L. | Dipsacaceae | 1 | 2 | 3 | 4 | | 6 | | | | ● | | | | | ● | | | | | ● | | | | | | | | | | | | | | |
| Schizonepeta annua (Pall.) Schischk. | Lamiaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | ◆ | | | | | ● | | | | | ◆ Katun-Terrasse |
| Schizonepeta multifida (L.) Briq. | Lamiaceae | | | 3 | 4 | 5 | | | | | ● | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Schulzia crinita (Pall.) Spreng. | Apiaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Scirpus lacustris L. = Schoenoplectus lacustris (L.) Pall | Cyperaceae | 1 | 2 | 3 | 4 | | 6 | | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | |
| Scirpus sylvaticus L. | Cyperaceae | 1 | 2 | 3 | 4 | | 6 | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scirpus tabernaemontani C.C. Gmel. = Schoenoplectus tabernaemontani (C.C. Gmel.) Palla | Cyperaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ■ | | | | | | | | | | | | | | | | | | | | | | | ● | Chuja between Aktash and Chagan-Uzun |
| Scolochloa festucacea (Willd.) Link | Poaceae | 1 | 2 | 3 | 4 | | 6 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |
| Scorzonera austriaca Willd. | Asteraceae | 1 | | 3 | 4 | | 6 | | | | ● | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Scutellaria scordiifolia Fisch. ex Schrank | Lamiaceae | | | 3 | 4 | 5 | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake floating islands, ■ = on the way to | | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside meadow and mire | | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Secale cereale L. * | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | ● | winter rye around Barnaul/Biysk |
| Secale montanum Guss. [?] | Poaceae | | | | | | | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | | |
| Sedum hybridum L. | Crassulaceae | 1 | | 3 | 4 | | 6 | | | | | | | | ■ | | | | | | ● | | | | | | | | | | | | | | | |
| Sedum telephium L. | Crassulaceae | - | - | - | - | - | - | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Senecio erucifolius L. | Asteraceae | 1 | | 3 | 4 | | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Senecio fluviatilis Wallr. = S. sarracenicus L. nom. ambig. | Asteraceae | 1 | 2 | 3 | 4 | | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Senecio jacobaea L. | Asteraceae | 1 | 2 | 3 | 4 | | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | |
| Senecio nemorensis L. | Asteraceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | |
| Serratula coronata L. = S. wolffii Andrae | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | ● | | | ● | | | | | | | | | | | | | | | | | | | | |
| Seseli buchtormense (Fisch. ex Hornem.) Koch | Apiaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | ● | | | | | | | ● | | | | | | | | |
| Seseli condensatum (L.) Reichenb. fil. = Libanotis condensata (L.) Crantz | Apiaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | | |
| Seseli ledebourii G.Don fil. | Apiaceae | | | 3 | | | 6 | | | | | | | | | ● | | | | | | ● | | | | | | | | | | | | | | |
| Seseli libanotis (L.) Koch = Libanotis pyrenaica (L.) Bourg. | Apiaceae | 1 | 2 | 3 | 4 | | 6 | | ● | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |
| Seseli strictum Ledeb. | Apiaceae | 1 | | 3 | | | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | |
| Setaria pumila (Poir.) Schult. | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Salair mountains to Barnaul |
| Sida hermaphrodita Rusby * | Malvaceae | 1 | | | | | | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | | "scenery plant", origin USA |
| Silene nutans L. | Caryophyllaceae | 1 | 2 | 3 | 4 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |
| Silene turgida Bieb. ex Bunge | Caryophyllaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | dense cushions, fine earth accumulating |
| Sisymbrium loeselii L. | Brassicaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Sisymbrium polymorphum (Murr.) Roth | Brassicaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | |
| Solanum dulcamara L. | Solanaceae | 1 | 2 | 3 | | | 6a | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Solanum nigrum L. | Solanaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | |
| Solanum tuberosum L. * | Solanaceae | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | covers 95% in the private gardens |
| Solidago dahurica Kitag. | Asteraceae | | | 3 | 4 | | 6 | | ● | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Solidago virgaurea L. | Asteraceae | 1 | 2 | 3 | | | | ● | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |
| Sonchus arvensis L. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | | | ● | | | | | | | | | | | | | | | | | | subsp. arvensis and subsp. uliginosus (Bieb.) Nym. |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Sorbus aucuparia L. | Rosaceae | 1 | 2 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sorbus sibirica Hedl. | Rosaceae | 1 | | 3 | 4 | 5 | | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | | | |
| Sorghum sudanense (Piper) Stapf * | Poaceae | 1 | 2 | 3 | | | 6 | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| Spiraea chamaedrifolia L. | Rosaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | ● | | ● | | ● | | | | ● | | | | | | | | |
| Spiraea hypericifolia L. | Rosaceae | 1 | 2 | 3 | 4 | | 6 | | | | ● | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Spiraea media Franz Schmidt | Rosaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | | | |
| Spiraea trilobata L. | Rosaceae | 1c | | 3 | 4 | | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Stachys annua (L.) L. | Lamiaceae | 1 | 2 | 3 | | 5a | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | SE Barnaul |
| Stachys palustris L. | Lamiaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stachys sylvatica L. | Lamiaceae | 1 | 2 | 3 | | | 6 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Stellaria bungeana Fenzl | Caryophyllaceae | 1 | | 3 | 4 | 5 | | | | | | | | | ● | | | | ● | ● | | | | | | | | | | | | | | | looks like S. nemorum |
| Stellaria dichotoma L. | Caryophyllaceae | | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Stellaria graminea L. | Caryophyllaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stellaria irrigua Bunge = S. umbellata Turcz. ex Kar. et Kir. | Caryophyllaceae | | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | ● | ● | | | |
| Stelleropsis altaica (Thieb.) Pobed. | Thymelaeaceae | | | 3 | | | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Stemmacantha carthamoides (Willd.) M. Dittrich = Rhaponticum carthamoides (Willd.)Iljin | Asteraceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | "Hirschwurzel", used as aphrodisiacum |
| Stipa capillata L. | Poaceae | 1 | 2 | 3 | 4 | | 6 | | | | | ■ | | | | ● | | | | | | | | | | | | | | | | | | | |
| Stipa glareosa P. Smirn. | Poaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | ● | | | broad leave sheath |
| Stipa krylovii Roshev. | Poaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | ● | | | ● | | | | | | corona of hairs at top of caryopse |
| Stipa orientalis Trin. | Poaceae | 1 | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | between Aktash and Kurai, yellow patches on slopes; awn plumose |
| Stipa pennata L. | Poaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | | ● | | | | | ● | | | | | | | | | | | | | | red book species because of steppe transformation to fields |
| Stratiotes aloides L. | Hydrocharitaceae | 1 | 2 | 3 | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | ● | also Ob flood plain |
| Suaeda corniculata (C.A. Mey.) Bunge | Chenopodiaceae | 1 | | 3 | 4 | | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Succisa pratensis Moench | Dipsacaceae | 1 | 2 | 3 | 4 | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Swertia obtusa Ledeb. | Gentianaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | ● | ● | ● | | | | | | | | | | | |
| Swida alba (L.) Opiz = Thelycrania alba (L.) Pojark., Cornus alba L. | Cornaceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | fruits shiny blue |
| Symphytum officinale L. | Boraginaceae | 1 | 2 | 3 | | 5a | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Taraxacum bessarabicum (Hornem.) Hand. Mazz. | Asteraceae | 1 | 2 | 3 | 4 | | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Teloxys aristata (L.) Moq. = Chenopodium aristatum L. | Chenopodiaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | ● | | | | | | | | | | | | | | | | ● | also Salair mountains to Barnaul |
| Tephroseris heterophylla (Fisch.) Konechn. = Senecio resedifolius Less. | Asteraceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Tephroseris integrifolia (L.) Holub = Senecio integrifolius (L.) Clairv. | Asteraceae | 1 | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Tephroseris pricei (Simps.) Holub = Senecio pricei Simps. | Asteraceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | flower heads villous-tomentose |
| Thalictrum alpinum L. | Ranunculaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Thalictrum foetidum L. | Ranunculaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | ● | | | | | | | | ● | | | | | | ● | | | | | | | | |
| Thalictrum minus L. | Ranunculaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | ● | | ● | | | | ● | ● | | | | | | | ● | | | | | | | | |
| Thalictrum petaloideum L. | Ranunculaceae | | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Thalictrum simplex L. | Ranunculaceae | 1 | 2 | 3 | 4 | | 6 | | ● | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Thelypteris palustris Schott | P: Thelypteridaceae | 1 | 2 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | |
| Thesium repens Ledeb. | Santalaceae | | | 3 | 4 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Thlaspi arvense L. | Brassicaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus marschallianus Willd. | Lamiaceae | 1 | 2 | 3 | | 5a | 6 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Thymus serphyllum L. | Lamiaceae | 1 | | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | |
| Tragopogon orientalis L. | Asteraceae | 1 | | 3 | 4a | 5a | 6 | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| Trifolium pratense L. | Fabaceae | 1 | 2 | 3 | 4 | 5a | 6 | | ● | | ● | | | ● | | | | ■ | | | | | | | | | | | | | | | | | |
| Triglochin maritimum L. | Juncaginaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | |
| Triglochin palustre L. | Juncaginaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | | | | | ● | | | | |
| Trisetum altaicum Roshev. | Poaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Trisetum sibiricum Rupr. | Poaceae | 1 | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | ● | | ● | | | | | | | | | | | | | |
| Triticum aestivum L. * | Poaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | main crop, e.g. Barnaul/Biysk |
| Triticum araraticum Jakubz. = T. montanum Makuschina | Poaceae | | 2 | | | | | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | perennial |
| Trollius asiaticus L. | Ranunculaceae | | | 3 | 4 | | 6 | | | | | | | | ● | | | | ● | ● | ● | | ● | | | | | | | | | ● | | | |
| Trommsdorfia maculata (L.) Bernh. = Achyrophorus maculatus (L.) Scop. | Asteraceae | 1 | 2 | 3 | 4 | | | | ● | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Tussilago farfara L. | Asteraceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | |
| Urtica cannabina L. | Urticaceae | 1a | | 3 | 4 | 5a | 6 | | | | | ● | | | | | | | | | | | | | | | | | | | | | | ● | Toguchin, Cherga; as weed in every village |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | **28.7.** | **29.-30.7.** | | **31.7.** | **1.8.** | **1.8.** | **1.8.** | **2.8.** | **3.-4.8.** | | | **5.8.** | **6.8.** | | | **7.8.** | **8.8.** | **15.8.** | **10.8.** | | **14.8.** | **10.8.** | **11.-13.8.** | | **12.-13.8.** | **16.8.** | **28.7.-18.8.** | **Date** |
| Urtica dioica L. | Urticaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | | | | | | | ● | | | | ● | ● | | | | | | | | | | | | | | | Salair, black taiga: natural habitat |
| Vaccinium myrtillus L. | Ericaceae | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Vaccinium vitis-idaea L. | Ericaceae | 1 | 2 | 3 | 4 | 5 | | ● | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Veratrum lobelianum Bernh. | Melanthiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | ● | ● | ● | | | | | | | | | | | |
| Veratrum nigrum L. | Melanthiaceae | 1 | | 3 | 4 | | 6 | | ● | | | | ● | | | | | | ● | ● | | | | | | | | | | | | | | | |
| Verbascum thapsus L. | Scrophulariaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | Salair mountains to Barnaul |
| Veronica anagallis-aquatica L. | Scrophulariaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| Veronica chamaedrys L. | Scrophulariaceae | 1 | 2 | 3 | 4 | 5 | 6 | ● | ● | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Veronica densiflora Ledeb. | Scrophulariaceae | | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | |
| Veronica incana L. | Scrophulariaceae | 1 | | 3 | 4 | 5 | 6 | | | | ● | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Veronica longifolia L. | Scrophulariaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Veronica officinalis L. | Scrophulariaceae | 1 | 2 | | | 5a | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Veronica pinnata L. | Scrophulariaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | |
| Veronica spicata L. | Scrophulariaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | ● | | | | | | | | | | | | | | | | ● | | | | | | | ● | also between Toguchin and Yurty |
| Viburnum opulus L. | Viburnaceae | 1 | 2 | 3 | 4 | | 6 | | | | | | | | ● | | | | ● | | | | | | | | | | | | | | | ● | also Katun near Platovo |
| Vicia amoena Fisch. | Fabaceae | | | 3 | 4 | 5 | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vicia costata Ledeb. | Fabaceae | | | 3 | | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | only Vicia species of desert habitats |
| Vicia cracca L. | Fabaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vicia faba L. * | Fabaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| Vicia sativa L. | Fabaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| Vicia sepium L. | Fabaceae | 1 | 2 | 3 | 4 | 5 | 6 | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vicia sylvatica L. | Fabaceae | 1 | | 3 | 4 | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vicia unijuga A.Br. | Fabaceae | | | 3 | 4 | 5 | | | ● | | | | ● | | | ● | | | ● | | | | | | | | | | | | | | | | |
| Vicia villosa Roth | Fabaceae | 1 | 2 | | | 5a | 6 | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| Vincetoxicum sibiricum (L.) Decne. | Asclepiadaceae | | | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | |
| Viola altaica Ker-Gawl. | Violaceae | | | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | flowers blue-yellow |
| Viola mirabilis L. | Violaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Viola rupestris F.W. Schmidt | Violaceae | 1 | | | 4 | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Viola uniflora L. | Violaceae | | | 3 | 4 | 5 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| Viola uniflora L. subsp. lasczinskyi V.V.Zuev | Violaceae | | | 3 | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | published in Fl. Sibir. (Geraniac.-Cornac.), 10: 98 (1996); named in honour to our botanic guide |
| Woodsia ilvensis (L.) R. Br. | P: Woodsiaceae | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | | | | ● | | ● | | | | | | | | | | | | |
| x Triticale rimpaui (Wittm) Muntz * = Secale cereale L. x Triticum aestivum L. | Poaceae | - | - | - | - | - | - | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | frost sensitive |
| Xanthium strumarium L. | Asteraceae | 1 | 2 | 3 | | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | |
| Youngia tenuifolia (Willd.) Babc. et Stebb. | Asteraceae | | | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Ziziphora clinopodioides Lam. | Lamiaceae | | 2 | 3 | 4 | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | ● | also Cherga; intensive smelling of Menthol |
| Zygophyllum pterocarpum Bunge | Zygophyllaceae | | | 3 | | | 6 | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 734 | species numbers | 535 | 341 | 665 | 624 | 361 | 473 | 53 | 96 | 12 | 85 | 21 | 69 | 22 | 81 | 68 | 8 | 42 | 69 | 48 | 59 | 51 | 66 | 73 | 6 | 16 | 36 | 9 | 22 | 61 | 41 | 74 | 17 | 69 | |
| | percentage of regional distribution | 73% | 46% | 91% | 85% | 49% | 64% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nomenclature follows Czerepanow (1995) for vascular plants (* = only cultivated plant). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | | - | 2-1/2 | | - | - | - | 3 | 4-1/2 | | - | - | 5 | 6 | | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | | Yurty | | | Chrestinovski | Aprelka | Salair | Barnaul | | | | Ust-Sema | Kumalyr | | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | | | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | general travel observations, localities see under comments | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | | 31.7. | 1.8. | 1.8. | | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| **Bryophytes** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Abietinella abietina (Hedw.) Fleisch. | B: Thuidiaceae | N hemisphere | | | | | | | | | | | | | | | | | | | | ● | | | | | | | ● | | | | | | | | | | |
| Aulacomnium palustre (Hedw.) Schwaegr. | B: Aulacomniaceae | boreal + temperate regions of N + S hemisphere | | | | | | | | | | | | | | | | | | | | | | ● | | ● | | | | | | | | | | | | | |
| Bryum pseudotriquetrum (Hedw.) Gaertn., Mey et Scherb. | B: Bryaceae | Eurasia, N America | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Calliergon stramineum (Brid.) Kindb. | B: Amblystegiaceae | N hemisphere, S America | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | |
| Calliergonella cuspidata (Hedw.) Loeske | B: Amblystegiaceae | N hemisphere, New Zealand, S America, Australia | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | |
| Climatium dendroides (Hedw.) Web. et Mohr | B: Climatiaceae | N hemisphere, New Zealand | | | | | | | | | | | | | | | ● | | | | | | | ● | | | | | | | | | | | | | | | |
| Cratoneuron filicinum (Hedw.) Spruce | B: Cratoneuraceae | N hemisphere, parts of S America, New Zealand | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Dicranum polysetum Sw. | B: Dicranaceae | Eurasia, N America | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Drepanocladus sp. | B: Amblystegiaceae | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| Fontinalis antipyretica Hedw. | B: Fontinalaceae | N hemisphere | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | |
| Homalothecium nitens (Hedw.) Robins. = Tomenthypnum nitens (Hedw.) Loeske | B: Brachytheciaceae | circumpolar | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | |
| Hylocomium splendens (Hedw.) B.S.G. | B: Hylocomiaceae | Eurasia, Africa, N America, New Zealand | | | | | | | | | | | | | ● | | | | | | ● | ● | | ● | | | | | | | | | | | | | | | |
| Orthodicranum montanum (Hedw.) Loeske | B: Dicranaceae | Eurasia, N America | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Paludella squarrosa (Hedw.) Brid. | B: Meeseaceae | arctic + boreal regions of Eurasia + N America, Alps | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Plagiomnium cuspidatum (Hedw.) Kop. | B: Mniaceae | Eurasia, N America | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Plagiomnium ellipticum (Brid.) Kop. = P. affine agg. | B: Mniaceae | - | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Pleurozium schreberi (Brid.) Mitt. | B: Hylocomiaceae | N hemisphere, mountains of S | | | | | | | | | | | | | ● | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Polytrichum commune Hedw. | B: Polytrichaceae | almost cosmopolitic | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, | spruce forest, | pingos, mire terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| **Species** | **Plant family** | **1** | **2** | **3** | **4** | **5** | **6** | **28.7.** | **29.-30.7.** | | **31.7.** | **1.8.** | **1.8.** | **1.8.** | **2.8.** | **3.-4.8.** | | | **5.8.** | **6.8.** | | | **7.8.** | **8.8.** | **15.8.** | **10.8.** | | **14.8.** | **10.8.** | **11.-13.8.** | | **12.-13.8.** | **16.8.** | **28.7.-18.8.** | **Date** |
| Polytrichum strictum Menz. ex Brid. | B: Polytrichaceae | Holarctis, subantarctic S America | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Ptilium crista-castrensis (Hedw.) De Not. | B: Hypnaceae | N hemisphere, montane-subalpine | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | |
| Ptilidium pulcherimum (G. Web.) Vainio | B: Ptilidiaceae | Eurasia, N America | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Rhacomitrium sp. | B: Grimmiaceae | - | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Rhytidiadelphus triquetrus (Hedw.) Warnst. | B: Hylocomiaceae | N hemisphere, Africa | | | | | | | | | | | | | ● | | | | ● | | | | | | | | | | | | | | | | "electric cats tail", N rich conditions |
| Rhytidium rugosum (Hedw.) Kindb. | B: Rhytidiaceae | Europe, N America | | | | | | | | | | | | | | | | | | ● | | | | ● | | | ● | | | | | | | | |
| Sphagnum angustifolium (Russ.) C. Jens | B. Sphagnaceae | Europe, N America | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Sphagnum capillifolium (Ehrh.) Hedw. = S. nemoreum Scop. nom. dub. | B: Sphagnaceae | Eurasia, N to S-America | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Sphagnum fuscum (Schimp.) Klinggr. | B: Sphagnaceae | Eurasia, N America | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| Sphagnum girgensohnii Russ. | B: Sphagnaceae | Eurasia, N America | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | red/green colour |
| Sphagnum warnstorfii Russ. | B: Sphagnaceae | Eurasia, N America | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 29 | species numbers | | | | | | | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 6 | 0 | 0 | 0 | 2 | 3 | 0 | 12 | 2 | 4 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nomenclature of bryophytes follows Frahm & Frey (1992). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Key site | | *Vascular plants:* Regions of the former USSR (a = alien, c = cult.). *Bryophytes:* world distribution. Lichens: no specification | | | | | | - | 1-1/4 | - | 2-1/2 | - | - | - | 3 | 4-1/2 | - | - | 5 | 6 | - | - | 7-1 | 7-2 | 8 | 9-2 | 9-3 | - | 10 | 11 | | 12 | - | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Locality | | | | | | | | Sagorsk | Chebula | | Yurty | | Chrestinovski | Aprelka | Salair | Barnaul | | | Ust-Sema | Kumalyr | | | Seminsky pass, Sarlik | | | Aktash | | | Kurai | Chagan-Uzun | | Beltir to Karagem Pass | Talmenka | general travel observations, localities see under comments | |
| Vegetation type | | E Europe | Caucasus | W Siberia | E Siberia | Far East | Middle Asia | birch forest, ■ = lake | forest steppe | lake, ■ = village | salted maeadow, steppe; ■ = lake | floating islands, ■ = on the way to | Scotch pine forest | manganous quarry | black taiga, ■ = camp site | forest steppe | water pond | BAS Centre, ■ = cult. | Scotch pine forest | larch forest | steppe, ■ = roadside | meadow and mire at Sema river | Siberian cedar forest | tundra, mire | Jaloman river junction, ■ = | ■ = salted steppe, ■ = sand-pit | spruce forest, pingos, mire | terrace of Menka river | dry steppe | semi-desert | mire, river | alpine meadow, mire, tundra | river bank | | Comments |
| Species | Plant family | 1 | 2 | 3 | 4 | 5 | 6 | 28.7. | 29.-30.7. | | 31.7. | 1.8. | 1.8. | 1.8. | 2.8. | 3.-4.8. | | | 5.8. | 6.8. | | | 7.8. | 8.8. | 15.8. | 10.8. | | 14.8. | 10.8. | 11.-13.8. | | 12.-13.8. | 16.8. | 28.7.-18.8. | Date |
| **Lichens** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aspicilia tominii Oxn. | L: Lecanoraceae (Hymeneliaceae) | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | moving lichen |
| Aspicilia vagans Oxn. | L: Lecanoraceae (Hymeneliaceae) | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | moving lichen |
| Cetraria cucullata (Bell.) Ach. | L: Parmeliaceae | - | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Cetraria islandica (L.) Ach. | L: Parmeliaceae | - | | | | | | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Cetraria nivalis (L.) Ach. | L: Parmeliaceae | - | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Cladonia coccifera (L.) Willd. | L: Cladoniaceae | - | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | red pyknidia |
| Cladonia mitis Sandst. = Cladina mitis (Sandst.) Hale et W. Culb. | L: Cladoniaceae | - | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Cladonia rangiferina (L.) Wigg. = Cladina rangiferina (L.) Nyl. | L: Cladoniaceae | - | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| Cladonia stellaris (Opiz) Pouzar et Vezda = Cladonia alpestris (L.) Rabenh., Cladina stellaris (Opiz) Brodo | L: Cladoniaceae | - | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Evernia sp. | L: Usneaceae | - | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | |
| Graphis scripta (L.) Ach. | L: Graphidaceae | - | | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Parmelia vagans Nyl. | L: Parmeliaceae | - | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| Peltigera sp. | L: Peltigeraceae | - | | | | | | | | | | | | ● | | | | | | | | | | ● | | | | | | | | | | | |
| Stereocaulon paschale (L.) Hoffm. | L: Stereocaulaceae | - | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| Thamnolia vermicularis (Sw.) Ach. ex Schaer | L: Usneaceae | - | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | "Totengebein" |
| Umbilicaria sp. | L: Umbilicariaceae | - | | | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| 16 | species numbers | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Nomenclature of lichens follows Wirth (1980) and Kopaczevskaja et al. (1971) for Aspicilia. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 779 | total species numbers | | | | | | | 53 | 96 | 12 | 86 | 21 | 73 | 24 | 88 | 68 | 8 | 42 | 71 | 51 | 59 | 63 | 74 | 83 | 6 | 16 | 39 | 9 | 22 | 61 | 44 | 74 | 17 | 69 | |