

IOPB COLUMN

Edited by Karol Marhold & Ilse Breitwieser

IAPT/IOPB chromosome data 16

Edited by Karol Marhold

Laura Chalup^{1*} & Guillermo Seijo^{1,2}¹ Instituto de Botánica del Nordeste (UNNE-CONICET), Facultad de Ciencias Agrarias, Sgto. Cabral 2131, 3400 Corrientes, Argentina² Facultad de Ciencias Exactas y Naturales y Agrimensura, Universidad Nacional del Nordeste, Avenida Libertad 5500, 3400 Corrientes, Argentina

* Author for correspondence: lchalup@agr.unne.edu.ar

This work was supported by Agencia Nacional de Promoción Científica y Tecnológica, Argentina PICTO-UNNE 090. Laura Chalup is a fellow of Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina.

* First chromosome count for the species or variety.

▼ First chromosome count for a given country.

FABACEAE

Lathyrus crassipes Hook. & Arn.

$2n = 14$, CHN. Argentina, Corrientes, Empedrado, El Sombrero Experimental Station of National Institute of Agronomic Technology (INTA), 27°33'44" S, 58°44'55" W, 10 Nov 2000, G. Seijo, G. Lavia, H. Roig & H. Bogado 2349 (CTES, G, U).

Lathyrus latifolius L.

$2n = 14$, CHN. Argentina, Córdoba, Punilla, Capilla del Monte, 30°51'17" S, 64°31'33" W, 11 Nov 2005, V. Solís Neffa 1998 (CTES) [Fig. 1A].

$n = 7$, CHN. Argentina, Río Negro, Bariloche, Puerto Pañuelo, 41°03'13" S, 71°31'58" W, 7 Feb 1998, G. Seijo 1170 (CTES, LIL, SPF).

Lathyrus macrostachys Vogel

$n = 7$, CHN. Argentina, Misiones, Posadas, Zaimán river, 27°26'48" S, 55°54'12.1" W, 3 Dec 2008, L. Chalup, G. Seijo, V. Solís Neffa & A. González 1 (CTES).

Lathyrus magellanicus var. *glaucescens* Speng.

* $2n = 14$, CHN. Argentina, Chubut, Languiñeo, Corcovado river, 43°53'53" S, 71°25'30" W, 2 Feb 2009, L. Chalup, W. Medina, C. Mackluf & E. Meza Torres 19 (CTES, MO, NY) [Fig. 1C].

Lathyrus magellanicus Lam. var. *magellanicus*

$2n = 14$, CHN. Argentina, Río Negro, Bariloche, Gutiérrez lake, 41°13'25" S, 71°24'43" W, 17 Jan 2000, G. Seijo 2307 (CTES, K, NY, SI) [Fig. 1B].

Lathyrus magellanicus var. *tucumanensis* Burkart

$n = 7$, CHN. Argentina, Jujuy, Tiraxi, 20°00'19" S, 64°21'24" W, 19 Sep 1997, G. Seijo & M. Dematteis 1109 (CEN, CTES, LPB, MBM, NY).

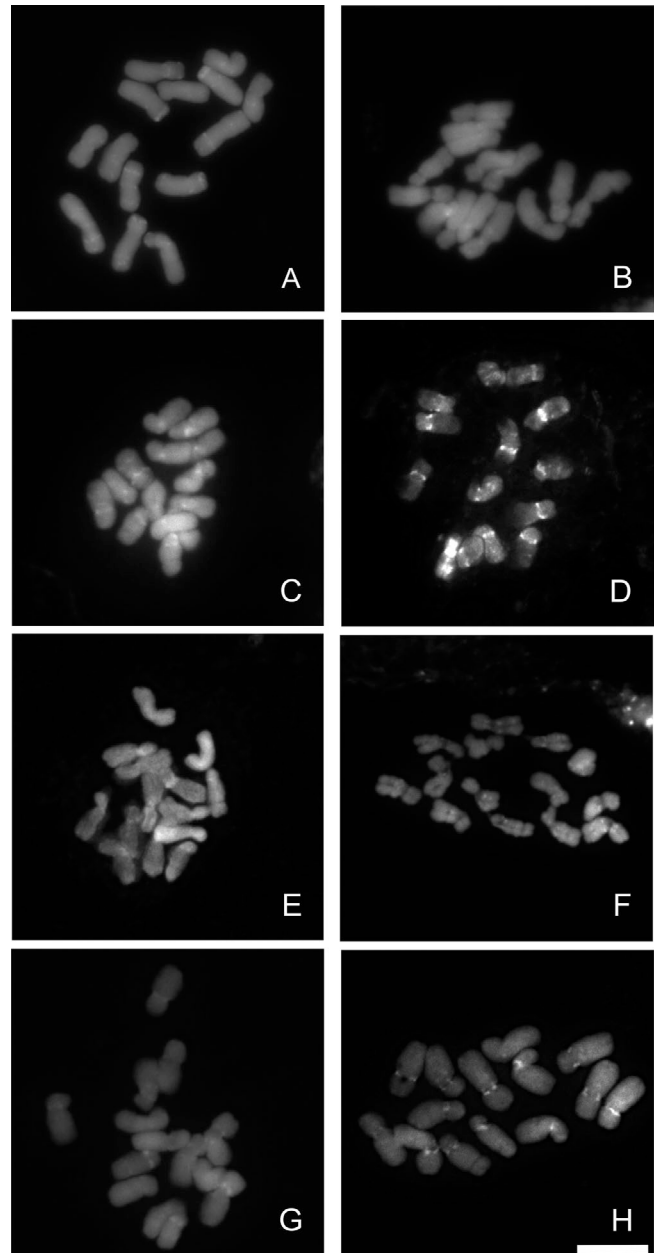


Fig. 1. Mitotic metaphases of *Lathyrus* stained with DAPI. **A**, *L. latifolius* (V. Solís Neffa 1998), $2n = 14$; **B**, *L. magellanicus* var. *magellanicus* (G. Seijo 2307), $2n = 14$; **C**, *L. magellanicus* var. *glaucescens* (L. Chalup & al. 19), $2n = 14$; **D**, *L. multiceps* (G. Seijo 1607), $2n = 14$; **E**, *L. nitens* (G. Seijo & V. Solís Neffa 3966), $2n = 14$; **F**, *L. paranensis* (G. Seijo & V. Solís Neffa 3954), $2n = 14$; **G**, *L. pubescens* (G. Seijo & V. Solís Neffa 3972), $2n = 14$; **H**, *L. pubescens* (G. Seijo 2332), $2n = 14$. — Scale bar = 10 μ m.

All materials for the chromosome column should be submitted electronically to: Karol Marhold, karol.marhold@savba.sk (Institute of Botany, Slovak Academy of Sciences, SK-845 23 Bratislava, Slovakia, and Department of Botany, Charles University, CZ 128–01 Prague, Czech Republic). The full version of this contribution is available in the online edition of TAXON appended to this article. The following citation format is recommended: Baltisberger, M. & Voelger, M. 2006. *Sternbergia sicula*. In: Marhold, K. (ed.), IAPT/IOPB chromosome data 1. *Taxon* 55: 444, E2.

Lathyrus multiceps Clos

$2n = 14$, CHN. Argentina, Neuquén, Los Lagos, Correntoso river, 40°44'13" S, 71°40'15" W, 28 Jan 1999, *G. Seijo 1607* (CTES, F, TEX) [Fig. 1D].

$n = 7$, CHN. Argentina, Neuquén, Lacar, Hermoso lake, 40°21'40" S, 71°28'36" W, 10 Feb 1998, *G. Seijo 1194* (CTES, K, MICH); Argentina, Neuquén, Aluminé, Villa Pehuenia, 38°53'37" S, 71°11'09" W, 3 Feb 1998, *G. Seijo 1653* (ALCB, CTES, G, HUEFS, MBM).

Lathyrus nitens Vogel

* $2n = 14$, CHN. Uruguay, Tacuarembó, road to Gruta de los Cuervos, 31°37'12" S, 56°02'30" W, 17 Nov 2007, *G. Seijo & V. Solís Neffa 3966* (CTES, UTEP) [Fig. 1E].

Lathyrus paranensis Burkart

▼ $2n = 14$, CHN. Uruguay, Rivera, route 29, Cañada de Santa Bárbara, 31°35'22" S, 55°30'23" W, 16 Nov 2007, *G. Seijo & V. Solís Neffa 3954* (ASU, BGE, CTES, FUEL, I, MBM) [Fig. 1F]; Uruguay, Colonia, 17 km N Cufre, 34°04'43" S, 57°05'09" W, 22 Nov 2007, *G. Seijo & V. Solís Neffa 3984* (CTES).

Lathyrus pubescens Hook. & Arn.

▼ $2n = 14$, CHN. Uruguay, Rivera, Bajada de Pena, 31°08'35" S, 55°54'59" W, 15 Nov 2007, *G. Seijo & V. Solís Neffa 3941* (CTES, FUEL, IAC, ICN, MBM, MO); Uruguay, San José, Balneario Kiyú, 31°41'36" S, 56°44'55" W, 21 Nov 2007, *G. Seijo & V. Solís Neffa 3972* (CEN, CTES) [Fig. 1G]; Argentina, Buenos Aires, Tornquist, route 72, 10 km S from Saldungaray to Paso de Piedras dum, 38°05'29" S, 62°16'13" W, 20 Jan 2000, *G. Seijo 2332* (CTES) [Fig. 1H].

$n = 7$, CHN. Argentina, Tucumán, road from Anta Muerta to Villa Noguéz, 26°51'32" S, 65°21'09" W, 18 Sep 1997, *G. Seijo & M. Dematteis 1086* (CTES, CUVC, HUEFS, MBM, MICH, NY); Argentina, San Luis, Chacabuco, Villa Larca, Chorro de San Ignacio, 32°38'32" S, 64°56'47" W, 13 Dec 1999, *G. Seijo 2059* (CTES); Bolivia, Santa Cruz, Caballero, 8 km W from Comarapa to Cochabamba, 17°54'35" S, 64°35'06" W, 31 Jan 2004, *G. Seijo, V. Solís Neffa, A. Schinini & R. Almada 3082* (CTES).

Neli H. Grozeva

Department of Biology and Aquaculture, Agricultural Faculty, Trakia University, 6000 Stara Zagora, Bulgaria; grozeva@uni-sz.bg

This study was supported by the Project Scientific Research Fund of Trakia University, Agriculture faculty.

CHENOPODIACEAE*Atriplex oblongifolia* Waldst. & Kit.

$2n = 36$, CHN. Bulgaria, the Black Sea Coast, Nessebar old town, sandy terrains in the east end of the beach with *Chenopodium vulvaria* L. and *C. polyspermum* L., 42°39' N, 27°44' E, 0 m, 22 Sep 2010, *N.H. Grozeva 4058* (SOM) [Fig. 2A].

Atriplex tatarica L.

$2n = 18$, CHN. Bulgaria, the Black Sea Coast, Varnensko ezero lake, periodically flooded coastal alluvial saline sands, along coastline with *Bassia hirsuta* (L.) Asch., 43°11' N, 27°50' E, 79 m, 08 Sep 2011, *N.H. Grozeva 4059* (SOM) [Fig. 2B].

Bassia hirsuta (L.) Asch.

$2n = 18$, CHN. Bulgaria, the Black Sea Coast, Varnensko ezero lake, periodically flooded coastal alluvial sands, along coastline with *Atriplex tatarica*, 43°11' N, 27°50' E, 79 m, 08 Sep 2011, *N.H. Grozeva 4060* (SOM) [Fig. 2C].

Bassia laniflora (S.G. Gmel.) A.J. Scott

$2n = 18$, CHN. Bulgaria, the Black Sea Coast, Ahtopol town, near the coastline south of the town with *Corispermum nitidum* Kit. ex Schult., *Salsola tragus* L., *Chenopodium pratericola* Rydb. etc., 42°05'40" N 27°56'60" E, 6 m, 09 Sep 2011, *N.H. Grozeva 4062* (SOM) [Fig. 2D].

This is the first chromosome count for the species from Bulgarian populations.

Chenopodium album L.

$2n = 54$, CHN. Bulgaria, Sredna Gora Mt., Gorno Novo selo village, ruderal places at the western end of the village near the road for the hut Kavaklika, 42°27' N, 25°14' E, 597 m, 17 Sep 2010, *N.H. Grozeva 4061* (SOM) [Fig. 2E].

Chenopodium chenopodioides (L.) Aellen

$2n = 18$, CHN. Bulgaria, the Black Sea Coast, Obzor town, near the coastline north of the town with *Eryngium maritimum* L. and *Crambe maritima* L., 42°49'43" N, 27°52'55" E, 1 m, 22 Sep 2011, *N.H. Grozeva 4063* (SOM) [Fig. 2F].

Chenopodium polyspermum L.

$2n = 18$, CHN. Bulgaria, Thracian Lowland, Asenovgrad town, ruderal places on the territory of the health centre Euomed with *Polygonum aviculare* L., 42°01' N, 24°52' E, 104 m, 18 Sep 2010, *N.H. Grozeva 4064* (SOM) [Fig. 2G].

Chenopodium rubrum L.

$2n = 18$, CHN. Bulgaria, Thracian Lowland, Stara Zagora town, around the trunk of *Tilia tomentosa* in the Trite chuchura neighborhood, 42°25' N, 25°38' E, 195 m, 25 Sep 2010, *N.H. Grozeva 4067* (SOM) [Fig. 2H].

Chenopodium strictum Roth

$2n = 36$, CHN. Bulgaria, Thracian Lowland, Purvomay town, degraded land between the houses along Viktor Yugo street in Debar neighborhood, 42°06' N, 25°13' E, 134 m, 28 Sep 2010, *N.H. Grozeva 4065* (SOM) [Fig. 2I].

Chenopodium urbicum L.

$2n = 18$, CHN. Bulgaria, Thracian Lowland, Tselina village, ruderal places east of the gas station along the road to Velikan village with *Chenopodium album*, 42°07' N, 25°27' E, 193 m, 27 Sep 2010, *N.H. Grozeva 4066* (SOM) [Fig. 2J].

Corispermum nitidum Kit. ex Schult.

$2n = 18$, CHN. Bulgaria, the Black Sea Coast, Ahtopol town, near the coastline south of the town with *Corispermum nitidum*, *Bassia laniflora*, *Salsola tragus*, *Chenopodium pratericola*, etc., 42°05' N 27°56' E, 6 m, 09 Sep 2011, *N.H. Grozeva 4068* (SOM) [Fig. 2K].

Dysphania pumilio (R. Br.) Mosyakin & Clemants

$2n = 18$, CHN. Bulgaria, Rhodope Mts., Kurdzhali town, ruderal places between buildings in Studen kladenec neighborhood with *Dysphania botrys* (L.) Mosyakin & Clemants, 41°39' N, 25°38' E, 275 m, 10 Sep 2011, *N.H. Grozeva 4069* (SOM) [Fig. 2L].

Salicornia europaea L.

$2n = 18$, CHN. Bulgaria, the Black Sea Coast, Pomoriysko lake, in saline areas around the lake near Salt museum with *Bassia hirsuta* and *Suaeda maritima* (L.) Dumort., 42°35' N, 27°37' E, 10 m, 08 Sep 2011, *N.H. Grozeva 4070* (SOM) [Fig. 2M].

This is the first chromosome count for the species from Bulgarian populations.

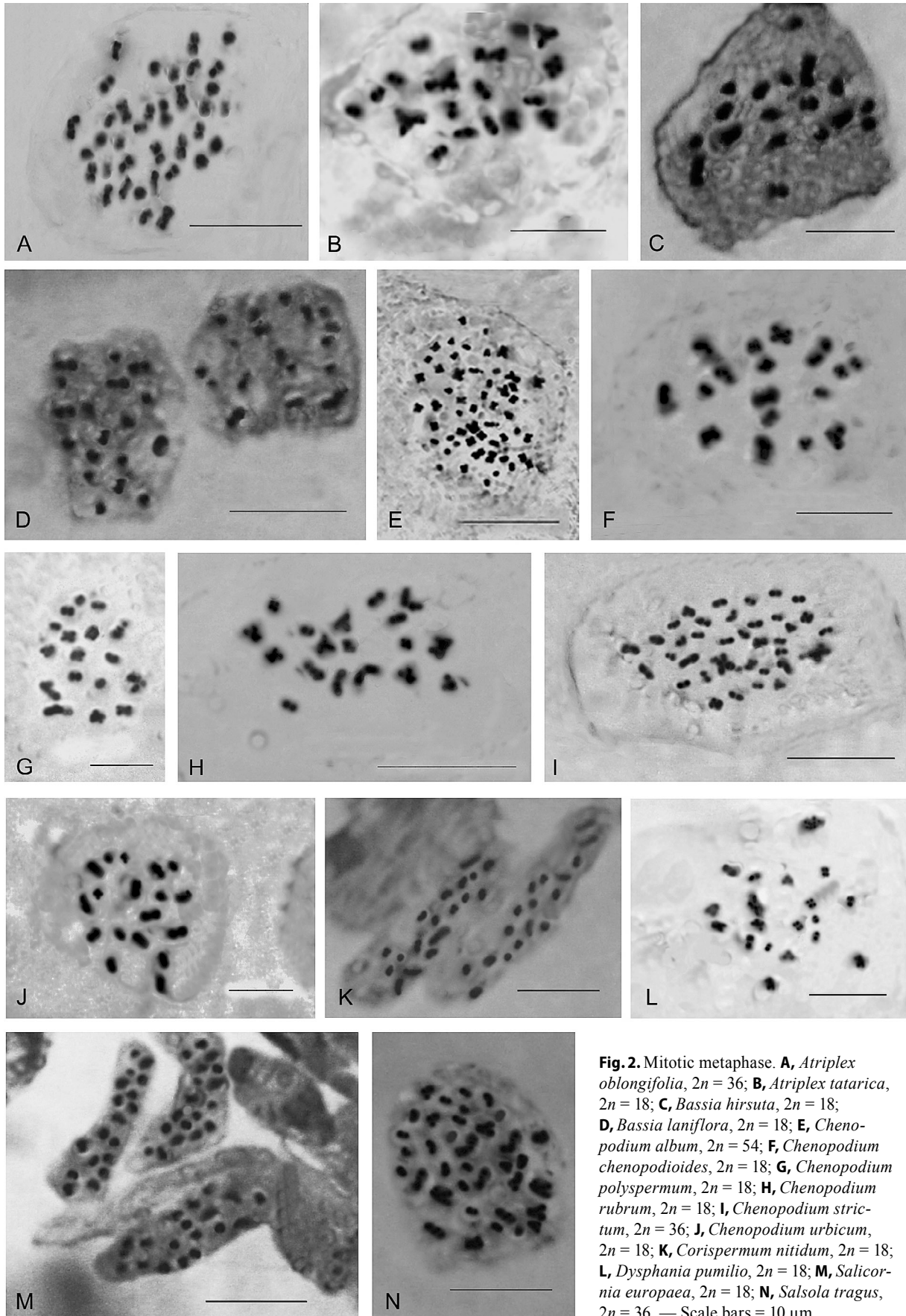


Fig. 2. Mitotic metaphase. **A**, *Atriplex oblongifolia*, $2n = 36$; **B**, *Atriplex tatarica*, $2n = 18$; **C**, *Bassia hirsuta*, $2n = 18$; **D**, *Bassia laniflora*, $2n = 18$; **E**, *Chenopodium album*, $2n = 54$; **F**, *Chenopodium chenopodioides*, $2n = 18$; **G**, *Chenopodium polyspermum*, $2n = 18$; **H**, *Chenopodium rubrum*, $2n = 18$; **I**, *Chenopodium strictum*, $2n = 36$; **J**, *Chenopodium urbicum*, $2n = 18$; **K**, *Corispermum nitidum*, $2n = 18$; **L**, *Dysphania pumilio*, $2n = 18$; **M**, *Salicornia europaea*, $2n = 18$; **N**, *Salsola tragus*, $2n = 36$. — Scale bars = 10 μ m.

Salsola tragus L.

$2n = 36$, CHN. Bulgaria, the Black Sea Coast, Ahtopol town, near the coastline south of the town with *Corispermum nitidum*, *Bassia laniflora*, *Chenopodium pratericola*, etc., 09 Sep 2011, 42°05'40" N 27°56'60" E, 6 m, *N.H. Grozeva 4071* (SOM) [Fig. 2N].

This is the first chromosome count for the species from Bulgarian populations.

Denis A. Krivenko,^{1*} Violetta V. Kotseruba,² Sergey G. Kazanovsky,¹ Alla V. Verkhozina¹ & Olga D. Chernova³

1 *Institute of Plant Physiology & Biochemistry Siberian Branch of the Russian Academy of Sciences, 132 Lermontov Str., 664033, Irkutsk, Russia*

2 *Komarov Botanical Institute of the Russian Academy of Sciences, 2 Prof. Popov Str., 197376, St.-Petersburg, Russia*

3 *Zabaikalsky State Humanitarian Pedagogical University named after N. Chernishevsky, 129 Babushkina Str., 672007, Chita, Russia*

* Author for correspondence: krivenko.irk@gmail.com

* First chromosome count for the genus.

** First chromosome count for the species.

*** New chromosome number (cytotype) for the species.

This study was supported by grants no. 11-04-00240-a, 11-04-01167-a, 12-04-01586-a, 12-04-31151_mol-a, 13-04-00351-a, 13-04-01458-a, 13-04-01468-a from the Russian Fund for Basic Research (RFBR) and by Interdisciplinary integration project Nr. 17, from the Siberian Branch of the Russian Academy of Sciences.

ACORACEAE*Acorus calamus* L.

$2n = 24$, CHN. Russia, Republic of Buryatiya, Pribaikal'skii Raion, vicinity of Gremyachinsk village, 411 m, 52°47'46" N, 107°58'44" E, on the marshy shore of the lake on the shore of Baikal Lake, 22 Jul 2011, *A.V. Verkhozina 19864* (IRK).

ADOXACEAE*Adoxa moschatellina* L.

$2n = 36$, CHN. Russia, Republic of Altai, Ongudaiskii Raion, left bank of the Agulak River, near the mouth, 1149 m, 50°12'42" N, 087°14'45" E, on the rocks covered with moss, 28 Jul 2012, *D.A. Krivenko 29573* (IRK).

APIACEAE*Conium maculatum* L.

$2n = 22$, CHN. Russia, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, vicinity of Central Siberian Botanical Garden, Siberian Branch of the Russian Academy of Sciences, right bank of the Zyryanka River, 145 m, 54°49'25" N, 083°06'08" E, vegetation ruderal on the road, 4 Sep 2012, *S.G. Kazanovsky 26612* (IRK).

ASCLEPIADACEAE*Vincetoxicum sibiricum* (L.) Decne.

$2n = 22$, CNH. Russia, Zabaikal'skii Krai, Krasnokamenskii Raion, Krasnokamensk town, mining dumps, Urtui dump, steppe, 20 Aug 2009, *Ye.A. Bondarevich 29562* (IRK).

ASTERACEAE*Artemisia halodendron* Turcz. ex Besser

$2n = 36$, CNH. Mongolia, Dornod Aimak, Khalkin-Gol somon, steeply sloping plain, 10 km E of the Buyr-Nur Lake, deep sandy gully, aeolian sands, 15 Aug 2008, *A.A. Korobkov 09-92* (LE).

Artemisia insulana Krasch.

$2n = 18$, CNH. Russia, Kamchatskii Krai, Aleutskii Raion, Pacific Ocean, Bering Sea, Komandorskie Islands, Beringa Island, slope of the ridge, shrub tundra, 24 Aug 1999, *N.V. Sinel'nikova 99-203* (LE).

Artemisia tanacetifolia L.

$2n = 54$, CNH. Russia, Altaiskii Krai, vicinity of Barnaul city, experimental plot South Siberian Botanical Garden, 19 Sep 1999, *A.A. Korobkov 99-196* (LE).

Artemisia vulgaris L.

$2n = 16$, CNH. Russia, Kemerovskaya Oblast', Tashtagol'skii Raion, vicinity of Kaz village, grass-motley group at the highway, 11 Sep 2000, *I.M. Krasnoborov 00-111* (NS).

Cirsium esculentum (Siev.) C.A. Mey.

$2n = 34$, CHN. Russia, Irkutskaya Oblast', Ol'khonskii Raion, 2 km NE from the Zama village (through rocky spit), flow between Baikal Lake and Zama Lake, 454 m, 53°28'18" N, 107°32'21" E, marshy shore of Zama Lake, 24 Aug 2011, *A.V. Verkhozina 19730* (IRK).

Neopallasia pectinata (Pall.) Poljakov

$2n = 18$, CNH. Russia, Republic of Buryatiya, Selenginskii Raion, Borgoiskii Mts., north slope of the ridge to the Selenduma village, broken sand-gravel sites along of the edge road, 18 Sep 2005, *A.A. Korobkov 06-211* (LE).

Petasites frigidus (L.) Fr.

$2n = 60$, CHN. Russia, Republic of Sakha (Yakutia), Mirninskii Raion, right bank of the Byuryuelyakh River (right bank of the Ulakhan-Botuobuya River), 6.5 km upstream from the mouth river, 316 m, 61°12'28" N, 112°08'11" E, spruce-larch blueberry lichen-greenmoss forest, 1 Sep 2012, *D.A. Krivenko 27259* (IRK).

Senecio vulgaris L.

$2n = 40$, CHN. Russia, Sverdlovskaya Oblast', Ekaterinburg city, territory of Institute of Plant & Animal Ecology, Ural Branch of the Russian Academy of Sciences, old building, 56°49'20" N, 060°19'38" E, ruderal community along the asphalt walkway, 7 Sep 2011, *O.S. Dymshakova 21110* (IRK).

Sonchus asper (L.) Hill

$2n = 18$, CHN. Russia, Sverdlovskaya Oblast', Ekaterinburg city, territory of Institute of Plant & Animal Ecology, Ural Branch of the Russian Academy of Sciences, old building, 56°49'20" N, 060°19'38" E, ruderal community along the asphalt walkway, 7 Sep 2011, *O.S. Dymshakova 21105* (IRK).

Taraxacum officinale F.H. Wigg.

$2n = 24$, CHN. Russia, Sverdlovskaya Oblast', Ekaterinburg city, territory of Institute of Plant & Animal Ecology, Ural Branch of the Russian Academy of Sciences, old building, 56°49'20" N, 060°19'38" E, ruderal community along the asphalt walkway, 7 Sep 2011, *O.S. Dymshakova 29603* (IRK).

Tragopogon orientalis L.

$2n = 12$, CHN. Russia, Altaiskii Krai, Volchikhinskii Raion, vicinity of Volchikha village, Volchikhinskiye barrows, among arable, 277 m, 52°12'18" N, 080°30'16" E, lode, 17 Jul 2012, *D.A. Krivenko 29637* (IRK).

** *Tragopogon trachycarpus* S.A. Nikitin

$2n = 12$, CHN. Russia, Republic of Buryatiya, Pribaikal'skii Raion, 4 km S of the Turuntaevo village, 480 m, 52°11'32" N,

107°35'25" E, escarpment of the road, 22 Jul 2011, *D.A. Krivenko* 28217 (IRK) [Fig. 3H].

Tridactylina kirilowii (Turcz.) Sch. Bip.

$2n = 18$, CHN. Russia, Irkutskaya Oblast', Slyudyanskii Raion, lower reaches of Slyudyanka River, 51°29'57" N, 104°09'33" E, coastal pebbles, 28 Aug 2010, *Yu.N. Pochinchik* 24539 (IRK) [Fig. 3I].

BORAGINACEAE

* *Craniospermum subvillosum* Lehm.

$2n = 24$, CHN. Russia, Republic of Buryatiya, Pribaikal'skii Raion, Baikal Lake, vicinity of Gremyachinsk village, 411 m, 52°47'46" N, 107°58'44" E, sandy shore, 22 Jul 2011, *D.A. Krivenko* 23123 (IRK).

** *Lappula tuvunica* Ovczinnikova

$2n = 24$, CHN. Russia, Altaiskii Krai, Tret'yakovskii Raion, Staroaleiskoe village, 301 m, 51°00'25" N, 082°00'31" E, roadside, 19 Jul 2012, *D.A. Krivenko* 29604 (IRK).

BRASSICACEAE

Alyssum tortuosum Waldst. & Kit. ex Willd.

$2n = 16$, CHN. Russia, Altaiskii Krai, Mikhailovskii Raion, near Malinovoye Lake, 163 m, 51°39'50" N, 079°49'59" E, steppe, 17 Jul 2012, *D.A. Krivenko* 29633 (IRK).

Capsella bursa-pastoris (L.) Medik.

$2n = 32$, CHN. Russia, Sverdlovskaya Oblast', Ekaterinburg city, territory of Institute of Plant & Animal Ecology, Ural Branch of the Russian Academy of Sciences, old building, 56°49'20" N, 060°19'38" E, ruderal community along the asphalt walkway, 7 Sep 2011, *O.S. Dymshakova* 21108 (IRK).

Lepidium ruderales L.

$2n = 16$, CHN. Russia, Irkutskaya Oblast', Irkutskii Raion, vicinity of Maloe Goloustnoe village, the right tributary Goloustnaya River, riverside, 13 Aug 2012, *D.A. Krivenko* 29607 (IRK).

CAPRIFOLIACEAE

Linnaea borealis L.

$2n = 32$, CHN. Russia, Republic of Buryatiya, Pribaikal'skii Raion, 3.5 km SW from the mouth of the Turka River, vicinity of Turka village, 461 m, 52°54'59" N, 108°11'03" E, clusterberry-peatmoss forest, 25 Jul 2011, *D.A. Krivenko* 23271 (IRK).

CARYOPHYLLACEAE

Stellaria media (L.) Vill.

$2n = ca. 40$, CHN. Russia, Sverdlovskaya Oblast', Ekaterinburg city, territory of Institute of Plant & Animal Ecology, Ural Branch of the Russian Academy of Sciences, old building, 56°49'20" N, 060°19'38" E, ruderal community along the asphalt walkway, 7 Sep 2011, *O.S. Dymshakova* 21109 (IRK).

CHENOPODIACEAE

Corispermum sibiricum Iljin

$2n = 18$, CHN. Russia, Republic of Sakha (Yakutia), Suntarskii Raion, right bank of the Vilyui River, 21 km SW of the Suntar village, 2.7 km SW of the Agdary village, 600 m above the mouth of the Arga-Diyeli River, 106 m, 61°59'03" N, 117°25'18" E, riverside, 26 Aug 2012, *D.A. Krivenko* 29606 (IRK).

CLUSIACEAE

Hypericum attenuatum Choisy

$2n = 16$, CHN. Russia, Irkutskaya Oblast', Irkutskii Raion, vicinity of Bol'shoe Goloustnoe village, delta Goloustnaya River, 52°03'24" N, 105°24'39" E, meadow steppe, 15 Aug 2012, *D.A. Krivenko* 29634 (IRK).

CYPERACEAE

** *Carex pamirica* subsp. *dichroa* (Freyn) T.V. Egorova

$2n = ca. 32-34$, CHN. Russia, Republic of Buryatiya, Pribaikal'skii Raion, Baikal Lake, vicinity of Gremyachinsk village, 411 m, 52°47'46" N, 107°58'44" E, sandy shore, 22 Jul 2011, *D.A. Krivenko* 20658 (IRK).

EPHEDRACEAE

Ephedra monosperma C.A. Mey.

$2n = 42$, CHN. Russia, Irkutskaya Oblast', Nizhneudinskii Raion, Uda riverhead, left bank, near the Bogatyrskie caves, edge forest, 22 Jul 2011, *T.V. Krivenko* 29512 (IRK) [Fig. 3D].

FABACEAE

Astragalus frigidus (L.) A. Gray

*** $2n = 16+0-1B$, CHN. Russia, Irkutskaya Oblast', Nizhnelimskii Raion, 57 km NE of the Novaya Igirma urban village, Bol'shaya Yalyka River, about 17 km upstream from the river mouth, 488 m, 57°30'56" N, 104°33'06" E, birch-spruce-willow-grass-sedge-peatmoss-greenmoss forest, 15 Aug 2012, *S.G. Kazanovsky* 24684 (IRK) [Fig. 3A].

Lespedeza davurica (Laxm.) Schindl.

$2n = 42$, CHN. Russia, Zabaikal'skii Krai, Aginskii Buryatskii District, Aginskii Raion, Nozhii Lake, 15 km S of the Tsokto-Khangul village, petrophytic steppe, 24 Sep 2001, *G.N. Zinov'yeva* 29510 (IRK) [Fig. 3E].

Melilotus albus Medik.

$2n = 16$, CHN. Russia, Zabaikal'skii Krai, vicinity of Chita city, sedge-wormwood steppe, 14 Sep 2006, *G.N. Zinov'yeva* 29509 (IRK).

Oxytropis varlakovii Serg.

$2n = 32$, CHN. Russia, Zabaikal'skii Krai, Akshinskii Raion, Khalanda Lake shore, 18 Jul 2007, *O.D. Chernova* 29507 (IRK) [Fig. 3F].

Thermopsis lanceolata R. Br.

$2n = 18$, CHN. Russia, Zabaikal'skii Krai, Ononskii Raion, Zun-Torei Lake, feather grass steppe, 19 Jul 2000, *G.N. Zinov'yeva* 29503 (IRK); Russia, Zabaikal'skii Krai, Gazimuro-Zavodskii Raion, vicinity of Gazimurskii Zavod village, meadow steppe, 9 Aug 2006, *O.D. Chernova* 29506 (IRK) [Fig. 3G].

Vicia cracca L.

$2n = 24$, CHN. Russia, Zabaikal'skii Krai, vicinity of Chita city, on the banks of the Chita River, thicket shrubs, 30 Jul 2007, *G.N. Zinov'yeva* 29511 (IRK).

IRIDACEAE

Iris biglumis Vahl

$2n = 40$, CHN. Russia, Republic of Buryatiya, Tarbagataiskii Raion, right bank of the Selenga River, northern outskirts of the Saratovka village, 505 m, 51°39'29" N, 107°25'30" E, forb-grass meadow steppe, 27 Jul 2011, *D.A. Krivenko* 19870 (IRK).

Iris laevigata Fisch. ex Fisch. & C.A. Mey

$2n = 32$, CHN. Russia, Republic of Buryatiya, Kabanskii Raion, Rechka Vydrinaya station, left bank of the Vydrinaya River, 200 m of the mouth of river, 51°28'56" N, 104°53'23" E, swamp between of the railway embankment and the pebbly shaft shore Baikal Lake, 26 Aug 2010, *Yu.N. Pochinchik* 24372 (IRK); Russia, Republic of Buryatiya, Barguzinskii Raion, Svyatoi Nos Peninsula, coast Baikal Lake, 459 m, 53°35'51" N, 108°52'37" E, shore lakes on the road, 26 Jul 2011, *A.V. Verkhozina* 23573 (IRK).

Iris ruthenica Ker Gawl.

$2n = \text{ca. } 80$, CHN. Russia, Altaiskii Krai, Smolenskii Raion, Smolenskii pass, NE of the Smolenskoe village, 680 m, 52°21'09" N, 085°06'22" E, pine plantations forest, 22 Jun 2012, *D.A. Krivenko 29574* (IRK); Russia, Republic of Altai, Ongudaiskii Raion, Seminskii pass, 3–4 km E of the Chuiskii tract, subalpine meadow, 26 Jun 2012, *D.A. Krivenko 29575* (IRK).

LILIACEAE

Tulipa biebersteiniana Schult. & Schult. f.

$2n = 24$, CHN. Russia, Republic of Bashkortostan, Kumertauskii

Raion, near Tumanchino settlement, riverside of Belaya River, steppe slopes, 8 May 2007, *N.A. Kutlunina & A.Yu. Belyaev 556693* (SVER); Russia, Orenburgskaya Oblast', Gaiskii Raion, 5 km SW of railway Halilovo station, Gubernlinskii Uplands, steppe, 6 May 2006, *N.A. Kutlunina & A.Yu. Belyaev 06-05-06* (UFU); Russia, Orenburgskaya Oblast', the railway Guberlya station of the Novotroitsk city, Gubernlinskii Uplands, steppe, 7 May 2006, *N.A. Kutlunina & A.Yu. Belyaev 506719* (SVER); Russia, Orenburgskaya Oblast', Kuvandikskii Raion, near Kuvandik town, riverside of Sakmara River, floodplain forest, 6 May 2007, *N.A. Kutlunina & A.Yu. Belyaev 506722* (SVER); Russia, Volgogradskaya Oblast', Srednehtubinskii Raion, riverside

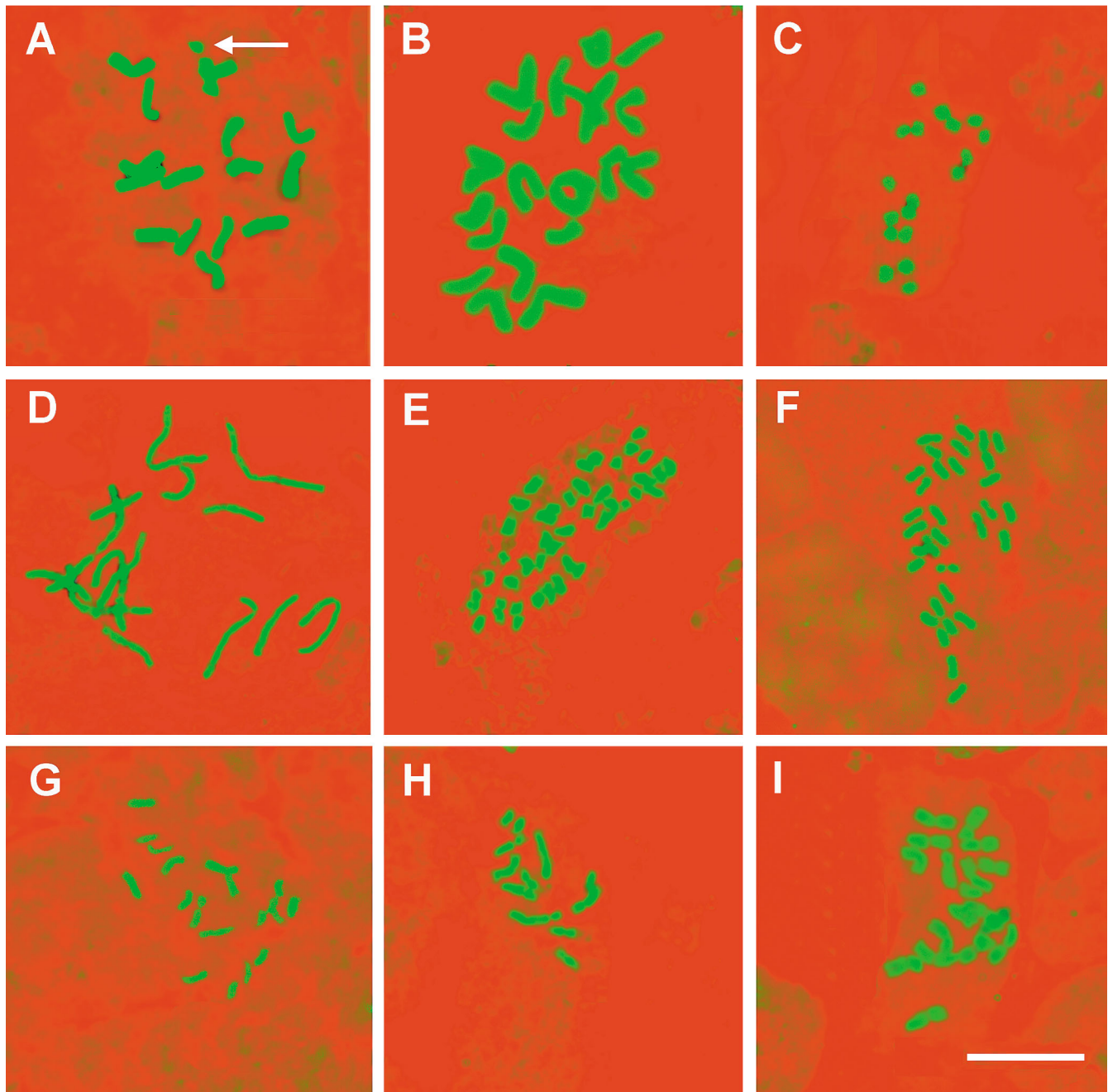


Fig. 3. **A**, *Astragalus frigidus*, $2n = 16+1B$ (marked by arrow); **B**, *Cypripedium guttatum*, $2n = 20$; **C**, *Daphne mezereum*, $2n = 18$; **D**, *Ephedra monosperma*, $2n = 14$; **E**, *Lespedeza davurica*, $2n = 42$; **F**, *Oxytropis varlakovii*, $2n = 32$; **G**, *Thermopsis lanceolata*, $2n = 18$; **H**, *Tragopogon trachycarpus*, $2n = 12$; **I**, *Tridactylina kirilowii*, $2n = 18$. — All of them mitotic counts. Scale bar = 2 μm .

of Ahtuba River, floodplain forest, 18 Apr 2007, *N.A. Kutlunina & M.I. Zerebtsova 18-04-07* (UFU); Russia, Volgogradskaya Oblast', Kamyshinskii Raion, Nature Park Sherbakovskii, rare oak forest, in depressions, 20 Apr 2007, *N.A. Kutlunina & A.Yu. Belyaev 20-04-07* (UFU).

*** $2n = 36$, CHN. Russia, Orenburgskaya Oblast', Guiskii Raion, 6 km SW from railway Halilovo station, floodplain of Bol'shaya Kayala River, 6 May 2006, *N.A. Kutlunina & A.Yu. Belyaev 06-05-06* (UFU).

Tulipa patens Agardh. ex Schult. & Schult. f.

$2n = 24$, CHN. Russia, Orenburgskaya Oblast', Gaiskii Raion, 6 km SW from railway Halilovo station, Guberlinskii Uplands, tops of hills, rocky steppe, 6 May 2006, *N.A. Kutlunina & A.Yu. Belyaev 06-05-06* (UFU).

Tulipa riparia Knjaz., Kulikov & E.g., Philippov

$2n = 36$, CHN. Russia, Chelyabinskaya Oblast', Ashinskii Raion, railway 1738 km station, riverside of Sim River, wet meadow, 24 May 2006, *N.A. Kutlunina & A.Yu. Belyaev 24-05-06* (UFU); Russia, Chelyabinskaya Oblast', Ashinskii Raion, near B'yanka settlement, bank of the Maloyuz stream, floodplain forest, 24 May 2006, *N.A. Kutlunina & A.Yu. Belyaev 506711* (SVER); Russia, Chelyabinskaya Oblast', Ashinskii Raion, to S from Sim city, bank of the Kuryak River near the confluence to the Sim River, wet meadow, 25 May 2006, *N.A. Kutlunina & A.Yu. Belyaev 25-05-06* (UFU).

Tulipa scythica Klokov & Zoz

$2n = 24$, CHN. Russia, Orenburgskaya Oblast', Kuvandikskii Raion, along the route from Kuvandik town to Mednogorsk town, steppe, 19 Apr 2005, *P.V. Kulikov 19-04-05* (UFU); Russia, Volgogradskaya Oblast', Leninskii Raion, near Leninsk settlement, steppe, 18 Apr 2007, *N.A. Kutlunina & M.I. Zerebtsova 18-04-07* (UFU); Russia, Volgogradskaya Oblast', Pallasovskii Raion, neighborhood of Buluhta Lake, steppe, 20 Apr 2007, *N.A. Kutlunina & M.I. Zerebtsova 20-04-07* (UFU).

ONAGRACEAE

Circaea alpina L.

$2n = 22$, CHN. Russia, Republic of Altai, Ongudaiskii Raion, left bank of the Aigulak River, near the mouth, 1149 m, 50°12'42" N, 087°14'45" E, on the rocks covered with moss, 28 Jul 2012, *D.A. Krivenko 29572* (IRK).

Epilobium fastigiato-ramosum Nakai

$2n = 36$, CHN. Russia, Irkutskaya Oblast', Ust'-Ordynskii Buryatskii District, Osinskii Raion, vicinity of Obusa village, 448 m, 53°43'33" N, 103°49'53" E, roadside Ust'-Uda-Osa, 26 Aug 2010, *A.V. Verkhovina 27773* (IRK).

ORCHIDACEAE

Cypripedium guttatum Sw.

$2n = 20$, CHN. Russia, Republic of Buryatiya, Tunkinskii Raion, vicinity of Zun-Murino village, near the base of Institute of Plant Physiology & Biochemistry, Siberian Branch of the Russian Academy of Sciences, 768 m, 51°43'21" N, 102°53'45" E, pine-birch-alder-rhododendron forest, 31 Jul 2011, *S.G. Kazanovsky & D.A. Krivenko 19885* (IRK) [Fig. 3B].

Goodyera repens (L.) R. Br.

$2n = 30$, CHN. Russia, Republic of Buryatiya, Tunkinskii Raion, vicinity of Zun-Murino village, near the base of Institute of Plant Physiology & Biochemistry, Siberian Branch of the Russian Academy of Sciences, 768 m, 51°43'21" N, 102°53'45" E, pine-birch-alder-rhododendron forest, 30 Jul 2011, *S.G. Kazanovsky & D.A. Krivenko 19796* (IRK).

Gymnadenia conopsea (L.) R. Br.

$2n = 40$, CHN. Russia, Republic of Buryatiya, Tunkinskii Raion, vicinity of Zun-Murino village, near the base of Institute of Plant Physiology & Biochemistry, Siberian Branch of the Russian Academy of Sciences, 766 m, 51°43'21" N, 102°53'38" E, pine-rhododendron-forbs-lichen forest, 31 Jul 2011, *S.G. Kazanovsky & D.A. Krivenko 20013* (IRK).

Neottianthe cucullata (L.) Schltr.

$2n = 42$, CHN. Russia, Republic of Buryatiya, Tunkinskii Raion, vicinity of Zun-Murino village, near the base of Institute of Plant Physiology & Biochemistry, Siberian Branch of the Russian Academy of Sciences, 799 m, 51°43'17" N, 102°53'40" E, pine rhododendron forbs forest, 31 Jul 2011, *S.G. Kazanovsky & D.A. Krivenko 20021* (IRK).

PLANTAGINACEAE

Plantago depressa Willd.

$2n = 12$, CHN. Russia, Zabaikal'skii Krai, Tungiro-Olekminskii Raion, 69th km of trails Mogocha-Tupik (Geologov settlement), Burkha River, 736 m, 54°14'36" N, 120°07'32" E, Larch-shrub (willow, birch scrub) forest, roadside, 12 Jul 2011, *S.G. Kazanovsky 20781* (IRK); Russia, Republic of Buryatiya, Tunkinskii Raion, vicinity of Zun-Murino village, base of Institute of Plant Physiology & Biochemistry, Siberian Branch of the Russian Academy of Sciences, right bank of the Khyr-Gorkhon River, 704 m, 51°43'15" N, 102°53'37" E, grass-forb meadow, 31 Jul 2011, *D.A. Krivenko 20014* (IRK).

Plantago major L.

$2n = 12$, CHN. Russia, Sverdlovskaya Oblast', Ekaterinburg city, territory of Institute of Plant & Animal Ecology, Ural Branch of the Russian Academy of Sciences, old building, 56°49'20" N, 060°19'38" E, ruderal community along the asphalt walkway, 7 Sep 2011, *O.S. Dymshakova 29598* (IRK).

POACEAE

Melica turczaninowiana Ohwi

$2n = 18$, CHN. Russia, Zabaikal'skii Krai, vicinity of Chita city, Titova Sopka hill, south-eastern slope, near top, 52°04'26" N, 113°26'49" E, pine-larch forest, 13 Aug 2008, *Ye.A. Bondarevich 22402* (IRK).

Milium alexeenkoi (Tzvelev) Tzvelev

$2n = 14$, CHN. Russia, Republic of Dagestan, Derbent city, along the trail up from Naryn-Kala fortress, 24 May 2009, *M.P. Rayko & V.V. Kotseruba 29597* (IRK, LE).

Phragmites flavescens (Custer) Hegetschw.

$2n = 48$, CHN. Kazakhstan, Pavlodarskaya Oblast', Bayanaul'skii Raion, Birzhankol' Lake, 391 m, 50°49'04" N, 075°20'24" E, in water, 28 Jun 2013, *D.A. Krivenko 29642* (IRK).

Spodiopogon sibiricus Trin.

$2n = 40$, CHN. Russia, Zabaikal'skii Krai, Aginskii Buryatskii District, Aginskii Raion, 19 km S of the Aginskoye village, apricot-elm thicket, on a steep rocky steppe slopes of southern exposure, 50°55'55" N, 114°32'15" E, 24 Aug 2011, *Ye.A. Bondarevich 22399* (IRK).

POLEMONIACEAE

Collomia linearis Nutt.

$2n = 16$, CHN. Russia, Irkutskaya Oblast', Zalarinskii Raion, vicinity of Tungui village, base of Institute of Plant Physiology & Biochemistry, Siberian Branch of the Russian Academy of Sciences, 53°33'52" N, 102°35'24" E, production field, soybean crops, 19 Jul 2012, *N.V. Dorofeev 24475* (IRK).

Polemonium caeruleum L.

$2n = 18$, CHN. Russia, Republic of Altai, Turochakskii Raion, right bank of the Biya River, vicinity of Novotroitskoe village, 526 m, 51°54'18" N, 087°08'47" E, glade among the thickets of willow shrubs, 24 Jun 2012, D.A. Krivenko 29658 (IRK).

RANUNCULACEAE

** *Aconitum sukaczewii* Steinb.

$2n = 16$, CHN. Russia, Irkutskaya Oblast', Slyudyanskii Raion, vicinity of Slyudyanka town, valley of the Slyudyanka River, right bank, 594 m, 51°37'35" N, 103°40'15" E, afforested steep valley sides, with rocky outcrops, 29 Jul 2011, S.G. Kazanovsky 19410 (IRK).

Ranunculus chinensis Bunge

*** $2n = 16+0-4B$, CHN. Russia, Zabaikal'skii Krai, Mogo-chinskii Raion, Pokrovka village, Amur River, 334 m, 53°20'36" N, 121°31'00" E, sand-pebble shore of the river, 7 Jul 2011, Ye.S. Prelovskaya & S.G. Kazanovsky 20959 (IRK).

ROSACEAE

Cohuria geoides (Pall.) Ledeb.

$2n = 14$, CHN. Russia, Altaiskii Krai, Zmeinogorskii Raion, vicinity of Zmeinogorsk town, mountain steppe slope, 19 Jun 2012, D.A. Krivenko 29576 (IRK).

SCROPHULARIACEAE

Veronica prostrata L.

$2n = 16$, CHN. Russia, Irkutskaya Oblast', Ust'-Udinskii Raion, vicinity of Lobagay village, 468 m, 53°57'13" N, 103°19'35" E, steppe slope, 29 Aug 2008, A.V. Verkhozina, S.G. Kazanovsky & O.A. Chernyshova 27830 (IRK).

SOLANACEAE

Hyoscyamus niger L.

$2n = 34$, CHN. Russia, Republic of Altai, Ust'-Kanskii Raion, vicinity of Chernyi Anui settlement, right bank of the Anui River, 699 m, 53°23'18" N, 084°41'17" E, roadside, 6 Jul 2012, D.A. Krivenko 29628 (IRK).

THYMELAEACEAE

Daphne mezereum L.

$2n = 18$, CHN. Russia, Republic of Buryatiya, Kabanskii Raion, right bank of the Vydrinaya River, 541 m, 51°23'21" N, 104°54'22" E, valley spruce-poplar-herb forest, 10 Aug 2011, S.G. Kazanovsky 21127 (IRK) [Fig. 3C].

VIOLACEAE

Viola rupestris F.W. Schmidt

$2n = 20$, CHN. Russia, Irkutskaya Oblast', Irkutskii Raion, vicinity of Bol'shoe Goloustnoe village, crease of Goloustnaya River, 52°02'14" N, 105°27'07" E, on stony placers, 2 Aug 2011, D.A. Krivenko 24499 (IRK).

Viola selkirkii Pursh ex Goldie

$2n = 24$, CHN. Russia, Irkutskaya Oblast', Slyudyanskii Raion, vicinity of Slyudyanka city, valley of the Slyudyanka River, right bank, 594 m, 51°37'35" N, 103°40'15" E, afforested steep valley sides, with rocky outcrops, 29 Jul 2011, S.G. Kazanovsky & D.A. Krivenko 19469 (IRK).

Maria N. Lomonosova

Central Siberian Botanical Garden, Siberian Branch of the Russian Academy of Science, Novosibirsk 630090, Russia; mlomonosova@mail.ru

▼ New chromosome number (cytotype) for the species.

* First chromosome count from Siberia.

▲ First chromosome count from Sakha (Yakutia) Republic.

** First chromosome count from Kalmykia Republic.

The research was supported by the Russian Foundation for Basic Research (grants no. 11-04-00123, 12-04-00746).

AMARANTHACEAE

Amaranthus retroflexus L.

$2n = 34$, CHN. Russia, Kalmykia Republic, Maloderbetovskii region, ecoton zone of the dried-up reservoir Barmantsak, solonchak, 47°58' N, 44°41' E, 28 Sep 2012, M. Lomonosova 937a (NS).

ASTERACEAE

Carduus crispus L.

** $2n = 18$, CHN. Russia, Kalmykia Republic, Tselinnyi region, 30 km of Volgograd, salt meadow, 46°40' N, 44°18' E, 30 Sep 2012, M. Lomonosova 959a (NS).

Centaurea diffusa Lam.

** $2n = 18$, CHN. Russia, Kalmykia Republic, Sarpinskii region, vicinities of Arshan-Zelmen reservoir, roadside, 47°35' N, 44°35' E, 28 Sep 2012, M. Lomonosova 941a (NS).

Lactuca serriola L.

$2n = 18$, CHN. Russia, Novosibirskaya Oblast', Karasuk, waste ground, 13 Sep 2012, M. Lomonosova 925a (NS).

Lactuca tatarica (L.) C.A. Mey.

** $2n = 18$, CHN. Russia, Kalmykia Republic, Priyutinskii region, 32 km of Elista to Priyutnoe, dried *Phragmites* community, 46°51' N, 43°55' E, 29 Sep 2012, M. Lomonosova 952a (NS); *ibid.*, Sarpinskii region, between Sadovyi village and Arshan-Zelmen reservoir, roadside, 47°41' N, 44°31' E, 30 Sep 2012, M. Lomonosova 961 (NS).

Saussurea amara (L.) DC.

$2n = 26$, CHN. Russia, Novosibirskaya Oblast', Karasuk, waste ground, 13 Sep 2012, M. Lomonosova 925b (NS).

Tragopogon podolicus (DC.) S.A. Nikitin

$2n = 12$, CHN. Russia, Novosibirskaya Oblast', Karasuk, waste ground, 13 Sep 2012, M. Lomonosova 924a, M. Lomonosova 925c (NS).

Xanthium strumarium L.

$2n = 36$, CHN. Russia, Novosibirskaya Oblast', Karasuk, roadside near the railway station, 13 Sep 2012, M. Lomonosova 926a (NS).

BRASSICACEAE

Lepidium densiflorum Schrad.

▼* $2n = 16$, CHN. Russia, Sakha (Yakutia) Republic, Khangalasskii ulus, vicinities of Bulgunnyakhtakh village, stony southern slope, 61°17' N, 128°35' E, 25 Aug 2012, M. Lomonosova & E. Nikolin 859 (NS).

Thlaspi arvense L.

▲ $2n = 14$, CHN. Russia, Yakutia Republic, Namskii ulus, vicinities of Betyuntsy village, oats field, 62°48' N, 129°37' E, 20 Aug 2012, M. Lomonosova & E. Nikolin 791a (NS).

CARYOPHYLLACEAE*Dianthus versicolor* Fisch. & Link

▼▲ $2n = 60$, CHN. Russia, Sakha (Yakutia) Republic, Namskii ulus, vicinities of Betyuntsy village, edge of birch forest, 62°48'N, 129°37'E, 20 Aug 2012, *M. Lomonosova & E. Nikolin 793* (NS).

CHENOPODIACEAE*Atriplex micrantha* C.A. Mey.

** $2n = 36$, CHN. Russia, Kalmykia Republic, Priyutninskii region, Priyutnoe, roadside, 29 Sep 2012, *M. Lomonosova 949a* (NS); *ibid.*, Sarpinskii region, vicinities of Arshan-Zelmen reservoir, desert steppe, 47°35'N, 44°35'E, 28 Sep 2012, *M. Lomonosova 940* (NS)

Atriplex patens (Litv.) Iljin

$2n = 36$, CHN. Russia, Novosibirskaya Oblast', Karasuk, salt meadow, 13 Sep 2012, *M. Lomonosova 922* (NS).

Atriplex prostrata Boucher & DC.

** $2n = 18$, CHN. Russia, Kalmykia Republic, Tselinnyi region, in vicinity of Khar-Bulak village, "Alone populus" spring, solonchak in a hollow, 29 Sep 2012, *M. Lomonosova 954a* (NS); *ibid.*, 30 km of the tract from Elista to Volgograd, 29 Sep 2012, *M. Lomonosova 959b* (NS).

Atriplex sagittata Borkh.

$2n = 18$, CHN. Russia, Novosibirskaya Oblast', Karasuk, waste ground, 13 Sep 2012, *M. Lomonosova 924b* (NS).

Atriplex tatarica L.

** $2n = 18$, CHN. Russia, Kalmykia Republic, Maloderbetovskii region, ecoton zone of the dried-up reservoir Barmantsak, solonchak, 47°58'N, 44°41'E, 28 Sep 2012, *M. Lomonosova 937b* (NS); *ibid.*, Sarpinskii region, vicinities of Arshan-Zelmen reservoir, roadside, 47°35'N, 44°35'E, 28 Sep 2012, *M. Lomonosova 941b* (NS).

Bassia hyssopifolia (Pall.) Kuntze

$2n = 18$, CHN. Russia, Kalmykia Republic, Tselinnyi region, 30 km from Tselinnoe to Volgograd, 46°40'N, 44°18'E, 30 Sep 2012, *M. Lomonosova 958a* (NS).

Bassia scoparia (L.) A.J. Scott (≡ *Kochia scoparia* (L.) Schrad.)

** $2n = 18$, CHN. Russia, Kalmykia Republic, Tselinnyi region, 30 km of Tselinnoe to Volgograd, 46°40'N, 44°18'E, 30 Sep 2012, *M. Lomonosova 958b* (NS); Russia, Khakasia Republic, Ust-Abakanskii region, vicinities of Solnechnoe village, steppe, 18 Oct 2012, *F. Kudrov 963* (NS).

Caroxylon dendroides (Pall.) Tzvelev

$2n = 18$, CHN. Russia, Kalmykia Republic, Priyutninskii region, north shore of Manych-Gudilo reservoir, steppe, 46°05'N, 43°27'E, 29 Sep 2012, *M. Lomonosova 947* (NS).

Chenopodium acerifolium Andr.

▲ $2n = 18$, CHN. Russia, Sakha (Yakutia) Republic, Megino-Kangalasskii ulus, Kolymskii tract, at the bridge over Suola river, sandy river bank, 62°05'N, 130°09'E, 28 Aug 2012, *M. Lomonosova & E. Nikolin 876* (NS).

Chenopodium album L.

** $2n = 54$, CHN. Russia, Kalmykia Republic, Priyutninskii region, Priyutnoe, waste ground, 29 Sep 2012, *M. Lomonosova 949a* (NS).

Chenopodium borbasii Murr

** $2n = 54$, CHN. Russia, Kalmykia Republic, Elista, flower bed, 30 Sep 2012, *M. Lomonosova 957* (NS).

Chenopodium ficifolium Sm.

$2n = 18$, CHN. Russia, Sakha (Yakutia) Republic, Namskii ulus, vicinities of Betyuntsy village, oats field, 62°48'N, 129°37'E, 20 Aug 2012, *M. Lomonosova & E. Nikolin 791b* (NS).

Chenopodium strictum Roth

** $2n = 36$, CHN. Russia, Novosibirskaya Oblast', Karasuk, waste ground, 13 Sep 2012, *M. Lomonosova 925d* (NS); Russia, Kalmykia Republic, Elista, "Chess City", roadside, 30 Sep 2012, *M. Lomonosova 960* (NS).

Chenopodium suecicum Murr

$2n = 18$, CHN. Russia, Novosibirskaya Oblast', Novosibirsk, Akademgorodok, roadside, 11 Sep 2012, *M. Lomonosova 965* (NS).

Kali tragus (L.) Scop. (≡ *Salsola tragus* L.)

** $2n = 36$, CHN. Russia, Novosibirskaya Oblast', Karasuk, roadside near the railway station, 13 Sep 2012, *M. Lomonosova 926b* (NS); Russia, Kalmykia Republic, Elista, roadside, 29 Sep 2012, *M. Lomonosova 944* (NS); *ibid.*, Tselinnyi region, 30 km of Elista to Volgograd, roadside, 46°41'N, 44°19'E, 30 Sep 2012, *M. Lomonosova 958c* (NS).

Oxybasis chenopodioides (L.) S. Fuentes, Uotila & Borsch(≡ *Chenopodium chenopodioides* (L.) Aellen)

** $2n = 18$, CHN. Russia, Kalmykia Republic, Priyutninskii region, 32 km of the tract from Elista to Priyutnoe, dried *Phragmites* community, 46°11'N, 43°55'E, 29 Sep 2012, *M. Lomonosova 952b* (NS).

Oxybasis glauca (L.) S. Fuentes, Uotila & Borsch(≡ *Chenopodium glaucum* L.)

$2n = 18$; Russia, Novosibirskaya Oblast', Karasuk, waste ground, 13 Sep 2012, *M. Lomonosova 925e* (NS).

Oxybasis urbica (L.) S. Fuentes, Uotila & Borsch(≡ *Chenopodium urbicum* L.)

** $2n = 18$, CHN. Russia, Kalmykia Republic, Elista, roadside, 29 Sep 2012, *M. Lomonosova 944* (NS); *ibid.*, Priyutnoe, waste ground, 29 Sep 2012, *M. Lomonosova 949c* (NS).

Salicornia perennans Willd.

$2n = 18$, CHN. Russia, Kalmykia Republic, Priyutninskii region, 32 km of Elista to Priyutnoe, dried *Phragmites* community, 46°51'N, 43°55'E, 29 Sep 2012, *M. Lomonosova 952c* (NS); Russia, Sakha (Yakutia) Republic, Namskii tract near Zhatay village, salt meadow with *Puccinellia*, 20 Aug 2012, *M. Lomonosova & E. Nikolin 783* (NS); *ibid.*, Namskii ulus, vicinities of Khamagatta village, solonchak, 62°40'N, 129°41'E, 20 Aug 2012, *M. Lomonosova & E. Nikolin 790* (NS); *ibid.*, Namskii ulus, vicinities of Khatyryk village, solonchak, 63°01'N, 129°31'E, 20 Aug 2012, *M. Lomonosova & E. Nikolin 796* (NS).

Salsola soda L.

** $2n = 18$, CHN. Russia, Kalmykia Republic, Maloderbetovskii region, ecoton zone of the dried-up reservoir Barmantsak, solonchak, 47°58'N, 44°41'E, 28 Sep 2012, *M. Lomonosova 938a* (NS).

Sedobassia sedoides (Pall.) Freitag & G. Kadereit(≡ *Bassia sedoides* (Pall.) Asch.)

* $2n = 18$, CHN. Russia, Novosibirskaya Oblast', Karasuk, waste ground, 13 Sep 2012, *M. Lomonosova 924c* (NS).

Suaeda acuminata (C.A. Mey.) Moq.

$2n = 18$, CHN. Russia, Kalmykia Republic, Maloderbetovskii region, ecoton zone of the dried-up reservoir Barmantsak, solonchak, 47°58'N, 44°41'E, 28 Sep 2012, *M. Lomonosova 938b* (NS); *ibid.*,

Priyutninskii region, 32 km of Elista to Priyutnoe, roadside, 46°11'N, 43°55'E, 29 Sep 2012, *M. Lomonosova 951* (NS).

Suaeda corniculata (C.A. Mey.) Bunge subsp. *corniculata*
2n = 54, CHN. Russia, Khakasia Republic, Ust-Abakanskii region, Krasnoe lake, salt meadow, 20 Sep 2012, *F. Kudrov 964a* (NS).

Suaeda salsa (L.) Pall.
**2n = 36, CHN. Russia, Kalmykia Republic, Maloderbetovskii region, ecoton zone of the dried-up reservoir Barmantsak, solonchak, 47°58'N, 44°41'E, 28 Sep 2012, *M. Lomonosova 937c* (NS); *ibid.*, Priyutninskii region, northern coast of the reservoir Manych-Gudilo, on the bottom of dried lake, 46°05'N, 43°27'E, 29 Sep 2012, *M. Lomonosova 948* (NS); *ibid.*, Tselinnyi region, vicinities of Khar-Bulak village, "Alone populus" spring, solonchak in a hollow, 29 Sep 2012, *M. Lomonosova 954b* (NS); *ibid.*, Tselinnyi region, 30 km from Elista to Volgograd, salt meadow, 46°40'N, 44°18'E, 30 Sep 2012, *M. Lomonosova 958d*, *M. Lomonosova 959c* (NS); Russia, Volgogradskaya Oblast', southern suburb of Volgograd, solonchak along the road, 30 Sep 2012, *M. Lomonosova 962* (NS).

Suaeda sibirica Lomon. & Freitag
2n = 72, CHN. Russia, Khakasia Republic, Ust-Abakanskii region, Krasnoe lake, solonchak, 20 Sep 2012, *F. Kudrov 964b* (NS).

PLANTAGINACEAE

Plantago cornuti Gouan
2n = 12, CHN. Russia, Novosibirskaya Oblast', Karasuk, waste ground, 13 Sep 2012, *M. Lomonosova 925f* (NS).

ROSACEAE

Potentilla paradoxa Nutt. ex Torr. & Gray
2n = 42, CHN. Russia, Novosibirskaya Oblast', Karasuk, waste ground, 13 Sep 2012, *M. Lomonosova 925g* (NS).

Nina S. Probatova,^{1*} Sergey G. Kazanovsky,² Elvira G. Rudyka,¹ Vitaly P. Seledets³ & Svetlana V. Ovchinnikova⁴

- Institute of Biology & Soil Science, Far East Branch of the Russian Academy of Sciences, 159 Stoletya Prospekt, 690022, Vladivostok, Russia*
- Siberian Institute of Plant Physiology & Biochemistry, Siberian Branch of the Russian Academy of Sciences, 132 Lermontov Str., 664033, Irkutsk, Russia*
- Pacific Institute of Geography, Far East Branch of the Russian Academy of Sciences, 7 Radio Str., 690041, Vladivostok, Russia*
- Central Siberian Botanical Garden, Siberian Branch of the Russian Academy of Sciences, 101 Zolotodolinskaya Str., 630090, Novosibirsk, Russia*

* Author for correspondence: probatova@ibss.dvo.ru

* First chromosome count for the species.

** New chromosome number (cytotype) for the species.

This study was supported by grants no. 11-04-00240 (to N.S. Probatova), 11-04-01167 (to V.S. Shneyer), 12-04-01586 (to A.V. Verkhovzina) from the Russian Fund for Basic Research (RFBR), and by Interdisciplinary integration project Nr. 17, from the Siberian Branch of the Russian Academy of Sciences.

ADOXACEAE

Adoxa moschatellina L.
2n = 36, CHN. Russia, Far East, Primorskii Krai, Muravëv-Amurskii Peninsula, Vladivostok, near Sanatornaya, forest part of the Botanical Garden-Institute, Far East Branch of the Russian Academy

of Science, forest on lower part of the slope, 12 May 2013, *Semeikin 12348* (VLA).

ALISMATACEAE

Alisma plantago-aquatica L.
2n = 14, CHN. Russia, East Siberia, Irkutskaya Oblast', Ust'-Kutskii Raion, 8.5 km WNW of Yarakta oilmans' settlement, left riverside of the Yarakta River, 442 m, near the bridge, roadside, in the puddle, 9 Aug 2012, *Kazanovsky 12369* (VLA, IRK).

ALLIACEAE

Allium condensatum Turcz.
2n = 16, CHN. Russia, Far East, Primorskii Krai, Peter the Great Bay, Klykova Island, 30 Jun 2000, *Prozorova 8179* (VLA).

APIACEAE

Kitagawia baicalensis (Redowsky ex Willd.) Pimenov
2n = 22, CHN. Russia, East Siberia, Republic of Buryatiya, Tunkinskii Raion, near Zun-Murino village, scientific station of the Siberian Institute of Plant Physiology & Biochemistry, the Khyr-Gorkhon River, 704 m, sandy slope, 25 Sep 2012, *Kazanovsky 12419* (VLA, IRK).

Oenanthe javanica (Blume) DC.

2n = 22, CHN. Russia, Far East, Primorskii Krai, Muravëv-Amurskii Peninsula, near Okeanskaya, the Botanical Garden Institute of the Far East Branch of the Russian Academy of Sciences, at the artificial pond, 27 Oct 2012, *Volynets & Semeikin 12214* (VLA).

2n = 44, CHN. Russia, Far East, Primorskii Krai, Peter the Great Bay, Reineke Island, moist depression near the settlement, 26 Aug 1999, *Probatova & Seledets 7895* (VLA).

ARACEAE

Arisaema amurense Maxim.
2n = 56, CHN. Russia, Far East, Primorskii Krai, Partizanskii Raion, the shore of Vostok Bay, flood-lands of the Volchanka River, 19 May 2013, *Nechaev 12349* (VLA).

ASTERACEAE

Arctium minus (Hill.) Bernh.
2n = 36, CHN. Russia, Far East, Primorskii Krai, Peter the Great Bay, Elena Island (close to Russkii Island), as a weed on the waste place near the abandoned building, 19 Sep 1997, *Probatova & Seledets 7554* (VLA).

Artemisia scoparia Waldst. & Kit.

2n = 16, CHN. Russia, East Siberia, Republic of Buryatiya, Tunkinskii Raion, right riverside of the Margasan River, 5 km S of Margasan locality, steep rocky SE slope, 25 Sep 2012, *Kazanovsky 12408* (VLA, IRK).

Artemisia tanacetifolia L.

2n = 54, CHN. Russia, East Siberia, Republic of Buryatiya, Tunkinskii Raion, right riverside of the Margasan River, 5 km S of Margasan locality, *Pinus* and *Betula* forest with grasses and various herbs, 25 Sep 2012, *Kazanovsky 12412* (VLA, IRK).

Glebionis segetum Fourr.

2n = 18, CHN. Russia, Far East, Primorskii Krai, Muravëv-Amurskii Peninsula, Vladivostok, between Akademgorodok and the factory "Zarya", roadside, 27 Oct 2012, *Semeikin 12217* (VLA).

Lapsana communis L.

2n = 14, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, in vicinity of Erivanskaya stanitsa, forest edge, 5 Sep 2009, *Probatova & Seledets 11510* (VLA).

Solidago dahurica Kitag.

$2n = 18$, CHN. Russia, East Siberia, Irkutskaya Oblast', Tulkinskii Raion, 2 km WNW of the railway station Shuba, 502 m, the *Betula* forest edge, meadow community, 16 Aug 2012, *Kazanovsky 12372* (VLA, IRK).

Youngia tenuifolia (Willd.) Bab. & Stebbins

$2n = 10$, CHN. Russia, East Siberia, Republic of Buryatiya, Tunkinskii Raion, in vicinity of Zun-Murino village, scientific station of the Siberian Institute of Plant Physiology & Biochemistry, the Khyr-Gorkhon River, 704 m, sandy slope, 25 Sep 2012, *Kazanovsky 12410* (VLA, IRK).

BORAGINACEAE

Brachybotrys paridiformis Maxim. ex Oliv.

$2n = 24$, CHN. Russia, Far East, Primorskii Krai, Muravëv-Amurskii Peninsula, near Okeanskaya, forest part of the Botanical Garden-Institute of the Far East Branch of Russian Academy of Sciences, W slope, coniferous-broadleaved forest, 16 Jun 2012, *Volynets 12139* (VLA).

BRASSICACEAE

Arabis pendula L.

$2n = 16$, CHN. Russia, Far East, Primorskii Krai, Mikhailovskii Raion, W outskirts of Novoshakhtinskii town, as a weed in a vegetable garden, 9 Sep 2012, *Lapenko 12355* (VLA).

Erysimum cheiranthoides L.

$2n = 16$, CHN. Russia, East Siberia, Irkutskaya Oblast', Ust'-Kutskii Raion, 18 km SSE of Yarakta oilmans' settlement, the Nizhnaya Tunguska River, near the bridge, 436 m, ruderal plant community, 8 Aug 2012, *Kazanovsky 12385* (VLA, IRK).

Rorippa palustris (L.) Besser

$2n = 16$, CHN. Russia, Far East, Primorskii Krai, Shkotovskii Raion, near Shkotovo settlement, stony embankment at the electric line, by the rivulet, 24 Aug 2013, *Nechaev 12424* (VLA).

CARYOPHYLLACEAE

Dianthus versicolor Fisch. ex Link

$2n = 30$, CHN. Russia, East Siberia, Republic of Buryatiya, Tunkinskii Raion, right riverside of the Margasan River, 5 km S of Margasan locality, steep rocky SE slope, 25 Sep 2012, *Kazanovsky 12362* (VLA, IRK).

Gastrolychnis brachypetala (Hornem.) Tolm. & Kozhanch.

** $2n = 24$, CHN. Russia, East Siberia, Republic of Buryatiya, Okinskii Raion, near Samarta settlement, East Sayan Mts., Kitoiskii Range, the upper course of the Kitoi River, 1890 m, in shrub community (*Caragana jubata*) along the riverside, 12 Jul 2008, *Kazanovsky 12387* (VLA, IRK).

Stellaria crassifolia Ehrh.

$2n = 26$, CHN. Russia, East Siberia, Zabaikalskii Krai, Mogo-chinskii Raion, Mogocha settlement, the riverside of the Amazar River, 610 m, *Carex* and grasses moist meadow, 6 Jul 2011, *Kazanovsky 12375* (VLA, IRK).

Stellaria graminea L.

$2n = 26$, CHN. Russia, East Siberia, Irkutskaya Oblast', Kuitunskii Raion, outskirts of Kuitun town, 535 m, near the car-service station, meadow by the road, 16 Aug 2012, *Kazanovsky 12409* (VLA, IRK).

Stellaria longifolia Muhl. ex Willd.

$2n = 26$, CHN. Russia, East Siberia, Irkutskaya Oblast', Katangskii Raion, 9.5 km SE of Bur village, 435 m, *Picea* and *Larix*

waterlogged forest with shrubs and green mosses, 11 Aug 2012, *Kazanovsky 12416* (VLA, IRK).

CONVALLARIACEAE

Maianthemum dilatatum (Alph. Wood) A. Nelson & J.F. Macbr.

$2n = 54$, CHN. Russia, Far East, Primorskii Krai, Peter the Great Bay, Russkii Island, 2 km NW of the Cape Vyatlina, forest edge, 24 Sep 1999, *Rudyka 7998* (VLA).

CONVOLVULACEAE

Calystegia dahurica Choisy

$2n = 22$, CHN. Russia, East Siberia, Republic of Buryatiya, Tunkinskii Raion, right riverside of the Margasan River, 5 km S of Margasan locality, steep rocky SE slope, 25 Sep 2012, *Kazanovsky 12370* (VLA, IRK).

CYPERACEAE

Carex siderosticta Hance

$2n = 24$, CHN. Russia, Far East, Primorskii Krai, Peter the Great Bay, Russkii Island, Shiguino, forest on the slope, 22 Aug 2011, *Rudyka 11904* (VLA).

GERANIACEAE

Geranium pratense L.

$2n = 28$, CHN. Russia, East Siberia, Irkutskaya Oblast', Ust'-Kutskii Raion, 18 km SSE of Yarakta oilmans' settlement, the Nizhnaya Tunguska River, near the bridge, 436 m, the riverside shrubs community, 8 Aug 2012, *Kazanovsky 12403* (VLA, IRK).

IRIDACEAE

Iris setosa Pall. ex Link

$2n = 38$, CHN. Russia, Far East, Primorskii Krai, Peter the Great Bay, Russkii Island, Shiguino, meadow at the bottom of a slope, 22 Aug 2011, *Rudyka 11882* (VLA).

LAMIACEAE

Clinopodium chinense Kuntze

$2n = 20$, CHN. Russia, Far East, Primorskii Krai, Muravëv-Amurskii Peninsula, Okeanskii Range, 5 km NNW of Lazurnyi settlement, 312 m, SE slope, *Artemisia gmelinii* community, 21 Oct 2004, *Probatova & Seledets 9555* (VLA).

Dracocephalum nutans L.

$2n = 10$, CHN. Russia, East Siberia, Irkutskaya Oblast', Nukutskii Raion, near Zarechnyi settlement, steppe community with grasses and various herbs, 11 Jun 2009, *Prelovskaya 12396* (VLA, IRK).

Elsholtzia ciliata (Thunb.) Hyl.

$2n = 16$, CHN. Russia, West Siberia, Republic of Altai, Chemal'skii Raion, Chemal village, right riverside of the Katun' River, opposite Patmos Island, 415 m, the edge of *Pinus* and *Betula* forest, at the road, 31 Aug 2012, *Kazanovsky 12380* (VLA, IRK).

Lagopsis supina (Steph.) Ikonn.-Gal.

$2n = 18$, CHN. Russia, East Siberia, Republic of Buryatiya, Dzhi-dinskii Raion, Petropavlovka village, 675 m, steppe community with grasses and various herbs, 13 Jul 2009, *Kazanovsky 12404* (VLA, IRK).

Leonurus glaucescens Bunge

$2n = 18$, CHN. Russia, West Siberia, Republic of Altai, Chemal'skii Raion, Chemal village, right riverside of the Katun' River, between Patmos Island and Chemal'skaya hydroelectric power station, 435 m, forest on the rocky slope, 30 Aug 2012, *Kazanovsky 12388* (VLA, IRK).

Mosla dianthera (Buch.-Ham. ex Roxb.) Maxim.

2n = 18, CHN. Russia, Far East, Primorskii Krai, Nakhodkinskii administrative raion, S outskirts of Livadia settlement, the bank of a small reservoir near Livadiiskoe Lake, 22 Sep 2012, *Lapenko 12346* (VLA).

Nepeta sibirica L.

2n = 18, CHN. Russia, West Siberia, Republic of Altai, Ongudaiskii Raion, in vicinity of Ongudai settlement, 958 m, stony S slope with steppe vegetation, 30 Aug 2012, *Kazanovsky 12377* (VLA, IRK).

Schizonepeta multifida (L.) Briq.

2n = 12, CHN. Russia, East Siberia, Republic of Buryatiya, Tunkinskii Raion, right riverside of the Margasan River, 5 km S of Margasan locality, steep rocky SE slope, 25 Sep 2012, *Kazanovsky 12357* (VLA, IRK).

LILIACEAE

Lilium pilosiusculum (Frey) Misch.

2n = 24, CHN. Russia, East Siberia, Irkutskaya Oblast', Slydyanskii Raion, 61-st km of the Kultukskii tract (road), near Staraya Angasolka village, 788 m, the edge of *Larix* and *Betula* forest with various herbs, 24 Sep 2012, *Kazanovsky 12417* (VLA, IRK).

LOBELIACEAE

Lobelia sessilifolia Lamb.

2n = 28, CHN. Russia, Far East, Primorskii Krai, Partizanskii Raion, between the coast of Vostok Bay and Dushkino settlement, the maritime plain, grassy bog, 31 Aug 2013, *Nechaev 12422* (VLA).

LYTHRACEAE

Lythrum salicaria L.

2n = 30, CHN. Russia, Far East, Primorskii Krai, Muravëv-Amurskii Peninsula, in vicinity of Sedanka railway station, forest edge, at the wayside ditch, 27 Aug 2013, *Kapustina 12423* (VLA).

PAPAVERACEAE

Papaver olchonense Peschkova

2n = 28, CHN. Russia, East Siberia, Irkutskaya Oblast', Ol'khonskii Raion, Cape Zunduk, right riverside of the Zunduk River, 564 m, stony NE slope with steppe vegetation, 27 Jun 2012, *Kazanovsky 12411* (VLA, IRK).

POACEAE

Bromopsis inermis (Leys.) Holub

2n = 56, CHN. Russia, East Siberia, Irkutskaya Oblast', Nizhneilmskii Raion, 5 km E of Novaya Iguirna town, 346 m, at the road, 15 Aug 2012, *Kazanovsky 12407* (VLA, IRK).

Calamagrostis obtusata Trin.

2n = 28, CHN. Russia, West Siberia, Republic of Altai, Ongudaiskii Raion, Chuiskii tract, Seminskii Pass, 1720 m, light *Pinus sibirica* forest with various herbs, 30 Aug 2012, *Kazanovsky 12420* (VLA, IRK).

Digitaria asiatica (Ohwi) Tzvelev

2n = 18, CHN. Russia, Far East, Primorskii Krai, Mikhailovskii Raion, W outskirts of Novoshakhtinskii town, as a weed in a vegetable garden, 29 Aug 2012, *Lapenko 12350* (VLA); Russia, Far East, Primorskii Krai, Ussuriyskii Raion, left riverside of the Razdol'naya (Suifun) River, near Utësnoe village, 18 Jun 1998, coll. unknown 7744 (VLA); Russia, Far East, Primorskii Krai, Peter the Great Bay, Elena Island (near Russkii Island), along the path to Larionova Cape, 19 Sep 1997, *Probatova & Seledets 7556* (VLA).

Digitaria ischaemum (Schreb.) Muhl.

2n = 36, CHN. Russia, Far East, Primorskii Krai, Mikhailovskii Raion, W outskirts of Novoshakhtinskii town, the Ozërnaya Pad' railway station, on the railroad embankment, 9 Sep 2012, *Lapenko 12352* (VLA).

Koeleria tokiensis Domin

2n = 14, CHN. Russia, Far East, Primorskii Krai, Peter the Great Bay, Lissii Island, 11 Sep 2002, *Nechaev 8906* (VLA).

Poa alpina L.

2n = 28, CHN. Russia, East Siberia, Republic of Buryatiya, Okinskii Raion, near Samarta settlement, East Sayan Mts., Kitoiskii Range, the upper course of the Kitoi River, 1889 m, meadow in the shrub community (*Caragana jubata*, *Rhododendron*, *Salix* spp.), 28 Aug 2010, *Kazanovsky 12344* (VLA, IRK).

Puccinellia andersonii Swallen

**2n = 42, CHN. Russia, Far East, Primorskii Krai, Terneiskii Raion, Sikhote-Alinskii biosphere reserve, locality Abrek, near Yaponskoe Lake, on maritime rocks, 6 Aug 2003, *Nesterova 9665* (VLA).

Puccinellia interior T.J. Sørensen

*2n = 28, CHN. Russia, Far East, Primorskii Krai, Dal'negorskii Raion, outskirts of Dal'negorsk town, the spring Tretii, rubbly littered plots, 17 Jul 1984, *Probatova, Seledets & al. 6407* (VLA).

Puccinellia paupercula Fernald & Weath.

*2n = 42, CHN. Russia, Far East, Primorskii Krai, Peter the Great Bay, Popova Island, the Stark Strait, plots of the shore covered by high tide, 22 Sep 1979, *Probatova & Seledets 5524* (VLA).

Puccinellia schischkinii Tzvelev

*2n = 14, CHN. Russia, Far East, Primorskii Krai, Vladivostok city, near Pervaya Rechka railway station, waste area at the railroad embankment, 28 Sep 1974, *Probatova & Seledets 3940* (VLA).

This specimen have been misidentified as "*P. tenuissima*" in Bot. Zhurn. 62(8): 1149. 1977.

Torreyochloa natans (Kom.) G.L. Church

2n = 14, CHN. Russia, Far East, Sakhalin, Korsakovskii Raion, 2 km SE of Ozërsk settlement, the Komissarovka River, near the mouth, low river bank, 5 Oct 1980, *Probatova & Seledets 5826* (VLA).

POLYGALACEAE

Polygala tenuifolia Willd.

2n = 34, CHN. Russia, East Siberia, Republic of Buryatiya, Dzhidinskii Raion, 10 km SW of Dyrestui village, left riverside of the Dzhida River, 596 m, steppe with *Ulmus pumila*, 24 Jul 2009, *Kazanovsky 12398* (VLA, IRK).

PRIMULACEAE

Lysimachia volkovae Prob.

*2n = 24, CHN. Russia, Far East, Primorskii Krai, Vladivostok city, Vtoraya Rechka, Russkaya Str., as a weed on the flower-bed, near the building, 29 Jul 2013, *Probatova & Seledets 12418* (VLA).

RANUNCULACEAE

Aquilegia oxysepala Trautv. & C.A. Mey.

2n = 16, CHN. Russia, Far East, Primorskii Krai, Khassanskii Raion, 40 km W of Razdol'noe settlement, vicinity of Kravtsovka village, forest on the slope, 3 May 1980, *Probatova & Seledets 5693* (VLA).

Aquilegia turczaninonii Kamelin & Gubanov

2n = 16, CHN. Russia, East Siberia, Zabaikal'skii Krai, Borzinskii Raion, mountain-steppe massif Adun-Chelon, 1019 m,

on the rocks, in the fissure filled with melkozem-humus soil, 15 Jul 2010, *Kazanovsky 12360* (VLA, IRK).

ROSACEAE

Geum canadense Jacq.

$2n = 42$, CHN. U.S.A., Texas, Addison (near Dallas), nature forest park, 3 Apr 2005, *Rudyka 9740* (VLA).

Potentilla fragarioides L.

$2n = 14$, CHN. Russia, Primorskii Krai, Vladivostok city, Kariernaya Str., on the slope, 21 Jun 2007, *Kapustina 10730* (VLA).

Potentilla norvegica L.

$2n = 56$, CHN. Russia, Primorskii Krai, Nadezhdinskii Raion, in vicinity of Taëzhnoe settlement, near country place “Al’batros”, roadside, 28 Jun 1998, *Probatova & Seledets 7824* (VLA).

Potentilla recta L.

$2n = 28$, CHN. Russia, North Caucasus, Krasnodarskii Krai, Novorossiiskii Raion, in vicinity of stanitsa Raevskaya, Volchii Vorota Pass, rubbly placer of marl, 3 Sep 2009, *Probatova & Seledets 12072* (VLA).

Potentilla tanacetifolia Willd. ex D.F.K. Schldl.

$2n = 28$, CHN. Russia, East Siberia, Republic of Buryatiya, Tunkinskii Raion, right riverside of the Margasan River, 5 km S of Margasan locality, steep rocky SE slope, 25 Sep 2012, *Kazanovsky 12338* (VLA, IRK).

SCROPHULARIACEAE

Veronica linariifolia Pall. ex Link

$2n = 34$, CHN. Russia, East Siberia, Republic of Buryatiya, Tunkinskii Raion, right riverside of the Margasan River, 5 km S of Margasan locality, steep rocky SE slope, 25 Sep 2012, *Kazanovsky 12374* (VLA, IRK).

SOLANACEAE

Solanum nigrum L.

$2n = 72$, CHN. Russia, Primorskii Krai, Mikhailovskii Raion, W outskirts of Novoshakhtinskii town, as a weed in the vegetable garden, 21 Sep 2010, *Lapenko 12339* (VLA).

VALERIANACEAE

Patrinia rupestris (Pall.) Juss.

$2n = 22$, CHN. Russia, East Siberia, Republic of Buryatiya, Tunkinskii Raion, right riverside of the Margasan River, 5 km S of Margasan locality, steep rocky SE slope, 25 Sep 2012, *Kazanovsky 12371* (VLA, IRK).

Nina S. Probatova,^{1*} Alla V. Verkhovina,² Elvira G. Rudyka,¹ & Denis A. Krivenko²

¹ Institute of Biology & Soil Science, Far East Branch of the Russian Academy of Sciences, 159 Stoletya Prospekt, 690022, Vladivostok, Russia

² Siberian Institute of Plant Physiology & Biochemistry, Siberian Branch of the Russian Academy of Sciences, 132 Lermontov Str., 664033, Irkutsk, Russia

* Author for correspondence: probatova@ibss.dvo.ru

* First chromosome count for the species.

This study was supported by grants no. 11-04-00240 (to N.S. Probatova), 12-04-01586 (to A.V. Verkhovina), 12-04-31151 (to D.A. Krivenko) from the Russian Fund for Basic Research (RFBR), and by

Interdisciplinary integration project Nr. 17, from the Siberian Branch of the Russian Academy of Sciences.

ALLIACEAE

Allium ramosum L.

$2n = 32$, CHN. Russia, Far East, Amurskaya Oblast', Arkharinskii Raion, Arkhara town, 10 Sep 2012, *Kudrin 12330* (VLA).

ASTERACEAE

Erigeron elongatus Ledeb.

$2n = 18$, CHN. Russia, East Siberia, Irkutskaya Oblast', Katangskii Raion, 16.5 km S of Bur settlement, 460 m, winter road in *Larix* and *Picea* forest with *Vaccinium myrtillus* and green mosses, on moist sabulous soil, near waterlogged plot, 10 Aug 2012, *Kazanovsky & Verkhovina 12373* (VLA, IRK).

Galatella dahurica DC.

$2n = 18$, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, Suntarskii Rayon, left riverside of the Vilyui River, opposite the mouth of the Arga-Dieli River (right tributary of the Vilyui River), 21 km SW of Suntar settlement, 3.3 km SSW of Agdary village, 111 m, meadow with steppe elements on S slope to the Vilyui River, 27 Aug 2012, *Krivenko 12414* (VLA, IRK).

Lactuca serriola L.

$2n = 18$, CHN. Russia, Far East, Amurskaya Oblast', Arkharinskii Raion, Arkhara town, waste ground, roadside, 23 Aug 2012, *Kudrin 12323* (VLA).

Matricaria perforata Mérat

$2n = 36$, CHN. Russia, East Siberia, Irkutskaya Oblast', Shelekhovskii Raion, in vicinity of Smolenshchina settlement, 437 m, the edge of a field, 1 Sep 2006, *Verkhovina & Tolstonogova 12384* (VLA, IRK).

Pterocypsela indica (L.) C. Shih

$2n = 18$, CHN. Russia, Far East, Amurskaya Oblast', Arkharinskii Raion, Khinganskii nature reserve, Antonovskoe forestry, square 11, 23 Aug 2012, *Kudrin 12324* (VLA).

Tanacetum vulgare L.

$2n = 18$, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, Suntarskii Rayon, left riverside of the Vilyui River, opposite the mouth of the Arga-Dieli River (right tributary of the Vilyui River), 21 km SW of Suntar settlement, 3.3 km SSW of Agdary village, 111 m, meadow with steppe elements on S slope to the Vilyui River, 27 Aug 2012, *Krivenko 12415* (VLA, IRK).

BORAGINACEAE

Echium vulgare L.

$2n = 16$, CHN. Russia, East Siberia, Irkutskaya Oblast', Nizhnelimskii Raion, near Khrebtovaya settlement, 592 m, meadow at the road, 14 Aug 2012, *Verkhovina 12359* (VLA, IRK).

Lappula lenensis Popov ex Ovczinnikova

* $2n = 24$, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, Suntarskii Raion, right riverside of the Vilyui River, 21 km SW of Suntar settlement, 2.7 km SW of Agdary village, 600 m above the mouth of the Arga-Dieli River, 106 m, the bank of the Vilyui River, 26 Aug 2012, *Verkhovina 12395* (VLA, IRK).

BRASSICACEAE

Bunias orientalis L.

$2n = 14$, CHN. Russia, East Siberia, Irkutskaya Oblast', SE outskirts of Taishet town, near 5th Tzelinnaya Str., ruderal plots at the road, 7 Aug 2012, *Verkhovina & al., 12391* (VLA, IRK).

Descurainia sophia (L.) Webb ex Prantl

$2n = 14$, CHN. Russia, East Siberia, Irkutskaya Oblast', Katangskii Raion, 9.5 km SE of Bur settlement, the pipe line, plug place, on dumped rockfill, 12 Aug 2012, *Verkhovina & Kazanovsky 12382* (VLA, IRK).

Lepidium latifolium L.

$2n = 24$, CHN. Russia, East Siberia, Irkutskaya Oblast', SE outskirts of Taishet town, along the railway lines, 7 Aug 2012, *Verkhovina & al. 12390* (VLA, IRK).

FABACEAE

Astragalus frigidus (L.) A. Gray

$2n = 16+0-2B$, CHN. Russia, East Siberia, Republic of Buryatiya, Tunkinskii Rayon, the valley of the Irkut River, right riverbank, in vicinity of Moigoty village, pine forest, 11 Aug 2012, *Krivenko 29593* (IRK).

Astragalus mongholicus Bunge

$2n = 16$, CHN. Russia, East Siberia, Irkutskaya Oblast', Ol'khonskii Rayon, Baikal Lake, Olkhon Island, near Shara-Nur Lake, pine forest, 15 Aug 2012, *Prelovskaya & Bondarevich 28970* (IRK).

Astragalus sericeocanus Gontsch.

$2n = 16+0-1B$, CHN. Russia, East Siberia, Republic of Buryatiya, Pribaikal'skii Rayon, 5 km SW of the mouth of the Turka River, in vicinity of Turka village, 452 m, sand dunes along the shore of Baikal Lake, forest edge, 24 Jul 2011, *Zhmud' 23490* (IRK).

CARYOPHYLLACEAE

Lychnis chalconica L.

$2n = 24$, CHN. Russia, East Siberia, Irkutskaya Oblast', Nizhneilmskii Raion, near Khrebtovaya settlement, 583 m, meadow at the road, probably on the place of the former vegetable garden, 15 Aug 2012, *Kazanovsky & Verkhovina 12402* (VLA, IRK).

LAMIACEAE

Dracocephalum thymiflorum L.

$2n = 14$, CHN. Russia, East Siberia, Irkutskaya Oblast', SE outskirts of Taishet town, along the railway lines, 7 Aug 2012, *Verkhovina & al. 12386* (VLA, IRK).

Leonurus villosus Desf.

$2n = 18$, CHN. Russia, East Siberia, Irkutskaya Oblast', Taishet town, near the railway station, Matrossova Str., ruderal plant communities along the road, 4 Aug 2012, *Verkhovina & Kaverzina 12379* (VLA, IRK).

LYTHRACEAE

Lythrum salicaria L.

$2n = 30$, CHN. Russia, East Siberia, Irkutskaya Oblast', SE outskirts of Taishet town, 1-st Tzelinnaya Str., 313 m, the littered slope of a road and alongside, plots with superfluous damping, 7 Aug 2012, *Verkhovina & al. 12381* (VLA, IRK).

PAPAVERACEAE

Papaver nudicaule L.

$2n = 28$, CHN. Russia, East Siberia, Republic of Buryatiya, Barguzinskii Raion, the Baikal Lake, Svyatoi Nos Peninsula, 16.5 km NNW of the mouth of Barguzin River, 447 m, dune sands, 26 Jul 2011, *Verkhovina 12392* (VLA, IRK).

PLANTAGINACEAE

Plantago major L.

$2n = 12$, CHN. Russia, East Siberia, Irkutskaya Oblast',

Ust'-Kutskii Raion, 8.5 km WNW of Yarakta oilmans' settlement, left riverside of the Yarakta River, 447 m, at the road near the bridge, overgrown rut along the bank of Yarakta River, 9 Aug 2012, *Verkhovina 12421* (VLA, IRK).

POACEAE

Agrostis clavata Trin.

$2n = 42$, CHN. Russia, Far East, Amurskaya Oblast', Arkharinskii Raion, Arkhara town, at the road, 20 Jul 2012, *Parilova 12311* (VLA).

Digitaria asiatica Tzvelev

$2n = 18$, CHN. Russia, Far East, Khabarovskii Krai, the railway station Khabarovsk-1, as a weed on the railroad embankment, 4 Sep 2004, *Probatova & Seledets 10484* (VLA).

Setaria glareosa Petrov

* $2n = 18$, CHN. Russia, East Siberia, Irkutskaya Oblast', Katangskii Raion, 9.5 km SE of Bur settlement, 440 m, the pipe line, plug place, on dumped rockfill, 12 Aug 2012, *Kazanovsky & Verkhovina 12376* (VLA, IRK).

Setaria pumila (Poir.) Roem. & Schult. (*S. glauca* auct.)

$2n = 18$, CHN. Russia, Far East, Amurskaya Oblast', Arkharinskii Raion, Khinganskii nature reserve, Antonovskoe forestry, the lakeside of Klëshinskoe Lake, on the bank, 21 Aug 1982, *Yashenkova 6302* (VLA).

$2n = 36$, CHN. Russia, Volga Region, Volgogradskaya Oblast', N outskirts of Volgograd city, gardening plots near GRES settlement, 2 Aug 2006, *Yurtseva 10496* (VLA).

PORTULACACEAE

Portulaca oleracea L.

$2n = 36$, CHN. Russia, Far East, Amurskaya Oblast', Arkharinskii Raion, Arkhara town, near the office of the Khinganskii nature reserve, on sandy ground, 10 Sep 2012, *Kudrin 12319* (VLA).

ROSACEAE

Comarum palustre L.

$2n = 28$, CHN. Russia, East Siberia, Irkutskaya Oblast', Katangskii Raion, 2 km SE of Bur settlement, 412 m, *Larix* and *Picea* forest with shrubs and green mosses, 11 Aug 2012, *Verkhovina & Kazanovsky 12401* (VLA, IRK).

Potentilla longifolia Willd. ex D.F.K. Schldtl.

$2n = 14$, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, Suntarskii Raion, left riverside of the Vilyui River, opposite the mouth of the Arga-Dieli River (right tributary of the Vilyui River), 21 km SSW of Agdary village, 111 m, meadow with steppe elements on S slope to the Vilyui River, 27 Aug 2012, *Krivenko 12337* (VLA, IRK).

Potentilla norvegica L.

$2n = 56$, CHN. Russia, East Siberia, Irkutskaya Oblast', Ust'-Kutskii Raion, 8.5 km WNW of Yarakta oilmans' settlement, left riverside of the Yarakta River, 447 m, at the road near the bridge, overgrown rut along the bank of Yarakta River, 9 Aug 2012, *Verkhovina 12383* (VLA, IRK).

Potentilla paradoxa Nutt. ex Torr. & Gray

$2n = 28$, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, Suntarskii Raion, right riverside of the Vilyui River, 20 km SW of Suntar settlement, 2 km SW of Agdary village, near the mouth of the Arga-Dieli River, 106 m, sandy bank, 27 Aug 2012, *Verkhovina 12413* (VLA, IRK); Russia, East Siberia, Republic of Buryatiya, Pribaikal'skii Raion, 5.3 km SW of Turka village, 464 m, roadside, 23 Jul 2011, *Verkhovina & Anossova 12340* (VLA, IRK).

María Santos-Vicente,* Enrique Rico & M. Montserrat Martínez-Ortega

Departamento de Botánica, Universidad de Salamanca, 37007 Salamanca, Spain.

* Author for correspondence: *m.santos@usal.es*

- * First chromosome count for the species.
- First chromosome count for an accession of the species from the referenced country.
- ▼ Endemic to the Iberian Peninsula.
- + Endemic to North Africa.

This study was supported by the Spanish Dirección General de Investigación (Ministerio de Ciencia y Tecnología and Ministerio de Educación y Ciencia) through the projects *Flora iberica* VI (REN2002-04634-C05-02; grant ref. BES-2003-2213 to M. Santos Vicente) and *Flora iberica* VII (CGL2005-05471-C04-03) and by the Junta de Castilla y León through project SA142A08. We greatly acknowledge this support.

ASTERACEAE

Inula helenioides DC.

* $2n = 32$, CHN. Spain, La Rioja, Lagunilla del Jubera towards Zenzano, 42°21'13" N, 02°20'25" W, 571 m, slopes and roadsides, dolomites, 1 Jul 2006, *A. Abad, S. Andrés-Sánchez, M.M. Martínez-Ortega & M. Santos-Vicente* 758 (SALA 136037) [Fig. 4A].

* $2n = 40$, CHN. Spain, Valladolid, San Martín de Valvení, 41°45'25" N, 04°31'39" W, 865 m, nitrophilous pastures, roadside, 6 Jul 2007, *L. Delgado & M. Santos-Vicente* 907 (SALA 136055) [Fig. 4B]; Spain, Soria, El Rojo, Hinojosa de la Sierra, 41°51'49" N, 02°35'34" W, 1030 m, riverbank, calcareous soil, 23 Aug 2007, *L. Delgado, C. Molina & M. Santos-Vicente* 953b (SALA 136056) [Fig. 4C].

A previously published chromosome count ($2n = 16$; Löve & Kjellqvist, 1974) needs to be discarded since the voucher specimen (RNG) corresponds to just a few leaves that for sure cannot be identified as *I. helenioides*. Therefore, these are the first reliable counts for this species endemic to France and Spain.

Inula langeana Beck

▼* $2n = 32$, CHN. Spain, Burgos, Jurisdicción de San Zadornil, San Millán de San Zadornil, 42°50'29" N, 03°09'14" W, 680 m, pasture in *Pinus sylvestris* and *Quercus ilex* forest, calcareous soil, 13 Jul 2004, *S. Andrés-Sánchez, J.A. Sánchez-Agudo & M. Santos-Vicente* 412 (SALA 136057) [Fig. 4D].

▼* $2n = 40$, CHN. Spain, Valladolid, Tudela de Duero, 41°34'23" N, 04°30'42" W, 863 m, *Quercus faginea* and *Pinus pinaster* forest, calcareous soil, 14 Jun 2005, *P. Bariego & M. Santos-Vicente* 583 (SALA 136058) [Fig. 4E].

▼* $2n = 48$, CHN. Spain, Palencia, Hontoria de Cerrato, 41°54'52" N, 004°23'42" W, 800 m, base of slopes, calcareous soil, 10 Aug 2007, *L. Delgado & M. Santos-Vicente* 952 (SALA 136059); Spain, Álava, Lantarón, Puentelarrá, 42°44'34" N, 03°02'31" W, 440 m, *Quercus ilex* forest, calcareous soil, 10 Jun 2006, *A. Abad, S. Andrés-Sánchez, M.M. Martínez-Ortega & M. Santos-Vicente* 755 (SALA 136022) [Fig. 4F]; Spain, Valladolid, Tudela de Duero, 41°34'30" N, 004°30'42" W, 850 m, *Quercus faginea* and *Pinus pinaster* forest, calcareous soil, 10 Aug 2007, *L. Delgado & M. Santos-Vicente* 946 (SALA 136060).

This is the first report for this endemic species, which is restricted to CN Iberian Peninsula. This taxon has been traditionally subordinated to *I. conyzae* (Griess.) DC., but morphological evidence supports the independence of both species (Santos-Vicente & al., in prep.). In addition, a single cytotype has been found in *I. conyzae* (Santos-Vicente & al., 2009), whereas *I. langeana* shows three ploidy levels.

Inula maletii Maire

+* $2n = 32$, CHN. Morocco, Fès-Boulemane, Ifrane, Tizi-n-Tretten, 33°27'32" N, 05°02'09" W, 1980 m, clearings on *Quercus ilex* and *Cedrus atlantica* forest, calcareous soil, 10 Jul 2006, *A. Herrero & al.* 3347 (SALA 136015) [Fig. 4G]; Morocco, Tadla-Azilal, Beni Mellal, El Ksiba, 32°30'36" N, 06°00'04" W, 1878 m, *Quercus ilex* forest, calcareous soil, 5 Jul 2006, *A. Quintanar & al.* 2043 (SALA 136016); Morocco, Tadla-Azilal, Col de Tanout ou Fillal, 32°40'38" N, 05°27'17" W, 2070 m, *Quercus ilex* forest, calcareous soil, 6 Jul 2006, *A. Quintanar & al.* 2153 (SALA 136007).

Inula maletii is a North-African endemic very narrowly distributed in the Middle Atlas of Morocco (ca. 10 populations). *Inula maletii* is morphologically similar to *I. bifrons*, but the latter species (scattered in S Europe) shows a different cytotype ($2n = 16$, diploid level; Santos-Vicente & al., 2009).

Inula montana L.

$2n = 16$, CHN. Spain, Palencia, Vertavillo, 41°48'58" N, 04°15'07" W, 811 m, *Quercus faginea* forest, calcareous soil, 20 Jun 2007, *L. Delgado & M. Santos-Vicente* 882 (SALA 136061).

■ $2n = 16$, CHN. Morocco, Marrakech-Tensift-Al Haouz, Oukaïmeden, 31°11'52" N, 07°51'55" W, 2700 m, pastures, sandstones, 30 Jun 2006, *A. Herrero & al.* 3215 (SALA 136064) [Fig. 4H].

The chromosome numbers obtained agree with those reported for Spain (Löve & Kjellqvist, 1974), France (Guinochet & Logeais, 1962; Delay, 1968) and Italy (D'Amato, 1971; Brullo & al., 1977). This is the first chromosome count for an accession of *I. montana* from North Africa (Morocco). The species has been also reported from Algeria.

Inula oculus-christi L.

$n = 16$, CHN. Bulgaria, Smolyan, Buynovsko Gorge, 41°38'30" N, 24°20'03" E, 1040 m, rocky places, calcareous soil, 2 Jun 2004, *C. Navarro & al.* 4769 (SALA 136063).

This haploid chromosome number agrees with that reported by Baksay (1958) for plants collected in Hungary and it is consistent with the previously published diploid number (e.g., Strid & Franzen, 1981; Probatova & al., 2009), including Bulgarian counts (Kuzmanov & Georgieva, 1977).

Inula salicina L.

$2n = 16$, CHN. Spain, Lleida, Bellver de Cerdanya, 42°20'11" N, 01°43'31" E, moist pastures, 1260 m, 1 Jul 2004, *X. Giráldez, A. Guillén & M. Santos-Vicente* 404 (SALA 136062); Spain, Salamanca, Aldeacipreste, 40°22'24" N, 05°53'13" W, 860 m, clearings on *Fraxinus angustifolia* and *Quercus pyrenaica* forest, siliceous soil, 8 Jun 2005, *L. Delgado & M. Santos-Vicente* 572 (SALA 136045) [Fig. 4I].

Most of the chromosome counts published for this taxon agree with ours (e.g., Löve & Kjellqvist, 1974; Lövkqvist & Hultgard, 1999). Supernumerary chromosomes have been reported in the literature for *I. salicina* ($2n = 16+2B$; Capineri & al., 1978; Ghaffari, 1987), and some exceptional reports ($2n = 18$; Kuzmanov & Kozucharov, 1970; Dobeš & al., 1997) could also be explained due to the presence of two B chromosomes. Nevertheless, supernumerary chromosomes have not been observed in the Spanish populations studied.

Literature cited

- Baksay, L.** 1958. The chromosome numbers of Ponto-Mediterranean plant species. *Ann. Hist.-Nat. Mus. Natl. Hung.* 50: 121–125.
- Brullo, S., Pavone, P., Terrasi, M.C. & Zizza, A.** 1977. Numeri cromosomi per la flora italiana: 299–314. *Inform. Bot. Ital.* 9: 57–71.
- Capineri, R., D'Amato, G. & Marchi, P.** 1978. Numeri cromosomici para la flora italiana: 543–583. *Inform. Bot. Ital.* 10: 421–465.
- D'Amato, G.** 1971. Numeri cromosomi per la flora italiana: 67–80. *Inform. Bot. Ital.* 3: 138–147.
- Delay, J.** 1968. Halophytes II. *Inform. Annuelles Caryosyst. Cytogén.* 2: 17–22.

Dobeš, C., Hahn, B. & Morawetz, W. 1997. Chromosomenzahlen zur Gefäßpflanzen-Flora von Österreichs. *Linzer Biol. Beitr.* 29: 5–43.

Ghaffari, S.M. 1987. Chromosome studies in some flowering plants of Iran. *Rev. Cytol. Biol. Vég. Botaniste* 10: 3–8.

Guinochet, M. & Logeais, A. 1962. Premières prospections caryologiques dans la flore des Alpes maritimes. *Rev. Cytol. Biol. Vég.* 25: 465–480.

Kuzmanov B.A. & Georgieva S. 1977. [Report]. In: Löve, A. (ed.), IOPB Chromosome number reports LVII. *Taxon* 26: 443–452.

Kuzmanov, B.A. & Kozucharov, S.I. 1970. [Report]. In: Löve, A. (ed.), IOPB chromosome number reports XXVI. *Taxon* 19: 264–269.

Löve, A. & Kjellqvist, E. 1974. Cytotaxonomy of spanish plants. IV. Dicotyledons: Caesalpiniaceae–Asteraceae. *Lagascalia* 4: 153–211.

Lökvist, B. & Hultgård, U.-M. 1999. Chromosome numbers in south Swedish vascular plants. *Opera Bot.* 137: 1–42.

Probatova, N.S., Seledets, V.P., Rudyka, E.G., Gnutikov, A.A., Kozhevnikova, Z.V. & Barkalov, V.Y. 2009. *Inula oculus-christi* L. In: Marhold, K. (ed.), IAPT/IOPB chromosome data 8. 58: *Taxon* 58: 1285, E12.

Santos-Vicente, M., Rico, E. & Martínez-Ortega, M.M. 2009. *Inula bifrons* L., *I. conyzae* (Griess.) Meikle, *I. ensifolia* L., *I. helenium* L. & *I. helvetica* Grauer (Asteraceae). In: Marhold, K. (ed.), IAPT/IOPB chromosome data 8. *Taxon* 58: 1288, E20–E21.

Strid, A. & Franzén, R. 1981. In: Löve, A. (ed.), IOPB Chromosome number reports LXXXIII. *Taxon* 30: 829–842.

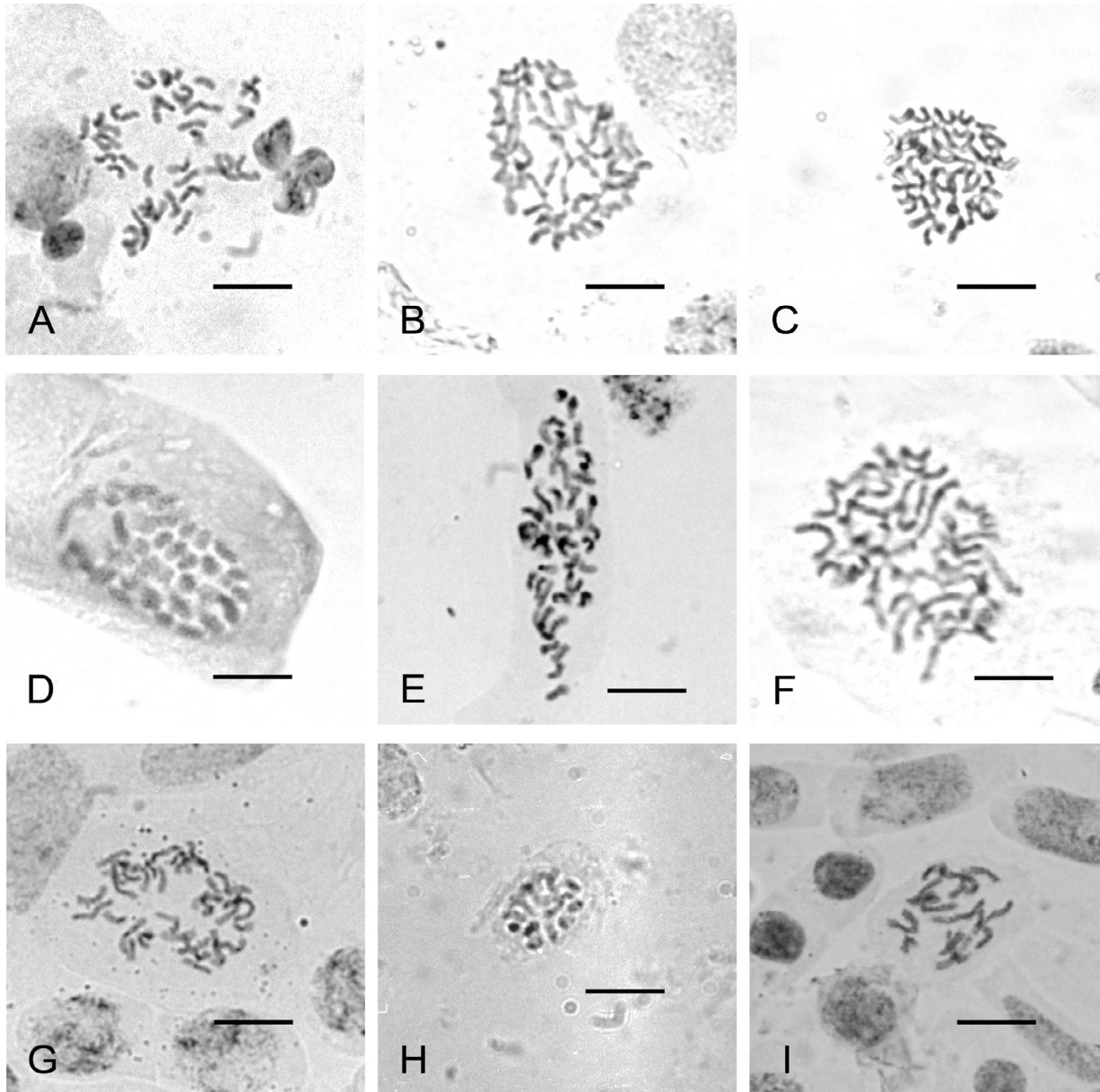


Fig. 4. **A**, *Inula helenioides*, $2n = 32$ (A. Abad, S. Andrés-Sánchez, M.M. Martínez-Ortega & M. Santos-Vicente 758; SALA 136037); **B**, *I. helenioides*, $2n = 40$ (L. Delgado & M. Santos-Vicente 907; SALA 136055); **C**, *I. helenioides*, $2n = 40$ (L. Delgado, C. Molina & M. Santos-Vicente 953b; SALA 136056); **D**, *I. langeana*, $2n = 32$ (S. Andrés-Sánchez, J.A. Sánchez-Agudo & M. Santos-Vicente 412; SALA 136057); **E**, *I. langeana*, $2n = 40$ (P. Bariego & M. Santos-Vicente 583; SALA 136058); **F**, *I. langeana*, $2n = 48$ (A. Abad, S. Andrés-Sánchez, M.M. Martínez-Ortega & M. Santos-Vicente 755; SALA 136022); **G**, *I. maletii*, $2n = 32$ (A. Herrero & al. 3347; SALA 136015); **H**, *I. montana* $2n = 16$ (A. Herrero & al. 3215; SALA 136064); **I**, *I. salicina*, $2n = 16$ (L. Delgado & M. Santos-Vicente 572; SALA 136045). — All of them mitotic counts. Scale bar = 10 μm .