

IAPT CHROMOSOME DATA

IAPT chromosome data 41

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IAPT chromosome data 41/1

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All materials for the chromosome column should be submitted electronically to: Karol Marhold, karol.marhold@savba.sk. The full version of this contribution is available in the online edition of TAXON appended to this article. The following citation format is recommended: Korobkov, A.A., Kotseruba, V.V. & Krivenko, D.A. 2019. IAPT chromosome data 30/4. In: Marhold, K. & Kučera, J. (eds.) & al., IAPT chromosome data 30. *Taxon* 68: 882, E1–E2.

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All materials CHN; collectors: *AA* = A.Z. Afinogenov, *AP* = A.Ya. Pshenichkin, *EB* = E.V. Banaev, *MT* = M.A. Tomoshevich; vouchers in NSK.

FABACEAE

Caragana altaica (Kom.) Pojark., $2n = 24, 32$; Russian Federation, Republic of Khakassiya, *EB* & *MT* 3001745, *EB* & *MT* 3001747.
Caragana pygmaea (L.) DC., $2n = 16$; Russian Federation, Republic of Tuva, *EB* & *MT* 3001748.

LAMIACEAE

Thymus iljinii Klokov & Des.-Shost., $2n = 24, 26$; Russian Federation, Krasnoyarskii Krai, *AA* 3001798.
Thymus marschallianus Willd., $2n = 28, 42$; Russian Federation, Novosibirskaya Oblast', *AP* 3001791. $2n = 42$; Russian Federation, Altaiskii Krai, *AP* 3001790, *EB* 3001792.
Thymus serpyllum L. s.l., $2n = 14, 20$; Russian Federation, Republic of Altai, *AA* 3001796. $2n = 24, 26, 28$; Kazakhstan, Vostochno-Kazakhstanskaya Oblast', *EB* 3001795. $2n = 26, 28$; Russian Federation, Republic of Altai, *EB* 3001794. $2n = 28$; Russian Federation, Novosibirskaya Oblast', *EB* 3001793. $2n = 28, 32, 36$; Russian Federation, Republic of Khakassiya, *AA* 3001797.

POLYGONACEAE

Atraphaxis frutescens (L.) K.Koch., $2n = 16, 24$; Russian Federation, Republic of Tuva, *EB* & *MT* 3001766.
Atraphaxis pungens (M.Bieb.) Jaub. & Spach., $2n = 32, 40$; Russian Federation, Republic of Tuva, *EB* & *MT* 3001763. $2n = 32, 40, 48$; Russian Federation, Republic of Tuva, *EB* & *MT* 3001761.

IAPT chromosome data 41/2

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All materials CHN.

AMARANTHACEAE

Alternanthera sessilis (L.) DC., $2n = 68$; Thailand, *P.A. Kuzmina* 72625 (IRK).

ASPARAGACEAE

Hosta ventricosa (Salisb.) Stearn, $2n = 60$; Kyrgyzstan, *T.V. Kostritsyna* 73003 (IRK).

ASTERACEAE

Achillea millefolium L., $2n = 64$; Russian Federation, Rostovskaya Oblast', *A.A. Korobkov* 2015-22 (LE).
Anthemis cotula L., $2n = 18$; Armenia, *D.A. Krivenko* & *al.* 2021-12 (LE).
Arctium lappa L., $2n = 36$; Germany, *G.V. Yurlova* 72763 (IRK).

Artemisia anethifolia Weber ex Stechm., $2n = 18$; Russian Federation, Republic of Buryatia, *B. Namzalov* 2021-01 (LE), *B. Namzalov* 2021-02 (LE), *B. Namzalov* 2021-06 (LE).
Artemisia capillaris Thunb., $2n = 18$; China, Jilin Province, *M.O. Burlyayeva* & *V.V. Kotseruba* 2014-111 (LE), *M.O. Burlyayeva* & *V.V. Kotseruba* 2014-112 (LE).
Artemisia frigida Willd., $2n = 18$; Russian Federation, Tyumenskaya Oblast', *B.S. Kharitonov* 2021-03 (LE), *B.S. Kharitonov* 2021-07 (LE). $2n = 36$; Russian Federation, Tyumenskaya Oblast', *B.S. Kharitonov* 2021-04 (LE).
Artemisia tilesii Ledeb., $2n = 18$; Russian Federation, Arkhangel'skaya Oblast', 24 Aug 2020, *L.A. Konoreva s.n.* (LE), *L.A. Konoreva* 2021-05 (LE).
Artemisia vulgaris L., $2n = 16$; Germany, *G.V. Yurlova* 72721 (IRK).
Aster alpinus L., $2n = 18$; Russian Federation, Irkutskaya Oblast', *D.A. Krivenko* 2021-14 (LE).
Aster biennis Ledeb. (= *Heteropappus biennis* (Ledeb.) Tamamsch. ex Grubov), $2n = 18$; Russian Federation, Irkutskaya Oblast', *D.A. Krivenko* 2021-11 (IRK, LE).
Erigeron canadensis L. (= *Conyza canadensis* (L.) Cronquist), $2n = 18$; Russian Federation, Altaiskii Krai, *D.A. Krivenko* 2021-17 (LE).
Leucanthemum vulgare Lam., $2n = 18$; Russian Federation, Republic of Dagestan, *V.V. Kotseruba* 2013-74 (LE), *V.V. Kotseruba* 2013-77 (LE).
Senecio inaequidens DC., $2n = 40$; Germany, *G.V. Yurlova* 72762 (IRK).
Solidago canadensis L., $2n = 18$; Germany, *G.V. Yurlova* 72720 (IRK).
Tanacetum leptophyllum (Steven ex M.Bieb.) Sch.Bip. (= *Pyrethrum leptophyllum* Steven ex M.Bieb.), $2n = 18$; Russian Federation, Republic of Dagestan, *N.I. Dorofeev* 2013-73 (LE), *V.V. Kotseruba* 2013-75 (LE), *V.V. Kotseruba* 2013-76 (LE).
Tanacetum partheniifolium (Willd.) Sch.Bip. (= *Pyrethrum partheniifolium* Willd.), $2n = 18$; Georgia, *D.A. Krivenko* & *al.* 2021-13 (LE).
Tanacetum parthenium (L.) Sch.Bip. (= *Pyrethrum glanduliferum* Sommier & Levier), $2n = 18$; Russian Federation, Kabardino-Balkarian Republic, *D.A. Krivenko* 2021-19 (IRK, LE).
Tridax procumbens L., $2n = 36$; Thailand, *P.A. Kuzmina* 72633 (IRK).
Tripleurospermum elongatum (Fisch. & C.A.Mey.) Bornm., $2n = 36$; Russian Federation, Kabardino-Balkarian Republic, *D.A. Krivenko* 2021-16 (IRK, LE).
Tripleurospermum parviflorum (Willd.) Pobed., $2n = 18$; Georgia, *D.A. Krivenko* & *al.* 2021-15 (IRK, LE).
Xeranthemum annuum L. (= *X. squarrosum* Boiss.), $2n = 12$; Armenia, *D.A. Krivenko* & *al.* 2021-18 (IRK, LE).

BIGNONIACEAE

Tecoma stans (L.) Juss. ex Kunth, $2n = 36$; Thailand, *P.A. Kuzmina* 72295 (IRK).

CLEOMACEAE

Cleome ruidosperma DC., $2n = 30$; Thailand, *P.A. Kuzmina* 72627 (IRK).

EUPHORBIACEAE

Acalypha indica L., $2n = 20$; Thailand, *P.A. Kuzmina* 72294 (IRK).
Euphorbia hirta L., $2n = 18$; Thailand, *P.A. Kuzmina* 72293 (IRK).

FABACEAE

Leucaena leucocephala (Lam.) de Wit, $2n = 104$; Thailand, *E.V. Zhmud 73011* (IRK), *E.V. Zhmud 72902* (IRK).

MAZACEAE

Dodartia orientalis L., $2n = 20$; Kyrgyzstan, *T.V. Kostritsyna 72204* (IRK).

NYCTAGINACEAE

Boerhavia repens L., $2n = 52$; Thailand, *P.A. Kuzmina 72774* (IRK).

ONAGRACEAE

Oenothera biennis L., $2n = 14$; Germany, *G.V. Yurlova 72764* (IRK).

PAPAVERACEAE

Chelidonium majus L., $2n = 12$; Kyrgyzstan, *T.V. Kostritsyna 72210* (IRK), *T.V. Kostritsyna 72211* (IRK), *T.V. Kostritsyna 72212* (IRK).

PHYLLANTHACEAE

Phyllanthus amarus Schumach. & Thonn., $2n = 26$; Thailand, *P.A. Kuzmina 72628* (IRK).

POACEAE

Cenchrus echinatus L., $2n = 34$; Thailand, *P.A. Kuzmina 72629* (IRK).

Elysius indica (L.) Gaertn., $2n = 18$; Thailand, *P.A. Kuzmina 72631* (IRK), *P.A. Kuzmina 72632* (IRK).

Leptochloa panicea (Retz.) Ohwi, $2n = 20$; Thailand, *P.A. Kuzmina 72630* (IRK).

RANUNCULACEAE

Clematis vitalba L., $2n = 16$; Germany, *G.V. Yurlova 72765* (IRK).

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All materials CHN; collectors: *AS* = A. Samdan; *DSh* = D. Shaulo, *EZ* = E. Zykova, *NK* = N. Kimsin, *TSh* = T. Shemetova; vouchers in NS.

APIACEAE

Eryngium planum L., $2n = 16$; Russian Federation, Novosibirskaya Oblast', *EZ EZ865-2119*.

Pimpinella saxifraga L., $2n = 40$; Russian Federation, Republic of Altai, *EZ EZ772-1618*.

ASTERACEAE

Bidens tripartita L., $2n = 48$; Russian Federation, Republic of Altai, *EZ EZ270-1716*.

Centaurea scabiosa L., $2n = 20$; Russian Federation, Novosibirskaya Oblast', *EZ & TSh EZ442-7417*.

Cirsium setosum (Willd.) M.Bieb., $2n = 34$; Russian Federation, Novosibirskaya Oblast', *DSh EZ709*.

Lactuca tatarica (L.) C.A.Mey., $2n = 18$; Russian Federation, Novosibirskaya Oblast', *EZ & TSh EZ376-4317*.

Pilosella katunensis Tupitz. (= *Pilosella echioides* (Lumn.) F.W. Schultz & Sch.Bip. p.p.), $2n = 27$; Russian Federation, Republic of Tyva, *NK & AS EZ643*.

BRASSICACEAE

Camelina microcarpa Andr. ex DC., $2n = 18$; Russian Federation, Republic of Altai, *EZ EZ 277-2515*.

CARYOPHYLLACEAE

Gypsophila paniculata L., $2n = 34$; Russian Federation, Novosibirskaya Oblast', *EZ & TSh EZ381-4317*.

FABACEAE

Melilotus albus Medik., $2n = 16$; Russian Federation, Novosibirskaya Oblast', *DSh EZ712*.

Melilotus officinalis (L.) Lam., $2n = 16$; Russian Federation, Novosibirskaya Oblast', *DSh EZ706*.

Vicia cracca L., $2n = 14$; Russian Federation, Novosibirskaya Oblast', *DSh EZ715*.

LAMIACEAE

Mentha arvensis L., $2n = 54$; Russian Federation, Republic of Altai, *EZ EZ412-6917*.

POACEAE

Agropyron pectinatum (M.Bieb.) P.Beauv., $2n = 28$; Russian Federation, Novosibirskaya Oblast', *EZ & TSh EZ377-4417*.

RANUNCULACEAE

Ranunculus cantoniensis DC. (= *R. chinensis* Bunge), $2n = 16$; Russian Federation, Krasnoyarskii Krai, *DSh EZ644*, *DSh EZ708*.

SCROPHULARIACEAE

Scrophularia nodosa L., $2n = 36$; Russian Federation, Republic of Altai, *EZ EZ399-6117*.

Verbascum nigrum L., $2n = 30$; Russian Federation, Novosibirskaya Oblast', *EZ EZ848-2020*.

IAPT chromosome data 41/4

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Methods and Technologies for Digital Monitoring and Forecasting of the Environmental Situation on the Baikal Natural Territory”).

All materials CHN.

AMARYLLIDACEAE

Allium ramosum L., $2n = 32$; Russian Federation, Irkutskaya Oblast', *O.A. Chernysheva 68811* (IRK00019661), *O.A. Chernysheva 68812* (VLA).

Allium schoenoprasum L., $2n = 16$; Russian Federation, Irkutskaya Oblast', *O.Yu. Zavgorodnyaya kr13* (IRK00014391).

APIACEAE

Carum carvi L., $2n = 20$; Russian Federation, Irkutskaya Oblast', *O.Yu. Zavgorodnyaya 66079* (IRK), *O.Yu. Zavgorodnyaya 66080* (VLA).

ASPARAGACEAE

Asparagus persicus Baker, $2n = 20$; Russian Federation, Republic of Dagestan, *D.A. Krivenko 65887* (IRK00035896), *D.A. Krivenko 65891* (LE), *D.A. Krivenko 65890* (PVB), *D.A. Krivenko 65889* (VLA).

ASTERACEAE

Bidens radiata Thuill., $2n = 48$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13833* (VLA).

Carduus crispus L., $2n = 16$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13821* (VLA).

Chrysanthemum arcticum L. (= *Arctanthemum arcticum* (L.) Tzvelev), $2n = 18$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13751* (VLA).

Lactuca sibirica (L.) Benth. ex Maxim. (= *Mulgedium sibiricum* (L.) Less.), $2n = 18$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13757* (VLA).

Lactuca tatarica (L.) C.A.Mey., $2n = 18$; Russian Federation, Republic of Tatarstan, *M.A. Markaryan 65855* (IRK), *M.A. Markaryan 65856* (VLA).

Sonchus oleraceus L., $2n = 32$; Tajikistan, *O.T. Rusinek 66249* (IRK), *O.T. Rusinek 66252* (IRKU), *O.T. Rusinek 66253* (NSK), *O.T. Rusinek 66251* (VLA).

Symphotrichum ciliatum (Ledeb.) G.L.Nesom (= *Brachyactis ciliata* (Ledeb.) Ledeb.), $2n = 14$; Russian Federation, Primorskii Krai, *O.A. Chernyagina 13765* (VLA).

Tripleurospermum inodorum (L.) Sch.Bip., $2n = 36$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13820* (VLA).

BETULACEAE

Betula ermanii Cham., $2n = 28$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13748* (VLA).

Betula glandulosa Michx. (= *B. exilis* Sukaczew), $2n = 28$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13746* (VLA).

BORAGINACEAE

Nonea pulla (L.) DC., $2n = 14$; Russian Federation, Altaiskii Krai, *D.A. Krivenko 68530* (IRK), *D.A. Krivenko 68531* (VLA).

BRASSICACEAE

Alyssum lenense Adams, $2n = 16$; Russian Federation, Irkutskaya Oblast', *O.Yu. Zavgorodnyaya kr20* (IRK).

Arabis sagittata (Bertol.) DC., $2n = 32$; Russia, Irkutskaya Oblast', *O.Yu. Zavgorodnyaya 66072* (IRK).

Descurainia sophia (L.) Webb ex Prantl, $2n = 14$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13819* (VLA).

CARYOPHYLLACEAE

Dianthus chinensis L., $2n = 30$; Russian Federation, Irkutskaya Oblast', *D.A. Krivenko & V.V. Murashko 68708* (IRK), *D.A. Krivenko & V.V. Murashko 68709* (VLA).

Silene multiflora (Ehrh.) Pers., $2n = 24$; Russian Federation, Altaiskii Krai, *D.A. Krivenko 68479* (IRK), *D.A. Krivenko 68480* (VLA).

COMMELINACEAE

Commelina communis L., $2n = 42$; Russian Federation, Primorskii Krai, *D.V. Mysnik 13795* (VLA).

EUPHORBIACEAE

Euphorbia davidii Subils, $2n = 56$; Russian Federation, Republic of Dagestan, *D.A. Krivenko 65938* (IRK), *D.A. Krivenko 65940* (VLA).

Euphorbia falcata L., $2n = 32$; Russian Federation, Kaliningradskaya Oblast', *O.Yu. Zavgorodnyaya 68830* (IRK), *O.Yu. Zavgorodnyaya 68831* (VLA).

FABACEAE

Oxytropis revoluta Ledeb., $2n = 16$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13822* (VLA).

LAMIACEAE

Ajuga chamaepitys subsp. *chia* (Schreb.) Arcang., $2n = 30$; Russian Federation, Republic of Dagestan, *D.A. Krivenko 66105* (IRK), *D.A. Krivenko 66106* (VLA).

Salvia deserta Schangin, $2n = 14$; Russian Federation, Altaiskii Krai, *D.A. Krivenko 68470* (IRK), *D.A. Krivenko 68471* (VLA).

LINACEAE

Linum perenne L., $2n = 18 + 0-2B$; Russian Federation, Irkutskaya Oblast', *O.Yu. Zavgorodnyaya kr260* (IRK).

MALVACEAE

Malva thuringiaca (L.) Vis., $2n = 44$; Russian Federation, Altaiskii Krai, *D.A. Krivenko 68510* (IRK), *D.A. Krivenko 68511* (VLA).

NITRARIACEAE

Peganum harmala L., $2n = 24$; Russian Federation, Republic of Dagestan, *D.A. Krivenko 65586* (IRK), *D.A. Krivenko 65587* (VLA).

OROBANCHACEAE

Cymbaria daurica L., $2n = 32$; Russian Federation, Irkutskaya Oblast', *O.Yu. Zavgorodnyaya kr21* (IRK), *O.Yu. Zavgorodnyaya 65971* (IRK).

PAPAVERACEAE

Papaver alboroseum Hultén, $2n = 28$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13810* (VLA).

Papaver ammophilum (Turcz.) Peschkova, $2n = 42$; Russian Federation, Irkutskaya Oblast', *O.Yu. Zavgorodnyaya kr259* (IRK).

PLANTAGINACEAE

Plantago camtschatica Link, $2n = 12$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13767* (VLA).

POLEMONIACEAE

Polemonium boreale Adams, $2n = 18$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13768* (VLA).

POLYGONACEAE

Atraphaxis frutescens (L.) K.Koch, $2n = 40$; Russian Federation, Altaiskii Krai, *D.A. Krivenko 68552* (IRK), *D.A. Krivenko 68554* (VLA).

Rumex obtusifolius subsp. *sylvestris* (Lam.) Čelak., $2n = 20$; Russian Federation, Kaliningradskaya Oblast', *O.Yu. Zavgorodnyaya 68861* (IRK), *O.Yu. Zavgorodnyaya 68862* (VLA).

Rumex stenophyllus Ledeb., $2n = 20$; Russian Federation, Altaiskii Krai, *D.A. Krivenko 68563* (IRK), *D.A. Krivenko 68564* (VLA).

PRIMULACEAE

Androsace septentrionalis L., $2n = 20$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13824* (VLA).

Primula kawasimae H.Hara, $2n = 18$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13829* (VLA).

RANUNCULACEAE

Aquilegia sibirica Lam., $2n = 14$; Russian Federation, Irkutskaya Oblast', *O.Yu. Zavgorodnyaya kr12* (IRK).

Ranunculus polyanthemos L., $2n = 16$; Russian Federation, Altaiskii Krai, *D.A. Krivenko 68446* (IRK), *D.A. Krivenko 68449* (NSK), *D.A. Krivenko 68448* (VLA).

Ranunculus smirnovii Ovcz., $2n = 28$; Russian Federation, Irkutskaya Oblast', *O.Yu. Zavgorodnyaya kr244* (IRK), *O.Yu. Zavgorodnyaya kr245* (IRK).

ROSACEAE

Argentina anserina subsp. *groenlandica* (Tratt.) Å.Löve (= *Potentilla egedei* Wormsk. ex Hornem.), $2n = 28$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13683* (VLA).

Filipendula vulgaris Moench, $2n = 14$; Russian Federation, Altaiskii Krai, *D.A. Krivenko 68592* (IRK), *D.A. Krivenko 68593* (VLA).

Geum aleppicum Jacq., $2n = 42$; Russian Federation, Kamchatskii Krai, *O.A. Chernyagina 13789* (VLA).

URTICACEAE

Urtica cannabina L., $2n = 52$; Russian Federation, Republic of Burятия, *O.Yu. Zavgorodnyaya 57673* (IRK00038350).

IAPT chromosome data 41/5

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All materials CHN; collectors: *MP* = M.G. Pimenov, *OT* = O. Tursunov.

APIACEAE / UMBELLIFERAE

Aegopodium tadshikorum Schischk., $n = 11$; Uzbekistan, *MP 5-17* (MW).

Elwendia intermedia (Korovin) Pimenov & Kljuykov, $n = 6$; Uzbekistan, *MP 4-17* (MW).

Ferula penninervis Regel & Schmalh., $n = 11$; Uzbekistan, *MP 7-17* (MW). $2n = 22$; Uzbekistan, 28 Sep 2019, *MP & OT s.n.* (MW).

Ferula pratovii F.O.Khass. & I.I.Malzev, $2n = 22$; Uzbekistan, 1 Aug 2019, *I.I. Malzev s.n.* (TASH).

Ferula samarkandica Korovin, $n = 11$; Uzbekistan, *MP 8-17* (MW).

Ferula tenuisecta Korovin, $n = 11$; Uzbekistan, *MP 9-17* (MW). $2n = 22$; Uzbekistan, 27 Sep 2019, *MP & OT s.n.* (MW).

Ferula ugamica Korovin, $2n = 22$; Uzbekistan, 29 Sep 2019, *MP & OT s.n.* (MW).

Kamelinia tianschanica F.O.Khass. & I.I.Malzev, $n = 5$; Uzbekistan, *MP 14-17* (MW).

Mogoltavia severtzovii (Regel) Korovin, $2n = 20$, $20 + 1-2B$; Tajikistan, *A. Kurbonov & MP 55-15* (MW).

Oedibasis platycarpa (Lipsky) Koso-Pol., $n = 10$; Uzbekistan, *MP 1-17* (MW).

Paraligisticum discolor (Ledeb.) V.N.Tikhom., $n = 11$; Uzbekistan, *MP 15-17* (MW).

Schrenkia golickeana B.Fedtsch., $n = 11$; Uzbekistan, *MP 10-17* (MW), *MP 2-17* (MW). $2n = 22$; Uzbekistan, 28 Sep 2019, *MP & OT s.n.* (MW).

IAPT chromosome data 41/6

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All materials CHN.

IRIDACEAE

Iris ruthenica Ker Gawl., $2n = 42$; Russian Federation, Altai Republic, 26 May 2018, *P.M. Zhurbenko s.n.* (LE 01228640). $2n = 84$; Russian Federation, Altaiskii Krai, 30 May 2018, *P.M. Zhurbenko, A.A. Kechaikin & V.I. Dorofeev s.n.* (LE 01228639).

IAPT chromosome data 41 – Extended version

Karol Marhold (ed.),^{1,2} Jaromír Kučera (ed.),¹ Nina B. Alexeeva,³ Tatiana V. Alexeeva,⁴ Ekaterina D. Badaeva,⁵ Evgeny V. Banaev,⁶ Olga A. Chernyagina,⁷ Aleksander A. Korobkov,³ Tatiana V. Kostritsyna,⁸ Violetta V. Kotseruba,³ Denis A. Krivenko,⁹ Polina A. Kuzmina,⁹ Tatyana V. Pankova,⁶ Michael G. Pimenov,⁴ Nina S. Probatova,¹⁰ Yuliya A. Pshenichkina,⁶ Dmitry N. Shaulo,⁶ Tatyana A. Shemetova,⁶ Julia V. Shner,⁴ Mariya A. Tomoshevich,⁶ Galina V. Yurlova,¹¹ Olga Yu. Zavgorodnyaya,⁹ Peter M. Zhurbenko³ & Elena Yu. Zykova⁶

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Publication of the contributions from Russian scientists cannot be in any way interpreted as support of the current military policy of the Russian Federation either by editors or by the International Association for Plant Taxonomy.

IAPT chromosome data 41/1

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This research was carried out within the framework of the topic “Theoretical and applied aspects of studying genofunds of natural plant populations and conservation of plant diversity ‘outside the typical environment’ (ex situ)” (AAAA-A21-121011290027-6).

* First chromosome count from the given region.

FABACEAE

**Caragana altaica* (Kom.) Pojark.

$2n = 24, 32$, CHN. Russian Federation, Republic of Khakassiya, Bogradskii Raion, vicinity of Troitskoe village, 54°15.399'N, 91°07.174' E, 6 Aug 2021, *E.V. Banaev & M.A. Tomoshevich 3001745* (NSK).

$2n = 24, 32$, CHN. Russian Federation, Republic of Khakassiya, Bogradskii Raion, vicinity of Red Stone village, right bank of the Volchiiy log river, 54°08.855'N, 91°15.431'E, 6 Aug 2021, *E.V. Banaev & M.A. Tomoshevich 3001747* (NSK).

**Caragana pygmaea* (L.) DC.

$2n = 16$, CHN. Russian Federation, Republic of Tuva, Tandinskii Raion, north shore of Lake Dus-Khol, 51°21.921'N, 94°24.699'E, 3 Aug 2021, *E.V. Banaev & M.A. Tomoshevich 3001748* (NSK).

LAMIACEAE

**Thymus iljinii* Klokov & Des.-Shost.

$2n = 24, 26$ (mixoploidy), CHN. Russian Federation, Krasnoyarskii Krai, vicinity of Krasnoyarsk city, steppe, 56°01'24.83"N, 92°51'29.25"E, 24 Aug 2017, *A.Z. Afinogenov 3001798* (NSK).

**Thymus marschallianus* Willd.

$2n = 28, 42$, CHN. Russian Federation, Novosibirskaya Oblast', Ordynskii Raion, 2 km north of Novopichugovo village, 54°38'24.33"N, 82°20'28.68"E, 10 Aug 2019, *A.Ya. Pshenichkin 3001791* (NSK).

$2n = 42$, CHN. Russian Federation, Altaiskii Krai, Kamenskii Raion, vicinity of Novoyarki village, 53°35'52.10"N, 80°47'17.73"E, 18 Aug 2019, *A.Ya. Pshenichkin 3001790* (NSK); Russian Federation, Altaiskii Krai, Burlinskii Raion, neighborhood of Petrovka village, on the shore of Lake Bolshoye Topolnoye, 53°21'45.36"N, 78°02'45.09"E, 29 Jul 2020, *E.V. Banaev 3001792* (NSK).

**Thymus serpyllum* L. s.l.

$2n = 14, 20$, CHN. Russian Federation, Republic of Altai, Ongudaiskii Raion, confluence of Chuya and Katun, steppe, 50°23'47.40"N, 86°40'35.20"E, 15 Aug 2020, *A.Z. Afinogenov 3001796* (NSK).

$2n = 24, 26, 28$, CHN. Kazakhstan, Vostochno-Kazakhstanskaya Oblast', Ulanskii Raion, vicinity of Tukul village, 49°42.597'N, 82°06.079'E, 11 Aug 2017, *E.V. Banaev 3001795* (NSK).

$2n = 26, 28$, CHN. Russian Federation, Republic of Altai, Ongudaiskii Raion, on the steppe slope along the river Aigulak, 50°21'40.01"N, 87°14'39.97"E, 6 Aug 2022, *E.V. Banaev 3001794* (NSK).

$2n = 28$, CHN. Russian Federation, Novosibirskaya Oblast', Karasukkii Raion, vicinity of Blagodatnoe village, 53°50.614'N, 78°01.084'E, 1 Aug 2020, *E.V. Banaev 3001793* (NSK).

$2n = 28, 32, 36$, CHN. Russian Federation, Republic of Khakassiya, Shirinskii Raion, vicinity of Son village, 54°22'58.35"N, 90°23'52.89"E, 13 Aug 2019, *A.Z. Afinogenov 3001797* (NSK).

POLYGONACEAE

**Atraphaxis frutescens* (L.) K.Koch

$2n = 16, 24$, CHN. Russian Federation, Republic of Tuva, Tes-Khemskii Raion, right bank of the river Tes-Khem, 50°30.944'N, 94°44.478'E, 4 Aug 2021, *E.V. Banaev & M.A. Tomoshevich 3001766* (NSK).

**Atraphaxis pungens* (M.Bieb.) Jaub. & Spach

$2n = 32, 40$, CHN. Russian Federation, Republic of Tuva, Tandinskii Raion, west shore of Lake Dus-Khol, 51°21.852'N, 94°25.734'E, 3 Aug 2021, *E.V. Banaev & M.A. Tomoshevich 3001763* (NSK).

$2n = 32, 40, 48$, CHN. Russian Federation, Republic of Tuva, Tes-Khemskii Raion, foot of Ahir-Ula mountain on the way to Shara-Nur Lake, steppe, 50°18.943'N, 94°41.635'E, 4 Aug 2021, *E.V. Banaev & M.A. Tomoshevich 3001761* (NSK).

IAPT chromosome data 41/2

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* First chromosome count for the genus.

** New cytotype for the species.

AMARANTHACEAE

Alternanthera sessilis (L.) DC.

** $2n = 68$, CHN. Thailand, Chonburi Province, Sattahip District, Samaesarn sub-districts, Sattahip Military Beach on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°36'50"N, 100°55'28"E, 13 Feb 2023, *P.A. Kuzmina 72625* (IRK) [Fig. 1A].

ASPARAGACEAE

Hosta ventricosa (Salisb.) Stearn

$2n = 60$, CHN. Kyrgyzstan, Bishkek city, E.Z. Gareev Botanical Garden of the National Academy of Sciences of the Kyrgyz Republic, 790 m, 42°51'25"N, 74°35'25"E, Jul 2022, *T.V. Kostritsyna 73003* (IRK) [Fig. 1B].

ASTERACEAE

Achillea millefolium L.

** $2n = 64$, CHN. Russian Federation, Rostovskaya Oblast', Taganrogskii Bay of the Sea of Azov, end of long sand-shell spit, elevated area, forb group, 27 Sep 2014, *A.A. Korobkov 2015-22* (LE).

Anthemis cotula L.

$2n = 18$, CHN. Armenia, Kotayk Province, on the border with Ararat Province, right bank of the Azat River, Goght village, weed-ruderal plant groups, 1690 m, 40°08'04"N, 44°46'14"E, 28 Jul 2019, *D.A. Krivenko & al. 2021-12* (LE).

Arctium lappa L.

$2n = 36$, CHN. Germany, Free State of Bavaria, Munich city, northern part, left bank of the Isar River, weed-ruderal plant groups, 48°12'23.35"N, 11°37'04.98"E, 28 Dec 2021, *G.V. Yurlova 72763* (IRK).

Artemisia anethifolia Weber ex Stechm.

$2n = 18$, CHN. Russian Federation, Republic of Buryatia, Ivolginskii Raion, Selenga midlands, Ivolginskaya basin, vicinity of Khoitobey village, ancient high terrace of the Ivolga River, depression with saline vegetation, 7 Sep 2020, *B. Namzalov 2021-01* (LE), *B. Namzalov 2021-02* (LE), *B. Namzalov 2021-06* (LE).

Artemisia capillaris Thunb.

$2n = 18$, CHN. China, Jilin Province, Yanbian Korean Autonomous Prefecture, Hunchun city, park near Lingbao temple, on hill near to pine plantations, 143 m, 42°53'20.3"N, 130°20'43.7"E, 29 Sep 2013, *M.O. Burlyaeva & V.V. Kotseruba 2014-111* (LE), *M.O. Burlyaeva & V.V. Kotseruba 2014-112* (LE).

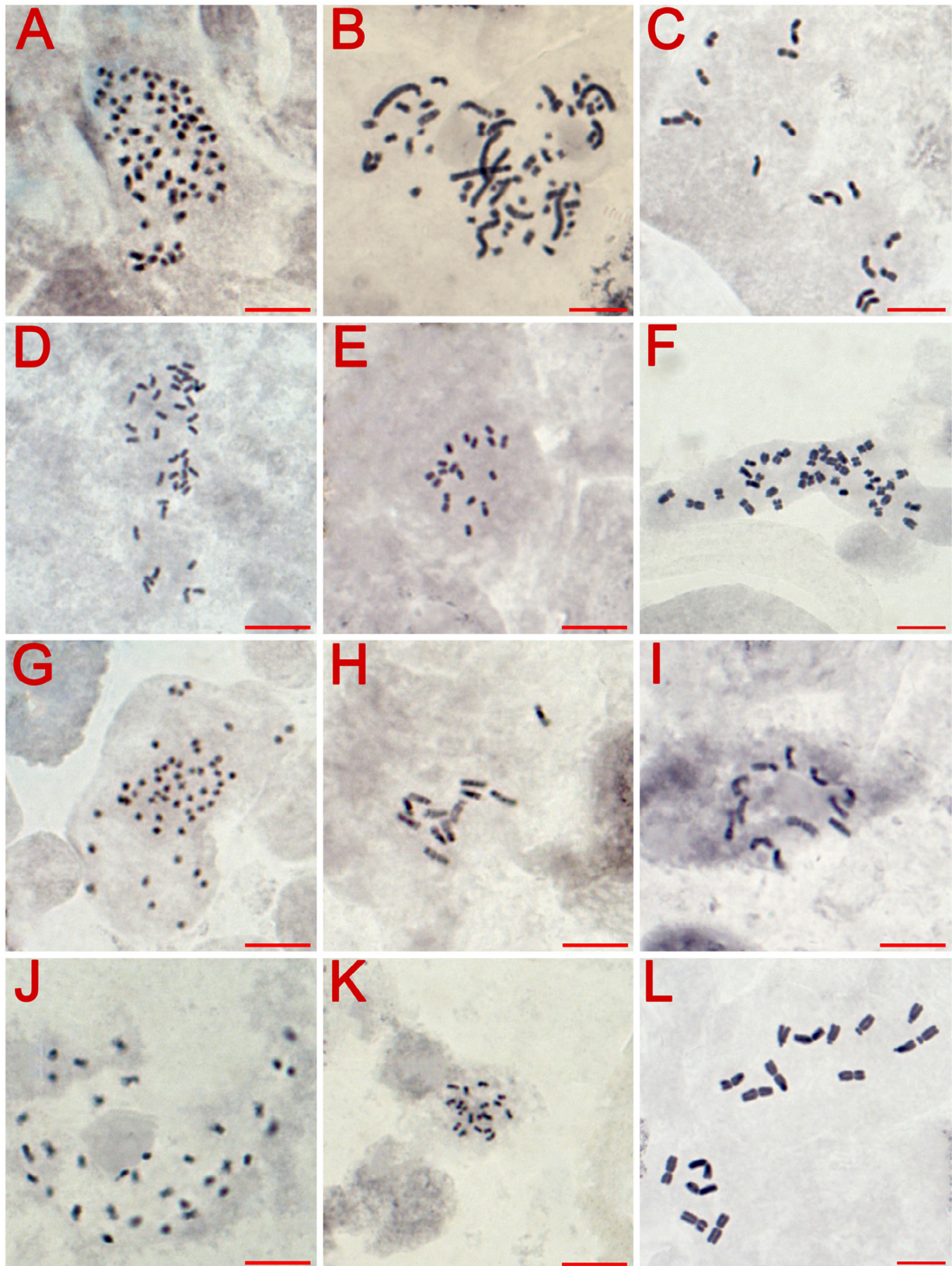


Fig. 1. Mitotic metaphases. **A**, *Alternanthera sessilis* ($2n = 68$); **B**, *Hosta ventricosa* ($2n = 60$); **C**, *Artemisia vulgaris* ($2n = 16$); **D**, *Senecio inaequidens* ($2n = 40$); **E**, *Solidago canadensis* ($2n = 18$); **F**, *Tridax procumbens* ($2n = 36$); **G**, *Boerhavia repens* ($2n = 52$); **H**, *Chelidonium majus*, 72210 ($2n = 12$); **I**, *Ch. majus*, 72212 ($2n = 12$); **J**, *Cenchrus echinatus* ($2n = 34$); **K**, *Eleusine indica*, 72631 ($2n = 18$); **L**, *Clematis vitalba* ($2n = 16$). — Scale bars = 10 μm .

Artemisia frigida Willd.

2n = 18, CHN. Russian Federation, Tyumenskaya Oblast', Tobolskii Raion, 1.5 km W of Abalak village, along banks of the Irtysh River, steppe, 7 Sep 2020, *B.S. Kharitonov 2021-03* (LE); Russian Federation, Tyumenskaya Oblast', Tobolskii Raion, Mt. Alafeyskaya, steppe slope, 28 Aug 2019, *B.S. Kharitonov 2021-07* (LE).

2n = 36, CHN. Russian Federation, Tyumenskaya Oblast', Tobolskii Raion, Mt. Alafeyskaya, steppe slope, 28 Aug 2019, *B.S. Kharitonov 2021-04* (LE).

Artemisia tilesii Ledeb.

2n = 18, CHN. Russian Federation, Arkhangelskaya Oblast', Nenets Autonomous Area, Zapolyarnyi Raion, Arctic Ocean, between Pechora and Kara Seas, Vaygach Island, coastal slope, forb meadow, 24 Aug 2020, *L.A. Konoreva s.n.* (LE), 26 Aug 2020, *L.A. Konoreva 2021-05* (LE).

Artemisia vulgaris L.

2n = 16, CHN. Germany, Free State of Bavaria, Munich city, northern part, left bank of the Isar River, weed-ruderal plant groups, 48°12'23.35"N, 11°37'04.98"E, 28 Dec 2021, *G.V. Yurlova 72721* (IRK) [Fig. 1C].

Aster alpinus L.

2n = 18, CHN. Russian Federation, Irkutskaya Oblast', Olkhonskii Raion, Lake Baikal, Olkhon Island, northwestern part of the island, mountain rocky steppe, 528 m, 53°22'48"N, 107°44'03"E, 17 Aug 2018, *D.A. Krivenko 2021-14* (LE).

Aster biennis Ledeb. (≡ *Heteropappus biennis* (Ledeb.)

Tamamsch. ex Grubov)

2n = 18, CHN. Russian Federation, Irkutskaya Oblast', Olkhonskii Raion, Lake Baikal, Olkhon Island, northwestern part of the island, mountain rocky steppe, 528 m, 53°22'48"N, 107°44'03"E, 17 Aug 2018, *D.A. Krivenko 2021-11* (IRK, LE).

Erigeron canadensis L. (≡ *Conyza canadensis* (L.) Cronquist)

2n = 18, CHN. Russian Federation, Altaiskii Krai, Rubtsovskii Raion, left bank of the Alei River, near Zakharovo village, salty meadow, 51°39'02"N, 81°18'40"E, 18 Sep 2018, *D.A. Krivenko 2021-17* (LE).

Leucanthemum vulgare Lam.

2n = 18, CHN. Russian Federation, Republic of Dagestan, Gunibskii Raion, Batsada village, 14 Aug 2012, *V.V. Kotseruba 2013-74* (LE); Russian Federation, Republic of Dagestan, Gunibskii Raion, vicinity of Gunib village, 16 Aug 2012, *V.V. Kotseruba 2013-77* (LE).

Senecio inaequidens DC.

2n = 40, CHN. Germany, Free State of Bavaria, Munich city, northern part, left bank of the Isar River, weed-ruderal plant groups, 48°12'23.35"N, 11°37'04.98"E, 28 Dec 2021, *G.V. Yurlova 72762* (IRK) [Fig. 1D].

Solidago canadensis L.

2n = 18, CHN. Germany, Free State of Bavaria, Munich city, northern part, left bank of the Isar River, weed-ruderal plant groups, 48°12'23.35"N, 11°37'04.98"E, 28 Dec 2021, *G.V. Yurlova 72720* (IRK) [Fig. 1E].

Tanacetum leptophyllum (Steven ex M.Bieb.) Sch.Bip.

(≡ *Pyrethrum leptophyllum* Steven ex M.Bieb.)

2n = 18, CHN. Russian Federation, Republic of Dagestan, Kurakhskii Raion, Kurakh-chai gorge, vicinity of Kurakh village, eroded northern slopes, narrow washes, 21 Aug 2011, *N.I. Dorofeev 2013-73* (LE); Russian Federation, Republic of Dagestan, Gunibskii Raion, on the way to Batsada village, 14 Aug 2012, *V.V. Kotseruba 2013-75* (LE); Russian Federation, Republic of Dagestan, Gunibskii Raion, vicinity of Gunib village, in forest, 15 Aug 2012, *V.V. Kotseruba 2013-76* (LE).

Tanacetum partheniifolium (Willd.) Sch.Bip. (≡ *Pyrethrum*

partheniifolium Willd.)

2n = 18, CHN. Georgia, Samtskhe-Javakheti Region, Akhmeta municipality, at the southern entrance to the Borjomi gorge, left bank of the Kura River, near Atskuri fortress, forb ruderalized stepped meadow, 1300 m, 41°42'26"N, 43°08'19"E, 23 Jul 2019, *D.A. Krivenko & al. 2021-13* (LE).

Tanacetum parthenium (L.) Sch.Bip. (= *Pyrethrum glanduliferum* Sommier & Levier)

2n = 18, CHN. Russian Federation, Kabardino-Balkarian Republic, Elbrusskii Raion, Greater Caucasus, Bokovoi range, foot of Mt. Elbrus, Polyana Azau settlement, sandy-pebbly deposits, 2380 m, 43°16'10"N, 42°28'47"E, 7 Aug 2019, *D.A. Krivenko 2021-19* (IRK, LE).

Tridax procumbens L.

2n = 36, CHN. Thailand, Chonburi Province, Sattahip District, Samaesarn sub-districts, Sattahip Military Beach on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°36'50"N, 100°55'28"E, 13 Feb 2023, *P.A. Kuzmina 72633* (IRK) [Fig. 1F].

Tripleurospermum elongatum (Fisch. & C.A.Mey.) Bornm.

**2n = 36, CHN. Russian Federation, Kabardino-Balkarian Republic, Elbrusskii Raion, Greater Caucasus, Bokovoi range, foot of Mt. Elbrus, Polyana Azau settlement, sandy-pebbly deposits, 2380 m, 43°16'10"N, 42°28'47"E, 7 Aug 2019, *D.A. Krivenko 2021-16* (IRK, LE).

Tripleurospermum parviflorum (Willd.) Pobed.

2n = 18, CHN. Georgia, Samtskhe-Javakheti Region, Akhaltsikhe municipality, right bank of Kura River, on the way from Greli village to Sapara monastery, flattened steppe slope, 1290 m, 41°36'54"N, 43°00'27"E, 23 Jul 2019, *D.A. Krivenko & al. 2021-15* (IRK, LE).

Xeranthemum annuum L. (= *X. squarrosum* Boiss.)

2n = 12, CHN. Armenia, Erevan city, Avan city district of the northeast part of the city (former Avan village), in composition of weed-ruderal vegetation, 1340 m, 40°14'22"N, 44°34'08"E, 21 Jul 2019, *D.A. Krivenko & al. 2021-18* (IRK, LE).

BIGNONIACEAE*Tecoma stans* (L.) Juss. ex Kunth

2n = 36, CHN. Thailand, Chonburi Province, Bang Lamung District, Pattaya city on the eastern side of the Gulf of Siam in the southwestern South China Sea, near Sanctuary of Truth, 12°58'18"N, 100°53'22"E, 18 Feb 2023, *P.A. Kuzmina 72295* (IRK).

CLEOMACEAE*Cleome rutidosperma* DC.

$2n = 30$, CHN. Thailand, Chonburi Province, Bang Lamung District, Pattaya city on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°53'09"N, 100°52'53"E, 15 Feb 2023, *P.A. Kuzmina 72627* (IRK).

EUPHORBIACEAE*Acalypha indica* L.

$2n = 20$, CHN. Thailand, Chonburi Province, Bang Lamung District, Pattaya city on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°53'09"N, 100°52'53"E, 15 Feb 2023, *P.A. Kuzmina 72294* (IRK).

Euphorbia hirta L.

$2n = 18$, CHN. Thailand, Chonburi Province, Bang Lamung District, Ko Lan Island on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°54'43"N, 100°46'12"E, 17 Feb 2023, *P.A. Kuzmina 72293* (IRK).

FABACEAE*Leucaena leucocephala* (Lam.) de Wit

$2n = 104$, CHN. Thailand, Phuket Province, Andaman Sea of the Indian Ocean, Phuket Island, roadside, 08°03'15.57"N, 98°24'43.85"E, Jan 2011, *E.V. Zhmud 73011* (IRK); Thailand, Krabi Province, Ko Lanta District, Andaman Sea of the Indian Ocean, Ko Lanta Yai Island of the western mainland coast, 07°39'26.00"N, 99°02'32.96"E, 10 Dec 2022, *E.V. Zhmud 72902* (IRK).

MAZACEAE**Dodartia orientalis* L.

$2n = 20$, CHN. Kyrgyzstan, Bishkek city, E.Z. Gareev Botanical Garden of the National Academy of Sciences of the Kyrgyz Republic, 790 m, 42°51'25"N, 74°35'25"E, Jul 2022, *T.V. Kostritsyna 72204* (IRK).

NYCTAGINACEAE*Boerhavia repens* L.

$**2n = 52$, CHN. Thailand, Chonburi Province, Bang Lamung District, Pattaya city on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°53'09"N, 100°52'53"E, 15 Feb 2023, *P.A. Kuzmina 72774* (IRK) [Fig. 1G].

ONAGRACEAE*Oenothera biennis* L.

$2n = 14$, CHN. Germany, Free State of Bavaria, Munich city, northern part, left bank of the Isar River, weed-ruderal plant groups, 48°12'23.35"N, 11°37'04.98"E, 28 Dec 2021, *G.V. Yurlova 72764* (IRK).

PAPAVERACEAE*Chelidonium majus* L.

$2n = 12$, CHN. Kyrgyzstan, Bishkek city, northern part of the city, right bank of the Ara-Archa River, Dubosekovskaya Str., 665 m, 42°56'35"N, 74°35'25"E, 15 Aug 2022, *T.V. Kostritsyna 72210* (IRK) [Fig. 1H]; Kyrgyzstan, Bishkek city, E.Z. Gareev Botanical Garden of the National Academy of Sciences of the Kyrgyz Republic, 790 m, 42°51'25"E, 74°35'25"E, Jul 2022, *T.V. Kostritsyna 72211* (IRK); Kyrgyzstan, Issyk-Kul'skaya Oblast', Issyk-Kul'skii Raion, northwestern shore of Issyk-Kul Lake, Ananevo village, 1620 m, 42°43'40"N, 77°40'40"E, Jul 2022, *T.V. Kostritsyna 72212* (IRK) [Fig. 1I].

PHYLLANTHACEAE*Phyllanthus amarus* Schumach. & Thonn.

$2n = 26$, CHN. Thailand, Chonburi Province, Sattahip District, Samaesarn sub-districts, Sattahip Military Beach on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°36'50"N, 100°55'28"E, 13 Feb 2023, *P.A. Kuzmina 72628* (IRK).

POACEAE*Cenchrus echinatus* L.

$2n = 34$, CHN. Thailand, Chonburi Province, Bang Lamung District, eastern side of the Gulf of Siam in the southwestern South China Sea, Pattaya city, 12°53'51.78"N, 100°52'16.09"E, 14 Feb 2023, *P.A. Kuzmina 72629* (IRK) [Fig. 1J].

Eleusine indica (L.) Gaertn.

$2n = 18$, CHN. Thailand, Chonburi Province, Sattahip District, Samaesarn sub-districts, Sattahip Military Beach on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°36'50"N, 100°55'28"E, 13 Feb 2023, *P.A. Kuzmina 72631* (IRK) [Fig. 1K]; Thailand, Chonburi Province, Bang Lamung District, eastern side of the Gulf of Siam in the southwestern South China Sea, Pattaya city, 12°53'51.78"N, 100°52'16.09"E, 14 Feb 2023, *P.A. Kuzmina 72632* (IRK).

Leptochloa panicea (Retz.) Ohwi

$2n = 20$, CHN. Thailand, Chonburi Province, Sattahip District, Samaesarn sub-districts, Sattahip Military Beach on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°36'50"N, 100°55'28"E, 13 Feb 2023, *P.A. Kuzmina 72630* (IRK).

RANUNCULACEAE*Clematis vitalba* L.

$2n = 16$, CHN. Germany, Free State of Bavaria, Munich city, northern part, left bank of the Isar River, weed-ruderal plant groups, 48°12'23.35"N, 11°37'04.98"E, 28 Dec 2021, *G.V. Yurlova 72765* (IRK) [Fig. 1L].

IAPT chromosome data 41/3

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* First chromosome count for the taxon.

APIACEAE*Eryngium planum* L.

$2n = 16$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Zael'tsovskii Raion, Arboretum territory, 19 Sep 2019, E. Zykova EZ865-2119 (NS) [Fig. 2A].

Pimpinella saxifraga L.

$2n = 40$, CHN. Russian Federation, Republic of Altai, Gorno-Altaysk city, bus-stop "Rodnik", bank of Maima River, pebbled river bank, 11 Aug 2018, 51°58'N, 85°55'E, E. Zykova EZ772-1618 (NS0049050) [Fig. 2B].

ASTERACEAE*Bidens tripartita* L.

$2n = 48$, CHN. Russian Federation, Republic of Altai, Maiminskii Raion, Manzherok village, roadside, 51°50'N, 85°45'E, 30 Jun 2016, E. Zykova EZ270-1716 (NS0049062) [Fig. 2C].

Centaurea scabiosa L.

$2n = 20$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Sovetskii Raion, Kirov village, wasteland, 54°59'N, 83°00'E, 19 Sep 2017, E. Zykova, T. Shemetova EZ442-7417 (NS0049049).

Cirsium setosum (Willd.) M.Bieb.

$2n = 34$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, Zyryanka River, footpath, 14 Sep 2018, D. Shaulo EZ709 (NS).

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

$2n = 18$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, Ob River, sand beach, 54°59'N, 83°00'E, 2 Aug 2017, E. Zykova, T. Shemetova EZ376-4317 (NS, NS0049060) [Fig. 2D].

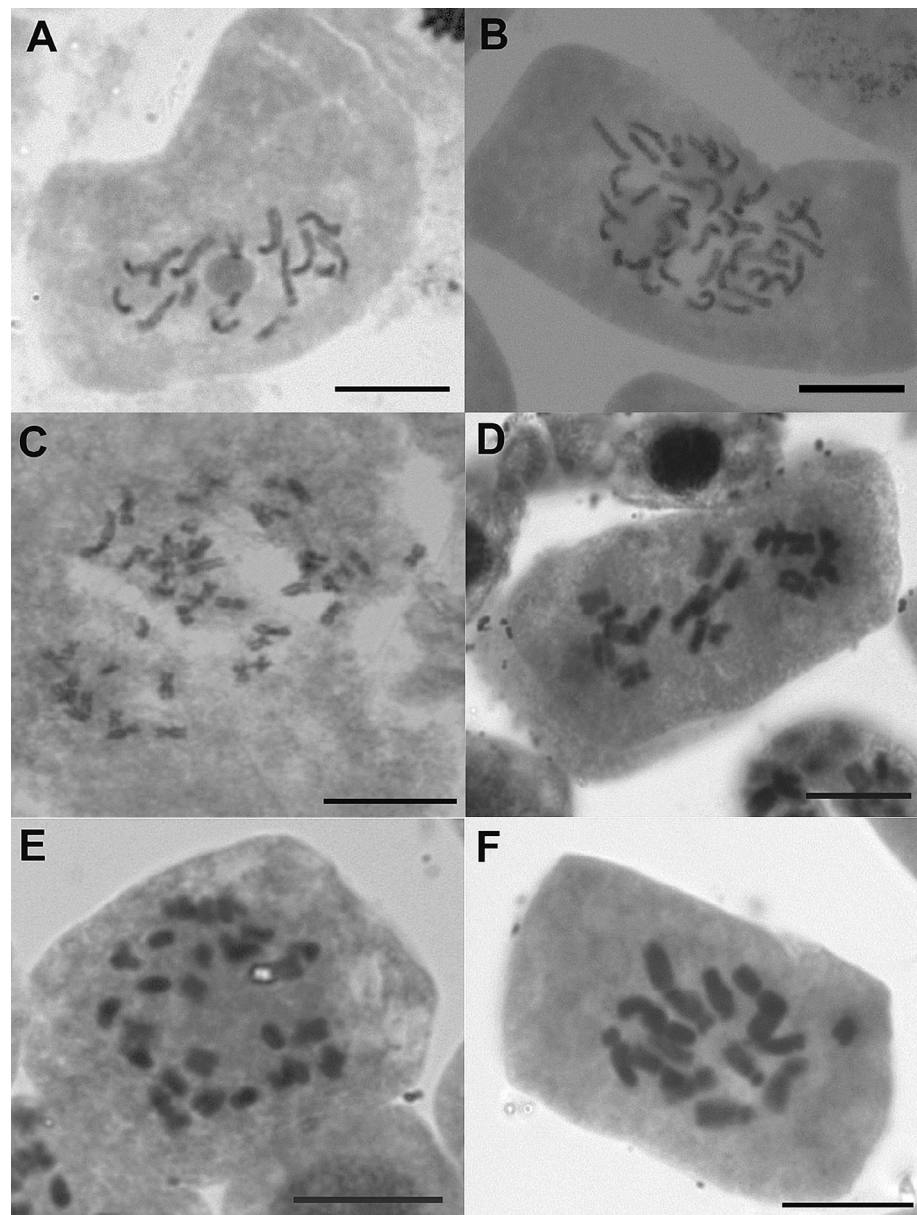


Fig. 2. Mitotic metaphases. **A**, *Eryngium planum*, $2n = 16$; **B**, *Pimpinella saxifraga*, $2n = 40$; **C**, *Bidens tripartita*, $2n = 48$; **D**, *Lactuca tatarica*, $2n = 18$; **E**, *Pilosella katunensis*, $2n = 27$; **F**, *Ranunculus cantoniensis* EZ644, $2n = 16$. — Scale bars = 10 μm .

Pilosella katunensis Tupitz. (= *Pilosella echioides* (Lumn.)

F.W.Schultz & Sch.Bip. p.p.)

* $2n = 27$, CHN. Russian Federation, Republic of Tyva, valley of Derzig River, community by dominants of *Iris* sp. and *Spiraea* sp. near the larch-birch forest, 19 Aug 2017, *N.V. Kimsin, A.M. Samdan EZ643* (NS) [Fig. 2E].

BRASSICACEAE

Camelina microcarpa Andr. ex DC.

$2n = 18$, CHN. Russian Federation, Republic of Altai, Kosh-Agachskii Raion, highway M-52 from Chegan-Uzun to the Aktash villages, roadside, 25 Jul 2015, *E. Zykova EZ277-2515* (NS0049061).

CARYOPHYLLACEAE

Gypsophila paniculata L.

$2n = 34$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, Ob River, beach, 54°59'N, 83°00'E, 02 Aug 2017, *E. Zykova, T. Shemetova EZ 381-4317* (NS0049059).

FABACEAE

Melilotus albus Medik.,

$2n = 16$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, Tereshkovoy street, roadside, 21 Sep 2018, *D. Shaulo EZ712* (NS).

Melilotus officinalis (L.) Lam.

$2n = 16$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Central Siberian Botanical Garden Siberian Branch of the Russian Academy of Sciences, birch-pine forest, 12 Sep 2018, *D. Shaulo EZ706* (NS).

Vicia cracca L.

$2n = 14$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, Zyryanka River, birch-pine forest, 15 Aug 2018, *D. Shaulo EZ715* (NS).

LAMIACEAE

Mentha arvensis L.

$2n = 54$, CHN. Russian Federation, Republic of Altai, Gorno-Altaysk city, Ulalushinskaya street, bank of the Ulalushka River, 51°58'N, 85°55'E, 25 Aug 2017, *E. Zykova EZ412-6917* (NS0049048).

POACEAE

Agropyron pectinatum (M.Bieb.) P.Beauv.

$2n = 28$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, wasteland along the road, 54°59'N, 83°00'E, 2 Aug 2017, *E. Zykova, T. Shemetova EZ377-4417* (NS).

RANUNCULACEAE

Ranunculus cantoniensis DC. (= *R. chinensis* Bunge)

$2n = 16$, CHN. Russian Federation, Krasnoyarskii Krai, Ermakovskii Raion, Western Sayan, Aradansky Range, 1 km south of the mouth of the Vankino creek, Reservoir of the Sayano-Shushenskaya hydroelectric power station, the upper limit of the strip of periodic flooding, 52°32'04.7"N, 91°18'02.1"E, 11 Jul 2018, *D. Shaulo EZ644* (NS) [Fig. 2F], *D. Shaulo EZ708* (NS).

SCROPHULARIACEAE

Scrophularia nodosa L.

$2n = 36$, CHN. Russian Federation, Republic of Altai, Gorno-Altaysk city, central embankment of the Maima River, pebbled river

bank, 51°58'N, 85°55'E, 18 Aug 2017, *E. Zykova EZ399-6117* (NS0049054).

Verbascum nigrum L.

$2n = 30$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirskii Raion, environs of Akademgorodok, mixed forest, adjacent to the old exposition areas of the Central Siberian Botanical Garden, 27 Sep 2020, *E. Zykova EZ848-2020* (NS).

IAPT chromosome data 41/4

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* First chromosome count for the genus.

** First chromosome count for the species.

AMARYLLIDACEAE

Allium ramosum L.

$2n = 32$, CHN. Russian Federation, Irkutskaya Oblast', Ust-Ordynskii Buryatskii Okrug, Nukutskii Raion, right bank of the Kuita River, left tributary of the Angara River (Bratskoe reservoir), 2 km SE of Tanguty village, solonchous steppe, 413 m, 53°45'24.21"N, 102°37'32.33"E, 15 Jul 2022, *O.A. Chernysheva 68811* (IRK00019661), *O.A. Chernysheva 68812* (VLA).

Allium schoenoprasum L.

$2n = 16$, CHN. Russian Federation, Irkutskaya Oblast', Ust-Ordynskii Buryatskii Okrug, Ekherit-Bulagatskii Raion, Krasnyi Yar Federal Reserve, near Krasnyi Yar kordon, stepped meadow, 633 m, 52°32'26.94"N, 105°02'27.42"E, 25 Jul 2019, *O.Yu. Zavgorodnyaya kr13* (IRK00014391) [Fig. 3A].

APIACEAE

Carum carvi L.

$2n = 20$, CHN. Russian Federation, Irkutskaya Oblast', Ust-Ordynskii Buryatskii Okrug, Alarskii Raion, Aleksandrovskaia village, at the edge of the forest, 53°20'49.07"N, 102°39'54.81"E, 29 Aug 2021, *O.Yu. Zavgorodnyaya 66079* (IRK), *O.Yu. Zavgorodnyaya 66080* (VLA).

ASPARAGACEAE

Asparagus persicus Baker

$2n = 20$, CHN. Russian Federation, Republic of Dagestan, Magaramkentskii Raion, Greater Caucasus, Samurskii range (Bokovoi mountain range system), left bank of the Samur River, 1.5 km ENE of Philya village, mountain steppe, 850 m, 41°29'10"N, 47°59'57"E, 9 Aug 2021, *D.A. Krivenko 65887* (IRK00035896), *D.A. Krivenko 65891* (LE), *D.A. Krivenko 65890* (PVB), *D.A. Krivenko 65889* (VLA).

ASTERACEAE*Bidens radiata* Thuill.

$2n = 48$, CHN. Russian Federation, Kamchatskii Krai, Bystrinskii Raion, Avangai village, on the shore of warm puddle with temperature of 35°C (Avangaiskie hot springs), 323 m, 56°03'14.2"N, 158°58'03.8"E, 18 Aug 2022, O.A. Chernyagina 13833 (VLA).

Carduus crispus L.

$2n = 16$, CHN. Russian Federation, Kamchatskii Krai, Ust-Kamchatskii Raion, Maiskoe village, on fallow, 28 m, 56°15'14.8"N, 160°03'53.6"E, 7 Aug 2022, O.A. Chernyagina 13821 (VLA).

Chrysanthemum arcticum L. (= *Arctanthemum arcticum* (L.) Tzvelev)

$2n = 18$, CHN. Russian Federation, Kamchatskii Krai, Karaginskii Raion, Tymlat village, at the mouth of the Tymlat River, marsh meadow, 2 m, 59°29'11.5"N, 163°11'37.2"E, 10 Sep 2021, O.A. Chernyagina 13751 (VLA).

Lactuca sibirica (L.) Benth. ex Maxim. (= *Mulgedium sibiricum* (L.) Less.)

$2n = 18$, CHN. Russian Federation, Kamchatskii Krai, Karaginskii Raion, Ossora settlement, near Ossorskoe Lake, in wasteland, 3 m, 59°14'43"N, 163°03'49"E, 18 Sep 2021, O.A. Chernyagina 13757 (VLA).

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

$2n = 18$, CHN. Russian Federation, Republic of Tatarstan, Kazan city, Vakhitovskii area of the city, left bank of the Kazanka River, embankment, 60 m, 55°48'07"N, 49°08'20"E, 21 Jul 2021, M.A. Markaryan 65855 (IRK), M.A. Markaryan 65856 (VLA).

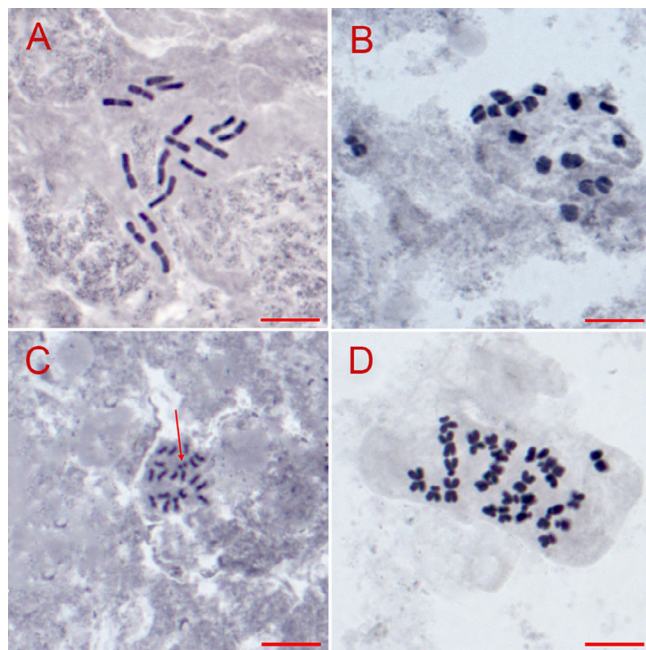


Fig. 3. Mitotic metaphases. **A**, *Allium schoenoprasum* ($2n = 16$); **B**, *Alyssum lenense* ($2n = 16$); **C**, *Linum perenne* ($2n = 18 + 2B$, B-chromosomes are indicated by arrow); **D**, *Ranunculus smirnovii*, *kr245* ($2n = 28$). — Scale bars = 10 μ m.

Sonchus oleraceus L.

$2n = 32$, CHN. Tajikistan, Sughd Region, Khujand city, left bank of the Syr Darya River, Khujand Botanical Garden, weedy, 40°17'57.83"N, 69°38'37.66"E, 23 Jun 2021, O.T. Rusinek 66249 (IRK), O.T. Rusinek 66252 (IRKU), O.T. Rusinek 66253 (NSK), O.T. Rusinek 66251 (VLA).

Symphotrichum ciliatum (Ledeb.) G.L.Nesom (= *Brachyactis ciliata* (Ledeb.) Ledeb.)

$2n = 14$, CHN. Russian Federation, Primorskii Krai, Vladivostok city, Vtoraya rechka area of the city, in the area of the bus station, roadside, 27 m, 43°09'56.9"N, 131°54'20.6"E, 2 Oct 2021, O.A. Chernyagina 13765 (VLA).

Tripleurospermum inodorum (L.) Sch.Bip.

$2n = 36$, CHN. Russian Federation, Kamchatskii Krai, Ust-Kamchatskii Raion, Maiskoe village, in landfill, 28 m, 56°15'19.7"N, 160°04'16.7"E, 7 Aug 2022, O.A. Chernyagina 13820 (VLA).

BETULACEAE*Betula ermanii* Cham.

$2n = 28$, CHN. Russian Federation, Kamchatskii Krai, Karaginskii Raion, vicinity of Ossora settlement, near Tsarskoe Lake, forest of *Betula ermanii*, 20 m, 59°10'22.6"N, 163°04'37.7"E, 16 Sep 2021, O.A. Chernyagina 13748 (VLA).

Betula glandulosa Michx. (= *B. exilis* Sukaczew)

$2n = 28$, CHN. Russian Federation, Kamchatskii Krai, Karaginskii Raion, Tymlat village, shrubby tundra with curtains of *Pinus pumila*, 4 m, 59°29'40.6"N, 163°10'50.3"E, 10 Sep 2021, O.A. Chernyagina 13746 (VLA).

BORAGINACEAE*Nonea pulla* (L.) DC.

$2n = 14$, CHN. Russian Federation, Altaiskii Krai, Shipunovskii Raion, right bank of the Klepechikha River, left tributary of the Alei River, 15 km SSW of Shinupovo village, stepped meadow, 52°09'34.73"E, 82°01'12.05"E, 18 Jul 2022, D.A. Krivenko 68530 (IRK), D.A. Krivenko 68531 (VLA).

BRASSICACEAE*Alyssum lenense* Adams

$2n = 16$, CHN. Russian Federation, Irkutskaya Oblast', Olkhonskii Raion, western coast of Lake Baikal, between Zunduk and Khargantui capes, stepped meadow, 477 m, 53°23'27.45"N, 107°24'09.72"E, 26 Jul 2020, O.Yu. Zavgorodnyaya *kr20* (IRK) [Fig. 3B].

Arabis sagittata (Bertol.) DC.

$2n = 32$, CHN. Russian Federation, Irkutskaya Oblast', Ust-Ordynskii Buryatskii Okrug, Alarskii Raion, Aleksandrovsk village, 53°20'49.07"N, 102°39'54.81"E, at the edge of the forest, 29 Aug 2021, O.Yu. Zavgorodnyaya 66072 (IRK).

Descurainia sophia (L.) Webb ex Prantl

$2n = 14$, CHN. Russian Federation, Kamchatskii Krai, Ust-Kamchatskii Raion, Maiskoe village, roadside, 28 m, 56°15'18.8"N, 160°03'56.2"E, 7 Aug 2022, O.A. Chernyagina 13819 (VLA).

CARYOPHYLLACEAE*Dianthus chinensis* L.

$2n = 30$, CHN. Russian Federation, Irkutskaya Oblast', Slydyanskii Raion, southwestern coast of Lake Baikal, Tolsty cape,

edge of the birch-pine forest, 51°47'26.43"N, 104°36'42.19"E, 1 Sep 2022, *D.A. Krivenko & V.V. Murashko 68708* (IRK), *D.A. Krivenko & V.V. Murashko 68709* (VLA).

Silene multiflora (Ehrh.) Pers.

$2n = 24$, CHN. Russian Federation, Altaiskii Krai, Aleiskii Raion, right bank of the Solonovka River, left tributary of the Alei River, 4.5 km NNW of Krasnyi Yar village, forb steppe meadow, 52°25'32.75"N, 82°34'50.36"E, 22 Jul 2022, *D.A. Krivenko 68479* (IRK), *D.A. Krivenko 68480* (VLA).

COMMELINACEAE

Commelina communis L.

$2n = 42$, CHN. Russian Federation, Primorskii Krai, Vladivostok city, Pervorechenskii area of the city, near narrow-gauge railway at the intersection of Irtyshskaya and Gamarnik streets, in wasteland, 21 Aug 2022, *D.V. Mysnik 13795* (VLA).

EUPHORBIACEAE

Euphorbia davidii Subils

$2n = 56$, CHN. Russian Federation, Republic of Dagestan, Shamilskii Raion, Greater Caucasus, left bank of the Aivarskoe Koisu, Khebda village, weed-ruderal plant groups, 910 m, 42°26'32"N, 46°32'58"E, 12 Aug 2021, *D.A. Krivenko 65938* (IRK), *D.A. Krivenko 65940* (VLA).

Euphorbia falcata L.

$2n = 32$, CHN. Russian Federation, Kaliningradskaia Oblast', Kaliningrad city, right bank of the Pergolya River, Borodinskaya Str. 22, in the yard of the house, 54°43'01.37"N, 20°28'03.17"E, 4 Oct 2022, *O.Yu. Zavgorodnyaya 68830* (IRK), *O.Yu. Zavgorodnyaya 68831* (VLA).

FABACEAE

Oxytropis revoluta Ledeb.

$2n = 16$, CHN. Russian Federation, Kamchatskii Krai, Elizovskii Raion, South Kamchatka Federal Reserve, foot of Muntovskii volcano, mountain tundra, 987 m, 52°30'05.1"N, 158°07'40.1"E, 12 Aug 2021, *O.A. Chernyagina 13822* (VLA).

LAMIACEAE

Ajuga chamaepitys subsp. *chia* (Schreb.) Arcang.

$2n = 30$, CHN. Russian Federation, Republic of Dagestan, Akhtynskii Raion, Greater Caucasus, Samurskii range (Bokovoi mountain range system), left bank of the Samur River, NE of Lutkun village, mountain stony steppe, 1230 m, 41°29'07.42"N, 47°42'22.58"E, 9 Aug 2021, *D.A. Krivenko 66105* (IRK), *D.A. Krivenko 66106* (VLA).

Salvia deserta Schangin

$2n = 14$, CHN. Russian Federation, Altaiskii Krai, Rubtsovskii Raion, left bank of the Alei River, N of Bezrukavka village, forb-sagebrush steppe slope, 51°36'30.24"N, 81°17'01.24"E, 13 Jul 2022, *D.A. Krivenko 68470* (IRK), *D.A. Krivenko 68471* (VLA).

LINACEAE

Linum perenne L.

$2n = 18 + 0-2B$, CHN. Russian Federation, Irkutskaya Oblast', Irkutskii Raion, southwestern coast of Lake Baikal, Bolshoe Goloustnoe settlement, 377 m, 52°03'44.12"N, 105°28'12.81"E, 5 Aug 2019, *O.Yu. Zavgorodnyaya kr260* (IRK) [Fig. 3C].

MALVACEAE

Malva thuringiaca (L.) Vis.

$2n = 44$, CHN. Russian Federation, Altaiskii Krai, Pospelikhinskii Raion, left bank of the Alei River, 7.5 km WSW of Mamontovo settlement, forb-brome-sagebrush steppe meadow, 51°54'01.30"N, 81°36'21.66"E, 15 Jul 2022, *D.A. Krivenko 68510* (IRK), *D.A. Krivenko 68511* (VLA).

NITRARIACEAE

Peganum harmala L.

$2n = 24$, CHN. Russian Federation, Republic of Dagestan, Magaramkentskii Raion, Greater Caucasus, western spurs of Samurskii range (Bokovoi mountain range system), left bank of the Samur River, opposite Maka-Kazmalyar village, mountain steppe, 960 m, 41°29'34"N, 48°01'24"E, 9 Aug 2021, *D.A. Krivenko 65586* (IRK), *D.A. Krivenko 65587* (VLA).

OROBANCHACEAE

**Cymbaria daurica* L.

$2n = 32$, CHN. Russian Federation, Irkutskaya Oblast', Olkhonskii Raion, western coast of Lake Baikal, Mukhor bay, near Shara-Togot village, 53°01'32.40"N, 106°44'35.92"E, 30 Jul 2020, *O.Yu. Zavgorodnyaya kr21* (IRK); Russian Federation, Irkutskaya Oblast', Olkhonskii Raion, western coast of Lake Baikal, Tazheranskaya steppe, Imel-Kutul tract, stony steppe, 52°56'36.5"N, 106°39'24.4"E, 23 Sep 2021, *O.Yu. Zavgorodnyaya 65971* (IRK).

PAPAVERACEAE

Papaver alboroseum Hultén

$2n = 28$, CHN. Russian Federation, Kamchatskii Krai, Ust-Kamchatskii Raion, Ust-Kamchatsk settlement, on pile of gravel, 3 m, 56°14'31.9"N, 162°31'24.5"E, 23 Jul 2022, *O.A. Chernyagina 13810* (VLA).

***Papaver amophilum* (Turcz.) Peschkova

$2n = 42$, CHN. Russian Federation, Irkutskaya Oblast', Olkhonskii Raion, Lake Baikal, Olkhon Island, coast of the Khuzhirsii bay, sands, 470 m, 53°11'01.91"N, 107°18'27.58"E, 19 Jul 2020, *O.Yu. Zavgorodnyaya kr259* (IRK).

PLANTAGINACEAE

Plantago camtschatica Link

$2n = 12$, CHN. Russian Federation, Kamchatskii Krai, Elizovskii Raion, South Kamchatka Federal Reserve, coast of the Pacific Ocean, Vestnik bay, seaside rocks, in crevices and on scree, 15 m, 51.556112°N, 157.719191°E, 23 Jul 2022, *O.A. Chernyagina 13767* (VLA).

POLEMONIACEAE

Polemonium boreale Adams

$2n = 18$, CHN. Russian Federation, Kamchatskii Krai, Elizovskii Raion, South Kamchatka Federal Reserve, Ksudach volcano, shore of the Klyuchevoe Lake, on dry rocky-sandy bank of the stream, 420 m, 51°47'21.4"N, 157°32'50.0"E, 29 Jul 2021, *O.A. Chernyagina 13768* (VLA).

POLYGONACEAE

Atraphaxis frutescens (L.) K.Koch

$2n = 40$, CHN. Russian Federation, Altaiskii Krai, Aleiskii Raion, interfluvium of the Levaya Gorevka and Gorevka rivers, 8 km NNW of Zavety Ilich settlement, forb steppe slope, 186 m, 52°31'

27.79°N, 82°34'01.04"E, 28 Jul 2022, *D.A. Krivenko 68552* (IRK), *D.A. Krivenko 68554* (VLA).

Rumex obtusifolius subsp. *sylvestris* (Lam.) Čelak.

2n = 20, CHN. Russian Federation, Kaliningradskaya Oblast', Kaliningrad city, right bank of the Pergolya River, Central Park of Culture and Leisure, forb bank of watercourse, 54°43'12.8"N, 20°28'43.3"E, 5 Oct 2022, *O.Yu. Zavgorodnyaya 68861* (IRK), *O.Yu. Zavgorodnyaya 68862* (VLA).

Rumex stenophyllus Ledeb.

2n = 20, CHN. Russian Federation, Altaiskii Krai, Rubtsovskii Raion, left bank of the Alei River, W of Mamontovo railway station, near Srednee Lake, solonchous meadow, 51°44'55.23"N, 81°25'35.39"E, 14 Jul 2022, *D.A. Krivenko 68563* (IRK), *D.A. Krivenko 68564* (VLA).

PRIMULACEAE

Androsace septentrionalis L.

2n = 20, CHN. Russian Federation, Kamchatskii Krai, Ust-Kamchatskii Raion, Ust-Kamchatsk settlement, on pile of gravel, 3 m, 56°14'31.9"N, 162°31'24.5"E, 23 Jul 2022, *O.A. Chernyagina 13824* (VLA).

Primula kawasimae H.Hara

2n = 18, CHN. Russian Federation, Kamchatskii Krai, Bystrinskii Raion, foothill of the Mt. Anaun, fine earth patches along the sides of dirt road running through the bush tundra (*Vaccinium uliginosum*-*Betula exilis*-*Ledum decumbens*), 876 m, 56°14'15.1"N, 158°51'28.2"E, 14 Aug 2022, *O.A. Chernyagina 13829* (VLA).

RANUNCULACEAE

Aquilegia sibirica Lam.

2n = 14, CHN. Russian Federation, Irkutskaya Oblast', Ust-Ordynskii Buryatskii Okrug, Ekherit-Bulagatskii Raion, Krasnyi Yar Federal Reserve, near Guzhir kordon, legume-grass-forb meadow, 52°37'06.72"N, 105°17'40.82"E, 8 Jul 2019, *O.Yu. Zavgorodnyaya kr12* (IRK).

Ranunculus polyanthemus L.

2n = 16, CHN. Russian Federation, Altaiskii Krai, Shipunovskii Raion, left bank of the Klepechikha River, left tributary of the Alei River, 7 km WNW of Shinupovo village, shore of the Matyugino Lake, forb-grasses steppe meadow, 52°14'07.62"N, 82°08'27.47"E, 19 Jul 2022, *D.A. Krivenko 68446* (IRK), *68449* (NSK), *68448* (VLA).

Ranunculus smirnovii Ovcz.

2n = 28, CHN. Russian Federation, Irkutskaya Oblast', Ust-Ordynskii Buryatskii Okrug, Ekherit-Bulagatskii Raion, Krasnyi Yar Federal Reserve, near Guzhir kordon, mixed forb forest, 52°37'13.40"N, 105°18'07.55"E, 8 Jul 2019, *O.Yu. Zavgorodnyaya kr244* (IRK), *O.Yu. Zavgorodnyaya kr245* (IRK) [Fig. 3D].

ROSACEAE

Argentina anserina subsp. *groenlandica* (Tratt.) Á.Löve (= *Potentilla egedei* Wormsk. ex Hornem.)

2n = 28, CHN. Russian Federation, Kamchatskii Krai, Karaginskii Raion, Tymlat village, at the mouth of the Tymlat River, tidal marsh, 1 m, 59°32'31.0"N, 163°09'58.6"E, 8 Sep 2021, *O.A. Chernyagina 13683* (VLA).

Filipendula vulgaris Moench

2n = 14, CHN. Russian Federation, Altaiskii Krai, Aleiskii Raion, right bank of the Solonovka River, left tributary of the Alei River, 4.5 km NNW of Krasnyi Yar village, forb steppe meadow, 52°25'32.75"N, 82°34'50.36"E, 22 Jul 2022, *D.A. Krivenko 68592* (IRK), *D.A. Krivenko 68593* (VLA).

Geum aleppicum Jacq.

2n = 42, CHN. Russian Federation, Kamchatskii Krai, Karaginskii Raion, Ossora settlement, on personal plot, 5 m, 59°14'29.4"N, 163°04'11.6"E, 18 Sep 2021, *O.A. Chernyagina 13789* (VLA).

URTICACEAE

Urtica cannabina L.

2n = 52, CHN. Russian Federation, Republic of Buryatia, Barguzinskii Raion, middle part of Lake Baikal, Zabaikalskii National Park, Bolshoi Ushkanii Island, 466 m, 53°51'15"N, 108°39'25"E, 3 Sep 2019, *O.Yu. Zavgorodnyaya 57673* (IRK00038350).

IAPT chromosome data 41/5

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* First chromosome count for the species.

** First chromosome count for the genus.

APIACEAE / UMBELLIFERAE

Aegopodium tadshikororum Schischk.

n = 11, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Mt. Chimgan, 41.5314°N, 70.0154°E, 1500–1600 m, 14 May 2017, *M.G. Pimenov 5-17* (MW) [Fig. 4A].

Elwendia intermedia (Korovin) Pimenov & Kljuykov

n = 6, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Mt. Chimgan, 41.5314°N, 70.0154°E, 1500–1600 m, 14 May 2017, *M.G. Pimenov 4-17* (MW) [Fig. 4B].

Ferula penninervis Regel & Schmalh.

n = 11, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Mt. Chimgan, 41.5314°N, 70.0154°E, 1500–1600 m, 14 May 2017, *M.G. Pimenov 7-17* (MW).

2n = 22, CHN. Uzbekistan, Tashkent Prov., Yangiabad, Chatkal Ridge, Dukensai, rocky slope, 41.1793°N, 70.1171°E, 28 Sep 2019, *M.G. Pimenov & O. Tursunov s.n.* (MW) [Fig. 5A].

**Ferula pratovii* F.O.Khass. & I.I.Malzev

2n = 22, CHN. Uzbekistan, Kashkadarya Prov., Hissar Ridge, basin riv. Kankazary, near the village Vuary, 38.7518°N, 67.2964°E, 1 Aug 2019, *I.I. Malzev s.n.* (TASH) [Fig. 5C].

The seeds were taken from one of the herbarium specimens collected at the locus classicus of the species.

Ferula samarkandica Korovin

n = 11, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Mt. Chimgan, 41.5314°N, 70.0154°E, 14 May 2017, *M.G. Pimenov 8-17* (MW) [Fig. 4C].

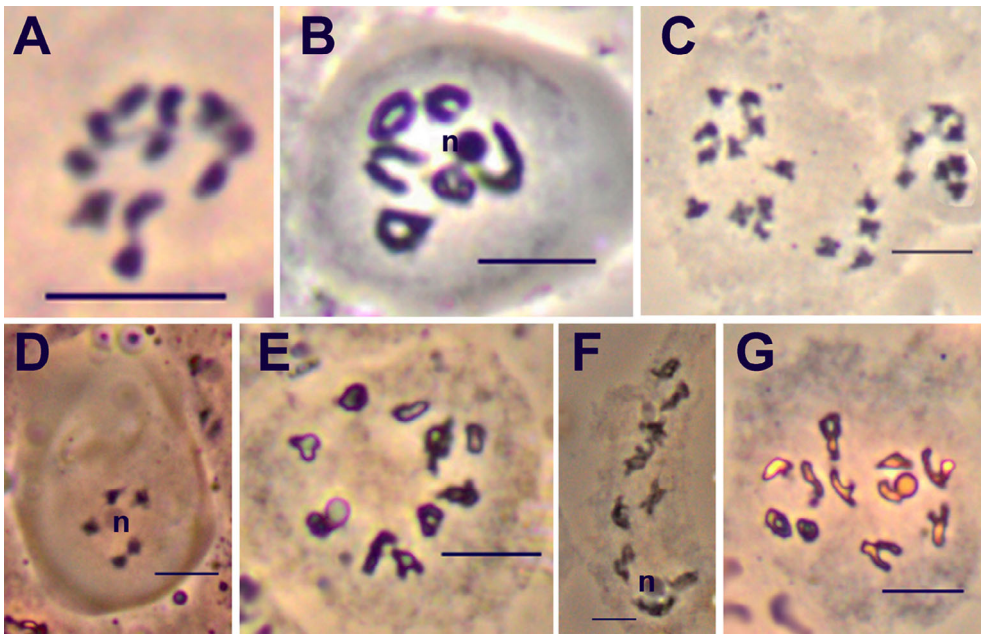


Fig. 4. Meiotic chromosomes. **A**, *Aegopodium tadshikorum*, $n = 11$; **B**, *Elwendia intermedia*, $n = 6$; **C**, *Ferula samarkandica*, $n = 11$; **D**, *Kamelinia tianschanica*, $n = 5$; **E**, *Oedibasis platycarpa*, $n = 10$; **F**, *Paraligusticum discolor*, $n = 11$; **G**, *Schrenkia golickeana*, $n = 11$. — Scale bars = 10 μm ; n = nucleolus.

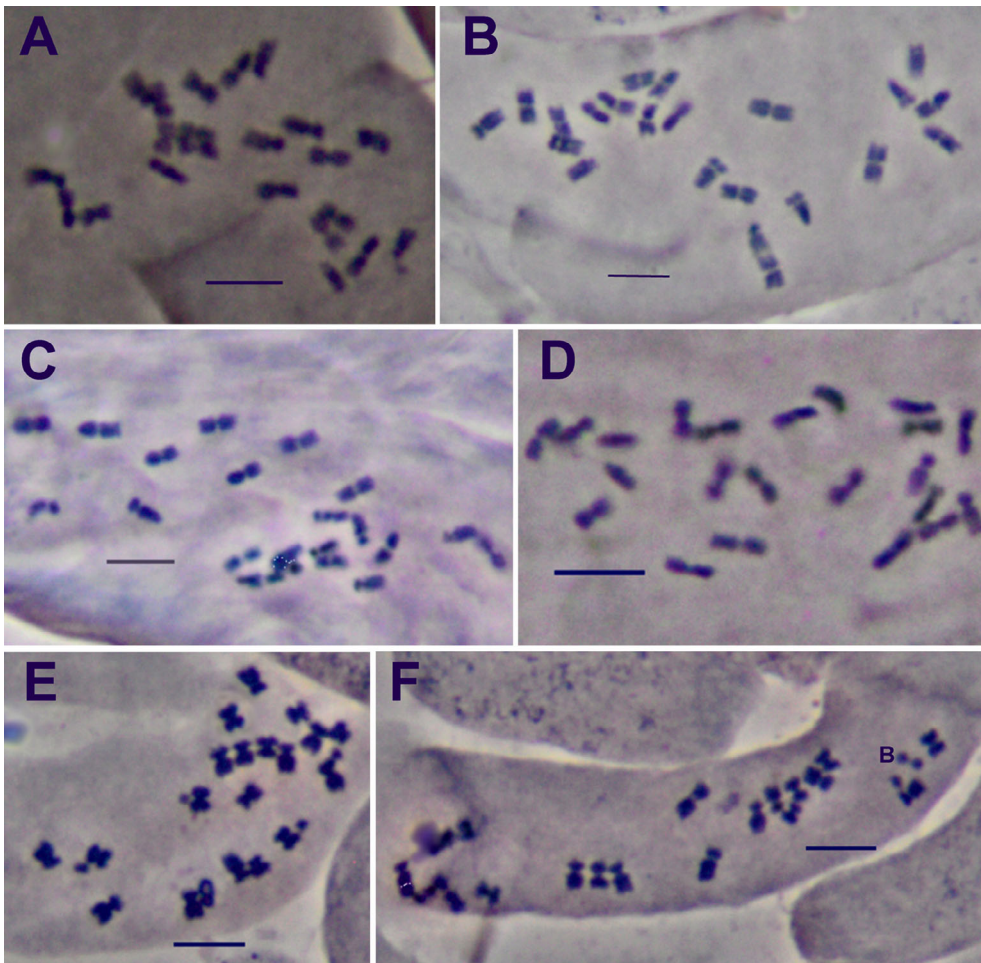


Fig. 5. Mitotic chromosomes. **A**, *Ferula penninervis*, $2n = 22$; **B**, *Ferula ugamica*, $2n = 22$; **C**, *Ferula pratovii*, $2n = 22$; **D**, *Ferula tenuisecta*, $2n = 22$; **E**, *Mogoltavia severtzovii*, $2n = 20$; **F**, *Mogoltavia severtzovii*, $2n = 20 + 1B$ (indicated by “B”). — Scale bars = 5 μm .

Ferula tenuisecta Korovin

$n = 11$, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Mt. Chimgan, 41.5314°N, 70.0154°E, 14 May 2017, *M.G. Pimenov* 9-17 (MW).

$2n = 22$, CHN. Uzbekistan, Tashkent Prov., Yangiabad, Chatkal Ridge, Dukensai, rocky slope, 41.1793°N, 70.1171°E, 27 Sep 2019, *M.G. Pimenov* & *O. Tursunov s.n.* (MW) [Fig. 5D].

Ferula ugamica Korovin

$2n = 22$, CHN. Uzbekistan, Yangiabad, Chatkal Ridge, Dukensai, rocky slope, 41.1793°N, 70.1171°E, 29 Sep 2019, *M.G. Pimenov* & *O. Tursunov s.n.* (MW) [Fig. 5B].

***Kamelinia tianshanica* F.O.Khass. & I.I.Malzev

$n = 5$, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Yangiabad, in cracks between stones on small- and large-block screes in Dukensai, 41.1793°N, 70.1171°E, 17 May 2017, *M.G. Pimenov* 14-17 (MW) [Fig. 4D].

Narrow endemic of Uzbekistan. Its taxonomic position in the family is still not determined—whether it belongs to the monotypic genus *Kamelinia* F.O.Khass. & I.I.Malzev or is a member of the closely related genus *Korshinskia* Lipsky. The chromosome number ($n = 5$), rare in the Umbelliferae, supports the recognition of an independent genus.

Mogoltavia severtzovii (Regel) Korovin

$2n = 20$, $20 + 1-2B$, CHN. Tajikistan, Sughd Prov., N slope of Achkop Mts., near the village Kingburak, along dry stream beds, 600 m, 40.2970°N, 69.8966°E, 25 May 2015, *A. Kurbonov* & *M.G. Pimenov* 55-15 (MW) [Fig. 5E,F].

Oedibasis platycarpa (Lipsky) Koso-Pol.

$n = 10$, CHN. Uzbekistan, Tashkent Prov., Bostanlyk region, Gazalkent, valley of Chirchik River, 41.4964°N, 69.6453°E, 800 m, 14 May 2017, *M.G. Pimenov* 1-17 (MW) [Fig. 4E].

Paraligusticum discolor (Ledeb.) V.N.Tikhom.

$n = 11$, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Yangiabad, Dukensai, rocky slope, 41.1793°N, 70.1171°E, 17 May 2017, *M.G. Pimenov* 15-17 (MW) [Fig. 4F].

Schrenkia golickeana B.Fedtsch.

$n = 11$, CHN. Uzbekistan, Tashkent Prov., Yangiabad, Chatkal Ridge, Dukensai, rocky slope, 41.1793°N, 70.1171°E, 17 May 2017, *M.G. Pimenov* 10-17 (MW); Uzbekistan, Tashkent Prov.,

Bostanlyk region, Gazalkent, valley of Chirchik River, 41.4964°N, 69.6453°E, 14 May 2017, *M.G. Pimenov* 2-17 (MW) [Fig. 4G].

$2n = 22$, CHN. Uzbekistan, Tashkent Prov., Yangiabad, Chatkal Ridge, Dukensai, rocky slope 41.1793°N, 70.1171°E, 28 Sep 2019, *M.G. Pimenov* & *O. Tursunov s.n.* (MW).

IAPT chromosome data 41/6

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This work was performed using equipment of The Core Facilities Center “Cell and Molecular Technologies in Plant Science” within the framework of the Komarov Botanical Institute Russian Academy of Sciences budget projects (no. 122011800672-6, no. 122011900031-0).

IRIDACEAE

Iris ruthenica Ker Gawl

$2n = 42$, CHN. Russia, Altai Republic, Turochakskii Raion, about 1 km NW of the village Artybash, forest glades, 450 m, 51.80077°N, 87.21467°E, 26 May 2018, *P.M. Zhurbenko s.n.* (LE 01228640) [Fig. 6A].

$2n = 84$, CHN. Russia, Altaiskii Krai, Tretyakovskii Raion, 2 km up the Alei River from the village of Krasnoe Razdolie, the southern macro-slope of Black Stone Mountain, rocks and brushwood, 500 m, 50.5424°N 82.2130°E, 30 May 2018, *P.M. Zhurbenko, A.A. Kechaikin* & *V.I. Dorofeev s.n.* (LE 01228639) [Fig. 6B].

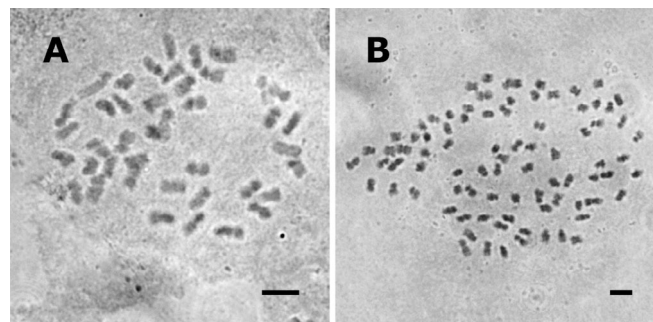


Fig. 6. Mitotic metaphases of *Iris ruthenica*. **A**, LE 01228640, $2n = 42$; **B**, LE 01228639, $2n = 84$. — Scale bars = 10 μ m.

IAPT chromosome data 41 – Extended version

Karol Marhold (ed.),^{1,2} Jaromír Kučera (ed.),¹ Nina B. Alexeeva,³ Tatiana V. Alexeeva,⁴ Ekaterina D. Badaeva,⁵ Evgeny V. Banaev,⁶ Olga A. Chernyagina,⁷ Aleksander A. Korobkov,³ Tatiana V. Kostritsyna,⁸ Violetta V. Kotseruba,³ Denis A. Krivenko,⁹ Polina A. Kuzmina,⁹ Tatyana V. Pankova,⁶ Michael G. Pimenov,⁴ Nina S. Probatova,¹⁰ Yuliya A. Pshenichkina,⁶ Dmitry N. Shauro,⁶ Tatyana A. Shemetova,⁶ Julia V. Shner,⁴ Mariya A. Tomoshevich,⁶ Galina V. Yurlova,¹¹ Olga Yu. Zavgorodnyaya,⁹ Peter M. Zhurbenko³ & Elena Yu. Zykova⁶

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Publication of the contributions from Russian scientists cannot be in any way interpreted as support of the current military policy of the Russian Federation either by editors or by the International Association for Plant Taxonomy.

IAPT chromosome data 41/1

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This research was carried out within the framework of the topic “Theoretical and applied aspects of studying genofunds of natural plant populations and conservation of plant diversity ‘outside the typical environment’ (ex situ)” (AAAA-A21-121011290027-6).

* First chromosome count from the given region.

FABACEAE

**Caragana altaica* (Kom.) Pojark.

$2n = 24, 32$, CHN. Russian Federation, Republic of Khakassiya, Bogradskii Raion, vicinity of Troitskoe village, 54°15.399'N, 91°07.174' E, 6 Aug 2021, *E.V. Banaev & M.A. Tomoshevich 3001745* (NSK).

$2n = 24, 32$, CHN. Russian Federation, Republic of Khakassiya, Bogradskii Raion, vicinity of Red Stone village, right bank of the Volchiiy log river, 54°08.855'N, 91°15.431'E, 6 Aug 2021, *E.V. Banaev & M.A. Tomoshevich 3001747* (NSK).

**Caragana pygmaea* (L.) DC.

$2n = 16$, CHN. Russian Federation, Republic of Tuva, Tandinskii Raion, north shore of Lake Dus-Khol, 51°21.921'N, 94°24.699'E, 3 Aug 2021, *E.V. Banaev & M.A. Tomoshevich 3001748* (NSK).

LAMIACEAE

**Thymus iljinii* Klokov & Des.-Shost.

$2n = 24, 26$ (mixoploidy), CHN. Russian Federation, Krasnoyarskii Krai, vicinity of Krasnoyarsk city, steppe, 56°01'24.83"N, 92°51'29.25"E, 24 Aug 2017, *A.Z. Afinogenov 3001798* (NSK).

**Thymus marschallianus* Willd.

$2n = 28, 42$, CHN. Russian Federation, Novosibirskaya Oblast', Ordynskii Raion, 2 km north of Novopichugovo village, 54°38'24.33"N, 82°20'28.68"E, 10 Aug 2019, *A.Ya. Pshenichkin 3001791* (NSK).

$2n = 42$, CHN. Russian Federation, Altaiskii Krai, Kamenskii Raion, vicinity of Novoyarki village, 53°35'52.10"N, 80°47'17.73"E, 18 Aug 2019, *A.Ya. Pshenichkin 3001790* (NSK); Russian Federation, Altaiskii Krai, Burlinskii Raion, neighborhood of Petrovka village, on the shore of Lake Bolshoye Topolnoye, 53°21'45.36"N, 78°02'45.09"E, 29 Jul 2020, *E.V. Banaev 3001792* (NSK).

**Thymus serpyllum* L. s.l.

$2n = 14, 20$, CHN. Russian Federation, Republic of Altai, Ongudaiskii Raion, confluence of Chuya and Katun, steppe, 50°23'47.40"N, 86°40'35.20"E, 15 Aug 2020, *A.Z. Afinogenov 3001796* (NSK).

$2n = 24, 26, 28$, CHN. Kazakhstan, Vostochno-Kazakhstanskaya Oblast', Ulanskii Raion, vicinity of Tukul village, 49°42.597'N, 82°06.079'E, 11 Aug 2017, *E.V. Banaev 3001795* (NSK).

$2n = 26, 28$, CHN. Russian Federation, Republic of Altai, Ongudaiskii Raion, on the steppe slope along the river Aigulak, 50°21'40.01"N, 87°14'39.97"E, 6 Aug 2022, *E.V. Banaev 3001794* (NSK).

$2n = 28$, CHN. Russian Federation, Novosibirskaya Oblast', Karasukkii Raion, vicinity of Blagodatnoe village, 53°50.614'N, 78°01.084'E, 1 Aug 2020, *E.V. Banaev 3001793* (NSK).

$2n = 28, 32, 36$, CHN. Russian Federation, Republic of Khakassiya, Shirinskii Raion, vicinity of Son village, 54°22'58.35"N, 90°23'52.89"E, 13 Aug 2019, *A.Z. Afinogenov 3001797* (NSK).

POLYGONACEAE

**Atraphaxis frutescens* (L.) K.Koch

$2n = 16, 24$, CHN. Russian Federation, Republic of Tuva, Tes-Khemskii Raion, right bank of the river Tes-Khem, 50°30.944'N, 94°44.478'E, 4 Aug 2021, *E.V. Banaev & M.A. Tomoshevich 3001766* (NSK).

**Atraphaxis pungens* (M.Bieb.) Jaub. & Spach

$2n = 32, 40$, CHN. Russian Federation, Republic of Tuva, Tandinskii Raion, west shore of Lake Dus-Khol, 51°21.852'N, 94°25.734'E, 3 Aug 2021, *E.V. Banaev & M.A. Tomoshevich 3001763* (NSK).

$2n = 32, 40, 48$, CHN. Russian Federation, Republic of Tuva, Tes-Khemskii Raion, foot of Ahir-Ula mountain on the way to Shara-Nur Lake, steppe, 50°18.943'N, 94°41.635'E, 4 Aug 2021, *E.V. Banaev & M.A. Tomoshevich 3001761* (NSK).

IAPT chromosome data 41/2

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This work was performed using equipment of The Core Facilities Center “Cell and Molecular Technologies in Plant Science” and in the framework of the institutional research projects of the Komarov Botanical Institute of the Russian Academy of Sciences (AAAA-A18-118040290161-3, AAAA-A19-119031290052-1).

* First chromosome count for the genus.

** New cytotype for the species.

AMARANTHACEAE

Alternanthera sessilis (L.) DC.

** $2n = 68$, CHN. Thailand, Chonburi Province, Sattahip District, Samaesarn sub-districts, Sattahip Military Beach on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°36'50"N, 100°55'28"E, 13 Feb 2023, *P.A. Kuzmina 72625* (IRK) [Fig. 1A].

ASPARAGACEAE

Hosta ventricosa (Salisb.) Stearn

$2n = 60$, CHN. Kyrgyzstan, Bishkek city, E.Z. Gareev Botanical Garden of the National Academy of Sciences of the Kyrgyz Republic, 790 m, 42°51'25"N, 74°35'25"E, Jul 2022, *T.V. Kostritsyna 73003* (IRK) [Fig. 1B].

ASTERACEAE

Achillea millefolium L.

** $2n = 64$, CHN. Russian Federation, Rostovskaya Oblast', Taganrogskii Bay of the Sea of Azov, end of long sand-shell spit, elevated area, forb group, 27 Sep 2014, *A.A. Korobkov 2015-22* (LE).

Anthemis cotula L.

$2n = 18$, CHN. Armenia, Kotayk Province, on the border with Ararat Province, right bank of the Azat River, Goght village, weed-ruderal plant groups, 1690 m, 40°08'04"N, 44°46'14"E, 28 Jul 2019, *D.A. Krivenko & al. 2021-12* (LE).

Arctium lappa L.

$2n = 36$, CHN. Germany, Free State of Bavaria, Munich city, northern part, left bank of the Isar River, weed-ruderal plant groups, 48°12'23.35"N, 11°37'04.98"E, 28 Dec 2021, *G.V. Yurlova 72763* (IRK).

Artemisia anethifolia Weber ex Stechm.

$2n = 18$, CHN. Russian Federation, Republic of Buryatia, Ivolginskii Raion, Selenga midlands, Ivolginskaya basin, vicinity of Khoitobey village, ancient high terrace of the Ivolga River, depression with saline vegetation, 7 Sep 2020, *B. Namzalov 2021-01* (LE), *B. Namzalov 2021-02* (LE), *B. Namzalov 2021-06* (LE).

Artemisia capillaris Thunb.

$2n = 18$, CHN. China, Jilin Province, Yanbian Korean Autonomous Prefecture, Hunchun city, park near Lingbao temple, on hill near to pine plantations, 143 m, 42°53'20.3"N, 130°20'43.7"E, 29 Sep 2013, *M.O. Burlyaeva & V.V. Kotseruba 2014-111* (LE), *M.O. Burlyaeva & V.V. Kotseruba 2014-112* (LE).

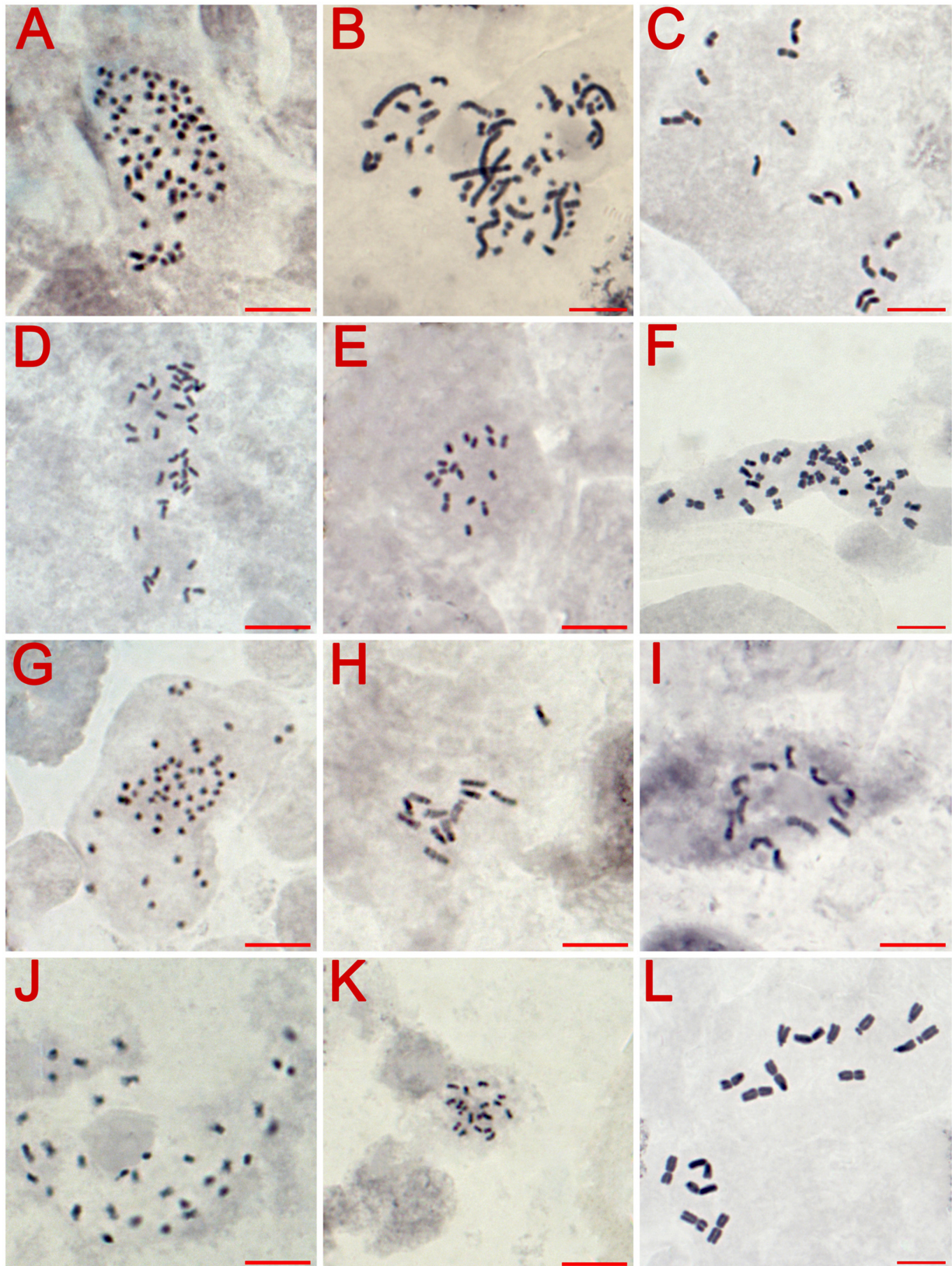


Fig. 1. Mitotic metaphases. **A**, *Alternanthera sessilis* ($2n = 68$); **B**, *Hosta ventricosa* ($2n = 60$); **C**, *Artemisia vulgaris* ($2n = 16$); **D**, *Senecio inaequidens* ($2n = 40$); **E**, *Solidago canadensis* ($2n = 18$); **F**, *Tridax procumbens* ($2n = 36$); **G**, *Boerhavia repens* ($2n = 52$); **H**, *Chelidonium majus*, 72210 ($2n = 12$); **I**, *Ch. majus*, 72212 ($2n = 12$); **J**, *Cenchrus echinatus* ($2n = 34$); **K**, *Eleusine indica*, 72631 ($2n = 18$); **L**, *Clematis vitalba* ($2n = 16$). — Scale bars = 10 μm .

Artemisia frigida Willd.

2n = 18, CHN. Russian Federation, Tyumenskaya Oblast', Tobolskii Raion, 1.5 km W of Abalak village, along banks of the Irtysh River, steppe, 7 Sep 2020, *B.S. Kharitonov 2021-03* (LE); Russian Federation, Tyumenskaya Oblast', Tobolskii Raion, Mt. Alafeyskaya, steppe slope, 28 Aug 2019, *B.S. Kharitonov 2021-07* (LE).

2n = 36, CHN. Russian Federation, Tyumenskaya Oblast', Tobolskii Raion, Mt. Alafeyskaya, steppe slope, 28 Aug 2019, *B.S. Kharitonov 2021-04* (LE).

Artemisia tilesii Ledeb.

2n = 18, CHN. Russian Federation, Arkhangelskaya Oblast', Nenets Autonomous Area, Zapolyarnyi Raion, Arctic Ocean, between Pechora and Kara Seas, Vaygach Island, coastal slope, forb meadow, 24 Aug 2020, *L.A. Konoreva s.n.* (LE), 26 Aug 2020, *L.A. Konoreva 2021-05* (LE).

Artemisia vulgaris L.

2n = 16, CHN. Germany, Free State of Bavaria, Munich city, northern part, left bank of the Isar River, weed-ruderal plant groups, 48°12'23.35"N, 11°37'04.98"E, 28 Dec 2021, *G.V. Yurlova 72721* (IRK) [Fig. 1C].

Aster alpinus L.

2n = 18, CHN. Russian Federation, Irkutskaya Oblast', Olkhonskii Raion, Lake Baikal, Olkhon Island, northwestern part of the island, mountain rocky steppe, 528 m, 53°22'48"N, 107°44'03"E, 17 Aug 2018, *D.A. Krivenko 2021-14* (LE).

Aster biennis Ledeb. (≡ *Heteropappus biennis* (Ledeb.)

Tamamsch. ex Grubov)

2n = 18, CHN. Russian Federation, Irkutskaya Oblast', Olkhonskii Raion, Lake Baikal, Olkhon Island, northwestern part of the island, mountain rocky steppe, 528 m, 53°22'48"N, 107°44'03"E, 17 Aug 2018, *D.A. Krivenko 2021-11* (IRK, LE).

Erigeron canadensis L. (≡ *Conyza canadensis* (L.) Cronquist)

2n = 18, CHN. Russian Federation, Altaiskii Krai, Rubtsovskii Raion, left bank of the Alei River, near Zakharovo village, salty meadow, 51°39'02"N, 81°18'40"E, 18 Sep 2018, *D.A. Krivenko 2021-17* (LE).

Leucanthemum vulgare Lam.

2n = 18, CHN. Russian Federation, Republic of Dagestan, Gunibskii Raion, Batsada village, 14 Aug 2012, *V.V. Kotseruba 2013-74* (LE); Russian Federation, Republic of Dagestan, Gunibskii Raion, vicinity of Gunib village, 16 Aug 2012, *V.V. Kotseruba 2013-77* (LE).

Senecio inaequidens DC.

2n = 40, CHN. Germany, Free State of Bavaria, Munich city, northern part, left bank of the Isar River, weed-ruderal plant groups, 48°12'23.35"N, 11°37'04.98"E, 28 Dec 2021, *G.V. Yurlova 72762* (IRK) [Fig. 1D].

Solidago canadensis L.

2n = 18, CHN. Germany, Free State of Bavaria, Munich city, northern part, left bank of the Isar River, weed-ruderal plant groups, 48°12'23.35"N, 11°37'04.98"E, 28 Dec 2021, *G.V. Yurlova 72720* (IRK) [Fig. 1E].

Tanacetum leptophyllum (Steven ex M.Bieb.) Sch.Bip.

(≡ *Pyrethrum leptophyllum* Steven ex M.Bieb.)

2n = 18, CHN. Russian Federation, Republic of Dagestan, Kurakhskii Raion, Kurakh-chai gorge, vicinity of Kurakh village, eroded northern slopes, narrow washes, 21 Aug 2011, *N.I. Dorofeev 2013-73* (LE); Russian Federation, Republic of Dagestan, Gunibskii Raion, on the way to Batsada village, 14 Aug 2012, *V.V. Kotseruba 2013-75* (LE); Russian Federation, Republic of Dagestan, Gunibskii Raion, vicinity of Gunib village, in forest, 15 Aug 2012, *V.V. Kotseruba 2013-76* (LE).

Tanacetum partheniifolium (Willd.) Sch.Bip. (≡ *Pyrethrum*

partheniifolium Willd.)

2n = 18, CHN. Georgia, Samtskhe-Javakheti Region, Akhmeta municipality, at the southern entrance to the Borjomi gorge, left bank of the Kura River, near Atskuri fortress, forb ruderalized stepped meadow, 1300 m, 41°42'26"N, 43°08'19"E, 23 Jul 2019, *D.A. Krivenko & al. 2021-13* (LE).

Tanacetum parthenium (L.) Sch.Bip. (= *Pyrethrum glanduliferum* Sommier & Levier)

2n = 18, CHN. Russian Federation, Kabardino-Balkarian Republic, Elbrusskii Raion, Greater Caucasus, Bokovoi range, foot of Mt. Elbrus, Polyana Azau settlement, sandy-pebbly deposits, 2380 m, 43°16'10"N, 42°28'47"E, 7 Aug 2019, *D.A. Krivenko 2021-19* (IRK, LE).

Tridax procumbens L.

2n = 36, CHN. Thailand, Chonburi Province, Sattahip District, Samaesarn sub-districts, Sattahip Military Beach on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°36'50"N, 100°55'28"E, 13 Feb 2023, *P.A. Kuzmina 72633* (IRK) [Fig. 1F].

Tripleurospermum elongatum (Fisch. & C.A.Mey.) Bornm.

**2n = 36, CHN. Russian Federation, Kabardino-Balkarian Republic, Elbrusskii Raion, Greater Caucasus, Bokovoi range, foot of Mt. Elbrus, Polyana Azau settlement, sandy-pebbly deposits, 2380 m, 43°16'10"N, 42°28'47"E, 7 Aug 2019, *D.A. Krivenko 2021-16* (IRK, LE).

Tripleurospermum parviflorum (Willd.) Pobed.

2n = 18, CHN. Georgia, Samtskhe-Javakheti Region, Akhaltsikhe municipality, right bank of Kura River, on the way from Greli village to Sapara monastery, flattened steppe slope, 1290 m, 41°36'54"N, 43°00'27"E, 23 Jul 2019, *D.A. Krivenko & al. 2021-15* (IRK, LE).

Xeranthemum annuum L. (= *X. squarrosum* Boiss.)

2n = 12, CHN. Armenia, Erevan city, Avan city district of the northeast part of the city (former Avan village), in composition of weed-ruderal vegetation, 1340 m, 40°14'22"N, 44°34'08"E, 21 Jul 2019, *D.A. Krivenko & al. 2021-18* (IRK, LE).

BIGNONIACEAE*Tecoma stans* (L.) Juss. ex Kunth

2n = 36, CHN. Thailand, Chonburi Province, Bang Lamung District, Pattaya city on the eastern side of the Gulf of Siam in the southwestern South China Sea, near Sanctuary of Truth, 12°58'18"N, 100°53'22"E, 18 Feb 2023, *P.A. Kuzmina 72295* (IRK).

CLEOMACEAE*Cleome rutidosperma* DC.

$2n = 30$, CHN. Thailand, Chonburi Province, Bang Lamung District, Pattaya city on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°53'09"N, 100°52'53"E, 15 Feb 2023, *P.A. Kuzmina 72627* (IRK).

EUPHORBIACEAE*Acalypha indica* L.

$2n = 20$, CHN. Thailand, Chonburi Province, Bang Lamung District, Pattaya city on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°53'09"N, 100°52'53"E, 15 Feb 2023, *P.A. Kuzmina 72294* (IRK).

Euphorbia hirta L.

$2n = 18$, CHN. Thailand, Chonburi Province, Bang Lamung District, Ko Lan Island on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°54'43"N, 100°46'12"E, 17 Feb 2023, *P.A. Kuzmina 72293* (IRK).

FABACEAE*Leucaena leucocephala* (Lam.) de Wit

$2n = 104$, CHN. Thailand, Phuket Province, Andaman Sea of the Indian Ocean, Phuket Island, roadside, 08°03'15.57"N, 98°24'43.85"E, Jan 2011, *E.V. Zhmud 73011* (IRK); Thailand, Krabi Province, Ko Lanta District, Andaman Sea of the Indian Ocean, Ko Lanta Yai Island of the western mainland coast, 07°39'26.00"N, 99°02'32.96"E, 10 Dec 2022, *E.V. Zhmud 72902* (IRK).

MAZACEAE**Dodartia orientalis* L.

$2n = 20$, CHN. Kyrgyzstan, Bishkek city, E.Z. Gareev Botanical Garden of the National Academy of Sciences of the Kyrgyz Republic, 790 m, 42°51'25"N, 74°35'25"E, Jul 2022, *T.V. Kostritsyna 72204* (IRK).

NYCTAGINACEAE*Boerhavia repens* L.

$**2n = 52$, CHN. Thailand, Chonburi Province, Bang Lamung District, Pattaya city on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°53'09"N, 100°52'53"E, 15 Feb 2023, *P.A. Kuzmina 72774* (IRK) [Fig. 1G].

ONAGRACEAE*Oenothera biennis* L.

$2n = 14$, CHN. Germany, Free State of Bavaria, Munich city, northern part, left bank of the Isar River, weed-ruderal plant groups, 48°12'23.35"N, 11°37'04.98"E, 28 Dec 2021, *G.V. Yurlova 72764* (IRK).

PAPAVERACEAE*Chelidonium majus* L.

$2n = 12$, CHN. Kyrgyzstan, Bishkek city, northern part of the city, right bank of the Ara-Archa River, Dubosekovskaya Str., 665 m, 42°56'35"N, 74°35'25"E, 15 Aug 2022, *T.V. Kostritsyna 72210* (IRK) [Fig. 1H]; Kyrgyzstan, Bishkek city, E.Z. Gareev Botanical Garden of the National Academy of Sciences of the Kyrgyz Republic, 790 m, 42°51'25"E, 74°35'25"E, Jul 2022, *T.V. Kostritsyna 72211* (IRK); Kyrgyzstan, Issyk-Kul'skaya Oblast', Issyk-Kul'skii Raion, northwestern shore of Issyk-Kul Lake, Ananevo village, 1620 m, 42°43'40"N, 77°40'40"E, Jul 2022, *T.V. Kostritsyna 72212* (IRK) [Fig. 1I].

PHYLLANTHACEAE*Phyllanthus amarus* Schumach. & Thonn.

$2n = 26$, CHN. Thailand, Chonburi Province, Sattahip District, Samaesarn sub-districts, Sattahip Military Beach on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°36'50"N, 100°55'28"E, 13 Feb 2023, *P.A. Kuzmina 72628* (IRK).

POACEAE*Cenchrus echinatus* L.

$2n = 34$, CHN. Thailand, Chonburi Province, Bang Lamung District, eastern side of the Gulf of Siam in the southwestern South China Sea, Pattaya city, 12°53'51.78"N, 100°52'16.09"E, 14 Feb 2023, *P.A. Kuzmina 72629* (IRK) [Fig. 1J].

Eleusine indica (L.) Gaertn.

$2n = 18$, CHN. Thailand, Chonburi Province, Sattahip District, Samaesarn sub-districts, Sattahip Military Beach on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°36'50"N, 100°55'28"E, 13 Feb 2023, *P.A. Kuzmina 72631* (IRK) [Fig. 1K]; Thailand, Chonburi Province, Bang Lamung District, eastern side of the Gulf of Siam in the southwestern South China Sea, Pattaya city, 12°53'51.78"N, 100°52'16.09"E, 14 Feb 2023, *P.A. Kuzmina 72632* (IRK).

Leptochloa panicea (Retz.) Ohwi

$2n = 20$, CHN. Thailand, Chonburi Province, Sattahip District, Samaesarn sub-districts, Sattahip Military Beach on the eastern side of the Gulf of Siam in the southwestern South China Sea, 12°36'50"N, 100°55'28"E, 13 Feb 2023, *P.A. Kuzmina 72630* (IRK).

RANUNCULACEAE*Clematis vitalba* L.

$2n = 16$, CHN. Germany, Free State of Bavaria, Munich city, northern part, left bank of the Isar River, weed-ruderal plant groups, 48°12'23.35"N, 11°37'04.98"E, 28 Dec 2021, *G.V. Yurlova 72765* (IRK) [Fig. 1L].

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* First chromosome count for the taxon.

APIACEAE*Eryngium planum* L.

$2n = 16$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Zael'tsovskii Raion, Arboretum territory, 19 Sep 2019, E. Zykova EZ865-2119 (NS) [Fig. 2A].

Pimpinella saxifraga L.

$2n = 40$, CHN. Russian Federation, Republic of Altai, Gorno-Altaysk city, bus-stop "Rodnik", bank of Maima River, pebbled river bank, 11 Aug 2018, 51°58'N, 85°55'E, E. Zykova EZ772-1618 (NS0049050) [Fig. 2B].

ASTERACEAE*Bidens tripartita* L.

$2n = 48$, CHN. Russian Federation, Republic of Altai, Maiminskii Raion, Manzherok village, roadside, 51°50'N, 85°45'E, 30 Jun 2016, E. Zykova EZ270-1716 (NS0049062) [Fig. 2C].

Centaurea scabiosa L.

$2n = 20$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Sovetskii Raion, Kirov village, wasteland, 54°59'N, 83°00'E, 19 Sep 2017, E. Zykova, T. Shemetova EZ442-7417 (NS0049049).

Cirsium setosum (Willd.) M.Bieb.

$2n = 34$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, Zyryanka River, footpath, 14 Sep 2018, D. Shaulo EZ709 (NS).

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

$2n = 18$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, Ob River, sand beach, 54°59'N, 83°00'E, 2 Aug 2017, E. Zykova, T. Shemetova EZ376-4317 (NS, NS0049060) [Fig. 2D].

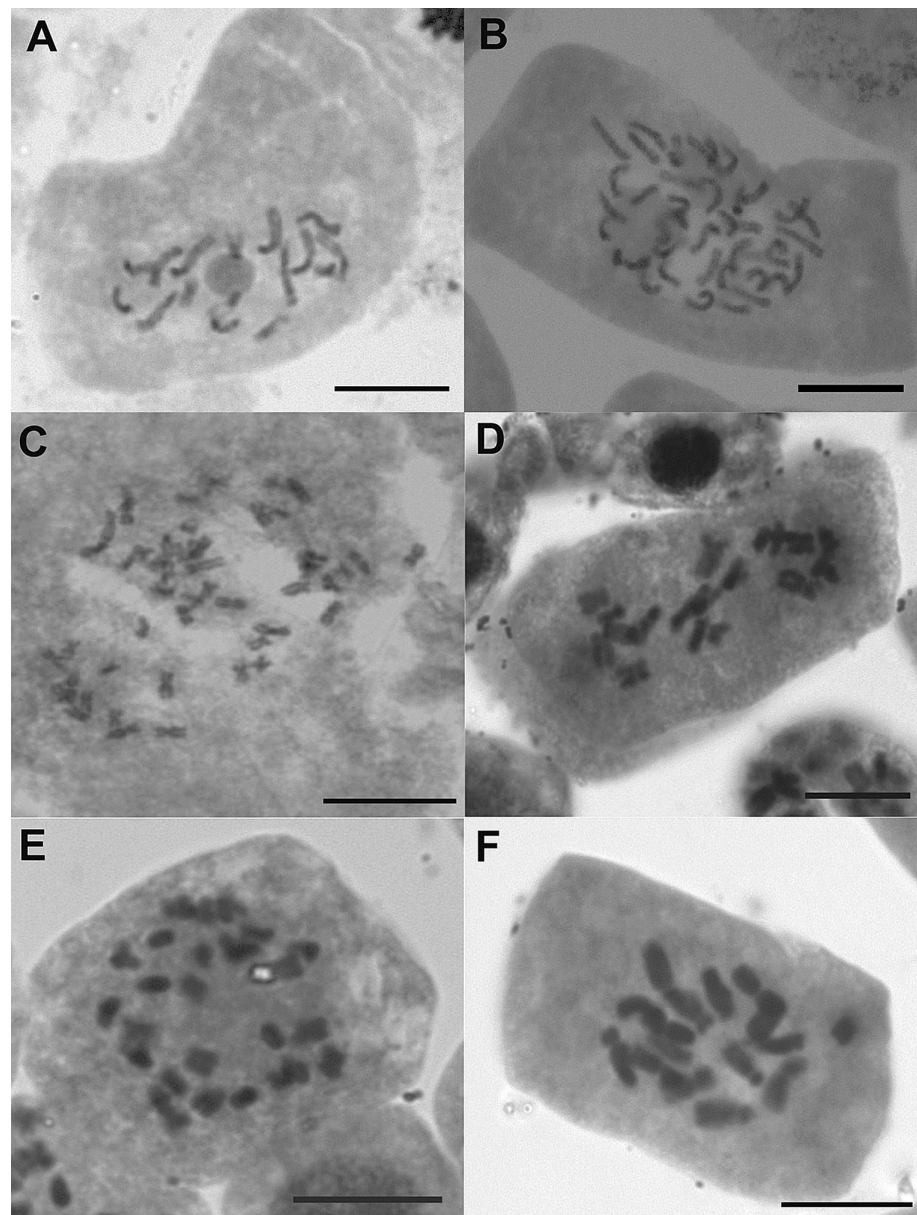


Fig. 2. Mitotic metaphases. **A**, *Eryngium planum*, $2n = 16$; **B**, *Pimpinella saxifraga*, $2n = 40$; **C**, *Bidens tripartita*, $2n = 48$; **D**, *Lactuca tatarica*, $2n = 18$; **E**, *Pilosella katunensis*, $2n = 27$; **F**, *Ranunculus cantoniensis* EZ644, $2n = 16$. — Scale bars = 10 μm .

Pilosella katunensis Tupitz. (= *Pilosella echioides* (Lumn.)

F.W.Schultz & Sch.Bip. p.p.)

* $2n = 27$, CHN. Russian Federation, Republic of Tyva, valley of Derzig River, community by dominants of *Iris* sp. and *Spiraea* sp. near the larch-birch forest, 19 Aug 2017, *N.V. Kimsin, A.M. Samdan EZ643* (NS) [Fig. 2E].

BRASSICACEAE

Camelina microcarpa Andr. ex DC.

$2n = 18$, CHN. Russian Federation, Republic of Altai, Kosh-Agachskii Raion, highway M-52 from Chegan-Uzun to the Aktash villages, roadside, 25 Jul 2015, *E. Zykova EZ277-2515* (NS0049061).

CARYOPHYLLACEAE

Gypsophila paniculata L.

$2n = 34$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, Ob River, beach, 54°59'N, 83°00'E, 02 Aug 2017, *E. Zykova, T. Shemetova EZ 381-4317* (NS0049059).

FABACEAE

Melilotus albus Medik.,

$2n = 16$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, Tereshkovoy street, roadside, 21 Sep 2018, *D. Shaulo EZ712* (NS).

Melilotus officinalis (L.) Lam.

$2n = 16$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Central Siberian Botanical Garden Siberian Branch of the Russian Academy of Sciences, birch-pine forest, 12 Sep 2018, *D. Shaulo EZ706* (NS).

Vicia cracca L.

$2n = 14$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, Zyryanka River, birch-pine forest, 15 Aug 2018, *D. Shaulo EZ715* (NS).

LAMIACEAE

Mentha arvensis L.

$2n = 54$, CHN. Russian Federation, Republic of Altai, Gorno-Altaysk city, Ulalushinskaya street, bank of the Ulalushka River, 51°58'N, 85°55'E, 25 Aug 2017, *E. Zykova EZ412-6917* (NS0049048).

POACEAE

Agropyron pectinatum (M.Bieb.) P.Beauv.

$2n = 28$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirsk city, Akademgorodok, wasteland along the road, 54°59'N, 83°00'E, 2 Aug 2017, *E. Zykova, T. Shemetova EZ377-4417* (NS).

RANUNCULACEAE

Ranunculus cantoniensis DC. (= *R. chinensis* Bunge)

$2n = 16$, CHN. Russian Federation, Krasnoyarskii Krai, Ermakovskii Raion, Western Sayan, Aradansky Range, 1 km south of the mouth of the Vankino creek, Reservoir of the Sayano-Shushenskaya hydroelectric power station, the upper limit of the strip of periodic flooding, 52°32'04.7"N, 91°18'02.1"E, 11 Jul 2018, *D. Shaulo EZ644* (NS) [Fig. 2F], *D. Shaulo EZ708* (NS).

SCROPHULARIACEAE

Scrophularia nodosa L.

$2n = 36$, CHN. Russian Federation, Republic of Altai, Gorno-Altaysk city, central embankment of the Maima River, pebbled river

bank, 51°58'N, 85°55'E, 18 Aug 2017, *E. Zykova EZ399-6117* (NS0049054).

Verbascum nigrum L.

$2n = 30$, CHN. Russian Federation, Novosibirskaya Oblast', Novosibirskii Raion, environs of Akademgorodok, mixed forest, adjacent to the old exposition areas of the Central Siberian Botanical Garden, 27 Sep 2020, *E. Zykova EZ848-2020* (NS).

IAPT chromosome data 41/4

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* First chromosome count for the genus.

** First chromosome count for the species.

AMARYLLIDACEAE

Allium ramosum L.

$2n = 32$, CHN. Russian Federation, Irkutskaya Oblast', Ust-Ordynskii Buryatskii Okrug, Nukutskii Raion, right bank of the Kuita River, left tributary of the Angara River (Bratskoe reservoir), 2 km SE of Tanguty village, solonchous steppe, 413 m, 53°45'24.21"N, 102°37'32.33"E, 15 Jul 2022, *O.A. Chernysheva 68811* (IRK00019661), *O.A. Chernysheva 68812* (VLA).

Allium schoenoprasum L.

$2n = 16$, CHN. Russian Federation, Irkutskaya Oblast', Ust-Ordynskii Buryatskii Okrug, Ekherit-Bulagatskii Raion, Krasnyi Yar Federal Reserve, near Krasnyi Yar kordon, steppe meadow, 633 m, 52°32'26.94"N, 105°02'27.42"E, 25 Jul 2019, *O.Yu. Zavgorodnyaya kr13* (IRK00014391) [Fig. 3A].

APIACEAE

Carum carvi L.

$2n = 20$, CHN. Russian Federation, Irkutskaya Oblast', Ust-Ordynskii Buryatskii Okrug, Alarskii Raion, Aleksandrovskaia village, at the edge of the forest, 53°20'49.07"N, 102°39'54.81"E, 29 Aug 2021, *O.Yu. Zavgorodnyaya 66079* (IRK), *O.Yu. Zavgorodnyaya 66080* (VLA).

ASPARAGACEAE

Asparagus persicus Baker

$2n = 20$, CHN. Russian Federation, Republic of Dagestan, Magarmkentkii Raion, Greater Caucasus, Samurskii range (Bokovoi mountain range system), left bank of the Samur River, 1.5 km ENE of Philya village, mountain steppe, 850 m, 41°29'10"N, 47°59'57"E, 9 Aug 2021, *D.A. Krivenko 65887* (IRK00035896), *D.A. Krivenko 65891* (LE), *D.A. Krivenko 65890* (PVB), *D.A. Krivenko 65889* (VLA).

ASTERACEAE*Bidens radiata* Thuill.

$2n = 48$, CHN. Russian Federation, Kamchatskii Krai, Bystrinskii Raion, Avangai village, on the shore of warm puddle with temperature of 35°C (Avangaiskie hot springs), 323 m, 56°03'14.2"N, 158°58'03.8"E, 18 Aug 2022, O.A. Chernyagina 13833 (VLA).

Carduus crispus L.

$2n = 16$, CHN. Russian Federation, Kamchatskii Krai, Ust-Kamchatskii Raion, Maiskoe village, on fallow, 28 m, 56°15'14.8"N, 160°03'53.6"E, 7 Aug 2022, O.A. Chernyagina 13821 (VLA).

Chrysanthemum arcticum L. (= *Arctanthemum arcticum* (L.) Tzvelev)

$2n = 18$, CHN. Russian Federation, Kamchatskii Krai, Karaginskii Raion, Tymlat village, at the mouth of the Tymlat River, marsh meadow, 2 m, 59°29'11.5"N, 163°11'37.2"E, 10 Sep 2021, O.A. Chernyagina 13751 (VLA).

Lactuca sibirica (L.) Benth. ex Maxim. (= *Mulgedium sibiricum* (L.) Less.)

$2n = 18$, CHN. Russian Federation, Kamchatskii Krai, Karaginskii Raion, Ossora settlement, near Ossorskoe Lake, in wasteland, 3 m, 59°14'43"N, 163°03'49"E, 18 Sep 2021, O.A. Chernyagina 13757 (VLA).

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

$2n = 18$, CHN. Russian Federation, Republic of Tatarstan, Kazan city, Vakhitovskii area of the city, left bank of the Kazanka River, embankment, 60 m, 55°48'07"N, 49°08'20"E, 21 Jul 2021, M.A. Markaryan 65855 (IRK), M.A. Markaryan 65856 (VLA).

Sonchus oleraceus L.

$2n = 32$, CHN. Tajikistan, Sughd Region, Khujand city, left bank of the Syr Darya River, Khujand Botanical Garden, weedy, 40°17'57.83"N, 69°38'37.66"E, 23 Jun 2021, O.T. Rusinek 66249 (IRK), O.T. Rusinek 66252 (IRKU), O.T. Rusinek 66253 (NSK), O.T. Rusinek 66251 (VLA).

Symphotrichum ciliatum (Ledeb.) G.L.Nesom (= *Brachyactis ciliata* (Ledeb.) Ledeb.)

$2n = 14$, CHN. Russian Federation, Primorskii Krai, Vladivostok city, Vtoraya rechka area of the city, in the area of the bus station, roadside, 27 m, 43°09'56.9"N, 131°54'20.6"E, 2 Oct 2021, O.A. Chernyagina 13765 (VLA).

Tripleurospermum inodorum (L.) Sch.Bip.

$2n = 36$, CHN. Russian Federation, Kamchatskii Krai, Ust-Kamchatskii Raion, Maiskoe village, in landfill, 28 m, 56°15'19.7"N, 160°04'16.7"E, 7 Aug 2022, O.A. Chernyagina 13820 (VLA).

BETULACEAE*Betula ermanii* Cham.

$2n = 28$, CHN. Russian Federation, Kamchatskii Krai, Karaginskii Raion, vicinity of Ossora settlement, near Tsarskoe Lake, forest of *Betula ermanii*, 20 m, 59°10'22.6"N, 163°04'37.7"E, 16 Sep 2021, O.A. Chernyagina 13748 (VLA).

Betula glandulosa Michx. (= *B. exilis* Sukaczew)

$2n = 28$, CHN. Russian Federation, Kamchatskii Krai, Karaginskii Raion, Tymlat village, shrubby tundra with curtains of *Pinus pumila*, 4 m, 59°29'40.6"N, 163°10'50.3"E, 10 Sep 2021, O.A. Chernyagina 13746 (VLA).

BORAGINACEAE*Nonea pulla* (L.) DC.

$2n = 14$, CHN. Russian Federation, Altaiskii Krai, Shipunovskii Raion, right bank of the Klepechikha River, left tributary of the Alei River, 15 km SSW of Shinupovo village, stepped meadow, 52°09'34.73"E, 82°01'12.05"E, 18 Jul 2022, D.A. Krivenko 68530 (IRK), D.A. Krivenko 68531 (VLA).

BRASSICACEAE*Alyssum lenense* Adams

$2n = 16$, CHN. Russian Federation, Irkutskaya Oblast', Olkhonskii Raion, western coast of Lake Baikal, between Zunduk and Khargantui capes, stepped meadow, 477 m, 53°23'27.45"N, 107°24'09.72"E, 26 Jul 2020, O.Yu. Zavgorodnyaya kr20 (IRK) [Fig. 3B].

Arabis sagittata (Bertol.) DC.

$2n = 32$, CHN. Russian Federation, Irkutskaya Oblast', Ust-Ordynskii Buryatskii Okrug, Alarskii Raion, Aleksandrovsk village, 53°20'49.07"N, 102°39'54.81"E, at the edge of the forest, 29 Aug 2021, O.Yu. Zavgorodnyaya 66072 (IRK).

Descurainia sophia (L.) Webb ex Prantl

$2n = 14$, CHN. Russian Federation, Kamchatskii Krai, Ust-Kamchatskii Raion, Maiskoe village, roadside, 28 m, 56°15'18.8"N, 160°03'56.2"E, 7 Aug 2022, O.A. Chernyagina 13819 (VLA).

CARYOPHYLLACEAE*Dianthus chinensis* L.

$2n = 30$, CHN. Russian Federation, Irkutskaya Oblast', Slydyanskii Raion, southwestern coast of Lake Baikal, Tolsty cape,

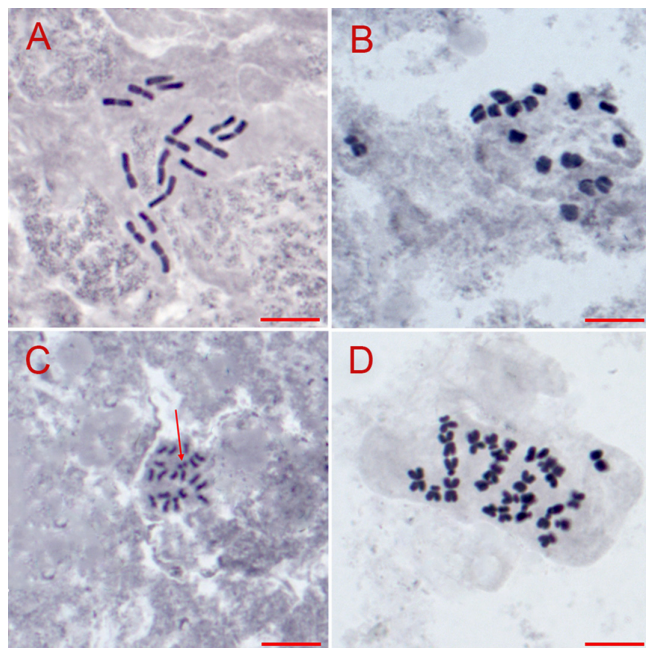


Fig. 3. Mitotic metaphases. **A**, *Allium schoenoprasum* ($2n = 16$); **B**, *Alyssum lenense* ($2n = 16$); **C**, *Linum perenne* ($2n = 18 + 2B$, B-chromosomes are indicated by arrow); **D**, *Ranunculus smirnovii*, kr245 ($2n = 28$). — Scale bars = 10 μ m.

edge of the birch-pine forest, 51°47'26.43"N, 104°36'42.19"E, 1 Sep 2022, *D.A. Krivenko & V.V. Murashko 68708* (IRK), *D.A. Krivenko & V.V. Murashko 68709* (VLA).

Silene multiflora (Ehrh.) Pers.

2n = 24, CHN. Russian Federation, Altaiskii Krai, Aleiskii Raion, right bank of the Solonovka River, left tributary of the Alei River, 4.5 km NNW of Krasnyi Yar village, forb steppe meadow, 52°25'32.75"N, 82°34'50.36"E, 22 Jul 2022, *D.A. Krivenko 68479* (IRK), *D.A. Krivenko 68480* (VLA).

COMMELINACEAE

Commelina communis L.

2n = 42, CHN. Russian Federation, Primorskii Krai, Vladivostok city, Pervorechenskii area of the city, near narrow-gauge railway at the intersection of Irtyshskaya and Gamarnik streets, in wasteland, 21 Aug 2022, *D.V. Mysnik 13795* (VLA).

EUPHORBIACEAE

Euphorbia davidii Subils

2n = 56, CHN. Russian Federation, Republic of Dagestan, Shamilskii Raion, Greater Caucasus, left bank of the Aivarskoe Koisu, Khebda village, weed-ruderal plant groups, 910 m, 42°26'32"N, 46°32'58"E, 12 Aug 2021, *D.A. Krivenko 65938* (IRK), *D.A. Krivenko 65940* (VLA).

Euphorbia falcata L.

2n = 32, CHN. Russian Federation, Kaliningradskaia Oblast', Kaliningrad city, right bank of the Pergolya River, Borodinskaya Str. 22, in the yard of the house, 54°43'01.37"N, 20°28'03.17"E, 4 Oct 2022, *O.Yu. Zavgorodnyaya 68830* (IRK), *O.Yu. Zavgorodnyaya 68831* (VLA).

FABACEAE

Oxytropis revoluta Ledeb.

2n = 16, CHN. Russian Federation, Kamchatskii Krai, Elizovskii Raion, South Kamchatka Federal Reserve, foot of Muntovskii volcano, mountain tundra, 987 m, 52°30'05.1"N, 158°07'40.1"E, 12 Aug 2021, *O.A. Chernyagina 13822* (VLA).

LAMIACEAE

Ajuga chamaepitys subsp. *chia* (Schreb.) Arcang.

2n = 30, CHN. Russian Federation, Republic of Dagestan, Akhtynskii Raion, Greater Caucasus, Samurskii range (Bokovoi mountain range system), left bank of the Samur River, NE of Lutkun village, mountain stony steppe, 1230 m, 41°29'07.42"N, 47°42'22.58"E, 9 Aug 2021, *D.A. Krivenko 66105* (IRK), *D.A. Krivenko 66106* (VLA).

Salvia deserta Schangin

2n = 14, CHN. Russian Federation, Altaiskii Krai, Rubtsovskii Raion, left bank of the Alei River, N of Bezrukavka village, forb-sagebrush steppe slope, 51°36'30.24"N, 81°17'01.24"E, 13 Jul 2022, *D.A. Krivenko 68470* (IRK), *D.A. Krivenko 68471* (VLA).

LINACEAE

Linum perenne L.

2n = 18 + 0–2B, CHN. Russian Federation, Irkutskaya Oblast', Irkutskii Raion, southwestern coast of Lake Baikal, Bolshoe Goloustnoe settlement, 377 m, 52°03'44.12"N, 105°28'12.81"E, 5 Aug 2019, *O.Yu. Zavgorodnyaya kr260* (IRK) [Fig. 3C].

MALVACEAE

Malva thuringiaca (L.) Vis.

2n = 44, CHN. Russian Federation, Altaiskii Krai, Pospelikhinskii Raion, left bank of the Alei River, 7.5 km WSW of Mamontovo settlement, forb-brome-sagebrush steppe meadow, 51°54'01.30"N, 81°36'21.66"E, 15 Jul 2022, *D.A. Krivenko 68510* (IRK), *D.A. Krivenko 68511* (VLA).

NITRARIACEAE

Peganum harmala L.

2n = 24, CHN. Russian Federation, Republic of Dagestan, Magaramkentskii Raion, Greater Caucasus, western spurs of Samurskii range (Bokovoi mountain range system), left bank of the Samur River, opposite Maka-Kazmalyar village, mountain steppe, 960 m, 41°29'34"N, 48°01'24"E, 9 Aug 2021, *D.A. Krivenko 65586* (IRK), *D.A. Krivenko 65587* (VLA).

OROBANCHACEAE

**Cymbaria daurica* L.

2n = 32, CHN. Russian Federation, Irkutskaya Oblast', Olkhonskii Raion, western coast of Lake Baikal, Mukhor bay, near Shara-Togot village, 53°01'32.40"N, 106°44'35.92"E, 30 Jul 2020, *O.Yu. Zavgorodnyaya kr21* (IRK); Russian Federation, Irkutskaya Oblast', Olkhonskii Raion, western coast of Lake Baikal, Tazheranskaya steppe, Imel-Kutul tract, stony steppe, 52°56'36.5"N, 106°39'24.4"E, 23 Sep 2021, *O.Yu. Zavgorodnyaya 65971* (IRK).

PAPAVERACEAE

Papaver alboroseum Hultén

2n = 28, CHN. Russian Federation, Kamchatskii Krai, Ust-Kamchatskii Raion, Ust-Kamchatsk settlement, on pile of gravel, 3 m, 56°14'31.9"N, 162°31'24.5"E, 23 Jul 2022, *O.A. Chernyagina 13810* (VLA).

***Papaver amophilum* (Turcz.) Peschkova

2n = 42, CHN. Russian Federation, Irkutskaya Oblast', Olkhonskii Raion, Lake Baikal, Olkhon Island, coast of the Khuzhirsii bay, sands, 470 m, 53°11'01.91"N, 107°18'27.58"E, 19 Jul 2020, *O.Yu. Zavgorodnyaya kr259* (IRK).

PLANTAGINACEAE

Plantago camtschatica Link

2n = 12, CHN. Russian Federation, Kamchatskii Krai, Elizovskii Raion, South Kamchatka Federal Reserve, coast of the Pacific Ocean, Vestnik bay, seaside rocks, in crevices and on scree, 15 m, 51.556112°N, 157.719191°E, 23 Jul 2022, *O.A. Chernyagina 13767* (VLA).

POLEMONIACEAE

Polemonium boreale Adams

2n = 18, CHN. Russian Federation, Kamchatskii Krai, Elizovskii Raion, South Kamchatka Federal Reserve, Ksudach volcano, shore of the Klyuchevoe Lake, on dry rocky-sandy bank of the stream, 420 m, 51°47'21.4"N, 157°32'50.0"E, 29 Jul 2021, *O.A. Chernyagina 13768* (VLA).

POLYGONACEAE

Atraphaxis frutescens (L.) K.Koch

2n = 40, CHN. Russian Federation, Altaiskii Krai, Aleiskii Raion, interfluvium of the Levaya Gorevka and Gorevka rivers, 8 km NNW of Zavety Ilich settlement, forb steppe slope, 186 m, 52°31'

27.79°N, 82°34'01.04"E, 28 Jul 2022, *D.A. Krivenko 68552* (IRK), *D.A. Krivenko 68554* (VLA).

Rumex obtusifolius subsp. *sylvestris* (Lam.) Čelak.

$2n = 20$, CHN. Russian Federation, Kaliningradskaya Oblast', Kaliningrad city, right bank of the Pergolya River, Central Park of Culture and Leisure, forb bank of watercourse, 54°43'12.8"N, 20°28'43.3"E, 5 Oct 2022, *O.Yu. Zavgorodnyaya 68861* (IRK), *O.Yu. Zavgorodnyaya 68862* (VLA).

Rumex stenophyllus Ledeb.

$2n = 20$, CHN. Russian Federation, Altaiskii Krai, Rubtsovskii Raion, left bank of the Alei River, W of Mamontovo railway station, near Srednee Lake, solonchous meadow, 51°44'55.23"N, 81°25'35.39"E, 14 Jul 2022, *D.A. Krivenko 68563* (IRK), *D.A. Krivenko 68564* (VLA).

PRIMULACEAE

Androsace septentrionalis L.

$2n = 20$, CHN. Russian Federation, Kamchatskii Krai, Ust-Kamchatskii Raion, Ust-Kamchatsk settlement, on pile of gravel, 3 m, 56°14'31.9"N, 162°31'24.5"E, 23 Jul 2022, *O.A. Chernyagina 13824* (VLA).

Primula kawasimae H.Hara

$2n = 18$, CHN. Russian Federation, Kamchatskii Krai, Bystrinskii Raion, foothill of the Mt. Anaun, fine earth patches along the sides of dirt road running through the bush tundra (*Vaccinium uliginosum*-*Betula exilis*-*Ledum decumbens*), 876 m, 56°14'15.1"N, 158°51'28.2"E, 14 Aug 2022, *O.A. Chernyagina 13829* (VLA).

RANUNCULACEAE

Aquilegia sibirica Lam.

$2n = 14$, CHN. Russian Federation, Irkutskaya Oblast', Ust-Ordynskii Buryatskii Okrug, Ekherit-Bulagatskii Raion, Krasnyi Yar Federal Reserve, near Guzhir kordon, legume-grass-forb meadow, 52°37'06.72"N, 105°17'40.82"E, 8 Jul 2019, *O.Yu. Zavgorodnyaya kr12* (IRK).

Ranunculus polyanthemus L.

$2n = 16$, CHN. Russian Federation, Altaiskii Krai, Shipunovskii Raion, left bank of the Klepechikha River, left tributary of the Alei River, 7 km WNW of Shinupovo village, shore of the Matyugino Lake, forb-grasses steppe meadow, 52°14'07.62"N, 82°08'27.47"E, 19 Jul 2022, *D.A. Krivenko 68446* (IRK), *68449* (NSK), *68448* (VLA).

Ranunculus smirnovii Ovcz.

$2n = 28$, CHN. Russian Federation, Irkutskaya Oblast', Ust-Ordynskii Buryatskii Okrug, Ekherit-Bulagatskii Raion, Krasnyi Yar Federal Reserve, near Guzhir kordon, mixed forb forest, 52°37'13.40"N, 105°18'07.55"E, 8 Jul 2019, *O.Yu. Zavgorodnyaya kr244* (IRK), *O.Yu. Zavgorodnyaya kr245* (IRK) [Fig. 3D].

ROSACEAE

Argentina anserina subsp. *groenlandica* (Tratt.) Á.Löve (= *Potentilla egedei* Wormsk. ex Hornem.)

$2n = 28$, CHN. Russian Federation, Kamchatskii Krai, Karaginskii Raion, Tymlat village, at the mouth of the Tymlat River, tidal marsh, 1 m, 59°32'31.0"N, 163°09'58.6"E, 8 Sep 2021, *O.A. Chernyagina 13683* (VLA).

Filipendula vulgaris Moench

$2n = 14$, CHN. Russian Federation, Altaiskii Krai, Aleiskii Raion, right bank of the Solonovka River, left tributary of the Alei River, 4.5 km NNW of Krasnyi Yar village, forb steppe meadow, 52°25'32.75"N, 82°34'50.36"E, 22 Jul 2022, *D.A. Krivenko 68592* (IRK), *D.A. Krivenko 68593* (VLA).

Geum aleppicum Jacq.

$2n = 42$, CHN. Russian Federation, Kamchatskii Krai, Karaginskii Raion, Ossora settlement, on personal plot, 5 m, 59°14'29.4"N, 163°04'11.6"E, 18 Sep 2021, *O.A. Chernyagina 13789* (VLA).

URTICACEAE

Urtica cannabina L.

$2n = 52$, CHN. Russian Federation, Republic of Buryatia, Barguzinskii Raion, middle part of Lake Baikal, Zabaikalskii National Park, Bolshoi Ushkanii Island, 466 m, 53°51'15"N, 108°39'25"E, 3 Sep 2019, *O.Yu. Zavgorodnyaya 57673* (IRK00038350).

IAPT chromosome data 41/5

Julia V. Shner,* Tatiana V. Alexeeva & Michael G. Pimenov

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* First chromosome count for the species.

** First chromosome count for the genus.

APIACEAE / UMBELLIFERAE

Aegopodium tadshikororum Schischk.

$n = 11$, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Mt. Chimgan, 41.5314°N, 70.0154°E, 1500–1600 m, 14 May 2017, *M.G. Pimenov 5-17* (MW) [Fig. 4A].

Elwendia intermedia (Korovin) Pimenov & Kljuykov

$n = 6$, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Mt. Chimgan, 41.5314°N, 70.0154°E, 1500–1600 m, 14 May 2017, *M.G. Pimenov 4-17* (MW) [Fig. 4B].

Ferula penninervis Regel & Schmalh.

$n = 11$, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Mt. Chimgan, 41.5314°N, 70.0154°E, 1500–1600 m, 14 May 2017, *M.G. Pimenov 7-17* (MW).

$2n = 22$, CHN. Uzbekistan, Tashkent Prov., Yangiabad, Chatkal Ridge, Dukensai, rocky slope, 41.1793°N, 70.1171°E, 28 Sep 2019, *M.G. Pimenov & O. Tursunov s.n.* (MW) [Fig. 5A].

**Ferula pratovii* F.O.Khass. & I.I.Malzev

$2n = 22$, CHN. Uzbekistan, Kashkadarya Prov., Hissar Ridge, basin riv. Kankazary, near the village Vuary, 38.7518°N, 67.2964°E, 1 Aug 2019, *I.I. Malzev s.n.* (TASH) [Fig. 5C].

The seeds were taken from one of the herbarium specimens collected at the locus classicus of the species.

Ferula samarkandica Korovin

$n = 11$, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Mt. Chimgan, 41.5314°N, 70.0154°E, 14 May 2017, *M.G. Pimenov 8-17* (MW) [Fig. 4C].

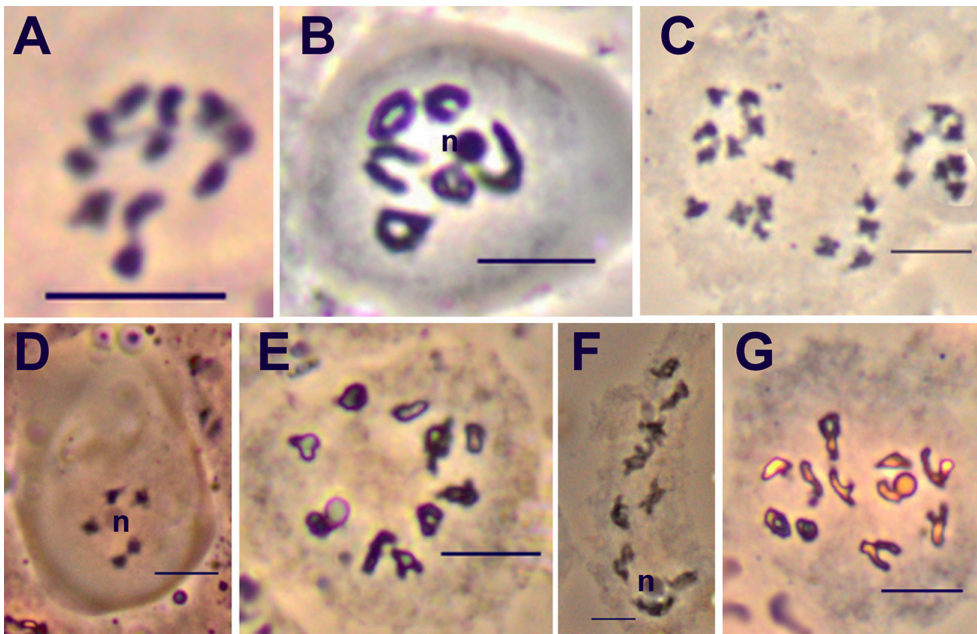


Fig. 4. Meiotic chromosomes. **A**, *Aegopodium tadshikorum*, $n = 11$; **B**, *Elwendia intermedia*, $n = 6$; **C**, *Ferula samarkandica*, $n = 11$; **D**, *Kamelinia tianschanica*, $n = 5$; **E**, *Oedibasis platycarpa*, $n = 10$; **F**, *Paraligusticum discolor*, $n = 11$; **G**, *Schrenkia golickeana*, $n = 11$. — Scale bars = 10 μm ; n = nucleolus.

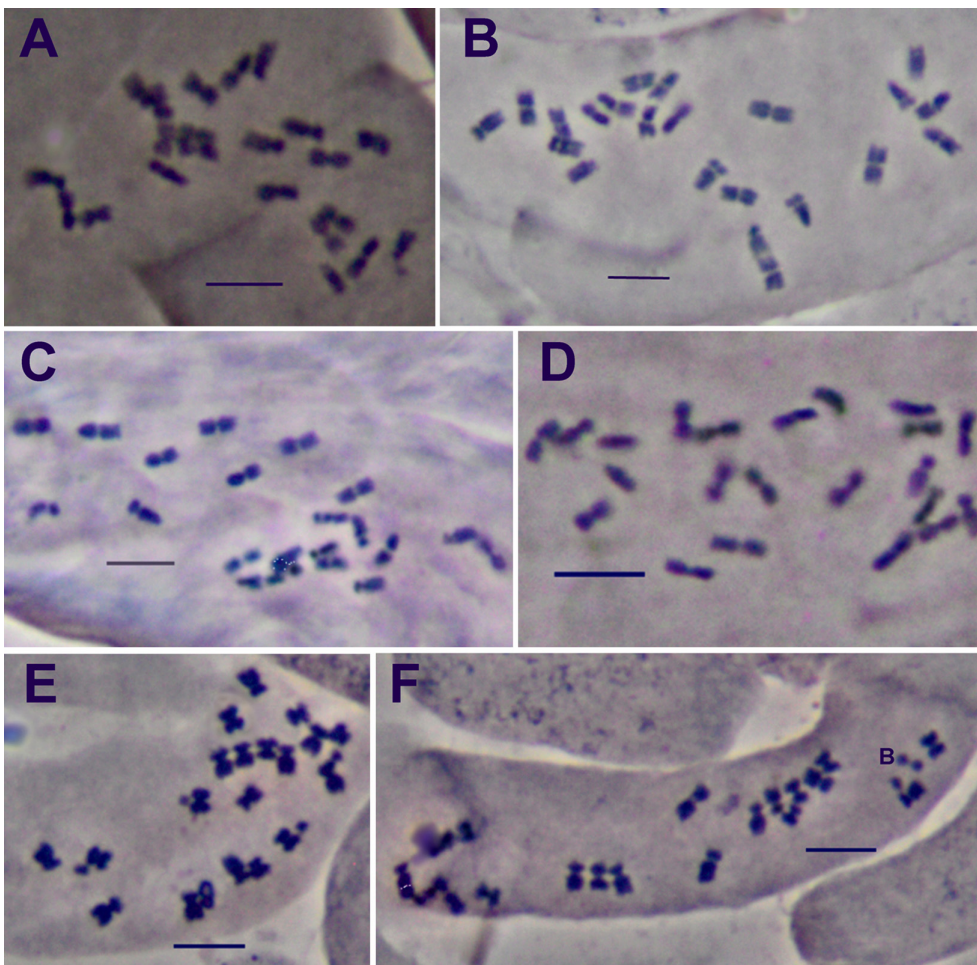


Fig. 5. Mitotic chromosomes. **A**, *Ferula penninervis*, $2n = 22$; **B**, *Ferula ugamica*, $2n = 22$; **C**, *Ferula pratovii*, $2n = 22$; **D**, *Ferula tenuisecta*, $2n = 22$; **E**, *Mogoltavia severtzovii*, $2n = 20$; **F**, *Mogoltavia severtzovii*, $2n = 20 + 1B$ (indicated by “B”). — Scale bars = 5 μm .

Ferula tenuisecta Korovin

$n = 11$, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Mt. Chimgan, 41.5314°N, 70.0154°E, 14 May 2017, *M.G. Pimenov* 9-17 (MW).

$2n = 22$, CHN. Uzbekistan, Tashkent Prov., Yangiabad, Chatkal Ridge, Dukensai, rocky slope, 41.1793°N, 70.1171°E, 27 Sep 2019, *M.G. Pimenov* & *O. Tursunov s.n.* (MW) [Fig. 5D].

Ferula ugamica Korovin

$2n = 22$, CHN. Uzbekistan, Yangiabad, Chatkal Ridge, Dukensai, rocky slope, 41.1793°N, 70.1171°E, 29 Sep 2019, *M.G. Pimenov* & *O. Tursunov s.n.* (MW) [Fig. 5B].

***Kamelinia tianshanica* F.O.Khass. & I.I.Malzev

$n = 5$, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Yangiabad, in cracks between stones on small- and large-block screes in Dukensai, 41.1793°N, 70.1171°E, 17 May 2017, *M.G. Pimenov* 14-17 (MW) [Fig. 4D].

Narrow endemic of Uzbekistan. Its taxonomic position in the family is still not determined—whether it belongs to the monotypic genus *Kamelinia* F.O.Khass. & I.I.Malzev or is a member of the closely related genus *Korshinskia* Lipsky. The chromosome number ($n = 5$), rare in the Umbelliferae, supports the recognition of an independent genus.

Mogoltavia severtzovii (Regel) Korovin

$2n = 20$, $20 + 1-2B$, CHN. Tajikistan, Sughd Prov., N slope of Achkop Mts., near the village Kingburak, along dry stream beds, 600 m, 40.2970°N, 69.8966°E, 25 May 2015, *A. Kurbonov* & *M.G. Pimenov* 55-15 (MW) [Fig. 5E,F].

Oedibasis platycarpa (Lipsky) Koso-Pol.

$n = 10$, CHN. Uzbekistan, Tashkent Prov., Bostanlyk region, Gazalkent, valley of Chirchik River, 41.4964°N, 69.6453°E, 800 m, 14 May 2017, *M.G. Pimenov* 1-17 (MW) [Fig. 4E].

Paraligusticum discolor (Ledeb.) V.N.Tikhom.

$n = 11$, CHN. Uzbekistan, Tashkent Prov., Chatkal Ridge, Yangiabad, Dukensai, rocky slope, 41.1793°N, 70.1171°E, 17 May 2017, *M.G. Pimenov* 15-17 (MW) [Fig. 4F].

Schrenkia golickeana B.Fedtsch.

$n = 11$, CHN. Uzbekistan, Tashkent Prov., Yangiabad, Chatkal Ridge, Dukensai, rocky slope, 41.1793°N, 70.1171°E, 17 May 2017, *M.G. Pimenov* 10-17 (MW); Uzbekistan, Tashkent Prov.,

Bostanlyk region, Gazalkent, valley of Chirchik River, 41.4964°N, 69.6453°E, 14 May 2017, *M.G. Pimenov* 2-17 (MW) [Fig. 4G].

$2n = 22$, CHN. Uzbekistan, Tashkent Prov., Yangiabad, Chatkal Ridge, Dukensai, rocky slope 41.1793°N, 70.1171°E, 28 Sep 2019, *M.G. Pimenov* & *O. Tursunov s.n.* (MW).

IAPT chromosome data 41/6

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IRIDACEAE

Iris ruthenica Ker Gawl

$2n = 42$, CHN. Russia, Altai Republic, Turochakskii Raion, about 1 km NW of the village Artybash, forest glades, 450 m, 51.80077°N, 87.21467°E, 26 May 2018, *P.M. Zhurbenko s.n.* (LE 01228640) [Fig. 6A].

$2n = 84$, CHN. Russia, Altaiskii Krai, Tretyakovskii Raion, 2 km up the Alei River from the village of Krasnoe Razdolie, the southern macro-slope of Black Stone Mountain, rocks and brushwood, 500 m, 50.5424°N 82.2130°E, 30 May 2018, *P.M. Zhurbenko, A.A. Kechaikin* & *V.I. Dorofeev s.n.* (LE 01228639) [Fig. 6B].

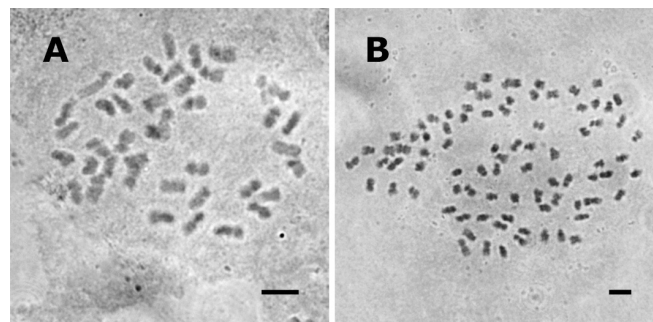


Fig. 6. Mitotic metaphases of *Iris ruthenica*. A, LE 01228640, $2n = 42$; B, LE 01228639, $2n = 84$. — Scale bars = 10 μ m.