IOPB COLUMN

Edited by Karol Marhold & Ilse Breitwieser

IAPT/IOPB chromosome data 10

Edited by Karol Marhold

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COMMELINACEAE

Commelina platyphylla Klotzsch ex Seub., 2*n* = 30; Argentina, Misiones Province, *MG 15* (CTES, MNES), *MG 23* (CTES, MNES, SI), *MG 24* (CTES, MNES, SI), *G 371* (MNES), *MG 46* (MNES), *MG 49* (MNES), *MG 51* (MNES); Paraguay, Itapúa Department, *MG 54* (MNES).

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BORAGINACEAE

Onosma arenaria Waldst. & Kit., 2*n* = 20 [12L(large) + 8S(small)]; Hungary, *VK & RŠ CSK3*, *CSK5*, *CSKX1*, *CSKX2*; *EPO2*, *TOK09-1*. Croatia, *VK & KO SUT09-1*, *SUT09-4*.
Onosma pseudoarenaria Schur subsp. *pseudoarenaria*, 2*n* = 26 (12L + 14S); Romania, *VK & RŠ 08PAU05*, *GDJ20*.
Onosma pseudoarenaria subsp. *fallax* (Borb.) Rauschert, 2*n* = 26 (12L + 14S); Croatia, *VK & KO RAB1*, *RAB6*, *RTK19*, *RTK20*; *VK & RŠ*, *ERV5*, *ERV6*, *CEP2*; Montenegro, *VK MRKO23*, *PDGJ32*, *PDGJ37*.
Onosma pseudoarenaria subsp. *tridentina* (Wettst.) Braun-Blanq., 2*n* = 26 (12L + 14S); Italy, *VK & RŠ SAB2*, *SAB4*.
Onosma pseudoarenaria subsp. *tuberculata* (Kit.) Rauschert, 2*n* = 26 (12L + 14S); Hungary, *VK & RŠ EPO7*, *PILIS6*, *PILIS10*, *PILIS15*, *PILIS17*, *ORK28*, *ORK43*, *FUL11*.
Onosma pseudoarenaria Schur (uncertain subspecific assignment), 2*n* = 26 (12L + 14S); Serbia, *VK & RŠ DEL09-8*, *ALE1*, *ALE2*, *ALE3*, *ALE4*, *ALE5*, *ALE8*, *ALE9*, *ALE12*.

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APOCYNACEAE (ASCLEPIADOIDEAE-CEROPEGIEAE)

Anomalluma mccoyi (Lavranos & Mies) Meve & Liede, 2*n* = 22; Oman, *Butler & Lauchs s.n.* sub *Lauchs 14*.
Baynesia lophophora Bruyns, 2*n* = 22; Namibia, *Bruyns 8000*.
Brachystelma praelongum S. Moore, 2*n* = 22; South Africa, *Peckover sub Specks 2985*.
Brachystelma rubellum (E. Mey.) Peckover, 2*n* = 22; Tanzania, *Hemp 2665*.
Caralluma priogonum K. Schum., 2*n* = 22; Kenya, *Meve & al. 954*.
Caudanthera edulis (Edg.) Meve & Liede, 2*n* = 22; Oman, *Butler & Lauchs s.n.* (UBT 3860).
Ceropegia affinis Vatke, 2*n* = 22; Ethiopia, *Liede & Meve 3538*.
Ceropegia ambovombensis Rauh & Gerold, 2*n* = 22; Madagascar, *Rauh & Gerold 74872* (HEID).
Ceropegia ampliata E. Mey. (= *C. ampliata* subsp. *madagascariensis* Lavranos), 2*n* = 44; Madagascar, *Bruyns 6217* (BOL).
Ceropegia ballyana Bullock, 2*n* = 22; Kenya, *Masinde 683* (EA, MSUN).

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

Ceropegia bulbosa A. Roxb. var. *bulbosa*, 2*n* = 22; Oman, *Butler C726*.
Ceropegia cufodontii Chiov., 2*n* = 44; Ethiopia, *Liede & Meve 3522*.
Ceropegia dolichophylla Schltr., 2*n* = 22; China, Guizhou, *Zhou sub Kong 674*.
Ceropegia imbricata E.A. Bruce & P.R.O. Bally, 2*n* = 22; Tanzania, *Hemp 4373*.
Ceropegia intracolor L.E. Newton, 2*n* = 22; Kenya, *Masinde & Meve 873*.
Ceropegia robivelonae Rauh & Gerold, 2*n* = 22; Madagascar, *Robivelon sub Botanical Garden Heidelberg 74007* (HEID).
Ceropegia sepium Deflers, 2*n* = 22, Saudi Arabia, *Collenette 3326* (ZSS).
Ceropegia sobolifera var. *nephroloba* H. Huber, 2*n* = 22; Tanzania, *Specks 765*.
Ceropegia somalensis Chiov., 2*n* = 22; Kenya, Longobito, *Masinde & al. 868* (EA).
Ceropegia stapeliiformis var. *serpentina* H. Huber, 2*n* = 22; South Africa, *Collenette s.n.* (ZSS, UBT 3859).
Ceropegia subaphylla K. Schum. (= *C. botrys* K. Schum.), 2*n* = 22; Oman, *Butler & Lauchs s.n. sub Lauchs 15*.
Desmidorchis somalica (N.E. Br.) Plowes, 2*n* = 22; Somalia, *Lavranos 24546*.
Echidnopsis archeri P.R.O. Bally, 2*n* = 22; Kenya, *McCoy s.n.* (UBT 3604).
Echidnopsis bihendulensis P.R.O. Bally, 2*n* = 22; Somalia, *Specks s.n.* (UBT 3925).
Echidnopsis globosa Thulin & Hjertson (= *E. fartaquensis* McCoy & Orlando), 2*n* = 22; Yemen, *Lavranos & Mies 31326*.
Echidnopsis insularis Lavranos, 2*n* = 22; Yemen, Socotra, *sub Specks 79*.
Echidnospis leachii Lavronos, 2*n* = 22; Tanzania, *Specks 1075*.
Echidnopsis oviflora McCoy, 2*n* = 22; Tanzania, *Specks 1264*.
Echidnopsis repens R.A. Dyer & Verdc., 2*n* = 22; Tanzania, *Specks 635* (ZSS).
Echidnopsis socotrana Lavranos, 2*n* = 22; Yemen, Socotra, *Thiv 3203*.
Echidnopsis urceolata P.R.O. Bally, 2*n* = 22; Ethiopia, *Vlk s.n.* (UBT 3260).
Monolluma solenophora (Lavranos) Meve & Liede, 2*n* = 22; Saudi Arabia, *Barad s.n.* (UBT 3236).
Orbea baldratii (A.C. White & B. Sloane) Bruyns subsp. *baldratii*, 2*n* = 22; Sudan, *Hartmann & Newton 21486*.
Orbea dummeri (N.E. Br.) Bruyns, 2*n* = 22; Tanzania, *Hemp s.n.* (UBT 3244).
Orbea fenestrata (Plowes) Meve, 2*n* = 22; Yemen, *Mangelsdorff Y25*.
Orbea huillensis subsp. *flava* Bruyns, 2*n* = 22; Namibia, *Bruyns 5522* (BOL).
Orbea luntii (Lavranos) Bruyns, 2*n* = 22; Yemen, *Lavranos & al. 31291*.
Orbea semota subsp. *orientalis* Bruyns, 2*n* = 22; Tanzania, *Specks 921*. 2*n* = 33; Kenya, *Luke 5511*.
Orbea taitica Bruyns (= *O. doddsiae* Plowes & McCoy), 2*n* = 22; Kenya, *Rauh 786* (MSUN).

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ALISMATACEAE

Alisma plantago-aquatica L., 2*n* = 14; Russia, Krasnodarskii Krai, *NP & VS 11469* (VLA).

AQUIFOLIACEAE

Ilex rugosa F. Schmidt, 2*n* = 40; Russia, Khabarovskii Krai, *Kryukova 11483* (VLA).

ASTERACEAE

Ajania pallasiana (Fisch. ex Besser) Poljakov, 2*n* = 18; Russia, Amurskaya Oblast', *Korobkov 07-05* (LE). 2*n* = 36; Russia, Khabarovskii Krai, *Korobkov 05-143, 05-144* (LE).
Artemisia abbreviata (Krasch. ex Korobkov) Krasnob., 2*n* = 18; Russia, Yakutia, *Petrovsky 00-21* (LE).
Artemisia annua L., 2*n* = 18; Russia, Daghestan, *Adjiyeva 06-73 (10897)* (LE).
Artemisia arctica Less., 2*n* = 18; Russia, Magadanskaya Oblast', *Probatova & Seledets 7116* (VLA). 2*n* = 36; Russia, Kamchatka, *Sokolovskaya 118* (VLA).
Artemisia armeniaca Lam., 2*n* = 54; Kazakhstan, *Ishmuratova 06-46 (10809)* (LE).
Artemisia austriaca Jacq., 2*n* =18; Russia, Kalmykia, *Ochirova 06-44 (10944)* (LE). 2*n* = 32; Russia, Orenburgskaya Oblast, *Afonina 06-94 (10914), 06-95 (10947)* (LE), Kalmykia, *Ochirova 06-100 (10982)* (LE).
Artemisia borealis Pall., 2*n* = 18; Russia, Kamchatka, *Sokolovskaya 97, 246* (VLA). 2*n* = 36; Russia, Yakutia, *Petrovsky 00-20* (LE). 2*n* = 54; U.S.A., Alaska, *Afonina 98-05* (LE).
Artemisia californica Less., 2*n* = 18; U.S.A., California, *Znamerovskaya 06-78 (10915)* (LE).
Artemisia chamaemelifolia Vill., 2*n* = 18, Russia, Daghestan, *Murtazaliev 06-72 (10789)* (LE).
Artemisia commutata Besser, 2*n* = 18; Russia, Khakassia, *Shmakov & al. 99-30* (ALTB). 2*n* = 36; Russia, Krasnoyarskii Krai, *Shmakov & al. 99-31* (ALTB), Yakutia, *Kuznetsova 06-56* (LE), Amurskaya Oblast', *NP & VS 10698* (VLA), Primorskii Krai, *NP & VS 6654* (VLA).
Artemisia daghestanica Krasch. & Poretzky, 2*n* = 18; Russia, Daghestan, *Murtazaliev 06-67 (10781)* (LE).
Artemisia dracunculus L., 2*n* = 18; Russia, Yakutia, *Kuznetsova 06-59* (LE). 2*n* = 36; Russia, Orenburgskaya Oblast', *Afonina 06-90 (10979), 06-91 (10935)* (LE).
Artemisia filatovae Kupr., 2*n* = 54; Kazakhstan, *Ishmuratova 06-48 (10793)* (LE).
Artemisia fragrans Willd., 2*n* = 18; Russia, Daghestan, *Yarovenko 06-64 (10893)* (LE).
Artemisia frigida Willd., 2*n* = 18; Russia, Krasnoyarskii Krai, *Stepanov 04-12* (LE). 2*n* = 54; Russia, Yakutia, *Kuznetsova 06-57* (LE).
Artemisia glabella Kar. & Kir., 2*n* = 18; Kazakhstan, *Ishmuratova 06-49 (10810)* (LE).
Artemisia glauca Pall. ex Willd., 2*n* = 18; Russia, Khakassia, *Shmakov & al. 99-28* (ALTB), Krasnoyarskii Krai, *Stepanov 04-10* (LE).
Artemisia glomerata Ledeb., 2*n* = 18; Russia, Kamchatka, *Sokolovskaya 101* (VLA).
Artemisia gmelinii Web, 2*n* = 36; Russia, Khakassia, *Shmakov & al.*

99-11 (ALTB). 2*n* = 54; Russia, Khakassia, *Shmakov & al. 99-09* (ALTB), Krasnoyarskii Krai, *Shmakov & al. 99-10* (ALTB), *Stepanov 04-11*, *04-13* (LE).

Artemisia integrifolia L., 2*n* = 36; Russia, Khakassia, *Shmakov & al. 99-05* (ALTB), Krasnoyarskii Krai, *Shmakov & al. 99-06* (ALTB), *Stepanov 04-09* (LE), Irkutskaya Oblast', *NP & VS 10749* (VLA).

Artemisia jacutica Drobow, 2*n* = 18; Russia, Yakutia, *Krivoshapkin 98-127*, *98-128, 98-129, 98-130* (LE), *Kuznetsova 06-58* (LE).

Artemisia kemrudica Krasch., 2*n* = 36; Turkmenistan, *Sokolovskaya 11* (VLA).

Artemisia kruhsiana Besser, 2*n* = 18; Russia, Yakutia, *Kuznetsova 06-30* (LE), Kamchatskii Krai, *Sokolovskaya 85* (VLA).

Artemisia laciniata Willd., 2*n* = 18; Russia, Khakassia, *Shmakov & al. 99-13* (ALTB), Primorskii Krai, *Nesterova 8499* (VLA).

Artemisia lagopus Fisch. ex Besser, 2*n* = 18; Russia, Magadanskaya Oblast', *NP & VS 7140* (VLA).

Artemisia lerchiana Web., 2*n* = 36; Kazakhstan, *Sytin 98-03* (LE).

Artemisia leucophylla Turcz. ex C. B. Clarke, 2*n* = 16; Russia, Yakutia, *Kuznetsova 06-60* (LE). 2*n* = 18; Russia, Magadanskaya Oblast', *NP & VS 7167* (VLA).

Artemisia littoricola Kitam., 2*n* = 36; Russia, Primorskii Krai, *Sokolovskaya 249* (VLA), *NP & VS 7338* (VLA).

Artemisia macrantha Ledeb., 2*n* = ca. 100; Russia, Yakutia, *Kuznetsova 06-61* (LE).

Artemisia macrocephala Besser, 2*n* = 18; Russia, Khakassia, *Shmakov & al. 99-17* (ALTB).

Artemisia manshurica (Kom.) Kom., 2*n* = 36; Russia, Khabarovskii Krai, *NP & VS 5964, 7090* (VLA).

Artemisia marschalliana Spreng., 2*n* = 18; Kazakhstan, *Ishmuratova 06-47 (10941)* (LE). 2*n* = 36; Russia, Daghestan, *Murtazaliev 06-75 (10896)* (LE), Orenburgskaya Oblast', *Afonina 06-92 (10939), 06-93 (10980)* (LE).

Artemisia martjanovii Krasch. ex Poljakov, 2*n* = 54; Russia, Yakutia, *Efimova 06-54* (LE).

Artemisia messerschmidtiana Besser, 2*n* = 54; Russia, Buryatia, *NP & VS 9719* (VLA).

Artemisia mongolica (Besser) Fisch. ex Nakai, 2*n* = 18; Russia, Irkutskaya Oblast', *NP & VS 10687* (VLA), Khabarovskii Krai, *NP & VS 5961* (VLA).

Artemisia pannosa Krash., 2*n* = 36; Russia, Primorskii Krai, *Nesterova 9305* (VLA), *NP & VS 6565* (VLA), *VS 9982* (VLA).

Artemisia pontica L., 2*n* = 18; Russia, Orenburgskaya Oblast, *Afonina 06-97 (10913)* (LE).

Artemisia rubripes Nakai, 2*n* = 16; Russia, Primorskii Krai, *Shatalova 7460* (VLA).

Artemisia saitoana Kitam., 2*n* = 18; Russia, Khabarovskii Krai, *NP & VS 5916* (VLA), Primorskii Krai, *Nesterova 7703* (VLA). 2*n* = 36; Russia, Primorskii Krai, *NP & VS 6620* (VLA).

Artemisia salsoloides Willd., 2*n* = 18; Russia, Daghestan, *Murtazaliev 06-66 (10895)* (LE).

Artemisia santonica Lam., 2*n* = 18; Russia, Orenburgskaya Oblast, *Afonina 06-87 (10916)* (LE).

Artemisia scoparia Waldst. & Kit., 2*n* = 16; Russia, Daghestan, *Murtazaliev 06-71 (10911)* (LE), Kalmykia, *Ochirova 06-42 (10940)* (LE), Khabarovskii Krai, *NP & VS 5960* (VLA).

Artemisia sericea Weber, 2*n* = 54; Russia, Krasnoyarskii Krai, *Shmakov & al. 99-23* (ALTB), *Stepanov 04-08* (LE).

Artemisia sieversiana Ehrh. ex Willd., 2*n* = 18; Kazakhstan, *Ishmuratova 06-50 (10942)* (LE).

Artemisia sosnovskyi Krasch. & Novopokr., 2*n* = 36; Russia, Daghestan, *Murtazaliev 06-68 (10777), 06-69 (10779)* (LE).

Artemisia stelleriana Besser, 2*n* = 18; Russia, Primorskii Krai, *Sokolovskaya 252* (VLA).

Artemisia tanacetifolia L., 2*n* = 36; Russia, Yakutia, *Atlassov 06-52* (LE). 2*n* = 54; Russia, Krasnoyarskii Krai, *Shmakov & al. 99-12* (ALTB).

Artemisia taurica Willd., 2*n* = 36; Russia, Daghestan, *Murtazaliev 06-77 (10983)* (LE).

Artemisia tilesii Ledeb., 2*n* = 18; Russia, Komi, *Sokolovskaya 6, 44* (VLA), North Koryakia, *Sokolovskaya 65* (VLA).

Artemisia viridis Willd. ex DC., 2*n* = 18; Kirghizia, *Sultanov 02-27* (LE).

Artemisia vulgaris L., 2*n* = 16; Russia, Daghestan, *Adjiyeva 06-74 (10894)* (LE), *Kotseruba 07-150* (LE), Khakassia, *Shmakov & al. 99-07* (ALTB), Yakutia, *Kuznetsova 06-62* (LE).

Eupatorium cannabinum L., 2*n* = 20; Russia, Krasnodarskii Krai, *Manilo 11190* (VLA).

Filifolium sibiricum (L.) Kitam., 2*n* = 18; Russia, Zabaikal'skii Krai, *Korobkov 06-216* (LE).

Mausolea eriocarpa (Bunge) Poljakov ex Podlech, 2*n* = 36; Turkmenistan, *Sokolovskaya 21, 22* (VLA).

Neopallasia pectinata (Pall.) Poljakov, 2*n* = 18; Russia, Tyva, *Shmakov & al. 99-32, 99-33* (ALTB).

Pyrethrum parthenifolium Willd., 2*n* = 18; Russia, Krasnodarskii Krai, *NP & VS 11567* (VLA).

BRASSICACEAE

Berteroa incana (L.) DC., 2*n* = 16; Russia, Krasnodarskii Krai, *NP & VS 11505* (VLA).

Draba nemorosa L., 2*n* = 16; Russia, Primorskii Krai, *Lapenko 11134* (VLA).

CARYOPHYLLACEAE

Dianthus armeria L., 2*n* = 30; Russia, Krasnodarskii Krai, *Manilo 11588* (VLA).

Gypsophila pacifica Kom., 2*n* = 34; Russia, Primorskii Krai, *Lapenko 11522* (VLA).

CHENOPODIACEAE

Kochia scoparia (L.) Schrad., 2*n* = 18; Russia, Primorskii Krai, *Lapenko 11518* (VLA).

FABACEAE

Sophora flavescens Aiton, 2*n* = 18; Russia, Primorskii Krai, *Lapenko 11524* (VLA).

Trigonella monspeliaca L., 2*n* = 16; Russia, Krasnodarskii Krai, *Manilo 11587* (VLA).

LAMIACEAE

Prunella vulgaris L., 2*n* = 28; Russia, Krasnodarskii Krai, *NP & VS 11481* (VLA).

LINACEAE

Linum squamulosum Rudolphi ex Willd., 2*n* = 18; Russia, Krasnodarskii Krai, *NP & VS 11531* (VLA).

MALVACEAE

Alcea rugosa Alef. (s.l.), 2*n* = 42; Russia, Krasnodarskii Krai, *Manilo 11596* (VLA).

POACEAE

Agrostis gigantea Roth, 2*n* = 42; Russia, Sverdlovskaya Oblast', *Tolkach 11509* (VLA).

Alopecurus brachystachyus M. Bieb., 2*n* = ca. 120; Russia, Amurskaya Oblast', *NP & Rudyka 4001* (VLA).

Anisantha sterilis (L.) Nevski, 2*n* = 14; Russia, Krasnodarskii Krai, *NP & VS 11529* (VLA).

Arthraxon langsdorffii (Trin.) Hochst., 2*n* = 36; Russia, Amurskaya Oblast', *NP & VS 11556* (VLA).

Avenella flexuosa (L.) Drejer, 2*n* = 28; Russia, Karelia, *NP & VS 11573* (VLA).

Beckmannia syzigachne (Steud.) Fernald, 2*n* = 14; Russia, Amurskaya Oblast', *Timchenko 11063* (VLA).

Bromopsis australis (Zherebina) Tzvelev & Prob., 2*n* = 56; Russia, Sverdlovskaya Oblast', *Tolkach 11501* (VLA).
Bromopsis inermis (Leyss.) Holub, 2*n* = 56; Russia, Sverdlovskaya Oblast', *Tolkach 11508* (VLA).
Bromus squarrosus L., 2*n* = 14; Russia, Astrakhanskaya Oblast', *NP & VS 11530* (VLA).
Chasmanthium latifolium (Michx.) H.O. Yates, 2*n* = 48; U.S.A., Texas, *Rudyka 11431* (VLA).
Chloris virgata Sw., 2*n* = 20; Russia, Primorskii Krai, *Lapenko 11520* (VLA).
Festuca valesiaca Schleich. ex Gaudin, 2*n* = 14; Russia, Krasnodarskii Krai, *NP & VS 11466* (VLA).
Holcus lanatus L., 2*n* = 14; Russia, Krasnodarskii Krai, *NP & VS 11464* (VLA).
Ochlopoa annua (L.) H. Scholz, 2*n* = 28; Russia, Sverdlovskaya Oblast, *Tolkach 11503* (VLA).
Poa glauca Vahl, 2*n* = 42; Russia, Daghestan, *Kotseruba 11458* (VLA).
Poa pratensis L., 2*n* = 56; Russia, Karelia, *NP & VS 11263* (VLA).
Poa skvortzovii Prob., 2*n* = 56; Russia, Primorskii Krai, *Dudkin* 11549 (VLA).

ROSACEAE

Potentilla reptans L., 2*n* = 28; Russia, Krasnodarskii Krai, *NP & VS 11467* (VLA).

SCROPHULARIACEAE

Linaria genistifolia (L.) Mill., 2*n* = 12; Russia, Krasnodarskii Krai, *NP & VS 11517* (VLA).

SOLANACEAE

Solanum dulcamara L., 2*n* = 24; Russia, Krasnodarskii Krai, *Manilo 11585* (VLA).

VERBENACEAE

Verbena hastata L., 2*n* = 14; Russia, Krasnodarskii Krai, *NP & VS 11589* (VLA).

VIOLACEAE

Viola papilionacea Pursh, 2*n* = 24; Russia, Primorskii Krai, *NP 7624* (VLA).

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UMBELLIFERAE/APIACEAE

Angelica pachyptera Ave-Lall. ex Fisch. & al., *n* = 11; Turkey, *P & K 27.*
Bifora radians M. Bieb., 2*n* = 20; Turkey, *P & K 37.*
Bunium hermonis (Post) Kljuykov, 2*n* = 20; Turkey, *P & K 71*, *74.*
Bupleurum exaltatum M. Bieb., *n* = 8; Turkey, *P & K 77.*
Bupleurum gerardii All., *n* = 8; Turkey, *P & K 12.*
Bupleurum subuniflorum Boiss. & Heldr., *n* = 8; Turkey, *P & K 82.*
Bupleurum sulphureum Boiss. & Balansa, *n* = 8; Turkey, *P & K 37, 60.*
Cachrys crassiloba (Boiss.) Meikle, 2*n* = 22; Turkey, 10 Oct 1999, *Majorov s.n.*
Cervaria aegopodioides (Boiss.) Pimenov (≡ *Peucedanum aegopodioides* (Boiss.) Vandas), *n* = 11; Turkey, *P & K 16.*
Chaerophyllum byzantinum Boiss., *n* = 11; Turkey, *P & K 15.*
Dichoropetalum anatolicum Pimenov & Kljuykov, *n* = 11; Turkey, *P & K 108.*
Dichoropetalum chrysaeum (Boiss. & Heldr.) Pimenov & Kljuykov, *n* = 11; Turkey, *P & K 66*. 2*n* = 22; Turkey, *P & K 117.*
Dichoropetalum palimbioides (Boiss.) Pimenov & Kljuykov, *n* = 11; Turkey, *P & K 110.*
Echinophora sibthorpiana Guss., *n* = 11; Turkey, *P & K 15.*
Echinophora tournefortii Jaub. & Spach, *n* = 11; Turkey, *P & K 57, 131.*
Ekimia bornmulleri (Hub.-Mor. & Reese) H. Duman & M. Watson, *n* = 11; Turkey, *P & K 65.*
Eryngium glomeratum Lam., *n* = 8; Turkey, *P & K 64.*
Ferula lycia Boiss., 2*n* = 22; Turkey, *P & K 61.*
Ferula tingitana L., 2*n* = 22; Turkey, *P & K 116.*
Ferulago macrosciadia Boiss. & Balansa, *n* = 11; Turkey, *P & K 21.*
Ferulago nodosa (L.) Boiss., 2*n* = 22; Greece, 07 Jun 2006, *P s.n.*
Ferulago thirkeana (Boiss.) Boiss., 2*n* = 22; Turkey, *P & K 119.*
Ferulago trachycarpa Boiss., *n* = 11; Turkey, *P & K 86, 111*, *126.*
Glaucosciadium cordifolium (Boiss.) B.L. Burtt & P.H. Davis, *n* = 11; Turkey, *P & K 56*, *57.*
Helosciadium nodiflorum (L.) W.D.J. Koch (≡ *Apium nodiflorum* L.), *n* = 11; Turkey, *P & K 86.*
Heracleum paphlagonicum Czeczott, 2*n* = 22; Turkey, *P & K 98.*
Heracleum platytaenium Boiss., 2*n* = 22; Turkey, *P & K 93.*
Heracleum ternatum Velen., *n* = 11; Turkey, *P & K 7.*
Hohenackeria exscapa (Steven) Koso-Pol., 2*n* = 32; Turkey, *P & K 55.*
Johrenia dichotoma DC., 2*n* = 22; Turkey, *P & K 76, 89*. *n* = 11; Turkey, *P & K 59.*
Laserpitium hispidum var. *eriopodum* Boiss., *n* = 11; Turkey, *P & K 38.*
Leiotulus secacul (Mill.) Pimenov & Ostroumova, 2*n* = 22; Turkey, 03 Jul 2007, *P & K s.n.*
Pastinaca glandulosa Boiss. & Hausskn., *n* = 11; Turkey, *P & K 93.*
Peucedanum obtusifolium Sm., *n* = 11; Turkey, *P & K 134.*
Pimpinella tragium Vill., *n* = 10; Turkey, *P & K 52.*
Prangos ferulacea (L.) Lindl., 2*n* = 66; Turkey, *P & K 79.*
Prangos meliocarpoides Boiss., 2*n* = 22; Turkey, *P & K 107.*
Seseli resinosum Freyn & Sint., *n* = 11; Turkey, *P & K 115.*
Seseli tortuosum L., *n* = 11; Turkey, *P & K 56*, *124.*
Sium sisaroideum DC., *n* = 11; Turkey, *P & K 4*, *100.*
Smyrnium connatum Boiss. & Kotschy, 2*n* = 22; Turkey, *P & K 54.*
Smyrnium olusatrum L., 2*n* = 22; Turkey, 21 Aug 2008, *P & K s.n.*
Stefanoffia aurea (Boiss.) Pimenov & Kjuykov, 2*n* = 20; Turkey, *P & K 25.*
Tordylium maximum L., 2*n* = 18; Turkey, *P & K 46*. 2*n* = 20; Turkey, 12 Aug 2008, *P & K s.n.*
Torilis ucrainica Spreng. *n* = 8; Turkey, *P & K 11*. 2*n* = 16; Turkey, *P & K 106.*
Zosima absinthiifolia (Vent.) Link, 2*n* = 20; Turkey, *P & K 49.*

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Chromosome numbers counted and ploidy level estimated by S. Španiel; collectors: *JŠ* = J. Šibík, *JZL* = J. Zozomová-Lihová, *KM* = K. Marhold, *ĽM* = Ľ. Majeský, *MP* = M. Perný, *SŠ* = S. Španiel, *VK* = V. Kolarčik; vouchers in SAV.

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BRASSICACEAE

Alyssum alyssoides (L.) L.

2n = 32, CHN. Romania, *SŠ*, *KM, JZL & VK 43HAG/5*.

2n ~ 4*x* ~ 32, FCM. **Bosnia and Herzegovina**, *SŠ & MP 123RDJ/1*, *SŠ & MP 123RDJ/2*, *SŠ & MP 123RDJ/3*, *SŠ & MP 123RDJ/4*, *SŠ & MP 123RDJ/5*, *SŠ & MP 196TRE/1*, *SŠ & MP 196TRE/2*, *SŠ & MP 196TRE/3*, *SŠ & MP 196TRE/4*, *SŠ & MP 196TRE/5*; **Bulgaria**, *SŠ & VK KON31/1*, *SŠ & VK KON31/2*, *SŠ & VK KON31/3*, *SŠ & VK KON31/4*, *SŠ & VK KON31/5*; **Croatia**, *SŠ & MP 102DCI/1*, *SŠ & MP 102DCI/2*, *SŠ & MP 102DCI/3*, *SŠ & MP 102DCI/4*, *SŠ & MP 102DCI/5*, *SŠ & MP 107OBR/1*, *SŠ & MP 107OBR/2*, *SŠ & MP 107OBR/3*, *SŠ & MP 107OBR/4*, *SŠ & MP 107OBR/5*, *SŠ & MP 108PJS/1*, *SŠ & MP 108PJS/2*, *SŠ & MP 108PJS/3*, *SŠ & MP 108PJS/5*, *SŠ & MP 125DZE/1*, *SŠ & MP 125DZE/2*, *SŠ & MP 125DZE/3*, *SŠ & MP 125DZE/4*, *SŠ & MP 125DZE/5*; **France**, *MP 90CEU/1*, *MP 90CEU/2*, *MP 90CEU/3*, *MP 90CEU/4*, *MP 90CEU/5*; **Italy**, *SŠ*, *MP & VK 56PAS/5*, *SŠ*, *MP & VK 56PAS/6*, *SŠ*, *MP & VK 56PAS/8*, *SŠ*, *MP & VK 56PAS/9*, *SŠ*, *MP & VK 59CAM/1*, *SŠ*, *MP & VK 59CAM/2*, *SŠ*, *MP & VK 59CAM/3*, *SŠ*, *MP & VK 59CAM/4*, *SŠ*, *MP & VK 59CAM/5*, *SŠ*, *MP & VK 60AMA/1*, *SŠ*, *MP & VK 60AMA/2*, *SŠ*, *MP & VK 60AMA/3*, *SŠ*, *MP & VK 60AMA/4*, *SŠ*, *MP & VK 60AMA/5*, *MP 88FEN/1*, *MP 88FEN/2*, *MP 88FEN/3*, *MP 88FEN/4*, *MP 88FEN/5*; Italy, SŠ *& MP 131OPI/1*, *SŠ & MP 131OPI/2*, *SŠ & MP 131OPI/3*, *SŠ & MP 131OPI/4*, *SŠ & MP 131OPI/5*; **Montenegro**, *SŠ & MP 112SUT/1*, *SŠ & MP 112SUT/2*, *SŠ & MP 112SUT/3*, *SŠ & MP 112SUT/4*, *SŠ & MP 112SUT/5*, *SŠ & MP 114KRU/1*, *SŠ & MP 114KRU/2*, *SŠ & MP 114KRU/3*, *SŠ & MP 114KRU/4*, *SŠ & MP 114KRU/5*, *SŠ & MP 115PET/1*, *SŠ & MP 115PET/2*, *SŠ & MP 115PET/3*, *SŠ & MP 115PET/4*, *SŠ & MP 115PET/5*; **Romania**, *SŠ, KM, JZL & VK 22LIP/1*, *SŠ, KM, JZL & VK 22LIP/2*, *SŠ, KM, JZL & VK 22LIP/3*, *SŠ, KM, JZL & VK 22LIP/4*, *SŠ, KM, JZL & VK 22LIP/5*, *SŠ, KM, JZL & VK 43HAG/1*, *SŠ, KM, JZL & VK 43HAG/2*, *SŠ, KM, JZL & VK 43HAG/3*, *SŠ, KM, JZL & VK 43HAG/4*, *SŠ, KM, JZL & VK 43HAG/5*, *SŠ, KM, JZL & VK 43HAG/6*, *SŠ, KM, JZL & VK 50BAB/1*, *SŠ, KM, JZL & VK 50BAB/2*, *SŠ, KM, JZL & VK 50BAB/3*, *SŠ, KM, JZL & VK 50BAB/4*; **Serbia**, *SŠ & JŠ 133KEL/1*, *SŠ & JŠ 133KEL/2*, *SŠ & JŠ 133KEL/3*, *SŠ & JŠ 133KEL/4*, *SŠ & JŠ 133KEL/5*, *SŠ & JŠ 136BOL/1*, *SŠ & JŠ 136BOL/2*, *SŠ & JŠ 136BOL/3*, *SŠ & JŠ 136BOL/4*, *SŠ & JŠ 137RAD/1*, *SŠ & JŠ 137RAD/2*, *SŠ & JŠ 137RAD/3*, *SŠ & JŠ 137RAD/4*, *SŠ & JŠ 137RAD/5*, *SŠ & JŠ 138RAD/1*, *SŠ & JŠ 138RAD/2*, *SŠ & JŠ 138RAD/3*, *SŠ & JŠ 138RAD/4*, *SŠ & JŠ 138RAD/5*, *SŠ & JŠ 138RAD/6*, *SŠ & JŠ 140TOP/1*, *SŠ & JŠ 140TOP/2*, *SŠ & JŠ 140TOP/3*, *SŠ & JŠ 140TOP/4*, *SŠ & JŠ 140TOP/5*, *SŠ & JŠ 140TOP/6*, *SŠ & JŠ 142IZV/1*, *SŠ & JŠ 142IZV/2*, *SŠ & JŠ 142IZV/3*, *SŠ & JŠ 142IZV/4*, *SŠ & JŠ 142IZV/5*, *SŠ & JŠ 144OST/1*, *SŠ & JŠ 144OST/2*, *SŠ & JŠ 144OST/3*, *SŠ & JŠ 144OST/4*, *SŠ & JŠ 144OST/5*, *SŠ & MP 190PJE/1*, *SŠ & MP 190PJE/2*, *SŠ & MP 190PJE/3*, *SŠ & MP 190PJE/4*, *SŠ & MP 190PJE/5*; **Slovakia**, *SŠ 19CKV/1*, *SŠ 19CKV/2*, *SŠ 19CKV/3*, *SŠ 19CKV/4*, *SŠ 19CKV/5*, *SŠ 19CKV/6*, *SŠ 19CKV/7*, *SŠ 19CKV/8*; **Slovenia**, *SŠ & MP 129OCI/1*, *SŠ & MP 129OCI/2*, *SŠ & MP 129OCI/3, SŠ & MP 129OCI/4*, *SŠ & MP 129OCI/5*;

IOPB COLUMN

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IAPT/IOPB chromosome data 10

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Methods are described in Bennett (1982), Grabiele & al. (2005) and Moscone & al. (1995, 1996).

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COMMELINACEAE

Commelina platyphylla Klotzsch ex Seub.

$2n = 2x = 30$, CHN (Fig. 1A–B, F). Argentina, Misiones Province, Capital Department, Posadas, 200 m W of Zaimán stream and 2.5 km W of Paraná river, in open field, 27°24′S, 55°53′W, 20 Nov 2001, *Grabiele 15* (CTES, MNES); Argentina, Misiones Province, Apóstoles Department, San José, in open wetland, 27°46′S, 55°45′W, 20 Dec 2002, *Grabiele 23* (CTES, MNES, SI); Argentina, Misiones Province, Capital Department, Posadas, at the coast of Paraná river, in open field, 27°21′S, 56°00′W, 14 Jan 2003, *Grabiele 24* (CTES, MNES, SI); Argentina, Misiones Province, Candelaria Department, Campo San Juan, 7.5 km E of Paraná river, in open field, 27°24′S, 55°36′W, 15 Oct 1994, *Guillen 371* (MNES); Argentina, Misiones Province, Capital Department, Garupá, 2 km W of Garupá stream, in open field, 27°28′S, 55°50′W, 23 Aug 2003, *Grabiele 46* (MNES); Argentina, Misiones Province, Candelaria Department, Parque Provincial Cañadon de Profundidad, 2 km W of Garupá stream, in clearing area, 27°33′S, 55°42′W, 5 Apr 2003, *Grabiele 49* (MNES); Argentina, Misiones Province, Candelaria Department, Cerro Corá, 15 km SE of Paraná river, in open field, 27°31′S, 55°35′W, 10 Apr 2003, *Grabiele 51* (MNES). Paraguay, Itapúa Department, Trinidad, 9 km NW of Paraná river, in open field, 27°07′S, 55°42′W, 1 Apr 2003, *Grabiele 54* (MNES).

Commelina platyphylla is a diploid species widely distributed in South America, representing a convenient model for karyological study. DAPI staining showed an unimodal and symmetrical karyotype (2A according to Stebbins, 1971) comprising 9m + 6sm medium-size chromosomes ranging from 2.29 to 4.04 µm, and 47.77 µm per haploid genome (Fig. 1K). In addition, CMA/Distamycin-A/DAPI fluorescence banding revealed the presence of two different types of constitutive heterochromatin (Hc), CMA+ DAPI– (GC-rich) and CMA– DAPI+ (AT-rich), both comprising the 7.08% (3.38 µm) of the haploid genome (Fig. 1A–E). GC-rich Hc (42% of total) is exclusively NOR-associated, covering the entire terminal macrosatellite of chromosome pairs nos. 10 (*sm*) and 13 (*sm*) (Fig. 1A, D, K). AT-rich Hc (58% of total) is localized interstitially (pairs nos. 4 and 12) or found at proximal (pairs nos. 2, 3 and 10) positions (Fig. 1B, K). Ag-NOR staining revealed 1 (77%) > 2 (19%) > 3 (3%) > 4 (1%) nucleoli in interphase nuclei (Fig. 1G–J) and 1 (38%) > 2 (35%) > 3 (15%) > 4 (12%) active nucleolar organizer regions (NORs) in metaphase (Fig. 1F); nucleolar dominance of pair no. 10 vs. 13 (1.6 times) is observed by classical staining and confirmed by Ag-NOR and also nucleolar associated bodies (NABs) were recognized (Fig. 1H). Polymorphisms for cytological markers were not observed. The equilocal distribution of the different Hc blocks and NORs (Fig. 1K), its arrangement within the classical staining predicted suprachromosomal organization according to Bennett´s model (Fig. 1L) added to the disposition of the chromocenters and the NABs in the interphase nuclei (Fig. 1C, E, H) suggest concerted evolution for the Hc and NORs dispersion in *C. platyphylla*.

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

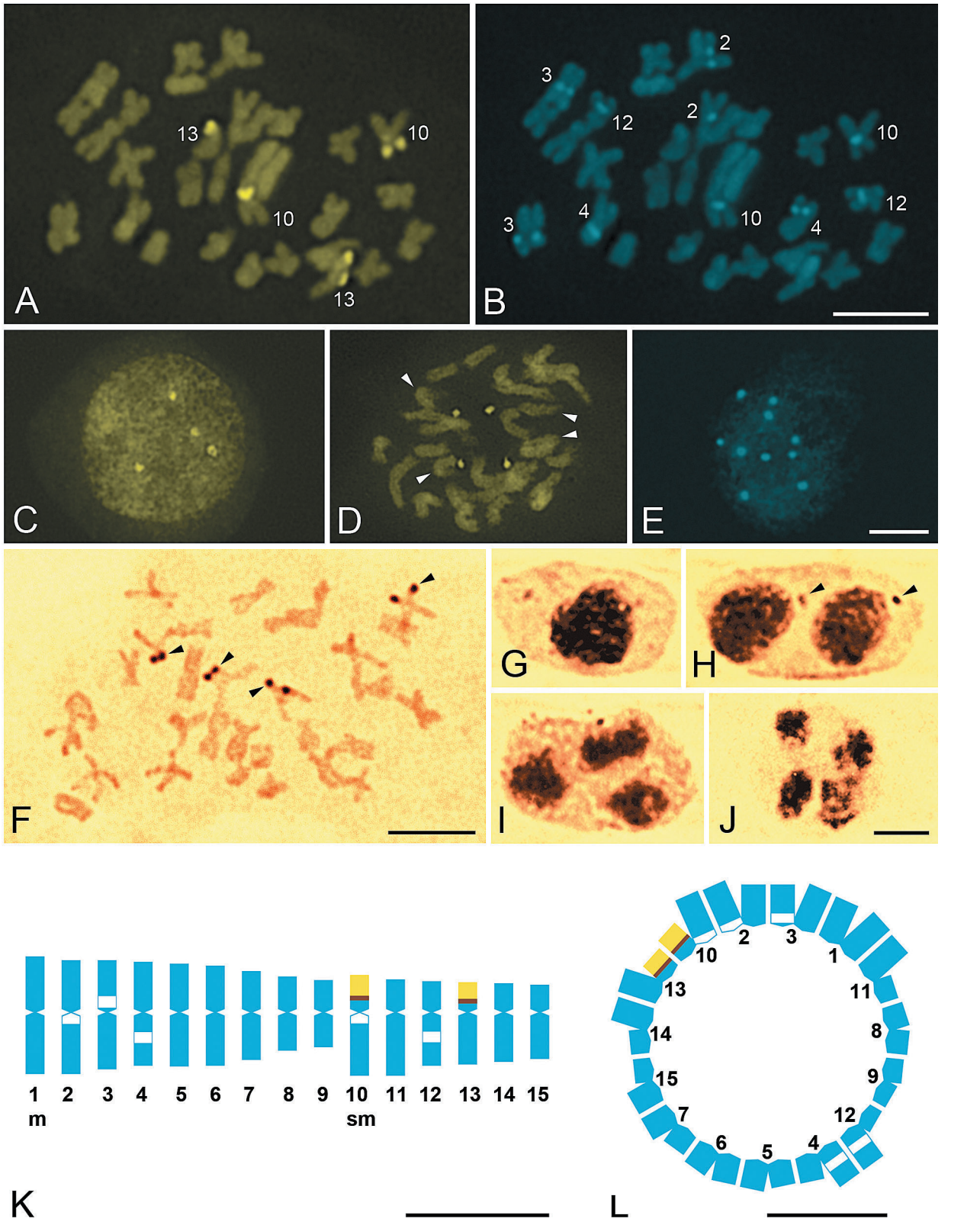

Fig. 1. Cytogenetic characterization of *C. platyphylla*. **A–E,** CMA/DA/DAPI-stained chromosomes and nuclei. **A, C–D,** metaphase bands, nucleus chromocenters and prometaphase terminal macrosatellites, respectively, CMA enhanced (bright yellow) corresponding to NOR-associated GC-rich Hc. **B, E,** metaphase bands and nucleus chromocenters, respectively, DAPI enhanced (bright blue) corresponding to AT-rich Hc. **F–J,** Ag-NOR-stained chromosomes and nuclei. **F,** metaphase with active NORs (dark brown). **G–J,** nuclei with different number of nucleoli (dark brown). **K–L,** conventional idiogram and predicted natural karyotype, respectively (light blue, euchromatin; yellow, GC-rich Hc; white, AT-rich Hc; brown, active NORs). Arrowheads point out chromosomes carrying NORs (D, F) or NABs (H). Scale bars = 5 µm.

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Three informal infrageneric groups have been recognized within the genus *Onosma* L., Asterotricha, Haplotricha and Heterotricha (Mártonfi & al., 2008; Peruzzi & Passalacqua, 2008; Kolarčik & al., 2010). Both representative species complexes of Heterotricha, *Onosma arenaria* s.l. and *O. pseudoarenaria* s.l., are assumed to be of a hybrid origin involving some taxa of Asterotricha and Haplotricha as ancestors. Karyological investigations supported this hypothesis; karyotypes of Heterotricha representatives combine both L (large) and S (small) chromosomes, which are otherwise specific for some haplotrichous and asterotrichous taxa respectively (Teppner, 1971; Vouillamoz, 2001). Keeping this in mind, specific chromosome set compositions are indicated here.

BORAGINACEAE

Onosma arenaria Waldst. & Kit.

$2n = 20$ (12L + 8S), CHN. Hungary, Csákberény, calcareous hills in surroundings of the village, 47°20′25.9″N, 18°21′19.7″E, 194 m, 25 Jun 2009, *Vladislav Kolarčik & Róbert Šuvada CSK3*, *CSK5*, *CSKX1*, *CSKX2* (SAV); Hungary, Epöl, slopes of the Sáshegy hill located between the villages of Epöl and Máriahalom, 25 Jun 2009, *Vladislav Kolarčik & Róbert Šuvada EPO2* (SAV); Hungary, Tokaj, Tokaji-hegy hill, S slopes above the vineyards located very close to the village of Tarcal, ca. 100 m W from the location 48°06′59.9″N, 21°21′59.7″E, 247 m, 26 Jun 2009, *Vladislav Kolarčik & Róbert Šuvada TOK09–1* (SAV) [Fig. 2]. Croatia, Sutina, along the road from Sinj to Muć at the entrance to the village of Sutina, 43°41′50.3″N, 16°33′08.0″E, 617 m, 12 Jun 2009, *Vladislav Kolarčik & Katarína Olšavská SUT09–1*, *SUT09–4* (SAV).

Onosma pseudoarenaria Schur subsp. *pseudoarenaria*

$2n = 26$ (12L + 14S), CHN. Romania, Pauliş (Hunedoara district), slope above the village, 45°56′47.8″N, 22°51′32.7″E, 251 m, 21 Jun 2008, *Vladislav Kolarčik & Róbert Šuvada 08PAU05* (SAV); Romania, Govajdia (Hunedoara district), scree slope above the road at the entrance to the village, 45°44′04.6″N, 22°49′32.8″E, 365 m, 21 Jun 2008, *Vladislav Kolarčik & Róbert Šuvada GDJ20* (SAV).

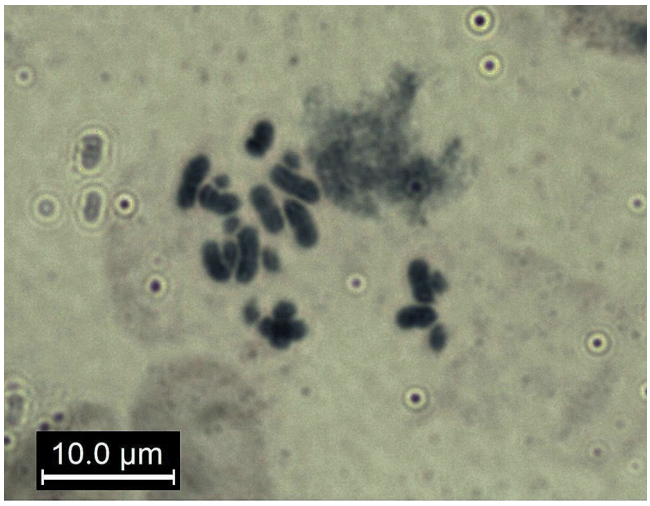

Fig. 2. Metaphase of *Onosma arenaria* with $2n = 20$ (12L + 8S, for explanation see text) chromosomes collected from locus classicus (Hungary, Tokaji-hegy).

Onosma pseudoarenaria subsp. *fallax* (Borb.) Rauschert

$2n = 26$ (12L + 14S), CHN. Croatia, Rab, calcareous stony sites along the road to the top of Mt Kamenjak above the town of Rab, 44°45′47.4″N, 14°47′14.0″E, 294 m, 11 Jun 2009, *Vladislav Kolarčik & Katarína Olšavská RAB1*, *RAB6* (SAV); Croatia, Premantura, Rt Kamenjak cape, several sites along the road across the peninsula, 44°46′41.4″N, 13°54′39.4″E, 20 m, 9 Jun 2009, *Vladislav Kolarčik & Katarína Olšavská RTK19*, *RTK20* (SAV); Croatia, Ervenik, calcareous sites ca. 3 km W from the village of Ervenik, 44°07′35.0″N, 15°54′23.8″E, 294 m, 24 Jul 2010, *Vladislav Kolarčik & Róbert Šuvada ERV5*, *ERV6* (SAV); Croatia, Kršan, calcareous field ca. 1.2 km N from the town, near the road between the towns of Plomin and Boljun, 45°10′51.8″N, 14°08′39.7″E, 20 m, 26 Jul 2010, *Vladislav Kolarčik & Róbert Šuvada CEP2* (SAV). Montenegro, Nikšić, along the road between the town of Nikšić and the village of Morakovo, very close to the village of Morakovo, 42°43′07.8″–42°43′28.9″N, 19°08′23.6″–19°07′13.7″E, 847–824 m, 24 May 2009, *Vladislav Kolarčik MRKO23* (SAV); Montenegro, Podgorica, calcareous fields along the railway between the town of Podgorica and the village of Virpazar, ca. 3 km S from the railway station in Podgorica, 42°24′11.9″N, 19°15′08.4″E, 50 m, 27 May 2009, *Vladislav Kolarčik PDGJ32*, *PDGJ37* (SAV).

Onosma pseudoarenaria subsp. *tridentina* (Wettst.) Braun-Blanq.

$2n = 26$ (12L + 14S), CHN. Italy, Sabbionara, calcareous slopes above the village, 28 Jul 2010, *Vladislav Kolarčik & Róbert Šuvada SAB2*, *SAB4* (SAV).

Onosma pseudoarenaria subsp. *tuberculata* (Kit.) Rauschert

$2n = 26$ (12L + 14S), CHN. Hungary, Epöl, slopes of the Sáshegy hill located between the villages of Epöl and Máriahalom, 25 Jun 2009, *Vladislav Kolarčik & Róbert Šuvada EPO7* (SAV); Hungary, Pilisszántó, slopes of the Pilis hill above the village, 47°40′42.64″ N, 18°52′52.08″ E, 370 m, 25 Jun 2009, *Vladislav Kolarčik & Róbert Šuvada PILIS6*, *PILIS10*, *PILIS15*, *PILIS17* (SAV); Hungary, Örkény, sand dunes between the villages of Örkény and Tatárszentgyörgy, 47°06′29.23″ N, 19°23′28.61″ E, 117 m, 24 Jun 2009, *Vladislav Kolarčik & Róbert Šuvada ORK28*, *ORK43* (SAV); Hungary, Fülöpháza, sand dunes along the road from the town of Kecskemét, S of the village of Fülöpháza, 46°51′55.22″ N, 19°25′12.08″ E, 108 m, 24 Jun 2009, *Vladislav Kolarčik & Róbert Šuvada FUL11* (SAV).

Onosma pseudoarenaria Schur (uncertain subspecific assignment)

$2n = 26$ (12L + 14S), CHN. Serbia, Bela Crkva, sand dunes in Deliblatska peščara, along the road between the villages of Šušara and Deliblato, 44°53′06.8″N, 21°04′45.5″E, 150 m, 19 Jun 2008, *Vladislav Kolarčik & Róbert Šuvada DEL09–8* (SAV); Serbia, Subotinac, steep slope above the road between the villages of Subotinac and Bovan, 43°37′32.94″ N, 21°41′36.63″ E, 229 m, 23 Jun 2009, *Vladislav Kolarčik & Róbert Šuvada ALE1*, *ALE2*, *ALE3*, *ALE4*, *ALE5*, *ALE8*, *ALE9*, *ALE12* (SAV).

The Heterotricha group is one of three informal infrageneric groups recognized within the genus *Onosma* L. The group occupies the European area from western France to southern Ukraine, and from central Germany to northern Greece. It includes several hybrid taxa which are morphologically very similar, however, generally allopatric except of very few cases, and their distribution ranges are fragmented into small islands. Based on morphology, the Heterotricha group is assumed to be a hybridogeneous complex, which originated via hybridization between some taxa of the other two infrageneric groups, Haplotricha and Asterotricha. Karyological investigations supported

this hypothesis; karyotypes of Heterotricha representatives comprise both L (large) and S (small) chromosomes, which are otherwise specific for some haplotrichous and asterotrichous taxa, respectively (Teppner, 1971; Vouillamoz, 2001).

In this study several poorly known populations of the Heterotricha group from Central Europe, the Balkan Peninsula and adjacent region of Po lowland in Italy were investigated karyologically, to display cytotype distribution pattern and to obtain karyological data for locus classicus of some taxa present in the studied area.

A general taxonomic concept of the Heterotricha group is missing, however, two complexes of taxa can be recognized. *Onosma pseudoarenaria* s.l., the complex of taxa with $2n = 26$ (12L + 14S), was quite comprehensively treated by Rauschert (1976). A taxonomic concept for the other complex, *O. arenaria* s.l. (*O. arenaria* Waldst. & Kit. and *O. helvetica* (A. DC.) Boiss.), comprising taxa with $2n = 20$ (12L + 8S), has not been established so far. Therefore, for material identification and species assignment we follow Rauschert (1976) and Vouillamoz (2001).

Plant material comprised *O. arenaria*, *O. pseudoarenaria* subsp. *pseudoarenaria*, subsp. *fallax* (Borb.) Rauschert, subsp. *tridentina* (Wettst.) Braun-Blanq., subsp. *tuberculata* (Kit.) Rauschert and populations of *O. pseudoarenaria* with uncertain subspecific assignment, including samples from locus classicus of *O. arenaria* and *O. pseudoarenaria* subsp. *fallax*.

For karyological analyses, we used either field-collected seeds or plants that were transferred from the field and cultivated. Root tips were obtained either from those cultivated plants or from germinating seeds. For the former, field-collected shoots of the same individual were used as voucher specimens; for the latter, the field-collected mother plants were the vouchers (*TOK09–1*, *RTK19*, *RTK20*), all deposited in the herbarium of the Institute of Botany of the Slovak Academy of Sciences (SAV).

All karyological analyses were performed following the method applied in Mártonfi & al. (2008) and Kolarčik & al. (2010); chromosomes were counted by V. Kolarčik and M. Moravčík.

Our results confirmed *O. pseudoarenaria* s.l. as a dominant complex in the studied area, which is in line with Rauschert (1976). *Onosma arenaria* from Hungary and *O. pseudoarenaria* from Hungary and Montenegro were counted for the first time. Within both cytological groups, populations from the locus classicus of *O. arenaria* (Hungary, Tokaj) and *O. pseudoarenaria* subsp. *fallax* (Croatia, Rab island) were analysed for the first time. The chromosome counts support their putative assignments to *O. arenaria* s.l. and *O. pseudoarenaria* s.l., respectively. Particularly, the count of *O. arenaria* from locus classicus is crucial for the establishment of a comprehensive taxonomic concept for the Heterotricha group in future. The population on this site, however, is very poor (only five individuals were recorded). The single count of *O. arenaria* s.l. in the Balkan Peninsula (from Croatia, Sutina) reported in Kolarčik & al. (2010) is confirmed here. Thus, this locality represents a very isolated occurrence in the fragmented area of *O. arenaria*, which will be interesting for further evolutionary and phylogeographic studies in this group. The sympatric occurrence of *O. arenaria* and *O. pseudoarenaria* in Hungary (Epöl) is the only one karyologically confirmed in the studied area, and thus, will be important in future studies exploring gene flow between both cytotypes under natural conditions.

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Rauschert, S. 1976. Zur Nomenklatur und Chorologie des Formenkreises von *Onosma pseudoarenarium* Schur s. lat. *Folia Geobot. Phytotax.* 11: 269–279.

Teppner, H. 1971. Cytosystematik, bimodale Chromosomensätze und permanente Anorthoploidie bei *Onosma* (Boraginaceae). *Österr. Bot. Z.* 119: 196–233.

Vouillamoz J. 2001. *Approches cytotaxonomique et moléculaire de la phylogéographie des taxons du genre* Onosma *(Boraginaceae) en Suisse et dans les pays limitrophes*. Ph.D. thesis., Faculté des Sciences de l´Université de Lausanne, Lausanne.

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* The chromosome number of the marked species has been counted for the first time.

** The chromosome number of the marked species is deviating from former reports.

APOCYNACEAE (ASCLEPIADOIDEAE-CEROPEGIEAE)

**Anomalluma mccoyi* (Lavranos & Mies) Meve & Liede

$2n = 22$, CHN. Oman, Dhofar, Mirbat, Nov 2000, *Butler & Lauchs s.n. sub Lauchs 14* (UBT).

**Baynesia lophophora* Bruyns

$2n = 22$, CHN. Namibia, Baynes Mts., s.a., *Bruyns 8000* (UBT).

**Brachystelma praelongum* S. Moore

$2n = 22$, CHN. South Africa, Mpumalanga, Morgenzon, s.a., *Peckover s.n. sub Specks 2985* (UBT).

Brachystelma rubellum (E. Mey.) Peckover

$2n = 22$, CHN. Tanzania, Moshi, Lake Chala, 1170 m, 17 Mar 2000, *Hemp 2665* (UBT).

Caralluma priogonum K. Schum.

$2n = 22$, CHN. Kenya, Longobito, 22 Feb 2000, *Meve, Masinde, Goyder & Newton 954* (UBT).

Caudanthera edulis (Edg.) Meve & Liede

$2n = 22$, CHN. Oman, Dhofar, 9 km W of Salalah, Dec 1998, *Butler & Lauchs s.n.* (UBT 3860).

**Ceropegia affinis* Vatke

$2n = 22$, CHN. Ethiopia, ca. 200 km N of Addis Ababa, Blue Nile Gorge, S side, 10°03′N 38°14′E, 03 Oct 2003, *Liede & Meve 3538* (UBT).

**Ceropegia ambovombensis* Rauh & Gerold

$2n = 22$, CHN. Madagascar, Ambovombé, s.a., *Rauh & Gerold 74872* (HEID).

****Ceropegia ampliata** E. Mey. (= *C. ampliata* subsp. *madagascariensis* Lavranos)
2*n* = 44, CHN. Madagascar, Ihosy, 1994, *Bruyns 6217* (BOL).

***Ceropegia ballyana** Bullock
2*n* = 22, CHN. Kenya, Rift Valley, West Pokot Distr., Sebit, Morun River, 27 Jul 1994, *Masinde 683* (EA, MSUN).

Ceropegia bulbosa A. Roxb. var. *bulbosa*
2*n* = 22, CHN. Oman, Jebel Qara, Thumrait-Salalah Road, just north of the junction with the Eastern Jebel road, Dec 1998, *Butler C726* (UBT).

***Ceropegia cufodontii** Chiov.
2*n* = 44, CHN. Ethiopia, Shewa Region, W Ambo, Gedo Pass, W side of Gedo Valley, 08°59′N, 37°44′E, 19 Sep 2003, *Liede & Meve 3522* (UBT).

***Ceropegia dolichophylla** Schltr.
2*n* = 22, CHN. China, Guizhou, Mt. Fanjing, 27°55′N, 108°47′E, 07 Oct 2006, *Zhou sub Kong 674* (UBT).

***Ceropegia imbricata** E.A. Bruce & P.R.O. Bally
2*n* = 22, CHN. Tanzania, Arusha, Kilimanjaro, Feb 2004, *Hemp 4373* (UBT).

***Ceropegia intracolor** L.E. Newton
2*n* = 22, CHN. Kenya, near Nairobi Airport, 29 Feb 1996, *Masinde & Meve 873* (UBT).

***Ceropegia robivelonae** Rauh & Gerold
2*n* = 22, CHN. Madagascar, Prof. Tolanaro, N Ambovombé, Sarfei Sakava, March 1996, *Robivelon sub Botanical Garden Heidelberg 74007* (HEID).

***Ceropegia sepium** Deflers
2*n* = 22, CHN. Saudi Arabia, Wadi al Uss, s.a., *Collenette 3326* (ZSS).

***Ceropegia sobolifera** var. *nephroloba* H. Huber
2*n* = 22, CHN. Tanzania, Ruvuma, 1996, *Specks 765* (UBT).

***Ceropegia somalensis** Chiov.
2*n* = 22, CHN. Kenya, Longobito, 22 Feb 1996, *Masinde, Meve, Goyder & Newton 868* (EA).

***Ceropegia stapeliiformis** var. *serpentina* H. Huber
2*n* = 22, CHN. South Africa, Lydenburg, 1980, *Collenette s.n.* (ZSS, UBT 3859).

Ceropegia subaphylla K. Schum. (= *C. botrys* K. Schum.)
2*n* = 22, CHN. Oman, Dhofar, 20 km W Salalah, Nov 2000, *Butler & Lauchs 15* (UBT).

Desmidorchis somalica (N.E. Br.) Plowes
2*n* = 22, CHN. Somalia, 30 km N Mogadishu, s.a., *Lavranos 24546* (UBT).

Echidnopsis archeri P.R.O. Bally
2*n* = 22, CHN. Kenya, Nguruman Escarpment, s.a., *McCoy s.n.* (UBT 3604).

Echidnopsis bihendulensis P.R.O. Bally
2*n* = 22, CHN. Somalia, Bihendula, 2003, *Specks s.n.* (UBT 3925).

Echidnopsis globosa Thulin & Hjertson (= *E. fartaquensis* McCoy & Orlando)
2*n* = 22, CHN. Yemen, Mola Matr, Nov 2000, *Lavranos & Mies 31326* (UBT).

***Echidnopsis insularis** Lavranos
2*n* = 22, CHN. Yemen, Socotra, s.a., *sub Specks 79* (UBT).

Echidnospis leachii Lavronos
2*n* = 22, CHN. Tanzania, Morogoro, 2000, *Specks 1075* (UBT).

***Echidnopsis oviflora** McCoy
2*n* = 22, CHN. Tanzania Dodoma Prov., 2000, *Specks 1264* (UBT).

Echidnopsis repens R.A. Dyer & Verdc.
2*n* = 22, CHN. Tanzania, Arusha, s.a., *Specks 635* (ZSS).

***Echidnopsis socotrana** Lavranos
2*n* = 22, CHN. Yemen, Socotra, Mahali, s.a., *Thiv 3203* (UBT).

Echidnopsis urceolata P.R.O. Bally
2*n* = 22, CHN. Ethiopia, Dolo Odo, s.a., *Vlk s.n.* (UBT 3260).

***Monolluma solenophora** (Lavranos) Meve & Liede
2*n* = 22, CHN. Saudi Arabia, Jabal Qahar, s.a., *Barad s.n.* (UBT 3236).

***Orbea baldratii** (A.C. White & B. Sloane) Bruyns subsp. *baldratii*
2*n* = 22, CHN. Sudan, El Bit near Erkovit, 18°47′N, 37°08′E, 1998, *Hartmann & Newton 21486* (UBT).

Orbea dummeri (N.E. Br.) Bruyns
2*n* = 22, CHN. Tanzania, Moshi, Lake Chala, Feb 2000, *Hemp s.n.* (UBT 3244).

***Orbea fenestrata** (Plowes) Meve
2*n* = 22, CHN. Yemen, Ussab al'Ali Massiv, ca. 20 km E and below of Ad Dann, 14°21′N, 44°02′E, Jul 1998, *Mangelsdorff Y25* (UBT).

***Orbea huillensis** subsp. *flava* Bruyns
2*n* = 22, CHN. Namibia, NE of Grootfontein, 1200 m, s.a., *Bruyns 5522* (BOL).

Orbea luntii (Lavranos) Bruyns
2*n* = 22, CHN. Yemen, Hadramaut, 8 km ESE of Ra´s Huweira, Nov 2000, *Lavranos, Mies & McCoy 31291* (UBT).

***Orbea semota** subsp. *orientalis* Bruyns
2*n* = 22, CHN. Tanzania, Arusha, Pare Mts, 1997, *Specks 921* (UBT).
2*n* = 33, CHN. Kenya, Taita Distr., near Bura, 03°28′S 38°18′E, 02 Dec 1999, *Luke 5511* (UBT).

***Orbea taitica** Bruyns (= *O. doddsiae* Plowes & McCoy)
2*n* = 22, CHN. Kenya, Eastern Prov., ca. 175 NE Nairobi, Ngomeni Hills, along road from Thika to Garissa, 00°38′S 38°22′E, s.a., *Rauh 786* (MSUN).

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

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ALISMATACEAE

Alisma plantago-aquatica L.

2*n* = 14, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, in vicinity of Erivanskaya settlement, Abin River, on pebbles, 5 Sep 2009, *Probatova & Seledets 11469* (VLA).

AQUIFOLIACEAE

Ilex rugosa F. Schmidt

2*n* = 40, CHN. Russia, Far East, Khabarovskii Krai, Lazo Raion, Khor River basin, the watershed of the rivers Ko and Akhbio (right affluents of Katen River), 25 Aug 2009, *Kryukova 11483* (VLA).

ASTERACEAE

Ajania pallasiana (Fisch. ex Besser) Poljakov

**2*n* = 18, CHN. Russia, Far East, Amurskaya Oblast', Arkharinskii Raion, Khinganskii nature reserve, watershed of Uril River and Mutnaya River, stony S slope, 6 Oct 2006, *Korobkov 07-05* (LE).

2*n* = 36, CHN. Russia, Far East, Khabarovskii Krai, Vaninskii Raion, the basin of Tumnin River, in vicinity of Tuluchi settlement, at foot of rocky slope, sparse oak forest, 27 Sep 2004, *Korobkov 05-143* (LE); Russia, Far East, Khabarovskii Krai, Vaninskii Raion, right riverside of Tumnin River, Tuluchi, the foot of S slope, on rocks, 25 Sep 2004, *Korobkov 05-144* (LE).

Artemisia abbreviata (Krasch. ex Korobkov) Krasnob.

2*n* = 18, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, in vicinity of Tiksi settlement, S rocky slope of Mt. Lyol'kina, 17 Aug 2000, *Petrovsky 00-21* (LE).

Artemisia annua L.

2*n* = 18, CHN. Russia, North Caucasus, Republic of Daghestan, near Makhachkala city, waste place, 10 Nov 2005, *Adjiyeva 06-73 (10897)* (LE).

Artemisia arctica Less.

2*n* = 18, CHN. Russia, Far East, Magadanskaya Oblast', Ten'kinskii Raion, 332 km of Ten'kinskaya route, IBPN biological station "Kontakt", dry mountain tundra, 22 Aug 1993, *Probatova & Seledets 7116* (VLA).

2*n* = 36, CHN. Russia, Far East, Kamchatka Peninsula, Yelizovskii Raion, Nachiki settlement, riverside of Plotnikova River, meadow, 4 Jul 1959, *Sokolovskaya 118* (VLA).

Artemisia armeniaca Lam.

2*n* = 54, CHN. Kazakhstan, Karaganda town, collection of the nature flora, 22 Oct 2005, *Ishmuratova 06-46 (10809)* (LE).

Artemisia austriaca Jacq.

**2n =18, CHN. Russia, European part, Republic of Kalmykia, outskirts of Elysta city, 28 Oct 2005, *Ochirova 06-44 (10944)* (VLA).

2*n* = 32, CHN. Russia, Urals Region, Orenburgskaya Oblast, Svetlinskii Raion, nature reserve, steppe, 11 Oct 2005, *Afonina 06-94 (10914), 06-95 (10947)* (LE); Russia, European part, Republic of Kalmykia, near Elysta city, steppe, 17 Oct 2005, *Ochirova 06-100 (10982)* (LE).

Artemisia borealis Pall.

2*n* = 18, CHN. Russia, Far East, North Koryakia, Olyutorskii Raion, near Achai-Vayam settlement, open places in light *Populus* forest, 17 Jul 1965, *Sokolovskaya 97* (VLA); Russia, Far East, Kamchatka Peninsula, Tigil'skii Raion, Palana settlement, mountainside near sea coast, 21 Aug 1959, *Sokolovskaya 246* (VLA).

2*n* = 36, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, lower course of Lena River, near the mouth of Arangastakh River, sandy terrace, 13 Aug 2000, *Petrovsky 00-20* (LE).

2*n* = 54, CHN. U.S.A., Alaska, the valley of Atkasuk River, sandy slope of a high terrace, 28 Aug 1998, *Afonina 98-05* (LE).

Artemisia californica Less.

2*n* = 18, CHN. U.S.A., California, Santa-Clara district, near Cupertino town, Oct 2005, *Znamerovskaya 06-78 (10915)* (LE).

Artemisia chamaemelifolia Vill.

2*n* = 18, CHN. Russia, North Caucasus, Republic of Daghestan, Gunibskii Raion, in vicinity of Verkhnii Gunib village,1800 m, S dry slope, 23 Oct 2005, *Murtazaliev 06-72 (10789)* (LE).

Artemisia commutata Besser

2*n* = 18, CHN. Russia, East Siberia, Republic of Khakassia, lakeside of the Krasnoyarskoe reservoir, in vicinity of Saragash village, 27 Sep 1997, *Shmakov, Shaulo & al. 99-30* (ALTB).

2*n* = 36, CHN. Russia, East Siberia, Krasnoyarskii Krai, the spur of Borus mountain ridge, riverside of Yenissei River, near the mouth of Kibik River, 29 Sep 1997, *Shmakov, Shaulo & al. 99-31* (ALTB); Russia, East Siberia, Republic of Sakha-Yakutia, outskirts of Yakutsk city, the territory of Botanical Garden, 6 Sep 2005, *Kuznetsova 06-56* (LE); Russia, Far East, Amurskaya Oblast', 40 km N of Blagoveschensk city, nature forest park "Mukhinka", forest edge, sandy lakeside, 29 Sep 2007, *Probatova & Seledets 10698* (VLA); Russia, Far East, Primorskii Krai, Dal'negorskii Raion, 3 km NW of Dal'negorsk town, the locality Partizanskaya Pad', dry limestone rock outcrops, 14 Sep 1985, *Probatova & Seledets 6654* (VLA).

Artemisia daghestanica Krasch. & Poretzky

2*n* = 18, CHN. Russia, North Caucasus, Republic of Daghestan, Tsumadinskii Raion, in vicinity of Asvali village, 900 m, dry rocky E slope, 28 Oct 2005, *Murtazaliev 06-67 (10781)* (LE).

Artemisia dracunculus L.

2*n* = 18, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, outskirts of Yakutsk city, the territory of Botanical Garden, 6 Sep 2005, *Kuznetsova 06-59* (LE).

2*n* = 36, CHN. Russia, Urals Region, Orenburgskaya Oblast, Svetlinskii Raion, nature reserve, 13 Oct 2005, *Afonina 06-90 (10979), 06-91 (10935)* (LE).

Artemisia filatovae Kupr.

*2*n* = 54, CHN. Kazakhstan, Karaganda town, the collection of nature flora, 22 Oct 2005, *Ishmuratova 06-48 (10793)* (LE).

Artemisia fragrans Willd.

2*n* = 18, CHN. Russia, North Caucasus, Republic of Daghestan, Tersko-Sulakskoye plateau, in vicinity of Shamkhal settlement, semi-desert, 10 Oct 2005, *Yarovenko 06-64 (10893)* (LE).

Artemisia frigida Willd.

2*n* = 18, CHN. Russia, East Siberia, Krasnoyarskii Krai, outskirts of Krasnoyarsk city, slopes to Yenissei River, steppe, 14 Oct 2003, *Stepanov 04-12* (LE).

2*n* = 54, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, outskirts of Yakutsk city, slopes with steppe vegetation near the Botanical Garden, 6 Sep 2005, *Kuznetsova 06-57* (LE).

Artemisia glabella Kar. & Kir.

*2*n* = 18, CHN. Kazakhstan, Karaganda town, the collection of medicinal plants, 14 Oct 2005, *Ishmuratova 06-49 (10810)* (LE).

Artemisia glauca Pall. ex Willd.

2*n* = 18, CHN. Russia, East Siberia, Republic of Khakassia, left lakeside of the Krasnoyarskoe reservoir, near Saragash village, 27 Sep 1997, *Shmakov, Shaulo & al. 99-28* (ALTB); Russia, East Siberia, Krasnoyarskii Krai, outskirts of Krasnoyarsk city, slopes to Yenissei River, 14 Oct 2003, *Stepanov 04-10* (LE).

Artemisia glomerata Ledeb.

2*n* = 18, CHN. Russia, Far East, North Koryakia, Olyutorskii Raion, 15 km NE of Achai-Vayam settlement, stony slope, 19 Jul 1965, *Sokolovskaya 101* (VLA).

Artemisia gmelinii Web.

2*n* = 36, CHN. Russia, East Siberia, Republic of Khakassia, left lakeside of the Krasnoyarskoe reservoir, near Saragash village, 27 Sep 1997, *Shmakov, Shaulo & al. 99-11* (ALTB).

2*n* = 54, CHN. Russia, East Siberia, Republic of Khakassia, left riverside of Abakan River, downstream of Askiz settlement, 15 Sep 1997, *Shmakov, Smirnov & al. 99-09* (ALTB); Russia, East Siberia, Krasnoyarskii Krai, Borus mountain ridge, right riverside of Yenissei River, near the mouth of Kibik River, 25 Sep 1997, *Shmakov, Shaulo & al. 99-10* (ALTB); Russia, East Siberia, Krasnoyarskii Krai, outskirts of Krasnoyarsk city, slopes to Yenissei River, steppe vegetation, 14 Oct 2003, *Stepanov 04-11* (LE); Russia, East Siberia, Krasnoyarskii Krai, Krasnoyarsk, Academic town, slopes to Yenissei River, 14 Oct 2003, *Stepanov 04-13* (LE).

Artemisia integrifolia L.

2*n* = 36, CHN. Russia, East Siberia, Republic of Khakassia, Shirinskii Raion, right riverside of Belyi Iyus River, 5 km N of Fyrkol' village, 14 Sep 1997, *Shmakov, Smirnov & al. 99-05* (ALTB); Russia, East Siberia, Krasnoyarskii Krai, the Borus mountain ridge, right riverside of Yenissei River, near the mouth of Kibik River, 25 Sep 1997, *Shmakov, Shaulo & al. 99-06* (ALTB); Russia, East Siberia, Krasnoyarskii Krai, Krasnoyarsk city, near University, birchwood with brake fern and herbs, 14 Oct 2003, *Stepanov 04-09* (LE); Russia, East Siberia, Irkutskaya Oblast', Irkutskii Raion, Baikal Lake, 17 km NE of Listvyanka, near Bol'shie Koty village, *Pinus-Larix* forest edge, on the slope, 13 Sep 2007, *Probatova & Seledets 10749* (VLA).

Artemisia jacutica Drobow

2*n* = 18, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, Khangalasskii ulus, near Pokrovsk settlement, *Larix* forest edge, 12 Oct 1998, *Krivoshapkin 98-128* (LE); Russia, East Siberia, Republic of Sakha-Yakutia, Yakutsk city, lakeside of Sayssary Lake, fallow land, 11 Oct 1998, *Krivoshapkin 98-127* (LE); Russia, East Siberia, Republic of Sakha-Yakutia, outskirts of Yakutsk city, the territory of the Botanical Garden, 6 Sep 2005, Kuznetsova 06-58 (LE); Russia, East Siberia, Republic of Sakha-Yakutia, Yakutsk city, the territory of the permafrost station, roadside, 12 Oct 1998, *Krivoshapkin 98-130* (LE); Russia, East Siberia, Republic of Sakha-Yakutia, along the Serguelyakh road, near Agricultural Academy, 4 Oct 1998, *Krivoshapkin 98-129* (LE).

Artemisia kemrudica Krasch.

*2*n* = 36, CHN. Turkmenistan, Kara-Kum desert, central part, the station of the Institute of Deserts, sands, 3 Apr 1964, *Sokolovskaya 11* (VLA).

Artemisia kruhsiana Besser

2*n* = 18, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, Verkhoyansk area, the valley of Sirilikan River, pebbles, 2 Aug 2005, *Kuznetsova 06-30* (LE); Russia, Far East, North Koryakia, Olyutorskii Raion, near Achai-Vayam settlement, dry spots in tundra, 14 Jul 1965, *Sokolovskaya 85* (VLA).

Artemisia laciniata Willd.

2*n* = 18, CHN. Russia, East Siberia, Republic of Khakassia, Askizskii Raion, left riverside of Abakan River, 22 km downstream of Askiz settlement, 15 Sep 1997, *Shmakov, Smirnov & al. 99-13* (ALTB); Russia, Far East, Primorskii Krai, Terneiskii Raion, Sikhote-Alinskii biosphere reserve, Jun 2001, *Nesterova 8499* (VLA).

Artemisia lagopus Fisch. ex Besser

2*n* = 18, CHN. Russia, Far East, Magadanskaya Oblast', Ol'skii Raion, near Niuklya settlement, the slope of marine terrace, 24 Aug 1993, *Probatova & Seledets 7140* (VLA).

Artemisia lerchiana Web.

2*n* = 36, CHN. Kazakhstan, Aktyubinskaya Oblast', in vicinity of Vessyolyi Mel settlement, *Spiraea* and *Artemisia* steppe with *Astragalus*, 5 Jun 1998, *Sytin 98-03* (LE).

Artemisia leucophylla Turcz. ex C.B. Clarke

2*n* = 16, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, outskirts of Yakutsk city, the territory of Botanical Garden, 6 Sep 2005, *Kuznetsova 06-60* (LE).

2*n* = 18, CHN. Russia, Far East, Magadanskaya Oblast', Ten'kinskii Raion, 340 km of Ten'kinskaya route, the IBPN biological station "Kontakt", slide-rocks, 21 Aug 1993, *Probatova & Seledets 7167* (VLA).

Artemisia littoricola Kitam.

2*n* = 36, CHN. Russia, Far East, Primorskii Krai, Cape Peschanyi (opposite Vladivostok city), along the coast of the Amurskii Bay, 7 Jun 1962, *Sokolovskaya 249* (VLA); Russia, Far East, Primorskii Krai, Partizanskii Raion, 1 km of Anna settlement, Anna Bay, spray zone, 22 Aug 1997, *Probatova & Seledets 7338* (VLA).

Artemisia macrantha Ledeb.

2*n* = ca. 100, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, outskirts of Yakutsk city, the territory of the Botanical Garden, 6 Sep 2005, *Kuznetsova 06-61* (LE)

Artemisia macrocephala Besser

2*n* = 18, CHN. Russia, East Siberia, Republic of Khakassia, Ordzhonikidzevskii Raion, right riverside of Tschulym River, 5 km E of Kopyovo village, 14 Sep 1997, *Shmakov, Smirnov & al. 99-17* (ALTB).

Artemisia manshurica (Kom.) Kom.

2*n* = 36, CHN. Russia, Far East, Khabarovskii Krai, Ul'chskii Raion, left riverside of the Amur River, 5 km above Bogorodskoye village, on sands and pebbles, 2 Jul 1981, *Probatova & Seledets 5964* (VLA); Russia, Far East, Khabarovskii Krai, the Bol'shekhekhtsirskii nature reserve, right riverside of Chirka River near the mouth (the confluent of the Ussuri River), stony slope, 1 Sep 1993, *Probatova & Seledets 7090* (VLA).

Artemisia marschalliana Spreng.

2*n* = 18, CHN. Kazakhstan, Karaganda town, the collection of nature flora, 20 Oct 2005, *Ishmuratova 06-47 (10941)* (LE).

2*n* = 36, CHN. Russia, North Caucasus, Republic of Daghestan, outskirts of Makhachkala city, rocky slopes, 17 Sep 2005, *Murtazaliev 06-75 (10896)* (LE); Russia, Urals Region, Orenburgskaya Oblast, Svetlinskii Raion, nature reserve, mountain ridge, 13 Oct 2005, *Afonina 06-92 (10939)* (LE); Russia, Urals Region, Orenburgskaya Oblast, Svetlinskii Raion, nature reserve, *Stipa* + *Artemisia* steppe, 11 Oct 2005, *Afonina 06-93 (10980)*(LE).

Artemisia martjanovii Krasch. ex Poljakov

**2*n* = 54, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, Khangalasskii ulus, Lena River, 162 km upstream of Yakutsk city, near Yelanka settlement, riverside, on limestone, 19 Aug 2005, *Efimova 06-54* (LE).

Artemisia messerschmidtiana Besser

2*n* = 54, CHN. Russia, East Siberia, Republic of Buryatia, Selenginskii Raion, 1 km S of Novo-Selenginsk settlement, petrophytic steppe with *Amygdalus pedunculata*, 11 Sep 2004, *Probatova & Seledets 9719* (VLA).

Artemisia mongolica (Besser) Fisch. ex Nakai

2*n* = 18, CHN. Russia, East Siberia, Irkutskaya Oblast', Irkutskii Raion, Baikal Lake, 17 km NE of Listvyanka, near Bol'shie Koty village, *Pinus-Larix* forest edge, on the slope, 13 Sep 2007, *Probatova & Seledets 10687* (VLA); Russia, Far East, Khabarovskii Krai, Ul'chskii Raion, left riverside of the Amur River, 5 km above Bogorodskoye village, on sands and pebbles, 2 Jul 1981, *Probatova & Seledets 5961* (VLA).

Artemisia pannosa Krasch.

2*n* = 36, CHN. Russia, Far East, Primorskii Krai, Terneiskii Raion, near Ternei settlement, Malaya Bay, coastal rocks, 16 Jun 2004, *Nesterova 9305* (VLA); Russia, Far East, Primorskii Krai, Dal'negorskii Raion, near Rudnaya Pristan' settlement, the mouth of Rudnaya River, coastal rocks, 18 Jul 1984, *Probatova & Seledets 6565* (VLA); Russia, Far East, Primorskii Krai, Dal'negorskii Raion, outskirts of Rudnaya Pristan' settlement, nature monument "Vulkan Brinera", steep stony W slope, 24 Sep 2005, *Seledets 9982* (VLA).

Artemisia pontica L.

2*n* = 18, CHN. Russia, Urals Region, Orenburgskaya Oblast, Svetlinskii Raion, nature reserve, steppe, 11 Oct 2005, *Afonina 06-97 (10913)* (LE).

Artemisia rubripes Nakai

2*n* = 16, CHN. Russia, Far East, Primorskii Krai, Mikhailovskii Raion, Grigoryevka village, forest park, roadside, 12 Aug 1997, *Shatalova 7460* (VLA).

Artemisia saitoana Kitam.

2*n* = 18, CHN. Russia, Far East, Khabarovskii Krai, Ul'chskii Raion, Udyl' Lake, 25 km of the mouth of Ukhta channel, Bol'shaya Bay, SE stony lakeside, 26 Jun 1981, *Probatova & Seledets 5916* (VLA); Russia, Far East, Primorskii Krai, Terneiskii Raion, Sikhote-Alinskii biosphere reserve, Blagodatnaya Bay, the spit, plant community with *Leontopodium palibinianum*, 1998, *Nesterova 7703* (VLA).

**2*n* = 36, CHN. Russia, Far East, Primorskii Krai, Dal'negorskii Raion, 3 km NW of Dal'negorsk town, the locality Partizanskaya Pad', limestone canyon, at the foot of a slope, 14 Sep 1985, *Probatova & Seledets 6620* (VLA).

Artemisia salsoloides Willd.

2*n* = 18, CHN. Russia, North Caucasus, Republic of Daghestan, Karabudakhkentskii Raion, near Gubden village, 500 m, S rocky slope, 28 Oct 2005, *Murtazaliev 06-66 (10895)* (LE).

Artemisia santonica Lam.

2*n* = 18, CHN. Russia, Urals Region, Orenburgskaya Oblast, Svetlinskii Raion, nature reserve, feather-grass steppe, 11 Oct 2005, *Afonina 06-87 (10916)* (LE).

Artemisia scoparia Waldst. & Kit.

2*n* = 16, CHN. Russia, North Caucasus, Republic of Daghestan, Tsumadinskii Raion, in vicinity of Asvali village, 1200 m, W dry slope, 28 Oct 2005, *Murtazaliev 06-71 (10911)* (LE); Russia, European part, Republic of Kalmykia, Zauturganskii settlement, Oct 2005, *Ochirova 06-42 (10940)* (LE); Russia, Far East, Khabarovskii Krai, Ul'chskii Raion, left riverside of the Amur River, 5 km above Bogorodskoye village, on small pebbles, 2 Jul 1981, *Probatova & Seledets 5960* (VLA).

Artemisia sericea Weber

**2*n* = 54, CHN. Russia, East Siberia, Krasnoyarskii Krai, the spur of the Borus mountain ridge, right riverside of Yenissei River, near the mouth of Kibik River, 25 Sep 1997, *Shmakov, Shaulo & al. 99-23* (ALTB); Russia, East Siberia, Krasnoyarskii Krai, Krasnoyarsk city, slopes to Yenissei River, steppe, 14 Oct 2003, *Stepanov 04-08* (LE).

Artemisia sieversiana Ehrh. ex Willd.

2*n* = 18, CHN. Kazakhstan, Karaganda town, the collection of nature flora, 26 Sep 2005, *Ishmuratova 06-50 (10942)* (LE).

Artemisia sosnovskyi Krasch. & Novopokr.

2*n* = 36, CHN. Russia, North Caucasus, Republic of Daghestan, Tsumadinskii Raion, in vicinity of Asvali village, 1200 m, E dry rocky slope, 28 Oct 2005, *Murtazaliev 06-68 (10777)* (LE); Russia, North Caucasus, Republic of Daghestan, Gunibskii Raion, near Verkhnii Gunib village, 1800 m, S slope, 23 Oct 2005, *Murtazaliev 06-69 (10779)* (LE).

Artemisia stelleriana Besser

2*n* = 18, CHN. Russia, Far East, Primorskii Krai, Cape Peschanyi (opposite Vladivostok city), along the coast of the Amurskii Bay, 7 Jun 1962, *Sokolovskaya 252* (VLA).

Artemisia tanacetifolia L.

2*n* = 36, CHN. Russia, East Siberia, Republic of Sakha-Yakutia, Ust'-Aldanskii Raion, near Onyor settlement, 9 Sep 2005, *Atlassov 06-52* (LE).

2*n* = 54, CHN. Russia, East Siberia, Krasnoyarskii Krai, the spur of the Borus mountain ridge, right riverside of Yenissei River, near the mouth of Kibik River, 25 Sep 1997, *Shmakov, Shaulo & al. 99-12* (ALTB).

Artemisia taurica Willd.

2*n* = 36, CHN. Russia, North Caucasus, Republic of Daghestan, outskirts of Makhachkala city, 17 Sep 2005, *Murtazaliev 06-77 (10983)* (LE).

Artemisia tilesii Ledeb.

2*n* = 18, CHN. Russia, European part, Republic of Komi, Intinskii Raion, state farm "Gornyak", the valley of Yun'-Yaga River, open clay slopes and pebbles, 9–10 Jul 1967, *Sokolovskaya 6, 44* (VLA); Russia, Far East, North Koryakia, Olyutorskii Raion, outskirts of Tilichiki settlement, the valley of the Avya-Vayam River, meadow, 8 Jul 1965, *Sokolovskaya 65* (VLA).

Artemisia viridis Willd. ex DC.

2*n* = 18, CHN. Kirghizia, Borkoldoi mountain ridge, N mountainside, the basin of Kara-Sai River, alpine meadow, 5 Sep 2002, *Sultanov 02-27* (LE).

Artemisia vulgaris L.

2*n* = 16, CHN. Russia, North Caucasus, Republic of Daghestan, Makhachkala city, university park, Oct 2005, *Adjiyeva 06-74 (10894)* (LE); Russia, North Caucasus, Republic of Daghestan, Dokusparinskii Raion, on the way to Shalbuzdag Mt. from Miskinjha village, 25 Sep 2006, *Kotseruba 07-150* (LE); Russia, East Siberia, Republic of Khakassia, Ordzhonikidzevskii Raion, right riverside of Tschulym River, 5 km E of Kopyovo village, 14 Sep 1997, *Shmakov, Smirnov & al. 99-07* (ALTB); Russia, East Siberia, Republic of Sakha-Yakutia, Yakutsk city, the territory of the Institute of Biological Problems in Cryolite Zone, Siberian Branch of the Russian Academy of Sciences, near the building, 5 Oct 2005, *Kuznetsova 06-62* (LE).

Eupatorium cannabinum L.

2*n* = 20, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, near Abinsk town, the valley of Abin River, in shrubs community, 15 Oct 2008, *Manilo 11190* (VLA).

Filifolium sibiricum (L.) Kitam.

2*n* = 18, CHN. Russia, East Siberia, Zabaikal'skii Krai, Sokhondinskii nature reserve, in vicinity of cordon Nizhnii Bukukun, S rocky slope of a hill, *Betula-Larix* forest, clearing with steppe vegetation, 6 Sep 2005, *Korobkov 06-216* (LE).

Mausolea eriocarpa (Bunge) Poljakov ex Podlech (*Artemisia eriocarpa* Bunge)

2*n* = 36, CHN. Turkmenistan, Kara-Kum desert, central part, the station of the Institute of Deserts, sand dunes, 3 Apr 1964, *Sokolovskaya 21, 22* (VLA).

Neopallasia pectinata (Pall.) Poljakov

2*n* = 18, CHN. Russia, East Siberia, Republic of Tyva, Uyukskii mountain ridge, 3 km NW of Kara-Khak village, right riverside of Biy-Khem River, 21 Sep 1997, *Shmakov, Smirnov & al. 99-32* (ALTB); Russia, East Siberia, Republic of Tyva, Dzun-Khemchikskii Raion, the valley of Chergana River in lower course, 18 Sep 1997, *Shmakov, Smirnov & al. 99-33* (ALTB).

Pyrethrum parthenifolium Willd.

2*n* = 18, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, in vicinity of Erivanskaya settlement, Abin River, on pebbles, 5 Sep 2009, *Probatova & Seledets 11567* (VLA).

BRASSICACEAE

Berteroa incana (L.) DC.

2*n* = 16, CHN. Russia, North Caucasus, Krasnodarskii Krai, Krymskii Raion, 117 km W of Krasnodar city, near Nizhne-Bakanskii settlement, roadside, 3 Sep 2009, *Probatova & Seledets 11505* (VLA).

Draba nemorosa L.

2*n* = 16, CHN. Russia, Far East, Primorskii Krai, Mikhailovskii Raion, W of Novo-Shakhtinsk settlement, railway road, 16 Jun 2008, *Lapenko 11134* (VLA).

CARYOPHYLLACEAE

Dianthus armeria L.

2*n* = 30, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, in vicinity of Erivanskaya settlement, clearing, 5 Sep 2009, *Manilo 11588* (VLA).

Gypsophila pacifica Kom.

2*n* = 34, CHN. Russia, Far East, Primorskii Krai, Dal'negorskii Raion, 3 km NW of Dal'negorsk town, on limestone, 16 Sep 2009, *Lapenko 11522* (VLA).

CHENOPODIACEAE

Kochia scoparia (L.) Schrad.

2*n* = 18, CHN. Russia, Far East, Primorskii Krai, Khankaiskii Raion, Kamen'-Rybolov settlement, roadside, 19 Sep 2009, *Lapenko 11518* (VLA).

FABACEAE

*Sophora flavesc*ens Aiton

2n = 18, CHN. Russia, Far East, Primorskii Krai, Khankaiskii Raion, near Kamen'-Rybolov settlement, lakeside of Khanka Lake, 19 Sep 2009, *Lapenko 11524* (VLA).

Trigonella monspeliaca L.

2*n* = 16, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, in vicinity of Erivanskaya settlement, clearing, 5 Sep 2009, *Manilo 11587* (VLA).

LAMIACEAE

Prunella vulgaris L.

2*n* = 28, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, in vicinity of Erivanskaya settlement, clearing, 5 Sep 2009, *Probatova & Seledets 11481* (VLA).

LINACEAE

Linum squamulosum Rudolphi ex Willd.

2*n* = 18, CHN. Russia, North Caucasus, Krasnodarskii Krai, Novorossiyskii Raion, in vicinity of Raevskaya settlement, Volchyi Vorota Pass, on crushed marl soil, 3 Sep 2009, *Probatova & Seledets 11531* (VLA).

MALVACEAE

Alcea rugosa Alef. (s.l.)

2*n* = 42, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, outskirts of Abinsk town, roadside on the slope, 5 Sep 2009, *Manilo 11596* (VLA).

POACEAE

Agrostis gigantea Roth

2*n* = 42, CHN. Russia, Urals, Sverdlovskaya Oblast', in vicinity of Ekaterinburg city, nursery garden, 3 Sep 2009, *Tolkach 11509* (VLA).

Alopecurus brachystachyus M. Bieb.

2*n* = ca. 120, CHN. Russia, Far East, Amurskaya Oblast', Dzheltulakskii Raion, near Tyndinskii settlement, the valley of Tynda River, 6 Jun 1975, *Probatova & Rudyka 4001* (VLA).

Anisantha sterilis (L.) Nevski

2*n* = 14, CHN. Russia, North Caucasus, Krasnodarskii Krai, Krymskii Raion, 117 km W of Krasnodar city, near Nizhne-Bakanskii settlement, roadside, 3 Sep 2009, *Probatova & Seledets 11529* (VLA).

Arthraxon langsdorffii (Trin.) Hochst.

2*n* = 36, CHN. Russia, Far East, Amurskaya Oblast', Arkharinskii Raion, 10 km S of Kundur settlement, Khinganskii nature reserve, valley waterlogged meadow, 17 Sep 2004, *Probatova & Seledets 11556* (VLA).

Avenella flexuosa (L.) Drejer

2*n* = 28, CHN. Russia, European part, Republic of Karelia, Pitkyarantskii Raion, 20 km N of Sortavala town, Ladoga Lake, Kiryavalakhty Bay, *Picea* forest, 29 Sep 2008, *Probatova & Seledets 11573* (VLA).

Beckmannia syzigachne (Steud.) Fernald

2*n* = 14, CHN. Russia, Far East, Amurskaya Oblast', 3–4 km from Blagoveschensk city, on the way to Verkhne-Blagoveschenskoye village, 25 Jul 2008, *Timchenko 11063* (VLA).

Bromopsis australis (Zherebina) Tzvelev & Prob.
**2*n* = 56, CHN. Russia, Urals, Sverdlovskaya Oblast', in vicinity of Ekaterinburg city, nursery garden, 3 Sep 2009, *Tolkach 11501* (VLA).

Bromopsis inermis (Leyss.) Holub
2*n* = 56, CHN. Russia, Urals, Sverdlovskaya Oblast', in vicinity of Ekaterinburg city, nursery garden, 3 Sep 2009, *Tolkach 11508* (VLA).

Bromus squarrosus L.
2*n* = 14, CHN. Russia, Volga Region, Astrakhanskaya Oblast', right riverside of the Volga River, near the salt lake Tinaki-1, saltwort desert with *Artemisia*, 27 Aug 2009, *Probatova & Seledets 11530* (VLA).

Chasmanthium latifolium (Michx.) H.O. Yates
2*n* = 48, CHN. U.S.A., Texas, Dallas, near Addison, in forest, along river bank, Apr 2009, *Rudyka 11431* (VLA).

Chloris virgata Sw.
2*n* = 20, CHN. Russia, Far East, Primorskii Krai, Khankaiskii Raion, railway station Kamen'-Rybolov, on the railroad embankment, 19 Sep 2009, *Lapenko 11520* (VLA).

Festuca valesiaca Schleich. ex Gaudin
2*n* = 14, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, in vicinity of Erivanskaya settlement, mountain slope, forest edge, 5 Sep 2009, *Probatova & Seledets 11466* (VLA).

Holcus lanatus L.
2*n* = 14, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, in vicinity of Erivanskaya settlement, clearing, 5 Sep 2009, *Probatova & Seledets 11464* (VLA).

Ochlopoa annua (L.) H. Scholz
2*n* = 28, CHN. Russia, Urals, Sverdlovskaya Oblast, in vicinity of Ekaterinburg city, nursery garden, 3 Sep 2009, *Tolkach 11503* (VLA).

Poa glauca Vahl
2*n* = 42, CHN. Russia, North Caucasus, Republic of Daghestan, Dokuzparinskii Raion, Shalbuzdag Mt., 14 Aug 2006, *Kotseruba 11458* (VLA).

Poa pratensis L.
2*n* = 56, CHN. Russia, European part, Republic of Karelia, Pryazhinskii Raion, near Pryazha village, 27 Sep 2008, *Probatova & Seledets 11263* (VLA).

Poa skvortzovii Prob.
**2*n* = 56, CHN. Russia, Far East, Primorskii Krai, Lazovskii Raion, near Marine biological station "Zapovednoye", waste ground, 23 Jul 2007, *Dudkin 11549* (VLA).

ROSACEAE
Potentilla reptans L.
2*n* = 28, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, in vicinity of Erivanskaya settlement, clearing, 5 Sep 2009, *Probatova & Seledets 11467* (VLA).

SCROPHULARIACEAE
Linaria genistifolia (L.) Mill.
2*n* = 12, CHN. Russia, Krasnodarskii Krai, outskirts of Novorossiysk city, stony slope to Tsemesskaya Bay (the Black Sea), shrubs community (sibljak) with *Paliurus spina-christi,* 3 Sep 2009, *Probatova & Seledets 11517* (VLA).

SOLANACEAE
Solanum dulcamara L.
2*n* = 24, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, in vicinity of Erivanskaya settlement, forest edge, 5 Sep 2009, *Manilo 11585* (VLA).

VERBENACEAE
Verbena hastata L.
2*n* = 14, CHN. Russia, North Caucasus, Krasnodarskii Krai, Abinskii Raion, in vicinity of Erivanskaya settlement, the valley of Abin River, on pebbles, 5 Sep 2009, *Probatova & Seledets 11589* (VLA).

VIOLACEAE
Viola papilionacea Pursh
2*n* = 24, CHN. Russia, Far East, Primorskii Krai, Muravyov-Amurskii Peninsula, Okeanskaya (suburb of Vladivostok), Botanical Garden FEB RAS, as a weed on the paths, 28 May 1998, *Probatova 7624* (VLA).

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* First chromosome count for the species.
** First chromosome count for the genus.
*** New chromosome number for the species.

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UMBELLIFERAE/APIACEAE
Angelica pachyptera Ave-Lall. ex Fisch. & al.
n = 11, CHN. Turkey, B3 Bilecik, Uludağ, E part, Kömür-su, 39°52′N, 29°59′E, 05 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 27* (MW).

Bifora radians M. Bieb.
2*n* = 20, CHN. Turkey, B3 Eskişehir, Bozdağ, Yarimça Bozdag, 39°54′N, 30°37′E, 1480 m, 30 Jun 2007, *M.G. Pimenov & E.V. Kljuykov 37* (MW).

Bunium hermonis (Post) Kljuykov
*2*n* = 20, CHN. Turkey, C4 Karaman, Toros Dağlari, Ermenek region, Güney yurt, valley of Küçük Çay, 36°39′N, 32°48′E, 900 m, 13 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 71* (MW); Turkey, C4 Karaman, Toros Dağlari, Ermenek region, Kazanci, 36°20′N, 32°51′E, 1135 m, 14 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 74* (MW).

Bupleurum exaltatum M. Bieb.
n = 8, CHN. Turkey, C4 Karaman, Toros Dağlari, Ermenek region, Kazanci, 36°20′N, 32°51′E, 1700 m, 14 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 77* (MW).

Bupleurum gerardii All.
n = 8, CHN. Turkey, B3 Eskişehir, Yazilikaya (Midas), 39°12′N, 30°42′E, 1320 m, 28 Jun 2007, *M.G. Pimenov & E.V. Kljuykov 12* (MW).

Bupleurum subuniflorum Boiss. & Heldr.
n = 8, CHN. Turkey, C3 Isparta, near Sütçüler, S of Sütçüler, Yeçilder, 37°25′N, 30°49′E, 790 m, 06 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 82* (MW).

Bupleurum sulphureum Boiss. & Balansa
n = 8, CHN. Turkey, C3 Burdur, chalk slopes S of the city, 37°43′N, 30°17′E, 950 m, 02 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 60* (MW); Turkey, B3 Eskişehir, Sivrihisar Dağlari, Kaymaz Da. 39°31′N, 31°13′E, 08 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 37* (MW).

Cachrys crassiloba (Boiss.) Meikle
*2*n* = 22, CHN. Turkey, C2 Antalya, Terikova, Phaselis bay, sandy sea shore, 36°31′N, 24°31′E, 10 Oct 1999, *S.R. Majorov s.n* (MW).

Cervaria aegopodioides (Boiss.) Pimenov (≡ *Peucedanum aegopodioides* (Boiss.) Vandas)
n = 11, CHN. Turkey, B3 Bilecik, near Bozüyuk, fishing farm, 39°52′N, 29°59′E, 07 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 16* (MW).

Chaerophyllum byzantinum Boiss.
n = 11, CHN. Turkey, B3 Eskişehir, Turkmen Da, Beşik Derese, 39°30′N, 30°25′E, 28 Jun 2007, *M.G. Pimenov & E.V. Kljuykov 15* (MW).

Dichoropetalum anatolicum Pimenov & Kljuykov
**n* = 11, CHN. Turkey, C2 Antalya, near Elmalı, SW slope of Elmalı Da, 36°44′N, 29°54′E, 1760–1800 m, 11 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 108* (MW).

Dichoropetalum chrysaeum (Boiss. & Heldr.) Pimenov & Kljuykov
**n* = 11, CHN. Turkey, C2 Burdur, Salda lake, 37°31′N, 29°43′E, 950 m, 03 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 66* (MW);
*2*n* = 22, CHN. Turkey, C2 Denizli, N slope of Honaz Da. 37°45′N, 29°16′E, 900 m, 14 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 117* (MW).

Dichoropetalum palimbioides (Boiss.) Pimenov & Kljuykov
n = 11, CHN. Turkey, C2 Antalya, near Elmalı, SW slope of Elmalı Da, 36°44′N, 29°54′E, ~2000 m, 11 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 110* (MW).

Echinophora sibthorpiana Guss.
n = 11, CHN. Turkey, B3 Eskişehir, Eskişehir City, Anadolu Tarimsel Arashtyrma Institutu, 39°45′N, 30°33′E, 07 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 15* (MW).

Echinophora tournefortii Jaub. & Spach
**n* = 11, CHN. Turkey, C3 Burdur, chalk slopes S of the city, 37°43′N, 30°17′E, 950 m, 02 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 57* (MW); Turkey, C2 Denizli, Pamukkale–Hieropolis, 37°56′N, 29°07′E, 390–400 m, 15 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 131* (MW).

Ekimia bornmulleri (Hub.-Mor. & Reese) H. Duman & M. Watson
***n* = 11, CHN. Turkey, C2 Burdur, Salda lake, 37°31′N, 29°43′E, 950 m, 03 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 65* (MW).

Eryngium glomeratum Lam.
n = 8, CHN. Turkey, C4 Karaman, Toros Dağlari, Ermenek region, 17 km E Ermenek, Çamlica köyü, Yerköprü, 36°37′N, 33°01′E, 990–1000 m, 12 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 64* (MW).

Ferula lycia Boiss.
*2*n* = 22, CHN. Turkey, C4 Karaman, Toros Dağlari, Ermenek region, 17 km E Ermenek, Çamlica köyü, Yerköprü, 36°37′N, 33°01′E, 990–1000 m, 12 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 61* (MW).

Ferula tingitana L.
2*n* = 22, CHN. Turkey, C3 Antalya, road Elmalı–Finike, Balbeşi, 36°25′N, 30°08′E, 225 m, 12 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 116* (MW).

Ferulago macrosciadia Boiss. & Balansa
**n* = 11, CHN. Turkey, B3 Eskişehir, Turkmen Da, Beşik Derese, 39°30′N, 30°25′E, 28 Jun 2007, *M.G. Pimenov & E.V. Kljuykov 21* (MW).

Ferulago nodosa (L.) Boiss.
2*n* = 22, CHN. Greece, Crete, central part, N shore, Rethimno, near Platanias, 35°21′N, 24°31′E, 07 Jun 2006, *M.G. Pimenov s.n*. (MW).

Ferulago thirkeana (Boiss.) Boiss
*2*n* = 22, CHN. Turkey, A4 Karabük, vicinity of Safranbolu, Peijir Mts, near Bulak Magarasi, 41°16′N, 32°37′E, 750–900 m, 23 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 119* (MW).

Ferulago trachycarpa Boiss
n = 11, CHN. Turkey, C2 Antalya, near Elmalı, SW slope of Elmalı Da, 36°44′N, 29°54′E, 1760–1800 m, 11 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 111* (MW); Turkey, C2 Denizli, N slope of Honaz Da, 37°44′N, 29°17′E, 990–1000 m, 14 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 126* (MW); Turkey, C4 Konya, Toros Dağlari, near Hadim, 36°59′N, 32°27′E, 1430 m, 16 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 86* (MW).

Glaucosciadium cordifolium (Boiss.) B.L. Burtt & P.H. Davis
***n* = 11, CHN. Turkey, C3 Burdur, chalk slopes S of the city, 37°43′N, 30°17′E, 950 m, 02 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 56* (MW); Turkey, C4 Karaman, Toros Dağlari, 3 km E of Ermenek, 36°53′N, 33°16′E, 1500 m, 12 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 57* (MW).

Helosciadium nodiflorum (L.) W.D.J. Koch (≡ *Apium nodiflorum* L.)
n = 11, CHN. Turkey, C3 Isparta, near Aksu, Mt. Anemas, 37°43′N, 31°03′E, 1430 m, 07 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 86* (MW).

Heracleum paphlagonicum Czeczott
*2*n* = 22, CHN. Turkey, A4 Kastamonu, Ilgaz Dağı, Ilgazdağı Milli Park, 41°00′N, 33°44′E, 1875 m, 19 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 98* (MW).

Heracleum platytaenium Boiss.
2*n* = 22, CHN. Turkey, C3 Isparta, near Yakovçar (Yakoafçar), Mt. Dedegöl, 37°45′N, 31°10′E, 1350 m, 08 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 92* (MW).

Heracleum ternatum Velen.
**n* = 11, CHN. Turkey, B3 Eskişehir, Bozdağ, forest of Çatacik, 39°53′N, 30°40′E, 27 Jun 2007, *M.G. Pimenov & E.V. Kljuykov 7* (MW).

Hohenackeria exscapa (Steven) Koso-Pol.
*2*n* = 32, CHN. Turkey, B3 Eskişehir, Bozan steppe, 39°48′N, 31°08′E, 01 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 55* (MW).

Johrenia dichotoma DC.
2*n* = 22, CHN. Turkey, C3 Isparta, near Aksu, Mt. Anemas, 37°43′N, 31°03′E, 1430 m, 08 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 89* (MW); Turkey, C4 Karaman, Toros Dağlari, Ermenek region, Kazanci, 36°20′N, 32°51′E, 1135 m, 14 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 76* (MW).
n = 11, CHN. Turkey, C3 Burdur, Burdur, chalk slopes S of the city, 37°43′N, 30°17′E, 950 m, 02 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 59* (MW).

Laserpitium hispidum var. *eriopodum* Boiss.

n = 11, CHN. Turkey, B3 Eskişehir, Sünduku Dağlari, Tandyr, 39°56′N, 30°40′E, 1240 m, 01 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 38* (MW).

Leiotulus secacul (Mill.) Pimenov & Ostroumova

2*n* = 22, CHN. Turkey, C2 Burdur, Salda lake, 37°31′N, 29°43′E, 950 m, 03 Jul 2007, *M.G. Pimenov & E.V. Kljuykov s.n.* (MW).

Pastinaca glandulosa Boiss. & Hausskn.

**n* = 11, CHN. Turkey, C4 Konya, Toros Dağlari, road Hadim – Beyreli, 36°55–57′N, 32°23′E, 1870–1890 m, 17 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 93* (MW).

Peucedanum obtusifolium Sm.

**n* = 11, CHN. Turkey, A2 (E), Istanbul, Black sea shore, Kilyos, sandy dunes, 41°14′N, 29°08′E, 13 m, 18 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 134* (MW).

Pimpinella tragium Vill.

n = 10, CHN. Turkey, B3 Eskişehir, Bozan steppe, 39°48′N, 31°08′E, 01 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 52* (MW).

Prangos ferulacea (L.) Lindl.

2*n* = 66, CHN. Turkey, C4 Konya, Toros Dağlari, near Hadim, 36°59′N, 32°27′E, 1430 m, 15 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 79* (MW).

Prangos meliocarpoides Boiss.

**2n* = 22, CHN. Turkey, C2 Antalya, near Elmalı, SW slope of Elmalı Da, 36°44′N, 29°54′E, 1760–1800 m, 11 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 107* (MW).

Seseli resinosum Freyn & Sint.

**n* = 11, CHN. Turkey, A4 Kastamonu, Küre, road to Inebolu, 41°48′N, 33°42′E, 600–900 m (type locality), 21 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 115* (MW).

Seseli tortuosum L.

n = 11, CHN. Turkey, C4 Karaman, Toros Dağlari, near Ermenek, 36°38′N, 32°54′E, 1350 m, 12 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 56* (MW); Turkey, A4 Bartin, near Bartin, 41°30′N, 32°28′E, ≈50 m, 24 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 124* (MW).

Sium sisaroideum DC.

n = 11, CHN. Turkey, B3 Eskişehir, Bozdağ, forest of Çatacik, 39°53′N, 30°40′E, 27 Jun 2007, *M.G. Pimenov & E.V. Kljuykov 4* (MW); Turkey, C3 Isparta, near Aksu, road to Zindan Mağarasi, below rocks in Aksu canyon, stream, 37°48′N, 31°04′E, 1290 m, 09 Jul 2007, *M.G. Pimenov & E.V. Kljuykov 100* (MW).

Smyrnium connatum Boiss. & Kotschy

**2n* = 22, CHN. Turkey, C4 Karaman, Toros Dağlari, near Ermenek, 36°38′N, 32°54′E, 1350 m, 12 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 54* (MW).

Smyrnium olusatrum L.

2*n* = 22, CHN. Turkey, A4 Kastamonu, Küre, road to Inebolu, 41°48′N, 33°42′E, 600–900 m, 21 Aug 2008, *M.G. Pimenov & E.V. Kljuykov s.n.* (MW).

Stefanoffia aurea (Boiss.) Pimenov & Kjuykov

***2n* = 20, CHN. Turkey, B3 Bilecik, Uludağ, Köşk Yolu, 39°53′N, 29°50′E, 07 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 25* (MW).

Tordylium maximum L.

****2n* = 18, CHN. Turkey, B3 Eskişehir, Bozdağ, Tandyr-Kuprü road, Dağkuprü, 39°58′N, 30°38′E, 880 m, 01 Jun 2007, *M.G. Pimenov & E.V. Kljuykov 46* (MW).

2*n* = 20, CHN. Turkey, A4 Kastamonu, road Küre–Inebolu, Ersizlerdere, limestone rocks, 41°50′N, 33°42′E, 650 m, 21 Aug 2008, *M.G. Pimenov & E.V. Kljuykov s.n.* (MW).

Torilis ucrainica Spreng.

**n* = 8, CHN. Turkey, B3 Eskişehir, Yazilikaya (Midas), 39°12′N, 30°42′E, 1320 m, 28 Jun 2007, *M.G. Pimenov & E.V. Kljuykov 11 (*MW).

2*n* = 16, CHN. Turkey, A4 Çankiri, near Tosya, valley of Devrez River, 41°00′N, 34°03′E, 700–750 m, 20 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 106* (MW).

Zosima absinthiifolia (Vent.) Link

2*n* = 20, CHN. Turkey, C4 Karaman, Toros Dağlari, near Ermenek, 36°38′N, 32°54′E, 1350 m, 11 Aug 2008, *M.G. Pimenov & E.V. Kljuykov 49* (MW).

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Chromosome numbers counted and ploidy level estimated by S. Španiel.

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BRASSICACEAE

Alyssum alyssoides (L.) L.

FCM: DAPI. Samples of *A. alyssoides* were prepared from silica gel–dried leaves. Internal standard: *Lycopersicon esculentum* 'Stupické polní rané' (2C DNA = 1.96 pg, Doležel & al. 1992). Fluorescence intensity (against *Lycopersicon esculentum* with a unit value) for analysed plants varied between 0.67 and 0.73 (mean 0.70). CVs of samples and internal standard were 2.09%–4.81% (mean 3.20%) and 1.79%–4.30% (mean 2.66%), respectively. First, samples of plants with known (counted) chromosome numbers were analysed simultaneously with an internal standard, and the ratios of their G_1 peak positions were recorded. Then the DNA ploidy levels of the analysed plants (of unknown chromosome numbers) were assessed by their peak position relative to the standard peak.

Our results covering the area of Italy, France, Slovakia, Slovenia, Croatia, Montenegro, Bosnia and Herzegovina, Serbia, Romania and Bulgaria coincide with the previous findings of the tetraploid chromosome number (2*n* = 32) for this taxon (Warwick & Al-Shehbaz, 2006). Deviations from this chromosome number, 2*n* = 16 (Contandriopoulos, 1970) and 2*n* = 24 (Gadella & Kliphuis, 1970), were not confirmed in any of the investigated plants.

2n = 32, CHN. Romania, Constanţa, Podişul Dobrogei de Sud, W of Mangalia, Limanu, near the lake Lacul Mangalia, 43°48′55.7″N, 28°30′48.4″E, 7 m, 18 May 2007, *S. Španiel*, *K. Marhold*, *J. Zozomová-Lihová & V. Kolarčik 43HAG/5* (SAV).

2*n* ~ 4*x* ~ 32, FCM. **Bosnia and Herzegovina,** Federacija Bosna i Hercegovina, Hercegovačko-neretvanski kanton, near the town of

Stolac towards Radimlja, 43°05′59″ N, 17°55′24″ E, 67 m, 25 Apr 2008, *S. Španiel & M. Perný 123RDJ/1*, *S. Španiel & M. Perný 123RDJ/2*, *S. Španiel & M. Perný 123RDJ/3*, *S. Španiel & M. Perný 123RDJ/4*, *S. Španiel & M. Perný 123RDJ/5* (SAV); Bosnia and Herzegovina, Republika Srpska, Treskavica mountain, Vratlo pass, 43°29.674′N, 18°31.574′E, 1153 m, 21 Jun 2008, *S. Španiel & M. Perný 196TRE/1*, *S. Španiel & M. Perný 196TRE/2*, *S. Španiel & M. Perný 196TRE/3*, *S. Španiel & M. Perný 196TRE/4*, *S. Španiel & M. Perný 196TRE/5* (SAV). **Bulgaria,** Kjustendil, Konjavo, 42°19.867′N, 22°46.527′E, 597 m, 9 May 2007, *S. Španiel & V. Kolarčik KON31/1*, *S. Španiel & V. Kolarčik KON31/2*, *S. Španiel & V. Kolarčik KON31/3*, *S. Španiel & V. Kolarčik KON31/4*, *S. Španiel & V. Kolarčik KON31/5* (SAV). **Croatia,** Ličko-senjska županija, N of Klada, along the road 2 km N of the crossroad to Dragičeviči, 44°49′42″ N, 14°54′12″ E, 358 m, 18 Apr 2008, *S. Španiel & M. Perný 102DCI/1*, *S. Španiel & M. Perný 102DCI/2*, *S. Španiel & M. Perný 102DCI/3*, *S. Španiel & M. Perný 102DCI/4*, *S. Španiel & M. Perný 102DCI/5* (SAV); Croatia, Zadarska županija, village of Kruševo, above the town of Obrovać, near the crossroad Knin-Zadar-Obrovać, 44°11′47″ N, 15°40′51″ E, 98 m, 19 Apr 2008, *S. Španiel & M. Perný 107OBR/1*, *S. Španiel & M. Perný 107OBR/2*, *S. Španiel & M. Perný 107OBR/3*, *S. Španiel & M. Perný 107OBR/4*, *S. Španiel & M. Perný 107OBR/5* (SAV); Croatia, Šibensko-kninska županija, near the village of Prevjes (between villages of Padene and Palanka N of the town of Knin), 44°06′44″ N, 16°04′39″ E, 338 m, 19 Apr 2008, *S. Španiel & M. Perný 108PJS/1*, *S. Španiel & M. Perný 108PJS/2*, *S. Španiel & M. Perný 108PJS/3*, *S. Španiel & M. Perný 108PJS/5* (SAV); Croatia, Šibensko-Kninska županija, N of the town of Knin, near the road to Golubić, near the bifurcation to Dzepine Jerkovići, 44°05′16″ N, 16°13′35″ E, 256 m, 26 Apr 2008, *S. Španiel & M. Perný 125DZE/1*, *S. Španiel & M. Perný 125DZE/2*, *S. Španiel & M. Perný 125DZE/3*, *S. Španiel & M. Perný 125DZE/4*, *S. Španiel & M. Perný 125DZE/5* (SAV). **France,** Provence-Alpes-Côte d'Azur, Hautes Alpes, Montagne de Céüse, 44°31′02″ N, 05°52′08″ E, 1572 m, 15 Jun 2007, *M. Perný 90CEU/1*, *M. Perný 90CEU/2*, *M. Perný 90CEU/3*, *M. Perný 90CEU/4*, *M. Perný 90CEU/5* (SAV). **Italy,** Abruzzo, Maiella, between Passo San Leonardo and the village Pacentro, 42°03′19″ N, 14°01′32″ E, 1075 m, 29 May 2007, *S. Španiel*, *M. Perný & V. Kolarčik 56PAS/5*, *S. Španiel*, *M. Perný & V. Kolarčik 56PAS/6*, *S. Španiel*, *M. Perný & V. Kolarčik 56PAS/8*, *S. Španiel*, *M. Perný & V. Kolarčik 56PAS/9* (SAV); Italy, Abruzzo, Gran Sasso e Monti della Laga, 5 km from Valico della Campannelle towards Fonte Cerreto, 42°27′04.1″ N, 13°23′11.0″ E, 1481 m, 30 May 2007, *S. Španiel*, *M. Perný & V. Kolarčik 59CAM/1*, *S. Španiel*, *M. Perný & V. Kolarčik 59CAM/2*, *S. Španiel*, *M. Perný & V. Kolarčik 59CAM/3*, *S. Španiel*, *M. Perný & V. Kolarčik 59CAM/4*, *S. Španiel*, *M. Perný & V. Kolarčik 59CAM/5* (SAV); Italy, Abruzzo, Maiella, at the foot of Mte Amaro (towards Passo S. Leonardo), 42°04′24.2″ N, 14°03′17.8″ E, 1410 m, 31 May 2007, *S. Španiel*, *M. Perný & V. Kolarčik 60AMA/1*, *S. Španiel*, *M. Perný & V. Kolarčik 60AMA/2*, *S. Španiel*, *M. Perný & V. Kolarčik 60AMA/3*, *S. Španiel*, *M. Perný & V. Kolarčik 60AMA/4*, *S. Španiel*, *M. Perný & V. Kolarčik 60AMA/5* (SAV); Italy, Piemonte, Valle del Chisone, Fenestrelle, Forte Fenestrelle, 45°02′08″ N, 07°03′52″ E, 1630 m, 13 Jun 2007, *M. Perný 88FEN/1*, *M. Perný 88FEN/2*, *M. Perný 88FEN/3*, *M. Perný 88FEN/4*, *M. Perný 88FEN/5* (SAV); Italy, Friuli-Venezia Giulia, Opicina near Trieste, 45°41′38″ N, 13°48′51″ E, 318 m, 28 Apr 2008, *S. Španiel & M. Perný 131OPI/1*, *S. Španiel & M. Perný 131OPI/2*, *S. Španiel & M. Perný 131OPI/3*, *S. Španiel & M. Perný 131OPI/4*, *S. Španiel & M. Perný 131OPI/5* (SAV). **Montenegro,** Bar, near the road between Sutorman and Virpazar, 42°08′57″ N, 19°06′25″ E, 663 m, 21 Apr 2008, *S. Španiel & M. Perný 112SUT/1*, *S. Španiel & M. Perný 112SUT/2*, *S. Španiel & M. Perný 112SUT/3*, *S. Španiel & M. Perný 112SUT/4*, *S. Španiel & M. Perný 112SUT/5* (SAV); Montenegro, Bar, village of Kruče between the towns of Stari Bar and Ulcinj, 41°59.696′N, 19°09.179′E, 82 m, 22 Apr 2008, *S. Španiel & M. Perný 114KRU/1*, *S. Španiel & M. Perný 114KRU/2*, *S. Španiel & M. Perný 114KRU/3*, *S. Španiel & M. Perný 114KRU/4*, *S. Španiel & M. Perný 114KRU/5* (SAV); Montenegro, Budva, along the road near Petrovac (towards Virpazar), 42°13.028′N, 18°57.334′E, 392 m, 22 Apr 2008, *S. Španiel & M. Perný 115PET/1*, *S. Španiel & M. Perný 115PET/2*, *S. Španiel & M. Perný 115PET/3*, *S. Španiel & M. Perný 115PET/4*, *S. Španiel & M. Perný 115PET/5* (SAV). **Romania,** Arad, Munţii Zărandului, Soimos near Lipova, 46°06.522′N, 21°43.420′E, 270 m, 2 May 2007, *S. Španiel*, *K. Marhold, J. Zozomová-Lihová & V. Kolarčik 22LIP/1*, *S. Španiel*, *K. Marhold, J. Zozomová-Lihová & V. Kolarčik 22LIP/2*, *S. Španiel*, *K. Marhold, J. Zozomová-Lihová & V. Kolarčik 22LIP/3*, *S. Španiel*, *K. Marhold, J. Zozomová-Lihová & V. Kolarčik 22LIP/4*, *S. Španiel*, *K. Marhold, J. Zozomová-Lihová & V. Kolarčik 22LIP/5* (SAV); Romania, Constanţa, Podişul Dobrogei de Sud, W of Mangalia, Limanu, near the lake Lacul Mangalia, 43°48′55.7″ N, 28°30′48.4″ E, 7 m, 18 May 2007 *S. Španiel*, *K. Marhold*, *J. Zozomová-Lihová & V. Kolarčik 43HAG/1*, *S. Španiel*, *K. Marhold*, *J. Zozomová-Lihová & V. Kolarčik 43HAG/2*, *S. Španiel*, *K. Marhold*, *J. Zozomová-Lihová & V. Kolarčik 43HAG/3*, *S. Španiel*, *K. Marhold*, *J. Zozomová-Lihová & V. Kolarčik 43HAG/4*, *S. Španiel*, *K. Marhold*, *J. Zozomová-Lihová & V. Kolarčik 43HAG/5*, *S. Španiel*, *K. Marhold*, *J. Zozomová-Lihová & V. Kolarčik 43HAG/6* (SAV); Romania, Tulcea, Podişul Babadagului, between Babadag and Baia (S of Babadag), 44°48′54.0″ N, 28°41′23.0″ E, 113 m, 19 May 2007, *S. Španiel*, *K. Marhold*, *J. Zozomová-Lihová & V. Kolarčik 50BAB/1*, *S. Španiel*, *K. Marhold*, *J. Zozomová-Lihová & V. Kolarčik 50BAB/2*, *S. Španiel*, *K. Marhold*, *J. Zozomová-Lihová & V. Kolarčik 50BAB/3*, *S. Španiel*, *K. Marhold*, *J. Zozomová-Lihová & V. Kolarčik 50BAB/4* (SAV). **Serbia,** Severna Bačka, Subotica, village of Kelebija, 46°10.130′N, 19°34.694′E, 115 m, 13 May 2008, *S. Španiel & J. Šibík 133KEL/1*, *S. Španiel & J. Šibík 133KEL/2*, *S. Španiel & J. Šibík 133KEL/3*, *S. Španiel & J. Šibík 133KEL/4*, *S. Španiel & J. Šibík 133KEL/5* (SAV); Serbia, Bor, Majdanpek, village of Boljetin, near the nature reserve Boljetinska reka, 44°32′24.3″ N, 22°01′46.6″ E, 100 m, 15 May 2008, *S. Španiel & J. Šibík 136BOL/1*, *S. Španiel & J. Šibík 136BOL/2*, *S. Španiel & J. Šibík 136BOL/3*, *S. Španiel & J. Šibík 136BOL/4* (SAV); Serbia, Braničevo, Kučevo, near the village of Radenka, 44°33′19.1″ N, 21°46′01.2″ E, 415 m, 15 May 2008, *S. Španiel & J. Šibík 137RAD/1*, *S. Španiel & J. Šibík 137RAD/2*, *S. Španiel & J. Šibík 137RAD/3*, *S. Španiel & J. Šibík 137RAD/4*, *S. Španiel & J. Šibík 137RAD/5* (SAV); Serbia, Zaječar, hill Vrška Čuka at the Serbian-Bulgarian border, 43°50′07.6″ N, 22°21′47.5″ E, 652 m, 15 May 2008, *S. Španiel & J. Šibík 138RAD/1*, *S. Španiel & J. Šibík 138RAD/2*, *S. Španiel & J. Šibík 138RAD/3*, *S. Španiel & J. Šibík 138RAD/4*, *S. Španiel & J. Šibík 138RAD/5*, *S. Španiel & J. Šibík 138RAD/6* (SAV); Serbia, Pirot, near the village of Topli do (NE of Pirot), 43°15′58.2″ N, 22°33′19.4″ E, 407 m, 17 May 2008, *S. Španiel & J. Šibík 140TOP/1*, *S. Španiel & J. Šibík 140TOP/2*, *S. Španiel & J. Šibík 140TOP/3*, *S. Španiel & J. Šibík 140TOP/4*, *S. Španiel & J. Šibík 140TOP/5*, *S. Španiel & J. Šibík 140TOP/6* (SAV); Serbia, Zaječar, Boljevac, slopes near Mali Izvor beside Radovanska reka, 43°51.480′N, 21°53.753′E, 300 m, 17 May 2008, *S. Španiel & J. Šibík 142IZV/1*, *S. Španiel & J. Šibík 142IZV/2*, *S. Španiel & J. Šibík 142IZV/3*, *S. Španiel & J. Šibík 142IZV/4*, *S. Španiel & J. Šibík 142IZV/5* (SAV); Serbia, Moravica, Čačak, Gornji Vujetinci, hill brdo Ostrica, 43°56′04.9″ N, 20°31′54.9″ E, 780 m, 18 May 2008, *S. Španiel & J. Šibík 144OST/1*, *S. Španiel & J. Šibík 144OST/2*, *S. Španiel & J. Šibík 144OST/3*, *S. Španiel & J. Šibík 144OST/4*, *S. Španiel & J. Šibík 144OST/5* (SAV); Serbia, Zlatibor, Prijepolje, border territory between Jabuka (Serbia) and Pljevlja (Montenegro), 43°20′24″ N, 19°28′57″ N, 1240 m, 18 Jun 2008, *S. Španiel & M. Perný 190PJE/1*, *S. Španiel & M. Perný 190PJE/2*, *S. Španiel & M. Perný 190PJE/3*, *S. Španiel & M. Perný 190PJE/4*, *S. Španiel & M. Perný 190PJE/5* (SAV). **Slovakia,** Podunajská nížina, Mužla, settlement of Čenkov, 47°46.116′N, 18°31.199′E, 109 m, 25 Apr 2007, *S. Španiel 19CKV/1*, *S. Španiel 19CKV/2*, *S. Španiel 19CKV/3*, *S. Španiel 19CKV/4*, *S. Španiel 19CKV/5*, *S. Španiel 19CKV/6*, *S. Španiel 19CKV/7*, *S. Španiel 19CKV/8* (SAV). **Slovenia,** Submediteransko območje, between the villages of Ocizla and Petrinje, 45°34′30″ N, 13°54′39″ E, 411 m, 28 Apr 2008, *S. Španiel*

& M. Perný 129OCI/1, *129OCI/2*, *S. Španiel & M. Perný 129OCI/3, S. Španiel & M. Perný 129OCI/4*, *S. Španiel & M. Perný 129OCI/5* (SAV).

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