



# Chromosome numbers in some vascular plant species from Russia: Komi Republic, Volga Region, Siberia and the Far East

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## ABSTRACT

The chromosome numbers (2n) for 26 vascular plant species of 21 genera from 10 families: Asteraceae: *Aster*, *Pilosella*; Caryophyllaceae: *Cerastium*, *Gypsophila*, *Moebria*, *Stellaria*; Fabaceae: *Glycyrrhiza*; Geraniaceae: *Erodium*; Lamiaceae: *Amethystea*, *Galeopsis*, *Thymus*; Paeoniaceae: *Paeonia*; Poaceae: *Brachypodium*, *Deschampsia*, *Elymus*, *Eremopyrum*, *Melica*, *Poa*; Ranunculaceae: *Ranunculus*; Rosaceae: *Fragaria*; Valerianaceae: *Patrinia*, from European Russia (Komi Republic, Astrakhanskaya Oblast'), Siberia (Altai Republic, Altaiskii Krai, Irkutskaya Oblast') and the Russian Far East (Primorskii Krai, Kamchatka Peninsula) are presented. The CNs are first studied in *Pilosella vaillantii*, *Thymus mongolicus* and *T. roseus*. The first CN count from Russia – for *Cerastium davuricum*, from Siberia – for *Moebria lateriflora*. *Poa ursulensis* is studied for the first time from Altai, *Ranunculus sceleratus* and *Elymus sibiricus* – from Kamchatka, *Erodium cicutarium* – from Irkutskaya Oblast', *E. stephanianum* – from Primorskii Krai. *Poa sajanensis* is reported firstly for Europe (Komi Republic).

**Keywords:** chromosome numbers, vascular plants, Komi Republic, Volga Region, Siberia, Far East, Russia

## РЕЗЮМЕ

Пробатова Н.С., Казановский С.Г., Черныгина О.А. Числа хромосом некоторых видов сосудистых растений из России: Республика Коми, Поволжье, Сибирь и Дальний Восток. Приводятся числа хромосом (2n) для 26 видов сосудистых растений из 21 рода и 10 семейств: Asteraceae: *Aster*, *Pilosella*; Caryophyllaceae: *Cerastium*, *Gypsophila*, *Moebria*, *Stellaria*; Fabaceae: *Glycyrrhiza*; Geraniaceae: *Erodium*; Lamiaceae: *Amethystea*, *Galeopsis*, *Thymus*; Paeoniaceae: *Paeonia*; Poaceae: *Brachypodium*, *Deschampsia*, *Elymus*, *Eremopyrum*, *Melica*, *Poa*; Ranunculaceae: *Ranunculus*; Rosaceae: *Fragaria*; Valerianaceae: *Patrinia*, – из Европейской России (Республика Коми, Астраханская область), Сибири (Республика Алтай, Алтайский край, Иркутская область) и Дальнего Востока (Приморский Край, п-ов Камчатка). Впервые исследованы в карноло-гическом отношении *Pilosella vaillantii*, *Thymus mongolicus* и *T. roseus*. Впервые для России исследовано число хромосом у *Cerastium davuricum*, впервые для Сибири – у *Moebria lateriflora*. *Poa ursulensis* впервые исследован с Алтая, *Ranunculus sceleratus* и *Elymus sibiricus* – с Камчатки, *Erodium cicutarium* – из Иркутской области, *E. stephanianum* – из Приморского края. *Poa sajanensis* впервые указывается для Европы (Республика Коми).

**Ключевые слова:** числа хромосом, сосудистые растения, Республика Коми, Волжский регион, Сибирь, Дальний Восток, Россия

Here we present further results of chromosome number (CN) study of 26 vascular plant species from Russia, mainly from Siberia and the Russian Far East (RFE), as well as from European Russia – Komi Republic and Astrakhanskaya Oblast' – Volga Region (Fig. 1). This contribution continues the series of previous publications by Probatova et al.

Chromosome countings were made with participation of E.G. Rudyka, on squashed preparations of root tips fixed with Carnoy's solution. The root tips were taken mostly from seedlings obtained through herbarium specimens, which were collected in the field. Preparations were stained with iron hematoxylin. Voucher specimens are preserved in the Herbarium VLA, Vladivostok (some – in IRK, Irkutsk). First CN data are indicated by asterisk (\*). The number of the dot on the map follows the number of voucher specimen. Brief information on the affinity and distribution of the species studied is given.

## ASTERACEAE

### *Aster ageratoides* Turcz., 2n = 18

Russia, Far East, Primorskii Krai, Dal'negorskii Raion, in vicinity of Dal'negorsk town, the Rudnaya River basin, ca. 400 m alt., Barachnaya Pad' locality, oak forest (*Quercus mongolica*), 28 Sep 2017, coll. O.A. Chernyagina 13221: 1 (VLA). Distribution: south of Primorskii Krai and of the Amur River basin; China, Korean Peninsula, ?Japan. Oak forests, mixed forests, among shrubs. Described from China. Diploid (2n = 2x, x = 9). All CN counts for this species hitherto made from Primorye show 2n = 18 (see Probatova 2014 and references therein). We suppose that *A. ageratoides* complex is represented in China, Taiwan, Korea and Japan not only by diploids, but by series of high polyploid CNs which were reported under this name (see in Nishikawa 2008).

\**Pilosella vaillantii* (Tausch) Soják (*Hieracium vaillantii* Tausch), 2n = 18

Russia, West Siberia, Altaiskii Krai, Charyshskii Raion, left riverside of the Charysh River, near Krasnyi Partizan



Figure 1 Study area. Dots with numbers from 1 to 17 are the sampling plot locations (according to numbering in the text)

village, the Altaiskii University practice base, 511 m alt., the steppe slope with rocky outcrops, 5 Jul 2016, coll. S.G. Kazanovsky 13257: **2** (IRK, VLA). Distribution: Europe, West Siberia. In *Pinus* and *Betula* forests, meadows, as a weed in the fields. Described from Bohemia. Not often in Altai. Diploid ( $2n = 2x; x = 9$ ). The first CN count for the species.

**CARYOPHYLLACEAE**

***Cerastium davuricum* Fisch. ex Spreng.,  $2n = 38$**

Russia, East Siberia, Irkutskaya Oblast', Irkutskii Raion, near Bol'shoe Goloustnoe settlement, the Uglovaya River – left tributary of Goloustnaya River, 492 m alt., riverside birch grass-forb forest, 21 Jul 2014, coll. S.G. Kazanovsky 13183: **3**. (IRK, VLA). Distribution: Europe, Siberia, Central Asia. Mountain meadows, forest edges, riverside pebbles, among shrubs. Described from the Baikal Siberia. Diploid ( $2n = 2x; x = 19$ ). The CN of this species was determined several times (see Fedorov 1969 and references therein). The first CN count for Russia.

***Gypsophila violacea* (Ledeb.) Fenzl,  $2n = 34$**

Russia, Far East, Primorskii Krai, Chugujevskii Raion, the Ussuri River basin, national park “Zov tigra”, the slope of Snezhnaya Mt., near the source of Ussuri River, dry stony slide-rocks, 30 Sep 2017, coll. O.A. Chernyagina 13218: **4** (VLA). Distribution: East Siberia (Yakutia, rare), Far East. On rocks, stony and rubbly slopes, up to 1800 m alt. Described from Khabarovskii Krai (Okhotsk). The third CN count for the species; it was studied first from near Magadan ( $2n = 34$  – Zhukova 1982), but  $2n = 36$  (Rudyka 1990) was erroneous. Diploid ( $2n = 2x; x = 17$ ).

***Moebringia lateriflora* (L.) Fenzl,  $2n = 24$**

Russia, East Siberia, Irkutskaya Oblast', Ol'khonskii Raion, Ol'khon Island, in vicinity of the Shara-Nur Lake, *Pinus* forest with forbs, 14 Aug 2014, coll. S.G. Kazanovsky 13173: **5** (IRK, VLA). Distribution: Holarctic. In coniferous, mixed and broadleaved forests, forest clearings, among shrubs, along riversides, in wet meadows, rarely in seacoasts, on sand dunes. Described from Siberia. Polymorphous species. Variable ploidy. This is the first CN count for Siberia and moreover, the first finding of diploid cytotype ( $2n = 2x; x = 12$ ), which is common in the RFE (see

Probatova 2014 and references therein), where  $2n = 48$  also occurs (reported from West Chukotka by Zhukova 1967).

***Stellaria daburica* Willd. ex Schlecht.,  $2n = 78$**

Russia, East Siberia, Irkutskaya Oblast', Irkutskii Raion, near Bol'shoe Goloustnoe settlement, the delta of Goloustnaya River, 489 m alt., grass-forb meadow, 22 Jul 2014, coll. S. G. Kazanovsky 13181: **3** (IRK, VLA). Distribution: East Siberia, Mongolia. On riverside pebbles, lakesides, meadows. Described from Dauria. Diploid ( $2n = 2x; x = 19$ ). This CN  $2n = 78$  have been established already in the species from West Chukotka, An'ujskoe upland (Zhukova & Petrovsky 1980, Antonova & Petrovsky 1986).

***Stellaria media* (L.) Vill,  $2n = 22$**

Russia, East Siberia, Irkutskaya Oblast', Sljudjanskii Raion, left riverside of the Sljudjanka River, 636 m alt., moist meadow at the output of spring water from under the rock, 21 Aug 2015, coll. S.G. Kazanovsky 13161: **6** (IRK, VLA). Distribution: Europe, but everywhere as alien and weedy plant. In the fields, vegetable gardens, forest glades, flowerbeds, roadsides, moist places. Described from Europe. Very polymorphous species, with multiple cytotypes, partly aneuploids ( $2n = 20, 22, 40, 42, 44$ ). The first finding of diploid cytotype ( $2x; x = 11$ ) from Siberia. Previously there was only one CN report from Siberia, but it was tetraploid CN  $2n = 44$  (see Chepinoga 2014 and references therein).

**FABACEAE**

***Glycyrrhiza foetidissima* Tausch,  $2n = 16$**

Russia, Volga Region, Astrakhanskaya Oblast', Astrakhan' city, outskirts of Babaevskii Raion, burned forests and moist floodplains, 20 May 2017, coll. O.A. Chernyagina 13228: **7** (VLA). Distribution: SE Europe, Caucasus, Mediterranean, Middle Asia. Meadows, steppe slopes, solonetz lands, among shrubs, along the roads. Described from Europe. Diploid ( $2n = 2x; x = 8$ ). Second CN report for the species.

**GERANIACEAE**

***Erodium cicutarium* (L.) L'Hér.,  $2n = 40$**

Russia, East Siberia, Irkutskaya Oblast', Zalarinskii Raion, Bazhir settlement, biological station of the Siberian Institute of Plant Physiology & Biochemistry SB RAS, 507 m

alt., the first year fallow, 19 Aug 2016, coll. S.G. Kazanovsky 13154: **8** (IRK, VLA). Almost cosmopolitan, but adventive in many regions. Weedy places, fallows, roadsides. Described from Europe. First CN count from Irkutskaya Oblast'. Tetraploid ( $2n = 4x$ ;  $x = 10$ ). Before it was only one report from Siberia ( $2n = 18$ ), perhaps erroneous, or belonging to the next species (see Chepinoga 2014 and references therein).

**\*\**Erodium stephanianum* Willd.,  $2n = 20$**

Russia, Far East, Primorskii Krai, Khassanskii Raion, the Reid Pallada Bay, near Mramornyi Cape, sandy-pebbly maritime terrace, on the territory of recreation center, 17 Jun 2014, coll. V.Yu. Barkalov 13247: **9** (VLA). Siberian-Central Asian species, alien elsewhere and in the Russian Far East. Waste places, at roadsides. Described from East Siberia (Dauria). First count of diploid cytotype ( $2x$ ;  $x = 10$ ) for this species. However from Mongolia  $2n = 16$  was reported (Mesíček & Soják 1995). Polybasic species? Variable ploidy? First CN count from Primorskii Krai.

**LAMIACEAE**

***Amethysetea caerulea* L.,  $2n = 26$**

Russia, East Siberia, Irkutskaya Oblast', Zalarinskii Raion, Bazhir settlement, biological station of the Siberian Institute of Plant Physiology & Biochemistry SB RAS, 507 m alt., the first year fallow, 19 Aug 2016, coll. S.G. Kazanovsky 13172: **8** (IRK, VLA). Distribution: Siberia, Central and East Asia. Steppe slopes, riversides, sandy-pebble banks, stony slide-rocks, waste places, roadsides, as a weed on plantations. Described from Siberia. Several CN counts from Primorskii Krai. The CN is constant. There was only one CN report from Siberia (see Chepinoga 2014 and references therein):  $2n = 26$ . Diploid ( $2n = 2x$ ;  $x = 13$ ).

***Galeopsis ladanum* L.,  $2n = 16$**

Russia, East Siberia, Irkutskaya Oblast', Zalarinskii Raion, Bazhir settlement, biological station of the Siberian Institute of Plant Physiology & Biochemistry SB RAS, 507 m alt., the first year fallow, 19 Aug 2016, coll. S.G. Kazanovsky 13219: **8** (IRK, VLA). Distribution: Europe, Mediterranean, West Siberia, alien in the East Siberia and the Russian Far East. Waste grounds, fallows, roadsides. Described from Europe. Many CN counts, and the CN is constant. Diploid ( $2n = 2x$ ;  $x = 8$ ).

**\**Thymus mongolicus* (Ronn. ex Diels) Ronn.,  $2n = 24$**

Russia, Far East, Primorskii Krai, Oktyabr'skii Raion, near Novo-Georgievka settlement, the valley of Razdol'naya (Suifun) River, on pebbles, 8 Jul 2009, V.A. Nechaev 11399: **10** (VLA). Distribution: South Siberia, Central Asia, south of the RFE. Stony slopes, rocks, sometimes on limestone. Described from East Kazakhstan. First CN count for the species. Diploid? ( $2n = 2x$ ;  $x = 12$ ).

**\**Thymus roseus* Schipczinsky,  $2n = 24$**

Russia, West Siberia, Altaiskii Krai, Charyshskii Raion, left riverside of the Charysh River, near Krasnyi Partizan village, the Altaiskii University practice base, 511 m alt., the steppe slope with rocky outcrops, 5 Jul 2016, coll. S.G. Kazanovsky 13270: **2** (IRK, VLA). Distribution: West Siberia; Central Asia. Stony slopes, rocks and slide-rocks. Described from Kazakhstan. The first CN count for the species. Diploid? ( $2n = 2x$ ;  $x = 12$ ).

**PAEONIACEAE**

***Paeonia obovata* Maxim.,  $2n = 20$**

Russia, Far East, Primorskii Krai, Chuguevskii Raion, the Ussuri River basin, the national park "Zov Tigra", the macroslope of Snezhnaya Mt., 1031 m, Picea forest, 30 Sep 2017, coll. O.A. Chernyagina 13201: **4** (VLA). Distribution: Amur, Sakhalin, South Kurils; China, Korea, Japan. Coniferous, mixed and deciduous forests, in river valleys and on the slopes, among shrubs. Described from Lower Amur River basin. Up to now, in Primorskii Krai the diploid CN  $2n = 10$  was revealed in *P. obovata* two times, and once –  $2n =$

20 for *P. japonica*, its synonym (see Probatova 2014 and references therein). This species in whole have been studying many times, but only from China there were reported two CNs –  $2n = 10$  and 20 (Hong, Zhang et al. 1988, Hong, Pan et al. 2001, Sang 2004); the same, obviously, is observed in Primorye. Further studies are needed. Variable ploidy ( $2n = 2x, 4x$ ;  $x = 5$ ).

**POACEAE**

***Brachypodium pinnatum* (L.) P. Beauv.,  $2n = 14$**

Russia, East Siberia, Irkutskaya Oblast', Sljudjanskii Raion, lower course of the Sljudjanka River, left riverside, 655 m alt., SSE slope with outcrops of crystalline limestone, light *Betula* forest with grasses and forbs, 8 Aug 2015, coll. S.G. Kazanovsky 13162: **6** (IRK, VLA). Distribution: Europe, Central Asia, Siberia (to the West Transbaikalia). Forest glades and clearings, light forests, among shrubs. Described from Europe. This species has eastern border of its area of distribution in south part of the Baikal Siberia. It is peculiar by its CNs, they are not constant within the species:  $2n = 14$  was known from Leningradskaya Oblast' (Sokolovskaya 1972) and from Kazakhstan Republic (Probatova, Kazanovsky, Rudyka et al. 2012),  $2n = 18$  – from Novossibirskaya Oblast', the same CN – also from Kazakhstan (Probatova, Kazanovsky, Rudyka et al. 2012),  $2n = 20$  – from Azerbaidzhan Republic (Sokolovskaya & Probatova 1978). Moreover, the  $2n = 28$  previously was registered from Permskii Krai (Guzik 1984) and from elsewhere, reported by many authors (see Chromosome numbers... 1969 and references therein). Polybasic species?

***Deschampsia turczaninowii* (Litv.) Roshev.,  $2n = 26$**

Russia, East Siberia, Irkutskaya Oblast', Sljudjanskii Raion, the Krugobaikal'skaya railway, 141-th km, near the mouth of Bol'shaya Krutaya Guba River, on moist sands of Baikal Lake, 1 Sep 2014, coll. M.M. Ivanova 13157: **11** (IRK, VLA). Distribution: endemic of Baikal. On sands and gravels of the Baikal lakesides. Described from Baikal (Syyatoi Nos Peninsula). Sometimes the pseudoviviparous spikelets occur in the panicles.  $2n = 26$  (Probatova, Gnutikov, Rudyka et al. 2008). Diploid ( $2n = 2x$ ;  $x = 13$ ).

***Elymus sibiricus* L.,  $2n = 28$**

Russia, Far East, Kamchatskii Krai, Kamchatka Peninsula, Bystrinskii Raion, Esso settlement, on roadside, 25 Aug 2017, coll. O.A. Chernyagina 13192: **12** (VLA). Distribution: E Europe, Siberia, Central and East Asia – NW America; elsewhere as alien. On sands and gravels of riversides, on the slopes, among shrubs, in forest glades, at the roads, in settlements. Described from Siberia. Well studied species in Siberia and the RFE, but still there was no CN count from Kamchatka. Tetraploid ( $2n = 4x$ ;  $x = 7$ ); there are no diploid species in the genus *Elymus* L.

***Eremopyrum orientale* (L.) Jaub et Spach,  $2n = 28$**

Russia, Volga Region, Astrakhanskaya Oblast', Astrakhan' city, Babaevskii Raion, dry roadside in the floodplain, abundant, 20 May 2017, coll. O.A. Chernyagina 13229: **7** (VLA). Distribution: SE and S Europe, Caucasus, Central Asia; elsewhere as alien. In steppes and semi-deserts, on sands, loamy and stony slopes, as alien at the roads. Described from the Aegean Sea islands. Tetraploid ( $2n = 4x$ ;  $x = 7$ ). Well studied species. This CN was also revealed from Crimea (see Agapova et al. 1993 and references therein). Tetraploid ( $2n = 4x$ ;  $x = 7$ ).

***Eremopyrum triticeum* (Gaertn.) Nevski,  $2n = 14$**

Russia, Volga Region, Astrakhanskaya Oblast', Astrakhan' city, Babaevskii Raion, dry roadside in the floodplain, abundant, 20 May 2017, coll. O.A. Chernyagina 13227: **7** (VLA). Distribution: SE Europe, Caucasus, Central Asia; elsewhere as alien. In steppes and semi-deserts, on sands and pebbles, saline places, stony slopes, at the roads and in settlements. Described from the Urals. This CN was also revealed from Crimea (see Agapova et al. 1993 and references therein) and Daghestan (Probatova, Seledets, Rudyka, 2016). The CN is constant. Diploid ( $2n = 2x$ ;  $x = 7$ ).

***Melica transsilvanica* Schur, 2n = 18**

Russia, West Siberia, Republic of Altai, Chermal'skii Raion, right riverside of the Katun' River, at the mouth of Bel'tirtjuk River, 614 m alt., rocky steppe slope, 3 Jul 2016, coll. S.G. Kazanovsky 13268: 13 (IRK, VLA). Distribution: SE Europe, Caucasus, W Siberia – Central Asia. In steppes, forest edges and glades, on stony slopes, on rocks, among shrubs. Described from Romania. Many CN counts from Russia and neighbouring countries. Diploid ( $2n = 2x$ ;  $x = 9$ ). This CN is constant in all the genus *Melica* L.

**\*\**Poa sajanensis* Roshev., 2n = c.64**

Russia, European part, Komi Republic [Komi ASSR], Intinskii Raion, sovkhos "Gornyak", Yun'-Yaga farm, forb meadow on the right riverside of the Yun'-Yaga River, 10 VII 1967, coll. A.P. Sokolovskaya & N.N. Tzvelev 34: 14 (VLA). Distribution: North of European Russia, East Siberia, North of the Russian Far East; North America (Alaska). Meadows in tundra, riverside sands and pebbles. Described from East Sayan Mts. Poorly studied species. Formerly it was misidentified as *Poa pratensis* L. or *P. sublanata* Reverd. Previously the CNs  $2n = 56$  and c. 70 from Kamchatka, North Koryakia and Bering Isl. were reported (Sokolovskaya & Probatova 1968; Probatova & Seledets 2008 – as *P. sublanata*). Here is the new CN for *P. sajanensis* and the first record of this species from Europe. Variable ploidy.

***Poa urssulensis* Trin., 2n = 28**

Russia, West Siberia, Altaiskii Krai, Charyshskii Raion, left riverside of the Charysh River, near Krasnyi Partizan village, the Altaiskii University practice base, 511 m alt., the steppe slope with rocky outcrops, 5 Jul 2016, coll. S.G. Kazanovsky 13258: 2 (IRK, VLA). Distribution: mostly South Siberia – Russian Far East, and in Middle, Central and S Asia. In lighted and dry forests, forest glades, among shrubs, on stony slopes, rocks and pebbles. Described from Altai (the Urssul River). Species with variable ploidy:  $2n = 28, 42 (4x, 6x)$ ; these CNs were reported earlier from Amurskaya Oblast' (see Agapova et al. 1993 and references therein),  $2n = 28$  – from Novossibirskaya Oblast' (Krasnikov 1991). Too little studied species. First CN count from Altai. The species probably has hybrid origin, from *P. transbaicalica* Roshev. and *P. palustris* or *P. nemoralis* (Tzvelev 2010).

**RANUNCULACEAE*****Ranunculus sceleratus* L., 2n = 56**

Russia, Far East, Kamchatskii Krai, Kamchatka Peninsula, suburbs of Petropavlovsk-Kamchatskii city, Malaya Lagernaya Bay, coastal sands, at the freshwater lake, humid zone with anthropogenic impact, 19 Sep 2016, coll. O.A. Chernyagina & E.A. Devyatova 13217: 15 (VLA). Distribution: Holarctic. Riverbanks, seacoasts, sometimes as alien. Anthropophyte, halophyte. Many CN counts throughout the world: mostly  $2n = 32$ , less  $2n = 64$ ; however the Far East populations obviously have another basic CN number than elsewhere (see Probatova 2014 and references therein). The CN  $2n = 56$  is known (but rare) also in Zabaikal'skii Krai (see Chepinoga 2014 and references therein). Variable ploidy ( $2n = 2x, 4x, 8x$ ;  $x = ?7, 8$ ). Further studies are needed. First CN count from Kamchatka.

**ROSACEAE*****Fragaria vesca* L., 2n = 14**

Russia, East Siberia, Irkutskaya Oblast', Kazachinskoi-Lenskii Raion, near the railway station Kunerma, 502 m alt., *Populus tremula* and *Betula* forest with *Vaccinium myrtillus* and small herbs, 11 Aug 2014, coll. S.G. Kazanovsky 13260: 16 (IRK, VLA). Distribution: Euro-Siberian – Mediterranean; alien in North America. Described from North Europe. Multiple CN counts give the same diploid number  $2n = 14$  ( $2n = 2x$ ;  $x = 7$ ).

**VALERIANACEAE*****Patrinia rupestris* (Pall.) DuRoi., 2n = 22**

Russia, Far East, Primorskii Krai, Kavalerovskii Raion, Kavalerovo settlement, the rocks Dersu Uzala, Zerkal'naya

River basin, 298 m alt., the floodplaine, dry slide-rocks, 29 Sep 2017, coll. O.A. Chernyagina 13262: 17 (VLA). Distribution: Siberia, Far East. Stony, rubbly and dry sandy slopes. Described from Dauria. Diploid ( $2n = 2x$ ;  $x = 11$ ). The CN is constant.

**CONCLUSION**

Most of the species studied are diploids, with different basic numbers:  $x = 7, 8, 9, 10, 11, 12, 13, 17, 19$ . Only 3 species have tetraploid CNs (*Elymus sibiricus* and 2 species of *Eremopyrum*). Almost 1/3 of the species studied have variable ploidy, and in 2 species (*Brachypodium pinnatum* and *Ranunculus sceleratus*) the basic CNs are not constant. The CNs are first studied in *Pilosella vaillantii*, *Thymus mongolicus* and *T. roseus*. In *Ranunculus sceleratus*, first studied from Kamchatka, the CN  $2n = 56$  was confirmed, though this CN is not characteristic for this species out of the Russian Far East. In Siberia the CN in *Moehringia lateriflora* was determined for the first time, and it appeared as the minimal for this species. The diploid cytotype we discovered in Siberia for *Stellaria media* as well. *Poa urssulensis* was analysed first from Altai, *Ranunculus sceleratus* and *Elymus sibiricus* – from Kamchatka, *Erodium cicutarium* – from Irkutskaya Oblast', *E. stephanianum* – from Primorskii Krai. *Brachypodium pinnatum* was studied at the east limit of its area of distribution (in Baikal Siberia). In *Paeonia obovata* the variable ploidy is confirmed for the RFE (Primorskii Krai), the same situation is in China ( $2n = 2x, 4x$ ). *Poa sajanensis* is reported firstly from Europe (Komi Republic); besides, here it has new (aneuploid) cytotype  $2n = c.64$ .

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