

IOPB COLUMN

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IAPT/IOPB chromosome data 2

edited by Karol Marhold

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All materials CHN, collected in Georgia, collectors' names abbreviated to RG, TsG, LJ, vouchers in TBI.

ALLIACEAE

- Allium szovitsii* Regel, $2n = 48$; *Shetekauri* 1321.
Allium atroviolaceum Boiss., $2n = 16$; RG & TsG 1322.

ASTERACEAE

- Centaurea bagadensis* Woronow, $2n = 30$; LJ 1331-32.
Centaurea bella Trautv., $2n = 58-60$; LJ 1157-58.
Centaurea cheiranthifolia Willd., $2n = 18$; LJ 1202.
Centaurea solstitialis L., $2n = 16$; LJ 1207.

CARYOPHYLLACEAE

- Gypsophila elegans* M. Bieb., $2n = 34$; TsG 1313.
Silene lacera (Stev.) Sims, $2n = 18$; TsG 1316.
Silene linearifolia Otth, $2n = 24$; TsG 1309.
Silene pygmaea Adams, $2n = 24$; RG 1303.
Telephium orientale Boiss., $2n = 18$; TsG 1305.

CHENOPODIACEAE

- Chenopodium sosnowskyi* Kapeller, $2n = 18$; RG, *Shetekauri* & *Kuchukhidze* 1317.

GENTIANACEAE

- Gentiana cruciata* L., $2n = 52$; RG 1312.

GLOBULARIACEAE

- Globularia trichosantha* Fisch. & C.A. Mey., $2n = 16$; RG & TsG 1319.

PAPAVERACEAE

- Chelidonium majus* L., $2n = 10$; *Kapanadze* 1323.

RANUNCULACEAE

- Ceratocephala falcata* Pers., $2n = 14$; TsG 1318.

SCROPHULARIACEAE

- Linaria meyeri* Kuprian., $2n = 12$; TsG 1308.

VALERIANACEAE

- Valerianella dentata* (L.) Poll., $2n = 14$; RG & TsG 1304.

Michael G. Pimenov¹, Tatyana V. Alexeeva¹, Eugene V. Kljuykov¹, Hu ZhiHao² & Liu QiXin³

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² Yunnan University, Kunming, Yunnan, R. P. China.

³ Nanjing Botanical garden of CAS and Jiangsu Province, R. P. China.

All materials CHN, collected in China, collectors Pimenov & al.: M. G. Pimenov, E. V. Kljuykov, Hu ZhiHao & Liu QiXin; vouchers in MW.

APIACEAE

- Angelica laxifoliata* Diels, $2n = 22$; Pimenov & al. 119.
Bupleurum microcephalum Diels, $2n = 12$; Pimenov & al. 143.
Bupleurum wenchuanense R.H. Shan & Yin Li, $2n = 12$; Pimenov & al. 110.
Chamaesium viridiflorum (Franch.) H. Wolff ex R.H. Shan, $2n = 12$; Pimenov & al. 315.
Chamaesium wolffianum Fedde ex H. Wolff, $2n = 12$; Pimenov & al. 437.
Haplospiraera phaea Hand.-Mazz., $2n = 22$; Pimenov & al. 460.
Heracleum henryi H. Wolff, $2n = 22$; Pimenov & al. 550.
Heracleum stenopterum Diels, $2n = 22$; Pimenov & al. 313.
Heracleum yungningense Hand.-Mazz., $2n = 22$; Pimenov & al. 257.
Hymenidium davidii (Franch.) Pimenov & Kljuykov, $2n = 18$; 15 Sept 1998, Pimenov & al. s.n.
Hymenidium linearilobum (W.W. Smith) Pimenov & Kljuykov, $2n = 22$; Pimenov & al. 406 & 424.
Ligusticopsis brachyloba (Franch.) Leute, $2n = 22$; Pimenov & al. 490.
Ligusticopsis dielsiana (H. Wolff) Pimenov & Kljuykov, $2n = 22$; Pimenov & al. 255 & 256.
Ligusticopsis integrifolia (H. Wolff) Leute, $2n = 22$; Pimenov & al. 510.
Ligusticopsis scapiformis (H. Wolff) Leute, $2n = 22$; Pimenov & al. 345 & 442.
Notopterygium forbesii H. Boissieu, $2n = 22$; Pimenov & al. 166 & 206.
Notopterygium oviforme R.H. Shan, $2n = 22$; Pimenov & al. 303.
Notopterygium weberbauerianum (Fedde ex H. Wolff) Pimenov

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*. 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.

& Kljuykov, $2n = 22$; Pimenov & al. 152.
Ostericum scaberulum (Franch.) C.C. Yuan & R.H. Shan, $2n = 22$; Pimenov & al. 427.
Peucedanum praeruptorum Dunn, $2n = 22$; Pimenov & al. 203.
Pimpinella flaccida C.B. Clarke, $2n = 20$; Pimenov & al. 473.
Pimpinella rockii H. Wolff, $2n = 18$; Pimenov & al. 507.
Semenovia millefolia (Diels) V.M. Vinogr. & Kamelin, $2n = 22$; Pimenov & al. 124.
Seseli grubovii V.M. Vinogr., $2n = 22$; Pimenov & al. 8.
Sinodielsia tibetica (H. Boissieu) Kljuykov & P.K. Mukh., $2n = 24$; Pimenov & al. 326.
Tongoloa elata H. Wolff, $2n = 12$; Pimenov & al. 163.
Trachydium souliei H. Boissieu, $2n = 22$; Pimenov & al. 472.

Michael G. Pimenov, Tatyana V. Alexeeva & Eugene V. Kljuykov

Botanical Garden of Moscow State University, Moscow 119899, Russia; mgpimenov@mail.ru

All materials CHN, collectors P&K = Pimenov & Kljuykov, vouchers in MW.

APIACEAE

Aulacospermum stylosum (C.B. Clarke) Rech. f. & Riedl, $2n = 18$; India, P&K 53.
Bupleurum exaltatum M. Bieb., $n = 7$; Kazakhstan, P&K 152.
Bupleurum himalayense Klotzsch, $2n = 16$; India, P&K 40.
Bupleurum longicaule Wall. ex DC., $2n = 16$; India, P&K 249.
Bupleurum marginatum DC., $n = 7$; India, P&K 45; $2n = 16$, India, P&K 217.
Bupleurum rupestre Edgew., $n = 7$; India, P&K 178.

Chaerophyllum villosum DC., $n = 11$; India, P&K 219.
Contioselinum tataricum Hoffm., $2n = 22$; India, P&K 162 & 244.
Ferula angreni Korovin, $2n = 22$; Kazakhstan, P&K 135.
Heracleum candicans DC., $2n = 22$; India, P&K 14 & 20; India, 7 Sept 2000, P&K s.n.
Heracleum pinnatum C.B. Clarke, $2n = 22$; India, P&K 115 & 155.
Hymenidium lindleyanum (Klotzsch) Pimenov & Kljuykov, $2n = 22$; India, P&K 80.
Hymenidium stellatum (D. Don) Pimenov & Kljuykov, $2n = 18$; India, P&K 60.
Hymenolaena candollei Wall. ex DC., $2n = 22$; India, P&K 59.
Ligusticopsis conifolia (DC.) Pimenov & Kljuykov, $2n = 22$; India, P&K 21, 131, 207 & 226.
Oreocome candollei (Wall. ex DC.) Edgew., $n = 11$; Nepal, P&K 12; $2n = 22$, India, P&K 13, 15 & 247.
Oreocome striata (DC.) Pimenov & Kljuykov, $n = 11$; India, P&K 254.
Pimpinella diversifolia DC., $n = 9$, Nepal, P&K 13.
Pterocyclus angelicoides (DC.) Klotzsch, $2n = 22$; India, P&K 233.
Schulzia albiflora (Kar. & Kir.) Popov, $n = 11$; Kirghyzia, P&K 94.
Selinum vaginatum (Edgew.) C.B. Clarke, $2n = 22$; India, P&K 245.
Seseli roylei (Lindl.) Pimenov & Kljuykov, $2n = 22$; India, P&K 125 & 188.
Sium medium Fisch. & C.A. Mey., $n = 6$; Kirghyzia, P&K 5.
Tordyliopsis brunonis DC., $2n = 22$; Nepal, P&K 24.
Trachyspermum anethifolium (D. Don) H. Wolff, $n = 9$; India, P&K 250.
Vicatia conifolia DC., $2n = 22$; India, P&K 196.

Evolution of Plants in Mountainous and Alpine Habitats

July 2008, Vysoké Tatry Mts., Slovak Republic.

We cordially invite you to Slovakia in the Tatry Mts., July 2008, to the next international IOPB symposium. The meeting will focus on current advances in the study of evolution of plants in mountainous and alpine habitats in various parts of the world. We will invite speakers on different topics, including mountain and alpine plant phylogeography, systematics and phylogeny of vascular plants in relation to mountain and alpine habitats, ecological factors influencing evolution at high altitudes, and conservation genetics of mountain and alpine endemic plants. The meeting was originally intended for 2007, but in order to avoid overlap with several other thematically related meetings, the IOPB council agreed to postpone this event to 2008.

To receive the first circular, please send an e-mail to karol.marhold@savba.sk or contact the following address: **Xth IOPB Symposium Secretariat**, Institute of Botany, Slovak Academy of Sciences, Dúbravská cesta 14, SK-845 23 Bratislava, Slovak Republic, Fax: +421 2 5477 1948.

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- 1983, Montréal, Canada: *Plant Biosystematics: 40 Years Later.*
- 1986, Zürich, Switzerland: *Differentiation Patterns in Higher Plants.*
- 1989, Kyoto, Japan: *Biological Approaches and Evolutionary Trends in Plants.*
- 1992, St. Louis, U.S.A.: *Experimental and Molecular Approaches to Plant Biosystematics.*
- 1995, Tromsø, Norway: *Variation and Evolution in Arctic and Alpine Plants.*
- 1998, Amsterdam, The Netherlands: *Plant Evolution in Man-made Habitats.*
- 2001, Albuquerque, U.S.A.: *Origin and Biology of Desert Floras.*
- 2004, Valencia, Spain: *Plant Evolution in Mediterranean Climate Zones.*

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

ALLIACEAE

Allium szovitsii Regel

$2n = 48$, CHN. Georgia, Khevsureti, upper reaches River Arguni, Khinos-Khorkhi, 2800–3000 m, 20 Aug 1997, *Shetekauri 1321* (TBI).

Allium atroviolaceum Boiss.

$2n = 16$, CHN. Georgia, Kartli, Mtskheta, environs of village of Upper Nichbisi, 700 m, 19 Jun 1998, *Gagnidze & Gviniashvili 1322* (TBI).

ASTERACEAE

Centaurea bagadensis Woronow

$2n = 30$, CHN. Georgia, Gorge of river Kodori, 800 m, 26 Jul 1985, *Jinjolia 1331-32* (TBI).

Centaurea bella Trautv.

$2n = 58-60$, CHN. Georgia, Kartli, Borjomi, environs of Tsagveri, 1000 m, 07 Jul 1997, *Jinjolia 1157-58* (TBI).

Centaurea cheiranthifolia Willd.

$2n = 18$, CHN. Georgia, Kartli, Borjomi, environs of Bakuriani, 1450 m, 01 Aug 1999, *Jinjolia 1202* (TBI).

Centaurea solstitialis L.

$2n = 16$, CHN. Georgia, Kartli, Tbilisi, environs of lake Lisi, 650 m, 04 Aug 1999, *Jinjolia 1207* (TBI).

CARYOPHYLLACEAE

**Gypsophila elegans* M. Bieb.

$2n = 34$, CHN. Georgia, Mtiuleti, Kazbegi, gorge of river Tergi, 1700 m, 16 Sept 1996, *Gviniashvili 1313* (TBI).

Silene lacera (Stev.) Sims

$2n = 18$, CHN. Georgia, Mtiuleti, Kazbegi, left bank of Tergi River, inter villages of Gergeti and Phansheti, 1750 m, 18 Sept 1996, *Gviniashvili 1316* (TBI).

**Silene linearifolia* Otth

$2n = 24$, CHN. Georgia, Mtiuleti, Kazbegi, environs of village of Phansheti, 1750 m, 18 Sept 1996, *Gviniashvili 1309* (TBI).

Silene pygmaea Adams

$2n = 24$, CHN. Georgia, Mtiuleti, Kazbegi, left bank of Tergi River, environs of village of Gveleti, 1500 m, 29 Jul 1996, *Gagnidze 1303* (TBI).

**Telephium orientale* Boiss.

$2n = 18$, CHN. Georgia, Kartli, Borjomi, environs of Tsagveri, 1050 m, 02 Jun 1998, *Gviniashvili 1305* (TBI).

CHENOPODIACEAE

**Chenopodium sosnowskyi* Kapeller

$2n = 18$, CHN. Georgia, Javakheti, South-East coast of lake Pharavani, 2000 m, 20 Aug 1992, *Gagnidze, Shetekauri & Kuchukhidze 1317* (TBI).

GENTIANACEAE

Gentiana cruciata L.

$2n = 52$, CHN. Georgia, Minor Caucasus, Massif Didgori, 1600 m, 17 Oct 1997, *Gagnidze 1312* (TBI).

GLOBULARIACEAE

Globularia trichosantha Fisch. & C.A. Mey.

$2n = 16$, CHN. Georgia, Kartli, Mtskheta, environs of village of Upper Nichbisi, 700 m, 19 Jun 1998, *Gagnidze & Gviniashvili 1319* (TBI).

PAPAVERACEAE

Chelidonium majus L.

$2n = 10$, CHN. Georgia, Kartli, environs of Borjomi, 20 Jul 1997, *Kapanadze 1323* (TBI).

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RANUNCULACEAE*Ceratocephala falcata* Pers.

$2n = 14$, CHN. Georgia, Mtiuleti, Kazbegi, environs of the village of Phansheti, 1800 m, 23 May 1996, *Gviniashvili 1318* (TBI).

SCROPHULARIACEAE**Linaria meyeri* Kuprian.

$2n = 12$, CHN. Georgia, Mtiuleti, Kazbegi, inter villages of Gergeti and Phansheti, 1700 m, 18 Sept 1996, *Gviniashvili 1308* (TBI).

VALERIANACEAE**Valerianella dentata* (L.) Poll.

$2n = 14$, CHN. Georgia, Kartli, Mtskheta, environs of village of Upper Nichbisi, 700 m, 09 Jul 1997, *Gagnidze & Gviniashvili 1304* (TBI).

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The investigations were supported by grants of the Russian Foundation of Fundamental Investigations (RFFI) and the National Geographic Society (U.S.A.).

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

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

APIACEAE*Angelica laxifoliata* Diels

$2n = 22$, CHN. China, Sichuan, Mingjiang river, between Shidaguan and Jiaochang, Maoziquo, near the stream, 32° 02' N, 103° 41' E, 2400 m, 13 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 119* (MW).

Bupleurum microcephalum Diels

$2n = 12$, CHN. China, Sichuan, Songpan Co., route to Hunglong, Limbo village, near Limbo Temple, spruce forests and their margins, shrubs (*Salix*, *Sibiraea*, *Berberis*), 32° 46' N, 103° 38' E, 3330 m, 14 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 143* (MW).

Bupleurum wenchuanense R.H. Shan & Yin Li

$2n = 12$, CHN. China, Sichuan, Mingjiang river, near Shidaguan, valley of lateral stream, 31° 54' N, 103° 41' E, 1800 m, 13 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 110* (MW).

Chamaesium viridiflorum (Franch.) H. Wolff ex R.H. Shan

$2n = 12$, CHN. China, Sichuan, between Xunduoqiao and Yajiang, pass near Gaul Temple, 30° 03' N, 101° 23' E, 4450–4700 m, 22 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 315* (MW).

Chamaesium wolffianum Fedde ex H. Wolff

$2n = 12$, CHN. China, Yunnan, N.W. part, Zhongdian Co., 27 km N. of Zhongdian, 28° 01' N, 99° 43' E, 3800 m, 26 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 437* (MW).

***Haplosphaera phaea* Hand.-Mazz.

$2n = 22$, CHN. China, Yunnan, N.W. part, Degen Co., road Zhongdian-Degen, Mts. Baimashan, Pamala Pass, 28° 20' N, 99° 05' E, 4410 m, 28 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 460* (MW).

Heracleum henryi H. Wolff

$2n = 22$, CHN. China, Yunnan, Tali Co., Diancang Shan Mts., E. slope, above Yangbi, rich mixed forests, 25° 42' N, 100° 06' E, 3200 m, 04 Oct 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 550* (MW).

Heracleum stenopterum Diels

$2n = 22$, CHN. China, Sichuan, between Xinduoqiao and Yajiang, pass near Gaul Temple, 30° 03' N, 101° 23' E, 4450–4700 m, 22 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 313* (MW).

Heracleum yungningense Hand.-Mazz.

$2n = 22$, CHN. China, Sichuan, Kanding Co., between Renmei and Xinduoqiao, 30° 22' N, 101° 31' E, 3900 m, 18 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 257* (MW).

**Hymenidium davidii* (Franch.) Pimenov & Kljuykov (≡ *Pleurospermum davidii* Franch.)

$2n = 18$, CHN. China, Sichuan, Songpan Co., route Songpan-Hongyuan, 38 km from Songpan, river Dobaihe, Huangshenguan, 34° 54' N, 103° 31' E, 3550 m, 15 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin s.n.* (MW).

Hymenidium linearilobum (W.W. Smith) Pimenov & Kljuykov

$2n = 22$, CHN. China, Sichuan, Xiangcheng Co., basin of Shuogu river, between Ranwu and Bazusutzan river, 28° 46' N, 99° 51' E, 3900 m, 25 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 406* (MW), China, Yunnan: N.W. part, Zhongdian Co., near village of Gezan, 28° 13' N, 99° 44' E, 2950 m, 26 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 424* (MW).

Ligusticopsis brachyloba (Franch.) Leute
 $2n = 22$, CHN. China, Yunnan, N.W. part, Zhongdian Co., 12 km N.W. of Zhongdian, Niapahai lake, 27° 58' N, 99° 34' E, 3360 m, 29 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 490* (MW).

Ligusticopsis dielsiana (H. Wolff) Pimenov & Kljuykov

$2n = 22$, CHN. China, Sichuan, Kanding Co., between Renmei and Xinduqiao, 30° 22' N, 101° 31' E, 3900 m, 18 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 255 & 256* (MW).

Ligusticopsis integrifolia (H. Wolff) Leute
 $2n = 22$, CHN. China, Yunnan, Lijiang Co., Mts. Yulongxue Shan, foot of eastern slope, mixed and pine forests, 27° 06' N, 100° 12' E, 3200 m, 01 Oct 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 510* (MW).

Ligusticopsis scapiformis (H. Wolff) Leute
 $2n = 22$, CHN. China, Sichuan, Litang Co., S. margin of Litang City, 30° 10' N, 100° 20' E, 4300 m, 23 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 345* (MW), China, Yunnan, N.W. part, Zhongdian Co., 15 km from Zhongdian on the road to Bifa see, 27° 48' N, 99° 47' E, 27 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 442* (MW).

**Notopterygium forbesii* H. Boissieu
 $2n = 22$, CHN. China, Sichuan, Songpan Co., route Songpan-Hongyuan, 38 km from Songpan, river Dobaihe, Huangshenguan, 34° 54' N, 103° 31' E, 3550 m, 15 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 166* (MW), China, Sichuan, valley of Suomehe river above Maerkang, near Zhoukeji, moist forest, 31° 52' N, 102° 21' E, 2200–2500 m, 17 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 206* (MW).

Notopterygium oviforme R.H. Shan
 $2n = 22$, CHN. China, Sichuan, Kanding Co., near Tongolo (Dongolou), 30° 03' N, 101° 29' E, 3700 m, 21 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 303* (MW).

Notopterygium weberbauerianum (Fedde ex H. Wolff) Pimenov & Kljuykov
 $2n = 22$, CHN. China, Sichuan, Songpan Co., route to Huanglong, pass across Min Shan ridge, 32° 44' N, 103° 42' E, 4200 m, 14 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 152* (MW).

**Ostericum scaberulum* (Franch.) C.C. Yuan & R.H. Shan
 $2n = 22$, CHN. China, Yunnan, N.W. part, Zhongdian

Co., near village of Gezan, 28° 13' N, 99° 44' E, 2950 m, 26 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 427* (MW).

Peucedanum praeruptorum Dunn
 $2n = 22$, CHN. China, Sichuan, valley of Suomehe river above Maerkang, near Zhoukeji, moist forest, 31° 52' N, 102° 21' E, 2300 m, 17 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 203* (MW).

Pimpinella flaccida C.B. Clarke
 $2n = 20$, CHN. China, Yunnan, N.W. part, Degen Co., Mts. Baimashan, 10 km of Degen on the road to Zhongdian, basin of Lankang Jiang (Mekong), 28° 31' N, 98° 45' E, 3400 m, 29 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 473* (MW).

Pimpinella rockii H. Wolff
 $2n = 18$, CHN. China, Yunnan, Lijiang Co., Yulongxue Shan, foot of E. slope, mixed and pine forests, 27° 06' N, 100° 12' E, 3200 m, 01 Oct 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 507* (MW).

Semenovia millefolia (Diels) V.M. Vinogr. & Kamelin
 $2n = 22$, CHN. China, Sichuan, upper part of Minjiang basin, near Songpan, stony slope, 32° 39' N, 103° 36' E, 3000 m, 13 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 124* (MW).

Seseli grubovii V.M. Vinogr.
 $2n = 22$, CHN. China, Xinjiang, East Tianshan, Bogda shan, near lake Tianshi, rocks, 43° 53' N, 88° 06' E, 1700–1800 m, 29 Aug 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 8* (MW).

Sinodielsia thibetica (H. Boissieu) Kljuykov & P.K. Mukh.

$2n = 24$, CHN. China, Sichuan, Yajiang Co., right bank of Yalong Jiang river below Yajiang City, 30° 01' N, 101° 03' E, 2700 m, 22 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 326* (MW).

Tongoloa elata H. Wolff
 $2n = 12$, CHN. China, Sichuan, Songpan Co., route Songpan-Hongyuan, 38 km from Songpan, river Dobaihe, Huangshenguan, 34° 54' N, 103° 31' E, 3550 m, 15 Sept 1998, *Pimenov, Kljuykov, Hu ZhiHao & Liu QiXin 163* (MW).

Trachydium souliei H. Boissieu
 $2n = 22$, CHN. China, Yunnan, N.W. part, Degen Co., road Zhongdian-Degen, Mts. Baimashan, W. slope, 28° 28' N, 99° 04' E, 3800 m, 28 Sept 1998, *Pimenov,*

Kljuykov, Hu ZhiHao & Liu QiXin 472 (MW).

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

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The investigations were supported by grants of the Russian Foundation of Fundamental Investigations (RFFI).

APIACEAE

**Aulacospermum stylosum* (C.B. Clarke) Rech. f. & Riedl

$2n = 18$, CHN. India, Himachal Pradesh, Lahul & Spiti distr., upper Bhaga valley between Patseo and Zing Zing Bar, $32^{\circ} 46' N$, $77^{\circ} 15' E$, 3910 m, 28 Aug 2000, *Pimenov & Kljuykov 53 (MW)*.

Bupleurum exaltatum M. Bieb.

$n = 7$, CHN. Kazakhstan, S. Kazakhstan distr., Ugam Range, valley of Sairam river, $42^{\circ} 09' N$, $70^{\circ} 23' E$, 1700 m, 04 Jul 2000, *Pimenov & Kljuykov 152 (MW)*.

Bupleurum himalayense Klotzsch

$2n = 16$, CHN. India, Himachal Pradesh, Lahul & Spiti distr., Pir Punjal Range, Chandra valley between Khoksar and Sissu, $32^{\circ} 26' N$, $77^{\circ} 18' E$, 3200 m, 27 Aug 2000, *Pimenov & Kljuykov 40 (MW)*.

Bupleurum longicaule Wall. ex DC.

$2n = 16$, CHN. India, Uttar Pradesh, Chamoli distr., Main Himalayan Range, basin of Alaknanda River, Bhyundar valley ("Valley of Flowers"), $30^{\circ} 37' N$, $79^{\circ} 34' E$, 3600–3800 m, 18 Sept 2000, *Pimenov & Kljuykov 249 (MW)*.

Bupleurum marginatum DC.

$n = 7$, CHN. India, Himachal Pradesh, Lahul & Spiti distr., Bhaga valley between Keylong and Gemur, $32^{\circ} 35' N$, $77^{\circ} 08' E$, 3520 m, 28 Aug 2000, *Pimenov & Kljuykov 45 (MW)*.

$2n = 16$, CHN. India, Uttar Pradesh, Chamoli distr., Main Himalayan Range, valley of Alaknanda River, near Govindghat, $30^{\circ} 37' N$, $79^{\circ} 34' E$, 1900 m, 17 Sept 2000, *Pimenov & Kljuykov 217 (MW)*.

**Bupleurum rupestre* Edgew.

$n = 7$, CHN. India, Himachal Pradesh, Kullu distr., Jalori Pass between Banjar and Ani, $31^{\circ} 20' N$, $77^{\circ} 23' E$,

3223 m, 11 Sept 2000, *Pimenov & Kljuykov 178 (MW)*.

Chaerophyllum villosum DC.

$n = 11$, CHN. India, Uttar Pradesh, Chamoli distr., Main Himalayan Range, basin of Alaknanda River, valley of Hem Ganga near Pulana, $30^{\circ} 37' N$, $79^{\circ} 34' E$, 2030 m, 17 Sept 2000, *Pimenov & Kljuykov 219 (MW)*.

Conioselinum tataricum Hoffm. (\equiv *Selinum papyraceum* C.B. Clarke).

$2n = 22$, CHN. India, Himachal Pradesh, Lahul & Spiti distr., Chandra valley, near Chatru, $32^{\circ} 19' N$, $77^{\circ} 21' E$, 3580 m, 10 Sept 2000, *Pimenov & Kljuykov 162 (MW)*, India, Uttar Pradesh, Chamoli distr., Main Himalayan Range, basin of Alaknanda River, Bhyundar valley ("Valley of Flowers"), $30^{\circ} 37' N$, $79^{\circ} 34' E$, 3600–3800 m, 18 Sept 2000, *Pimenov & Kljuykov 244 (MW)*.

**Ferula angreni* Korovin

$2n = 22$, CHN. Kazakhstan, S. Kazakhstan distr., Ugam Range, valley of Sairam river, Sary Agyr, $42^{\circ} 09' N$, $70^{\circ} 23' E$, 1450 m, 03 Jul 2000, *Pimenov & Kljuykov 135 (MW)*.

Heracleum candicans DC.

$2n = 22$, CHN. India, Himachal Pradesh, Kullu distr., Pir Punjal Range, S. slope of Rohtang Pass, Kothi, $32^{\circ} 19' N$, $77^{\circ} 10' E$, 2740 m, 26 Aug 2000, *Pimenov & Kljuykov 14 (MW)*, India, Himachal Pradesh, Kullu distr., Pir Punjal Range, S. slope, Rohtang Pass, 6 km below Marrhi, $32^{\circ} 20' N$, $77^{\circ} 13' E$, 3300 m, 27 Aug 2000, *Pimenov & Kljuykov 20 (MW)*, India, Keylong, 7 Sept 2000, *Pimenov & Kljuykov s.n. (MW)*.

Heracleum pinnatum C.B. Clarke

$2n = 22$, CHN. India, Jammu & Kashmir, Ladakh, Zaskar Mts., Pass Tanglang La, N. slope, $33^{\circ} 36' N$, $77^{\circ} 45' E$, 4900 m, 4 Sept 2000, *Pimenov & Kljuykov 115 (MW)*, India, Himachal Pradesh, Lahul & Spiti distr., Spiti valley between Kaza and Kye Gompa, $32^{\circ} 14' N$, $78^{\circ} 03' E$, 3650 m, 09 Sept 2000, *Pimenov & Kljuykov 155 (MW)*.

**Hymenidium lindleyanum* (Klotzsch) Pimenov & Kljuykov (*Hymenolaena lindleyana* Klotzsch)

$2n = 22$, CHN. India, Jammu & Kashmir, Ladakh, Pass Lachulung La, $33^{\circ} 05' N$, $77^{\circ} 38' E$, 4820 m, 30 Aug 2000, *Pimenov & Kljuykov 80 (MW)*.

Hymenidium stellatum (D. Don) Pimenov & Kljuykov

$2n = 18$, CHN. India, Himachal Pradesh, Lahul & Spiti distr., upper Tsarap valley, near Kumjung Serai (Sarai Kilang), $32^{\circ} 49' N$, $77^{\circ} 26' E$, 4620 m, 29 Aug

2000, *Pimenov & Kljuykov 60* (MW).

**Hymenolaena candollei* Wall. ex DC.

$2n = 22$, CHN. India, Himachal Pradesh, Lahul & Spiti distr., Main Himalayan Range, Pass Baralacha La, 32° 45' N, 77° 26' E, 4900 m, 28 Aug 2000, *Pimenov & Kljuykov 59* (MW).

**Ligusticopsis conifolia* (DC.) Pimenov & Kljuykov

$2n = 22$, CHN. India, Himachal Pradesh, Kullu distr., Pir Punjal Range, S. slope, Rohtang Pass, 6 km below Marrhi, 32° 20' N, 77° 13' E, 3300 m, 27 Aug 2000, *Pimenov & Kljuykov 21* (MW), India, Himachal Pradesh, Lahul & Spiti distr., Chandra valley near Chatru, 32° 19' N, 77° 21' E, 3580 m, 08 Sept 2000, *Pimenov & Kljuykov 131* (MW), India, Himachal Pradesh, Shimla distr., northern slope of Choordar Mt. (S. of Sarain village), 30° 52' N, 77° 30' E, 3290 m, 13 Sept 2000, *Pimenov & Kljuykov 207* (MW), India, Uttar Pradesh, Chamoli distr., Main Himalayan Range, basin of Alaknanda River, valley of Hem Ganga near Bhyundar, 30° 37' N, 79° 34' E, 2400 m, 18 Sept 2000, *Pimenov & Kljuykov 226* (MW).

Oreocome candollei (Wall. ex DC.) Edgew.

$n = 11$, CHN. Central Nepal, E. Himalaya, S. slopes of Annapurna mountain massif, valley of Modi Khola, right bank, between Doban (Dovan) and Himalaya Hotel, 28° 28' N, 83° 52' E, 2900 m, 22 Oct 1999, *Pimenov & Kljuykov 12* (MW).

$2n = 22$, CHN. India, Himachal Pradesh, Kullu distr., Pir Punjal Range, S. slope of Rohtang Pass, Kothi, 32° 19' N, 77° 10' E, 2740 m, 26 Aug 2000, *Pimenov & Kljuykov 13 & 15* (MW), India, Uttar Pradesh, Chamoli distr., Main Himalayan Range, basin of Alaknanda River, Bhyundar valley ("Valley of Flowers"), 30° 37' N, 79° 34' E, 3600–3800 m, 18 Sept 2000, *Pimenov & Kljuykov 247* (MW).

Oreocome striata (DC.) Pimenov & Kljuykov

$n = 11$, CHN. India, Uttar Pradesh, Almora distr., near Ranikhet, 29° 38' N, 79° 25' E, 1830 m, 20 Sept 2000, *Pimenov & Kljuykov 254* (MW).

Pimpinella diversifolia DC.

$n = 9$, CHN. Central Nepal, E. Himalaya, S. slopes of Annapurna mountain massif, valley of Modi Khola, right bank, between Doban (Dovan) and Himalaya Hotel, 28° 28' N, 83° 52' E, 2800 m, 22 Oct 1999, *Pimenov & Kljuykov 13* (MW).

Pterocyclus angelicoides (DC.) Klotzsch

$2n = 22$, CHN. India, Uttar Pradesh, Chamoli distr., Main Himalayan Range, basin of Alaknanda River, valley

of Hem Ganga near Ghangaria, 30° 37' N, 79° 34' E, 3000–3300 m, 18 Sept 2000, *Pimenov & Kljuykov 233* (MW).

**Schulzia albiflora* (Kar. & Kir.) Popov

$n = 11$, CHN. Kirghyzia: Dzhahalabad distr., basin of Naryn River, valley of Chichkan, upper part to Pass Alabel', 42° 15' N, 73° 00' E, 2650 m, 25 Jun 2000, *Pimenov & Kljuykov 94* (MW).

Selinum vaginatum (Edgew.) C.B. Clarke

$2n = 22$, CHN. India, Uttar Pradesh, Chamoli distr., Main Himalayan Range, basin of Alaknanda River, Bhyundar valley ("Valley of Flowers"), 30° 37' N, 79° 34' E, 3600–3800 m, 18 Sept 2000, *Pimenov & Kljuykov 245* (MW).

Seseli roylei (Lindl.) Pimenov & Kljuykov (= *Ligusticum marginatum* C.B. Clarke)

$2n = 22$, CHN. India, Himachal Pradesh, Lahul & Spiti distr., Bhaga valley near Keylong, route to Khardung Gompa, 32° 33' N, 77° 00' E, 3250 m, 07 Sept 2000, *Pimenov & Kljuykov 125* (MW), India, Himachal Pradesh, Shimla distr., Matiana, 31° 12' N, 77° 24' E, 2520 m, 12 Sept 2000, *Pimenov & Kljuykov 188* (MW).

Sium medium Fisch. & C.A. Mey.

$n = 6$, CHN. Kirghyzia, Dzhahalabad distr., basin of fl. Naryn, lower part of Chichkan valley, Emgek, 41° 56' N, 72° 52' E, 1080 m, 21 Jun 2000, *Pimenov & Kljuykov 5* (MW).

***Tordyliopsis brunonis* DC.

$2n = 22$, CHN. Central Nepal, E. Himalaya, S. slopes of Annapurna mountain massif, valley of Modi Khola, right bank, between Machhapuchhare Base Camp and Annapurna Base Camp, 28° 30' N, 83° 51' E, 4200 m, 23 Oct 1999, *Pimenov & Kljuykov 24* (MW).

Trachyspermum anethifolium (D. Don) H. Wolff

$n = 9$, CHN. India, Uttar Pradesh, Chamoli distr., near Adibadri (between Karnaprayag and Ranikhet), 30° 08' N, 79° 14' E, 1580 m, 19 Sept 2000, *Pimenov & Kljuykov 250* (MW).

Vicatia conifolia DC.

$2n = 22$, CHN. India, Himachal Pradesh, Shimla distr., N. slope of Choordar Mt. (S. of Sarain village), 30° 52' N, 77° 30' E, 2700 m, 13 Sept 2000, *Pimenov & Kljuykov 196* (MW).

Evolution of Plants in Mountainous and Alpine Habitats

July 2008, Vysoké Tatry Mts., Slovak Republic.

We cordially invite you to Slovakia in the Tatry Mts., July 2008, to the next international IOPB symposium. The meeting will focus on current advances in the study of evolution of plants in mountainous and alpine habitats in various parts of the world. We will invite speakers on different topics, including mountain and alpine plant phylogeography, systematics and phylogeny of vascular plants in relation to mountain and alpine habitats, ecological factors influencing evolution at high altitudes, and conservation genetics of mountain and alpine endemic plants. The meeting was originally intended for 2007, but in order to avoid overlap with several other thematically related meetings, the IOPB council agreed to postpone this event to 2008.

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