

## Nomenclatural novelties in the Apiaceae ( Umbelliferae ) for the Flora of China

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**Abstract** The revision of the family Apiaceae ( Umbelliferae ) for the Flora of China has demonstrated the need to formally publish the following 12 nomenclatural novelties : *Aconema minus* ( M. F. Watson ) M. F. Watson & Z. H. Pan , *A. brevipedicellatum* Z. H. Pan & M. F. Watson , *Angelica sinensis* var. *wilsonii* ( H. Wolff ) Z. H. Pan & M. F. Watson , *Harrismithia franchetii* ( M. Hiroe ) M. L. Sheh , *Heracleum candicans* var. *obtusifolium* ( Wall. ex DC. ) F. T. Pu & M. F. Watson , *Hydrocotyle hookeri* ssp. *chinensis* ( Dunn ex R. H. Shan & S. L. Liou ) M. F. Watson & M. L. Sheh , *H. hookeri* ssp. *handelii* ( H. Wolff ) M. F. Watson & M. L. Sheh , *Libanotis grubovii* ( V. M. Vinogradova ) M. L. Sheh & M. F. Watson , *Ligusticum likiangense* ( H. Wolff ) F. T. Pu & M. F. Watson , *L. nematophyllum* ( Pimenov & Kljuykov ) F. T. Pu & M. F. Watson , *L. nullivittatum* ( K. T. Fu ) F. T. Pu & M. F. Watson , *Pleurospermum bicolor* ( Franch. ) C. Norman ex Z. H. Pan & M. F. Watson. In addition , a lectotype is designated for *P. govanianum* ( DC. ) Benth. ex C. B. Clarke var. *bicolor* Franch. ( *P. bicolor* ).

**Key words** *Aconema* , *Angelica* , *Harrismithia* , *Heracleum* , *Hydrocotyle* , *Libanotis* , *Ligusticum* , *Pleurospermum* , Apiaceae , Umbelliferae , China , new species , new combination , lectotype.

Taxonomic revisions undertaken by the authors when preparing generic accounts for the Flora of China Apiaceae ( Umbelliferae ) necessitated a number of nomenclatural novelties. These are formally published here in advance of the printed Flora of China volume ( Sheh et al. , in press ) with supplementary notes when needed.

**1 *Aconema minus*** ( M. F. Watson ) M. F. Watson & Z. H. Pan , comb. nov. — *Sinocarum minus* M. F. Watson in Edinburgh J. Bot. 53 : 140. 1996. Type : Nepal. Barun Khola , Num , alt. 12500 ft , 1956-06-07 , J. D. A. Stainton 547 ( holotype , BM ! ; isotype , E ! ).

*A. wolffianum* sensu S. L. Liou in Fl. Reip. Pop. Sin. 55 ( 2 ) : 119. 1985 , non Fedde ex H. Wolff ( 1930 ).

矮小丝瓣芹

Note : *Aconema wolffianum* Fedde ex H. Wolff ( Repert. Spec. Nov. Regni Veg. 27 : 328. 1930 ) is a large plant ( usually 15 – 30 cm ) , with expanded petiole sheaths , rays 5 – 16 , 1 – 3.7 cm long , and obtuse petals. It is distributed in the eastern Himalaya and different to the Chinese material that has been attributed to this species ( e.g. in Fl. Reip. Pop. Sin. 55 ( 2 ) : 119 – 121. 1985 ). These Chinese plants are much smaller ( ca. 5 cm ) , have short petiole sheaths , rays 3 – 7 , ca. 1 cm long , and acute petals. Research has shown that these plants are conspecific with the recently described Bhutanese endemic *Sinocarum minus* . We now consider this to be better placed in

*Acronema* Edgeworth ( on account of the acute petals and small petiole sheaths ), and so make the necessary new combination.

**2 *Acronema brevipedicellatum*** Z. H. Pan & M. F. Watson, sp. nov. Type : China. Yunnan : Lijiang, Mt. Yulong Shan, alt. 3300 m, 1984-09-28, Pan Ze-hui et al. 84-186 ( holotype, NAS !).

*A. radiatum* sensu S. L. Liou in Fl. Reip. Pop. Sin. 55 ( 2 ): 128, pl. 51, fig. 10. 1985, non ( W. W. Smith ) H. Wolff, 1927.

#### 短柄丝瓣芹

Latin diagnosis : Species foliis basalibus et fulcrantibus heteromorphis, radiis brevibus, circ. 1 cm, pedicellis brevibus, 1 – 2 mm vel sessilibus, floribus albis, condensatis distincta.

Note : Comparison of material of *Acronema radiatum* ( W. W. Smith ) H. Wolff ( in Engler, Pflanzenr. 90 ( IV.228 ): 324. 1927 ; *Pimpinella radiata* W. W. Smith, Rec. Bot. Soc. India, 4 : 266. 1911 ; *Pternopetalum radiatum* ( W. W. Smith ) P. K. Mukherjee ), of the eastern Himalaya, has shown that this name has been misapplied in China. The Chinese material could not be equated with any previously known taxon, and so is here described as a new species.

**3 *Angelica sinensis* var. *wilsonii*** ( H. Wolff ) Z. H. Pan & M. F. Watson, comb. nov. — *A. wilsonii* H. Wolff in Repert. Spec. Nov. Regni Veg. 27 : 335. 1930. Type : China ( unlocalised ). Wilson s.n. 1907-1909 ( holotype, A !).

#### 川西当归

Note : Examination of the type of *Angelica wilsonii* has revealed that this taxon is very close to *A. sinensis*, and they are now considered conspecific. Here we have recognised *A. wilsonii* as a distinct variety, differentiated from the typical variety by obovoid or subglobose fruit ( vs. ellipsoid or ovoid ), and vittae absent on commissure ( vs. 1 – 2 on commissure ).

**4 *Harrysmithia franchetii*** ( M. Hiroe ) M. L. Sheh, comb. nov. — *Carum franchetii* M. Hiroe, Umc. World, 871. 1979, nomen novum for *C. dissectum* Franch. in Bull. Soc. Philom. Paris, sér. 8, 6 : 123. 1894, non Baillon, 1879. — *Harrysmithia dissecta* H. Wolff ex R. H. Shan in Fl. Reip. Pop. Sin. 55 ( 2 ): 128. 1985. Type : China. Yunnan : Talongtan near Tapintze, 1888-09-17, J. M. Delavay 3908 ( holotype, P !).

#### 云南细裂芹

Note : Franchet 's name is illegitimate as it was a later homonym when published. Hiroe ( 1979 ) republished this as a nomen novum under *Carum* L., and here we transfer this species to *Harrysmithia* H. Wolff following Shan 's treatment in Fl. Reip. Pop. Sin. 55 ( 2 ): 135. 1985.

**5 *Heracleum candicans* var. *obtusifolium*** ( Wall. ex DC. ) F. T. Pu & M. F. Watson, comb. et stat. nov. — *Heracleum obtusifolium* Wall. ex DC., Prodr. 4 : 191. 1830. — *Tetrataenium obtusifolium* ( Wall. ex DC. ) Mandenova in Notulae Syst. Geogr. Inst. Bot. Tbilissi 42 : 13. 1991. Type : Nepal ( unlocalised ). 1821, N. Wallich, Wall. Cat. 577 ( lectotype, G-DC ! ; isotype, K-W !).

#### 钝叶独活

Note : The taxonomic boundaries between *Heracleum obtusifolium* and the western Himalayan *H. candicans* Wall. ex DC. ( Prodr. 4 : 192. 1830 ) have long been problematic ( Watson, 1999 ). Leaf characters used to separate these taxa ( depth of division, dentation of the leaf margin, and leaf apex shape ) are very variable and are now considered unsuitable for retaining these taxa as separate species. Hence *H. obtusifolium* is reduced to a variety of *H. candicans*.

**6 *Hydrocotyle hookeri* ssp. *chinensis*** ( Dunn ex R. H. Shan & S. L. Liou ) M. F. Watson & M. L. Sheh, comb. nov. — *Hydrocotyle javanica* Thunb. var. *chinensis* Dunn ex R. H. Shan &

S. L. Liou in Acta Phytotax. Sin. 9 : 129. 1964. Type : China. Yunnan : Mengzi , A. Henry 10244 ( holotype , K !).

*H. burmanica* Kurz ssp. *craibii* ( H. Eichler ) C. Y. Wu & F. T. Pu in Novon 8 : 70. 1998. — *H. craibii* H. Eichler in Feddes Peper. 98 : 146. 1987. Type : China. Yunnan : Mengzi , alt. 2800 m , A. Henry 10224 ( holotype , K !).

*H. shanii* Boufford in Acta Phytotax. Sin. 28 : 331. 1990 , nom. illeg. superfl.

#### 中华天胡荽

Note : *Hydrocotyle burmanica* Kurz is a narrow endemic of southern Myanmar ( Watson & Smith , 2004 ) , but has been widely misapplied in China ( e. g. in Fl. Reip. Pop. Sin. 55 ( 1 ) : 20 , 22. 1979 ). Examination of the type material has shown that these Chinese plants equate with *H. hookeri* ( C. B. Clarke ) Craib ( Bull. Misc. Inform. Kew 1911 : 59. 1911 ). New combinations are thus required for Dunn 's var. *chinensis* , and *H. handelii* H. Wolff , both of which are now treated as subspecies of *H. hookeri* . Furthermore , *Hydrocotyle forrestii* H. Wolff is now recognised as a synonym of *H. hookeri* ssp. *hookeri* .

**7 *Hydrocotyle hookeri* ssp. *handelii*** ( H. Wolff ) M. F. Watson & M. L. Sheh , comb. nov. — *Hydrocotyle handelii* H. Wolff in Hand.-Mazz. , Symb. Sin. 7 : 707. 1933. — *H. burmanica* Kurz ssp. *handelii* ( H. Wolff ) C. Y. Wu & F. T. Pu in W. T. Wang. , Vasc. Pl. Hengduan Mountains 1 : 1277. 1993. Type : China. Yunnan : Yunnanfu ( Kunming ) , alt. 2350 m , 1914-10-01 , H. R. E. Handel-Mazzetti 5694 ( holotype , WU !).

#### 普渡天胡荽

**8 *Libanotis grubovii*** ( V. M. Vinogradova & C. H. Sanchir ) M. L. Sheh & M. F. Watson , comb. nov. — *Seseli grubovii* V. M. Vinogradova & C. H. Sanchir in Bot. Zhurn. 70 ( 7 ) : 965. 1985. Type : China. N Xinjiang : between Mt. Tian Shan and Bogdo-Ola , 1929-09-05 , M. Popov 423 ( holotype , LE ).

#### 锐棱岩风

Note : The retention of the traditional separation of *Libanotis* Haller ex Zinn and *Seseli* L. in the Flora of China necessitates the publication of *S. grubovii* , newly reported for China , in *Libanotis* .

**9 *Ligusticum likiangense*** ( H. Wolff ) F. T. Pu & M. F. Watson , comb. nov. — *Pleurospermum likiangense* H. Wolff in Repert. Spec. Nov. Regni Veg. 27 : 116. 1929. — *Ligusticopsis likiangensis* ( H. Wolff ) Lavrova & Kljuykov in Bot. Zhurn. 79 ( 10 ) : 104. 1994. Type : China. Yunnan : Likiang Snow Range , above Mahwang Patze , alt. 15300 ft , 1922-08-18 , J. F. C. Rock 5953a ( holotype , US !).

*Ligusticopsis integrifolia* ( H. Wolff ) Leute in Ann. Naturhist. Mus. Wien 73 : 77. 1969. — *Ligusticum integrifolium* H. Wolff in Repert. Spec. Nov. Regni. Veg. 27 : 307. 1930. Type : China , Yunnan : Lijiang , alt. 3300 m , G. Forrest 6357 ( holotype , E !).

*Ligusticum calophlebicum* H. Wolff in Repert. Spec. Nov. Regni. Veg. 27 : 310. 1930. — *Pleurospermum calophlebicum* ( H. Wolff ) M. Hiroe , Umbelliferae of Asia ( Excluding Japan ) 1 : 122. 1958. Type : China. Yunnan : Lijiang ( 丽江 ) , alt. 3000 – 4000 m , J. F. Rock 5844 ( isotype , E !).

*Trachydium hispidum* H. Wolff in Repert. Spec. Nov. Regni. Veg. 27 : 329. 1930 , non Franchet , 1894.

#### 美脉藁本

Note : *Pleurospermum likiangense* ( 1930 ) might be an erroneous repetition of *P. likiangense* . Even so , the former name is based on a different type to the latter , and is therefore an illegitimate

later homonym. However, the homonyms are evidently also taxonomic synonyms. The original descriptions show a basic consistency. The sum of gross external morphological characters shows that *P. likiangense* is similar to *Ligusticum calophlebicum*, but differs from the genus *Pleurospermum* Hoffmann in having linear bracts and bracteoles, ciliate at the margins (vs. often with white, narrow or broad, membranous margins); and fruit glabrous, lateral ribs narrowly winged (vs. corrugated, ribs equally winged or subwinged). This species is transferred to *Ligusticum* L. with the necessary new combination. *Ligusticum integrifolium* and *Trachydium hispidum* H. Wolff are also included within this taxon.

**10 *Ligusticum nematophyllum*** (Pimenov & Kljuykov) F. T. Pu & M. F. Watson, comb. nov. — *Conioselinum nematophyllum* Pimenov & Kljuykov, Willdenowia 33 : 361. 2003, nomen novum for *Ligusticum filifolium* R. H. Shan & F. T. Pu in Acta Phytotax. Sin. 29 : 538. 1991, non J. D. Hooker, 1864. Type : China. Sichuan : Nanping, Gong-ga-ling, alt. 3200 m, 1984-08-25, J. He 110 (holotype, CDBI!).

#### 线叶蕺本

Note : Shan and Pu's name is illegitimate as it was a homonym when published. Pimenov and Kljuykov republished this as a *nomen novum* under *Conioselinum* Hoffmann, and here we transfer this species to *Ligusticum* for the Flora of China.

**11 *Ligusticum nullivittatum*** (K. T. Fu) F. T. Pu & M. F. Watson, comb. nov. — *Cnidium nullivittatum* K. T. Fu in Fl. Tsinling. 1(3) : 460. 1981. — *Selinum nullivittatum* (K. T. Fu) C. C. Yuan & L. B. Li in Acta Bot. Bor.-Occid. Sin. 13 : 66. 1993. Type : China. Shaanxi : Hwain Hsien (Huayin), Tapaiyangcha, alt. 1600 – 1900 m, 1974-09-27, K. T. Fu 17241 (holotype, NWBI!).

#### 无管蕺本

Note : This species differs from the genus *Selinum* Linnaeus in having calyx teeth obscure (vs. evident, linear-lanceolate, and often equal or exceeding the stylopodium). It differs from the genus *Cnidium* in having fruit oblong-obovate (vs. oblong-ovoid) and ribs not corky (vs. narrowly corky winged). It is much more closely related to *Ligusticum acuminatum* Franch., so we here transfer it to the genus *Ligusticum*.

**12 *Pleurospermum bicolor*** (Franch.) C. Norman ex Z. H. Pan & M. F. Watson, comb. nov. — *Pleurospermum govanianum* (DC.) Benth. ex C. B. Clarke var. *bicolor* Franch. in Bull. Soc. Philom. Paris, sér. 8, 6 : 137. 1894, non *P. govanianum* var. *bicolor* H. Wolff, 1929, nom. illeg. — *Hymenidium bicolor* (Franch.) Pimenov & Kljuykov in Feddes Repert. 111 : 545. 2000. Type : China. Yunnan : Koulapo, between Dali and Heqing, alt. 3200 m, 1884-08-26, J. M. Delavay 949 (lectotype, P!).

#### 二色棱子芹

Note : Comparison of herbarium material across the whole Sino-Himalayan region reveals that this plant is quite different to the western Himalayan *Pleurospermum govanianum* and should be recognised as distinct species.

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## 为《Flora of China》提供的伞形科新资料

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**摘要** 在为编写《Flora of China》伞形科而进行的修订工作中,提出了 11 个新组合,即矮小丝瓣芹 *Acrone-ma minus* (M. F. Watson) M. F. Watson & Z. H. Pan, 短柄丝瓣芹 *A. brevipedicellatum* Z. H. Pan & M. F. Watson, 川西当归 *Angelica sinensis* var. *wilsonii* (H. Wolff) Z. H. Pan & M. F. Watson, 云南细裂芹 *Harry-smithia franchetii* (M. Hiroe) M. L. Sheh, 钝叶独活 *Heracleum candicans* var. *obtusifolium* (Wall. ex DC.) F. T. Pu & M. F. Watson, 中华天胡荽 *Hydrocotyle hookeri* ssp. *chinensis* (Dunn ex R. H. Shan & S. L. Liou) M. F. Watson & M. L. Sheh, 普渡天胡荽 *H. hookeri* ssp. *handelii* (H. Wolff) M. F. Watson & M. L. Sheh, 锐棱岩风 *Libanotis grubovii* (V. M. Vinogradova) M. L. Sheh & M. F. Watson, 美脉藁本 *Ligusticum likiangense* (H. Wolff) F. T. Pu & M. F. Watson 和线叶藁本 *L. nematophyllum* (Pimenov & Kljuykov) F. T. Pu & M. F. Watson, 无管藁本 *L. nullivittatum* (K. T. Fu) F. T. Pu & M. F. Watson 和二色棱子芹 *Pleurospermum bicolor* (Franch.) C. Norman ex Z. H. Pan & M. F. Watson. ;发现了 1 个新种,即短柄丝瓣芹。此外,还为 *Pleurospermum govanianum* var. *bicolor* Franch. 指定了后选模式。

**关键词** 丝瓣芹属;当归属;细裂芹属;独活属;天胡荽属;岩风属;藁本属;棱子芹属;伞形科;中国;新种;新组合;后选模式