

中国毛茛科翠雀属的分类学研究(七): 岩瓦翠雀花的名实订正

袁琼, 杨亲二*

(中国科学院华南植物园, 中国科学院植物资源保护与可持续利用重点实验室, 广州 510650)

摘要: 通过标本室和野外观察, 发现根据云南西北部维西标本描述的毛茛科岩瓦翠雀花(*Delphinium yanwaense* W. T. Wang)与云南西北部颇为常见的中甸翠雀花(*D. yuanum* Chen)没有本质区别, 故将前者处理为后者的异名。中甸翠雀花在叶的分裂程度上变异颇大。

关键词: 翠雀属; 毛茛科; 分类学

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Taxonomic Studies on the Genus *Delphinium* (Ranunculaceae) from China (VII): The Identity of *D. yanwaense*

YUAN Qiong, YANG Qin-er*

(Key Laboratory of Plant Resources Conservation and Sustainable Utilization, South China Botanical Garden, Chinese Academy of Sciences, Guangzhou 510650, China)

Abstract: Both herbarium and field observations have shown that *Delphinium yanwaense* W. T. Wang described from Weixi in northwestern Yunnan, China, is not essentially different from *D. yuanum* Chen, a species very common in northwestern Yunnan and highly variable in the degree of leaf division. We therefore reduce the former to the synonymy of the latter.

Key words: *Delphinium*; Ranunculaceae; Taxonomy

In 1983, Wang^[1] described *Delphinium yanwaense* W. T. Wang on the basis of a collection, K. Y. Lang et al. (= Beijing Inst. Bot. Hengduan Mount. Exped) 1325 (PE; Fig.1: A, B), from Weixi, northwestern Yunnan, China. In the protologue, he compared it with *D. tongolense* Franch., a species fairly common in western Sichuan and somewhat disjunctively occurring in central Yunnan (Songming), stating that it differed from *D. tongolense* in the stem lower, ca. 30 cm tall, only basally puberulent, glabrous elsewhere, the leaves smaller, 3.5–4.5 cm long, 4.5–5.5 cm broad,

the inflorescence 3–5-flowered with the axis glabrous, the pedicels puberulent only at apex, and the stamen filaments sparsely puberulent.

The characters given for *Delphinium yanwaense*, particularly the glabrous stem, inflorescence axis and pedicels, however, are reminiscent of *D. yuanum* Chen, a species very common in northwestern Yunnan, and also occurring in the adjacent southeastern Xizang (Zayu) and western Sichuan (Daocheng, Xiangcheng). Since its description, *D. yuanum* had long been known only from its type collection, i.e. T. T. Yu 12490 from Zhongdian

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* Corresponding author. E-mail: qeyang@scib.ac.cn

in northwestern Yunnan. In 2010 Yuan^[2] found this is due to that all other specimens belonging to it had been misidentified as *D. tenii* H. Lév., which was synonymous with *D. tatsienense* Franch. *Delphinium tatsienense* is widely distributed in western Sichuan, and northeastern and central Yunnan. It is readily distinguishable from *D. yuanum*, among other characters, by the stem, inflorescence axis and pedicels all densely retrorsely puberulent.

Wang^[3] in 1979 noted, under the name *Delphinium tenii*, that *D. yuanum* is highly variable in the degree of leaf division. This can be easily seen from herbarium specimens and has also been confirmed by our field observations. In particular, individuals with less divided leaves (Figs. 1–4) often appear in the populations growing in the valley of the Lanchang (Mekong) River (Yanwa, the type locality of *D. yanwaense*, is situated in the valley). *Delphinium yanwaense* is evidently no more than such a form of *D. yuanum*. Indeed, it is regrettable that, in describing *D. yanwaense* as new in 1985, Wang^[1] forgot his previous correct observation on the high variability in the degree of leaf division of *D. yuanum*.

In 1962 Wang^[4] described *Delphinium dolichocentrum* W. T. Wang on the basis of a series of specimens from northwestern Yunnan (Deqen, Lanping, Weixi; three paratype sheets are shown in Fig. 1: C, D and Fig. 2: D), but in 1979 Wang^[3] himself reduced it to the synonymy of *D. tenii*, which, as mentioned above, is a misapplied name for *D. yuanum*. In 1979 Wang^[5] described *D. obcordatilimum* W. T. Wang var. *minus* W. T. Wang on the basis of a collection, Sichuan Veg. Exped. 2100 (CDBI, KUN, PE; Fig. 5). Wang and Warnock^[6] in 2001 reduced it to the synonymy of *D. tenii*. Yuan^[2] in 2010 transferred both *D. obcordatilimum* var. *minus* and *D. dolichocentrum* from the synonymy of *D. tenii* to the synonymy of *D. yuanum*. After examining the type material we adopt this treatment herein.

It is far from understandable to us that Wang^[1] compared his *Delphinium yanwaense* with *D. tongolense*. As shown in Figure 1: A, B and Figure 6, in general aspect they are so different from each other that we

consider they are only distantly related. We will deal with *D. tongolense* in detail in another paper of this series.

Based on the above analyses we consider it reasonable to place *Delphinium yanwaense* in synonymy with *D. yuanum*.

Delphinium yuanum Chen in Bull. Fan Mem. Inst. Biol., n.s., **1**: 176. 1948; W. T. Wang in Acta Bot. Sin. **10**: 163. 1962; Munz in J. Arn. Arb. **48**: 543. 1967, p.p.; W. T. Wang in Fl. Reipubl. Popularis Sin. **27**: 434. 1979; et in Vas. Pl. Hengduan Mount. **1**: 489. 1993; et in Fl. Yunnan. **11**: 137. 2000; W. T. Wang & Warnock in Fl. China **6**: 263. 2001; Q. Yuan in J. Wuhan Bot. Res. **28**: 17. 2010. Type: China. Yunnan, Zhongdian, suburb of county town, grassland, 3000 m, Jul. 27, 1937, T. T. Yu (holotype, KUN!; isotypes, A!, KUN!, PE!).

D. dolichocentrum W. T. Wang in Acta Bot. Sin. **10**: 162. 1962. Type: China. Yunnan: Deqen, Chienalungna, grassland, 3100 m, Aug. 28, 1937, T. T. Yu 9885 (holotype, PE!; isotypes, KUN!, PE!).

D. obcordatilimum var. *minus* W. T. Wang in Fl. Reipubl. Popularis Sin. **27**: 616. 1979. Type: Sichuan: Daocheng, Julongxiang, Walongshe, grassland, 2800 m, Jul. 12, 1973, Sichuan Veg. Exped. 2100 (holotype, PE!; isotypes, CDBI!, KUN!, PE!).

D. yanwaense W. T. Wang in Acta Bot. Yunnan. **5**: 157. 1983; et in Vas. Pl. Hengduan Mount. **1**: 484. 1993; et in Fl. Yunnan. **11**: 124. 2000; W. T. Wang & Warnock in Fl. China **6**: 252. 2001. **syn. nov.** Type: China. Yunnan, Weixi, Yanwa, eastern side of Biluo Shan, on rocks, 2700 m, Jul. 11, 1981, K. Y. Lang et al. (= Beijing Inst. Bot. Hengduan Mount. Exped) 1325 (holotype, PE!; isotypes, PE!).

D. tenii auct. non H. Lév.: Munz in J. Arn. Arb. **48**: 538. 1967, p.p.; W. T. Wang in Fl. Reipubl. Popularis Sin. **27**: 431. 1979; et in Vas. Pl. Hengduan Mount. **1**: 489. 1993; et in Fl. Yunnan. **11**: 135. 2000; et in Guihaia **17**: 8. 1997; W. T. Wang & Warnock in Fl. China **6**: 263. 2001.

Additional specimens examined. Sichuan: Xiangcheng, Anonymous 1086 (CDBI), D. E. Boufford et al. 28550 (PE), 28847 (PE), 29062 (PE), J. Dong



Fig. 1 Specimens of *Delphinium yuanum*, all from Yanwa, Weixi, Yunnan, China. A: K. Y. Lang et al. (= Beijing Inst. Bot. Hengduan Mount. Exped) 1325 (holotype of *D. yanwaense*, PE); B: K. Y. Lang et al. 1325 (isotype of *D. yanwaense*, PE); C, D: K. M. Feng 4980 (paratypes of *D. dolichocentrum*, KUN).

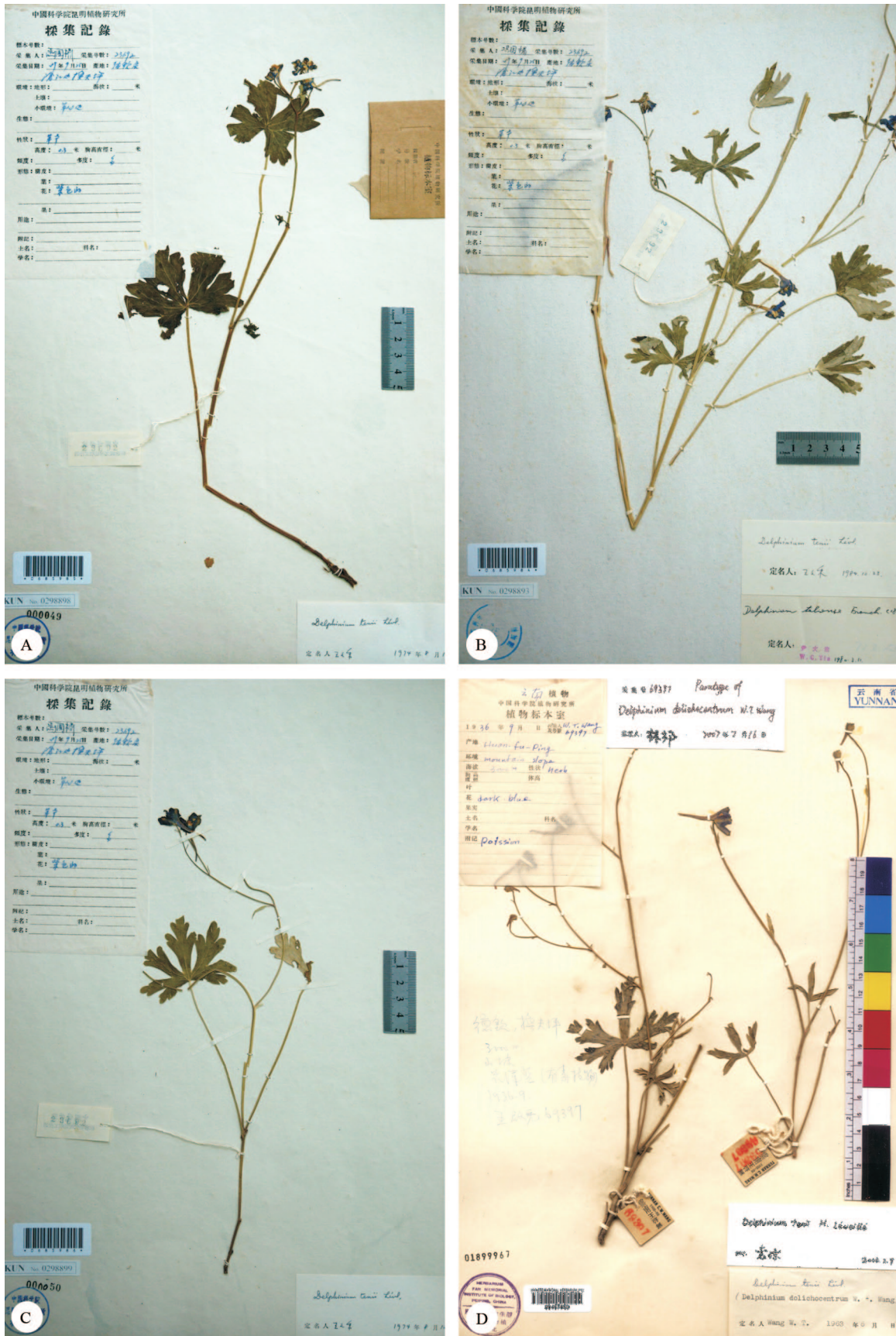


Fig. 2 Specimens of *Delphinium yuenum*, all from Huanfuping, Deqen, Yunnan, China. A–C: K. M. Feng 23692 (KUN); D: C. W. Wang 68397 (paratype of *D. dolichocentrum*, PE).

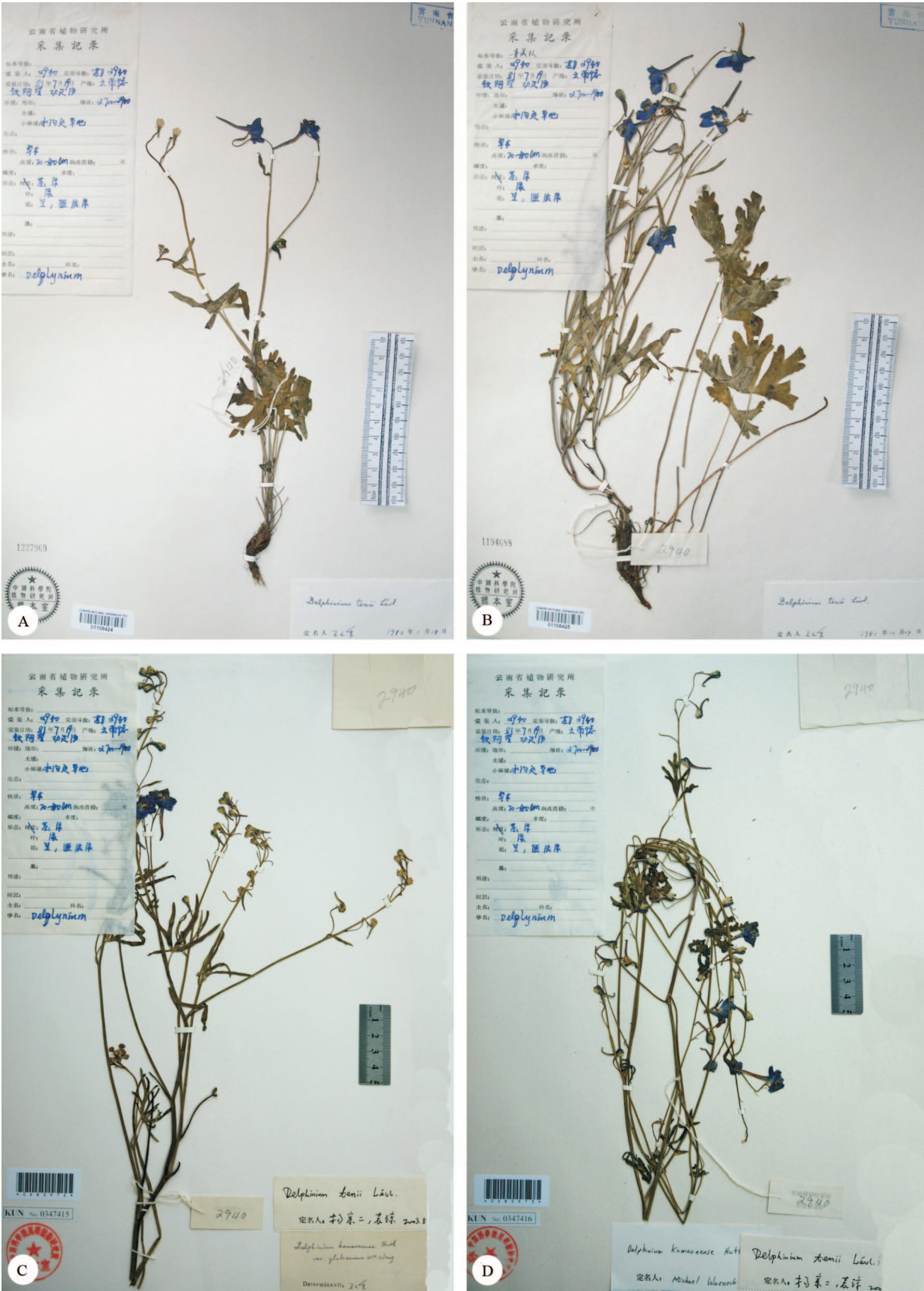


Fig. 3 Specimens of *Delphinium yuanum*, all from Adeng, Deqen, Yunnan, China. A, B: Qinghai-Xizang Exped. 2940 (PE); C, D: Qinghai-Xizang Exped. 2940 (KUN).

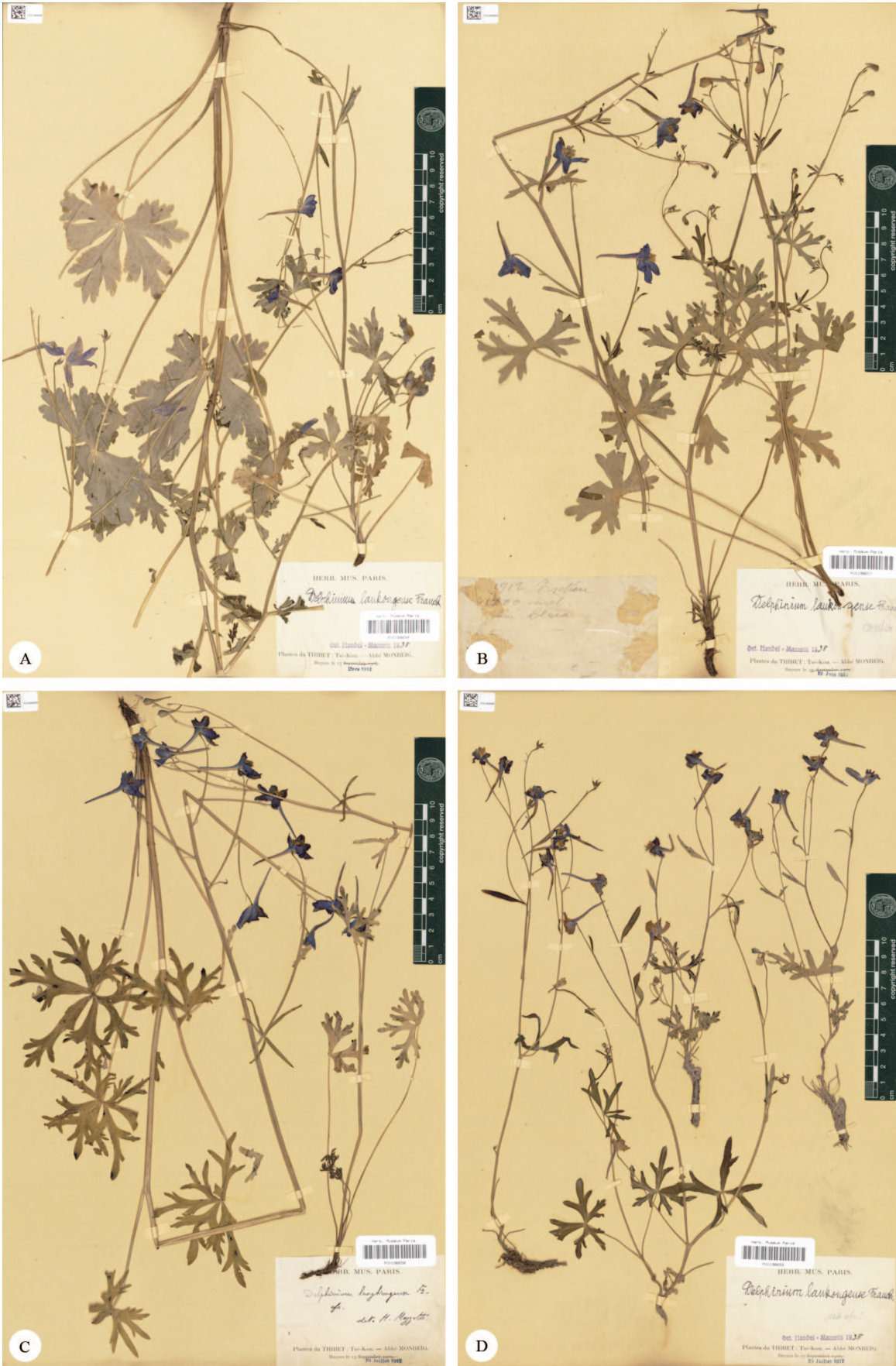


Fig. 4 Specimens of *Delphinium yuanum*, all from Tse-Kou, Deqen, Yunnan, China. A–D: Monbeig s.n. (P).



Fig. 5 Specimens of *Delphinium yuanum*, all from Daocheng, Sichuan, China. A: Sichuan Veg. Exped. 2100 (holotype of *D. obcordatilimbum* var. *minus*, PE); B: Sichuan Veg. Exped. 2100 (isotype of *D. obcordatilimbum* var. *minus*, PE); C: Sichuan Veg. Exped. 2100 (isotype of *D. obcordatilimbum* var. *minus*, CDBI); D: Sichuan Veg. Exped. 2100 (isotype of *D. obcordatilimbum* var. *minus*, KUN).



Fig. 6 Specimens of *Delphinium tongolense*. A: J. A. Soulié 2383 (P), Ta-sien-lou (= Kangding, type locality of *D. tongolense*), Sichuan, China; B: D. E. Boufford et al. 30800 (PE), Xiangcheng, Sichuan, China; C: D. E. Boufford et al. 35880 (PE), Yajiang, Sichuan, China; D: Q. E. Yang & Q. Yuan 193, Songming, Yunnan, China (PE).

28835 (CDBI), T. T. Yu 13336 (KUN, PE). **Xizang:** Zayu, C. W. Wang 65186 (KUN, LBG, PE). **Yunnan:** Degen, Anonymous 2940 (CDBI, KUN), K. M. Feng 5725 (KUN, PE), 23692 (KUN), K. Y. Lang et al. (= Beijing Inst. Bot. Hengduan Mount. Exped.) 3722 (PE), Monbeig s.n. (P, PE), Qinghai-Xizang Exped. 3616 (CDBI, PE), H. Sun & Z. G. Qian 692 (KUN), X. W. Tian 82 (13) (PE), T. T. Yu 10221 (KUN, PE), 10303 (KUN, PE), 10432 (IBSC, KUN, PE), 10504 (PE), C. W. Wang 64707 (IBSC, NAS, PE, WUK), 64733 (PE), 69117 (NAS, PE), 69174 (IBSC, LBG, PE, WUK), 69397 (KUN, PE), C. Y. Wu 4372 (KUN), L. Xie DQ03 (PE), DQ04 (PE), DQ05 (PE), Q. E. Yang & H. H. Kong 3233 (IBSC), 3243 (IBSC), Q. E. Yang & Q. Yuan 97 (PE); Lanping, H. T. Tsai 56240 (IBSC, KUN, LBG, NAS, PE); Weixi, K. M. Feng 4980 (KUN, PE), C. W. Wang 68051 (LBG, NAS, PE, WUK), Q. E. Yang & Q. Yuan 36 (PE), 37 (PE), 43 (PE); Without precise locality, H. T. Tsai 57505 (IBSC, KUN, LBG, PE); Zhongdian, Anonymous s.n. (PE), K. M. Feng 23213 (KUN, PE), J. S. Yang s.n. (KUN), 8204 (KUN), Q. E. Yang & H. H. Kong 3005 (IBSC), Q. E. Yang & Q. Yuan 1 (PE), 5 (PE), 6 (PE).

Notes. In general aspect, *Delphinium yuanum* is similar to *D. mosoynense* Franch., a species common in northwestern Yunnan, but differs by the stem, inflorescence axis and pedicels all glabrous (vs. densely appressed puberulent, sometimes mixed with yellow, glandular hairs). It is also close to the widespread Sino-Himalayan *D. kamaonense* Huth, but in the latter the pedicels are always densely retrorsely puberulent.

In the protologue of *Delphinium yuanum*, Chen^[6] designated T. T. Yu 12490 as the type but did not specify the herbarium in which the holotype sheet was conserved. Yuan^[2] stated that it was deposited in PE, but actually neither of the two sheets in PE were annotated by Chen himself (Wang^[4] mentioned that only an isotype was kept in PE). One of the two sheets in KUN, however, was annotated by Chen in his hand as “*Delphinium yuanum*, sp. nov.”, and thus we consider it to be the holotype (Fig. 7).

It is worth noting that the spurs of the upper sepals in the flowers of the type collection of *Delphinium*

yuanum appear to be somewhat shorter than those in the other collections of the species. We think this is due to the immaturity of the flowers in the type collection. As shown in Figure 8, one of the three specimens from Xiangcheng in western Sichuan identified as *D. tenii* (Fig. 8: C) is indistinguishable from the other two that were identified as *D. yuanum* (Fig. 8: A, B); their spurs are all relatively long and straight. Interestingly, a specimen from Dawu in western Sichuan, which was identified as *D. yuanum* (Fig. 8: D) due to the short, upcurved spurs, actually belongs to *D. orthocentrum* Franch., a species occurring in northwestern Sichuan (Hongyuan, Lixian, Nanping, Pingwu, Songpan). As mentioned before, since its description *D. yuanum* had been known only from its type collection for a long time until Yuan^[2] found that all the other specimens belonging to the species had been misidentified as *D. tenii*, a synonym of *D. tatsienense*. Indeed, it is totally inconceivable that the “typical” *D. yuanum*, with so showy, attractive flowers (Fig. 7) and with its type collection made as early as in 1937 from the suburb of the county town of Zhongdian, an area very well botanized, could have escaped all the later plant collectors and had long been represented only by its type material in the major Chinese herbaria such as KUN and PE. We cannot agree more with Davis and Heywood^[7] who wrote in 1963 that “It is only names that have types, not species” and that “Lack of exact agreement with the original description or type specimen certainly does not mean that the new material necessarily represents a different species. Allowance must be made for population variability.”

Delphinium yuanum, as pointed out by Chen^[8], is an elegant plant with horticultural value (Fig. 9). As the plant can grow well in dry, hot places at relatively low elevations in the valley of the Lanchang River in northwestern Yunnan, it should not be difficult to grow elsewhere.

Distribution and habitat. *Delphinium yuanum* is distributed in northwestern Yunnan, southwestern Sichuan (Daocheng, Xiangcheng) and southeastern Xizang (Zayu), China (Fig. 10). It usually grows in thickets or on rocky, grassy slopes at altitudes of 1900–3400 m.



Fig. 7 Holotype sheet of *Delphinium yuanum*, T. T. Yu 12490 (KUN), suburb of county town, Zhongdian, Yunnan, China.



Fig. 8 Specimens of *Delphinium yuanum* (A–C) and *D. orthocentrum* (D). A: D. E. Boufford et al. 28550 (PE), Xiangcheng, Sichuan, China; B: D. E. Boufford et al. 28847(PE), same locality; C: D. E. Boufford et al. 29062 (PE, previously misidentified as *D. tenii*), same locality; D: D. E. Boufford et al. 27710 (PE, previously misidentified as *D. yuanum*), Dawu, Sichun, China.

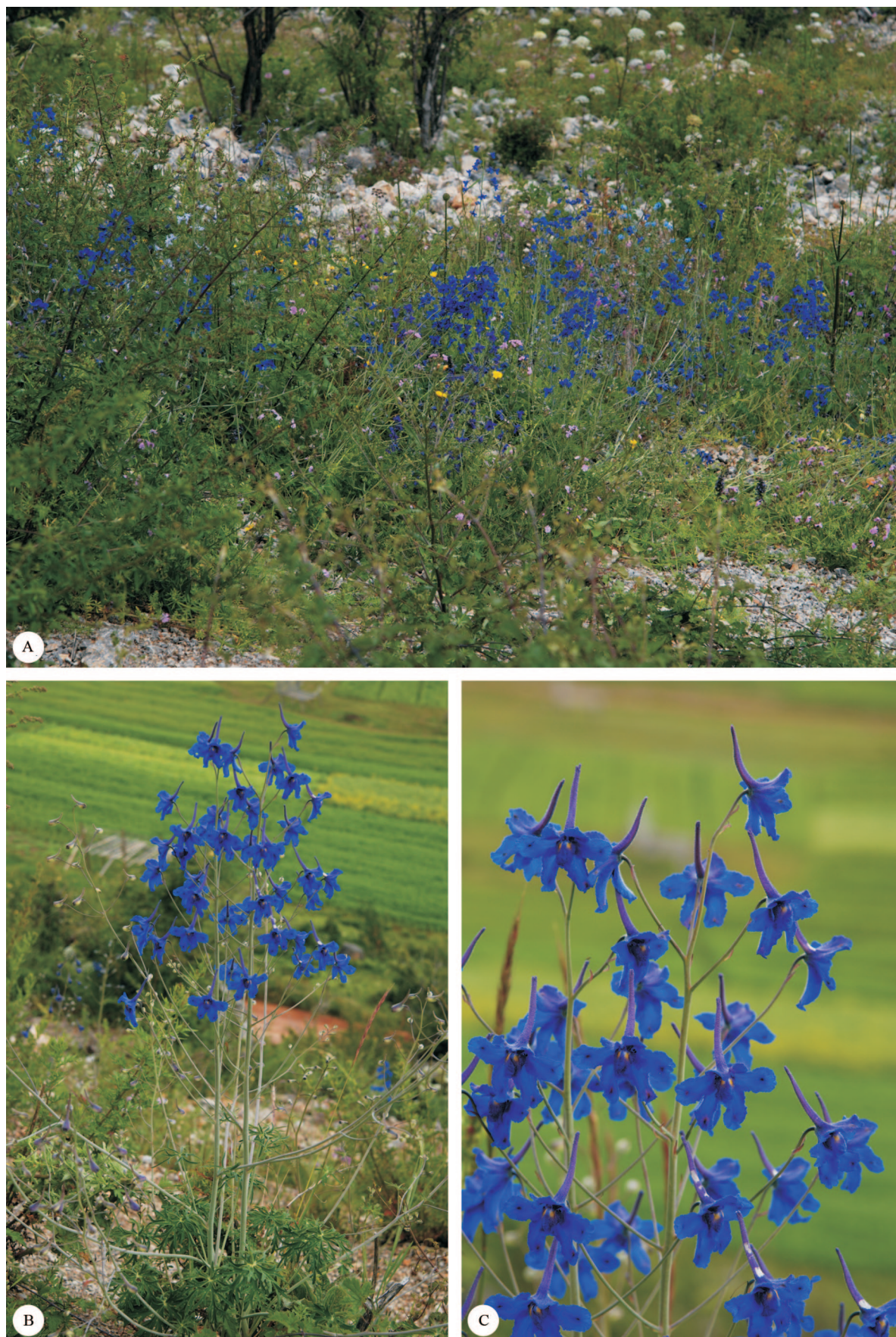


Fig. 9 *Delphinium yuanum* in the wild. A: Habitat; B: Habit; C: Inflorescences. Photographed by Q. Yuan from Napahai, Zhongdian, Yunnan, China.

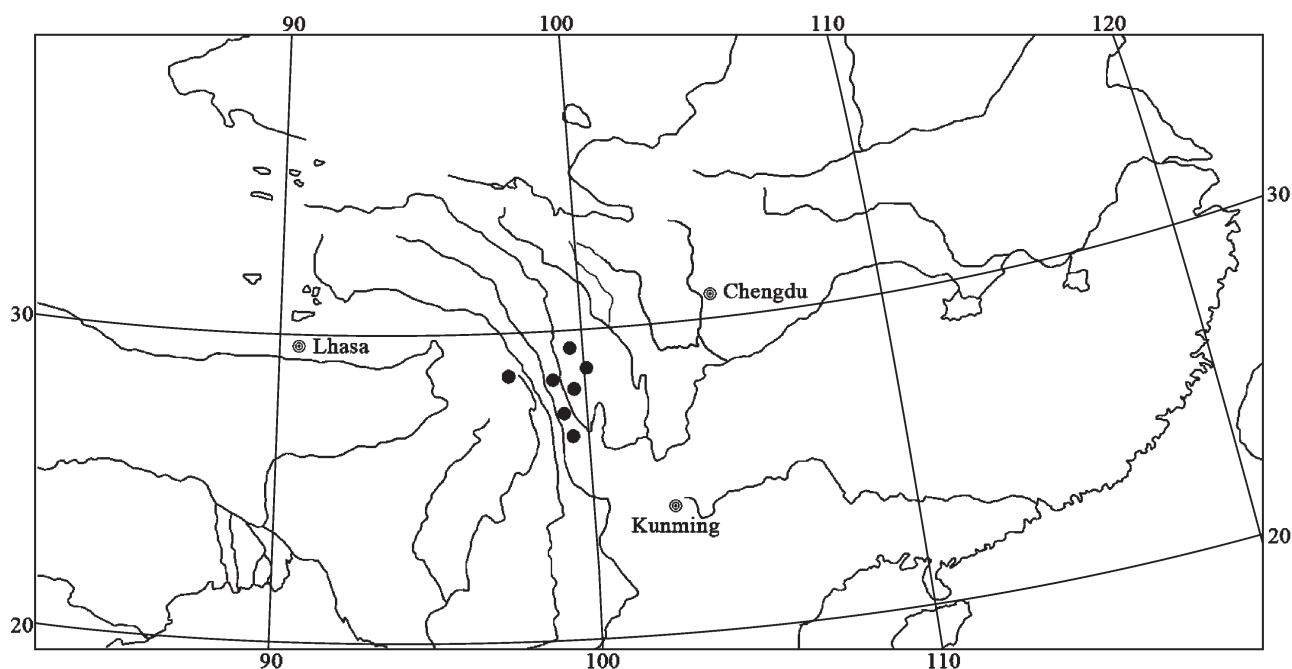


Fig. 10 Distribution of *Delphinium yuanum* (●).

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