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四川翠雀属三新种

王文采

(中国科学院植物研究所 系统与进化植物学国家重点实验室, 北京 100093)

摘要: 描述了在中国四川发现的毛茛科翠雀属三新种: 拟直距翠雀花 (*Delphinium orthocentroides* W. T. Wang), 宽爪翠雀花 (*D. platyonychinum* W. T. Wang) 和大臧翠雀花 (*D. dazangense* W. T. Wang)。

关键词: 毛茛科, 翠雀属, 新种, 四川, 中国

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Three new species of *Delphinium* L. (Ranunculaceae) from Sichuan

WANG Wen-Tsai

(State Key Laboratory of Systematic and Evolutionary Botany, Institute
of Botany, Chinese Academy of Sciences, Beijing 100093, China)

Abstract: Three new species of *Delphinium* L. (Ranunculaceae) are described from Sichuan, China.

Key words: Ranunculaceae, *Delphinium*, new species, Sichuan, China

2008 年秋季, 哈佛大学植物学家 D. E. Boufford 博士将他们于 2007 年夏季在四川西北部采集的一批毛茛科植物标本寄赠我所标本馆, 并委托我进行鉴定。在鉴定工作结束后, 发现此科翠雀属 (*Delphinium* L.) 三新种。现在本文发表。

1. 拟直距翠雀花 (图 1)

***Delphinium orthocentroides* W. T. Wang,**
sp. nov. Fig. 1.

Habitu species nova haec est similis *D. orthocentro* Franch., quod caule inferne glabro, foliis subtus pubescentibus, racemo 10-floro, bractea basali foliacea, bracteis minoribus 3.5-5 mm longis, calcaris sepalino sursum curvato, petalis apice 2-lobatis, staminodiorum limbis ad medium 2-fidis, ovariis puberulis statim differt.

Herba perennis. Caulis circ. 85 cm altus, basi 7 mm crassus, dense retroso-puberulus, simplex, circ. 15-folius. Folia caulina mediana et supera petiolata; laminarum papyraceae, ambitu cordato-pentagonae, 5-7 cm longae, 7-11 cm latae, ad 2-5 mm supra basin 3-partitae, lobo primario mediano rhombico vel anguste rhombico 2-3.5 cm lato apice longe acuminato 3-lobato margine inciso-dentato, lobis primariis lateralibus oblique flabellatis inaequaliter 2-partitis, supra ad nervos minime puberulae, subtus glabrae; petioli 1-6 cm longi. Racemus terminalis circ. 18 cm longus, 3 cm latus, dense 26-florus; bractearum inferarum lanceolarum, 2-5 cm longae, 2-6 mm latae, saepe paucae lobulatae, superae lineares, 6-10 mm longae, integrae; rhachis cum

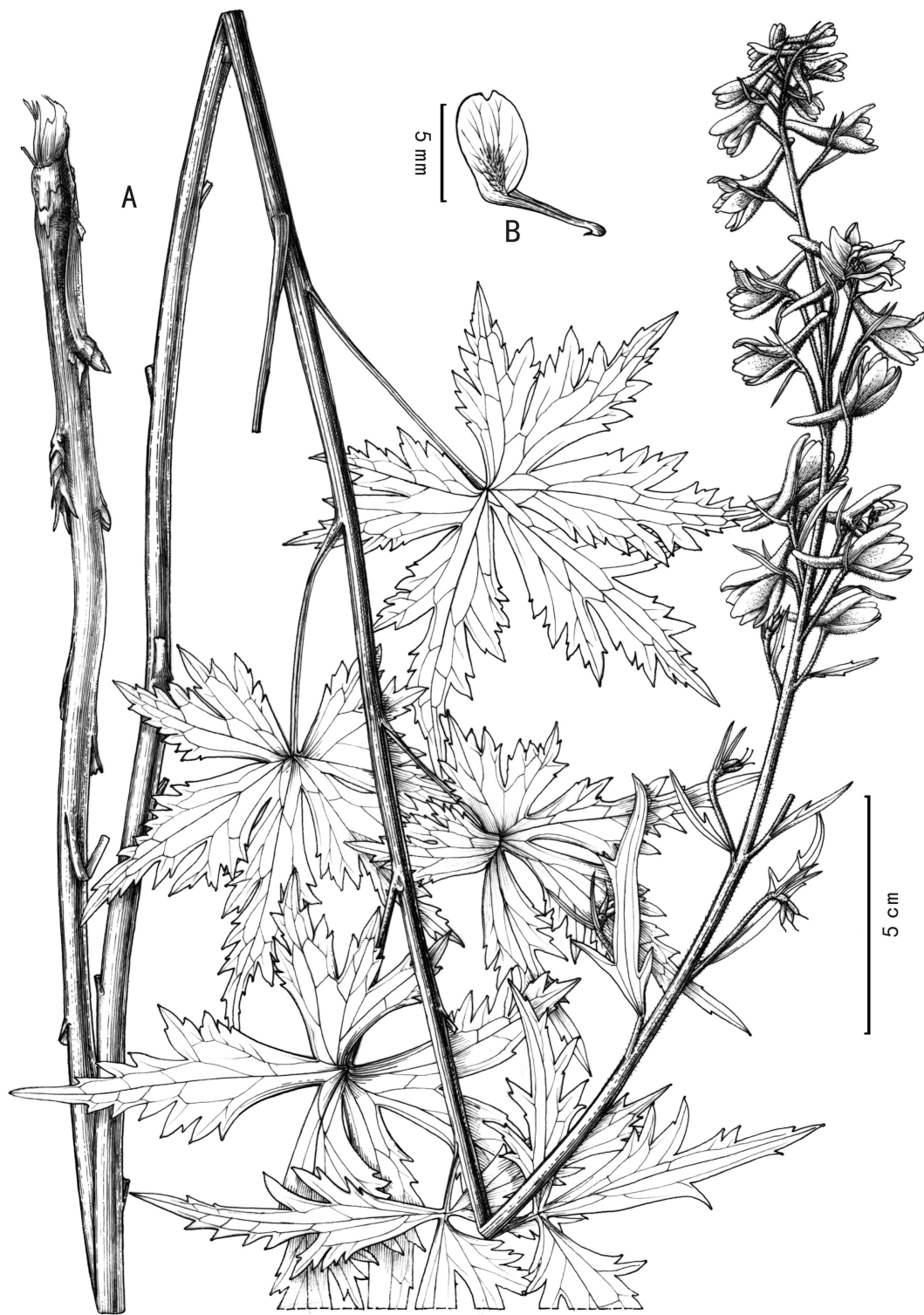


图 1 拟直距翠雀花 A. 植株全形; B. 退化雄蕊。

Fig. 1 *Delphinium orthocentroides* W. T. Wang A. Habit; B. Staminode (from holotype).

pedicellis dense patenter et retrorsum puberula;
pedicelli 0.6 – 2.2 cm longi, apice 2-bracteolati;
bracteolae anguste lineares, 5–11 mm longae, 0.6–1 mm

latae, puberulae. Flos 2–2.4 cm longus; sepala caerulea,
extus sparse puberula, intus glabra, id superum anguste
ovatum, 12 mm longum, 5 mm latum, calcar sepalino

recto horizontaliter patente cylindrico-subulato 9–12 mm longo basi 3 mm crasso, ea lateralia suboblonga, 14 mm longa, 4 mm lata, ea infera eis lateralibus similia, sed minora; petala glabra, apice rotundata; staminodia 11 mm longa, limbis caeruleis oblongo-obovatis 5.8 mm longis 4 mm latis apice retuso ventre supra basin luteo-barbatis, unguibus 5.2 mm longis basi 1-appendiculatis; stamina 4–6 mm longa, glabra; carpella 3, 4 mm longa, glabra.

多年生草本。茎高约 85 cm, 密被反曲短柔毛, 不分枝, 约有 15 叶, 中部以上茎生叶有柄; 叶片纸质, 心状五角形, 长 5~7 cm, 宽 7~11 cm, 3 深裂至距基部 2~5 mm 处, 中央深裂片菱形或狭菱形, 顶端长渐尖, 3 浅裂, 边缘有缺刻和牙齿, 侧深裂片斜扇形, 不等 2 深裂, 上面脉上有极短毛, 下面无毛; 叶柄长 1~6 cm。总状花序顶生, 长约 18 cm, 宽 3 cm, 有 26 花; 下部苞片披针形, 长 2~5 cm, 宽 2~6 mm, 常有少数小裂片, 上部苞片条形, 长 6~10 mm, 全缘; 轴和花梗密被开展和反曲短柔毛; 花梗长 0.6~2.2 cm, 顶端有 2 小苞片; 小苞片狭条形, 长 5~11 mm。花长 2~2.4 cm; 萼片蓝色, 外面疏被短柔毛, 内面无毛, 上萼片狭卵形, 长 12 mm, 萼距直, 水平开展, 圆筒状钻形, 长 9~12 mm, 基部粗 3 mm, 侧萼片近长圆形, 长 14 mm, 宽 4 mm, 下萼片似侧萼片, 但较小; 花瓣无毛, 顶端圆形; 退化雄蕊长 11 mm, 瓣片蓝色, 长圆状倒卵形, 长 5.8 mm, 顶端微凹, 腹面基部之上有黄色髯毛, 爪基部有 1 附属物; 雄蕊无毛; 心皮 3, 无毛。

Sichuan. Ruorgai Xian(若尔盖县): E of Ruorgai on highway 213, from E on Xian-dao Jiu-Ruo-Lu (Jiuzhaigou-Ruorgai Road) to Lamaling Yakou (pass). 33° 38'38" N, 103°30'28" E, 3 975 m. Meadow. Plants ca 1 m tall, flowers blue. 22 August 2007. D. E. Boufford, K. Fujikawa, S. L. Kelley, R. H. Ree, H. Sun, B. Xu, J. W. Zhang, T. C. Zhang, W. D. Zhu no. 40254 (holotype, PE; isotype, GH).

本种在体态方面与直距翠雀花 (*D. orthocentrum* Franch.) 相似, 但茎密被反曲短柔毛, 叶下面无毛, 总状花序有 26 花, 基部苞片披针形, 小苞片较大, 长 5~11 mm, 萼距水平开展, 花瓣片顶端不分裂, 退化雄蕊瓣片顶端微凹, 子房无毛而与后者相区别。在直距翠雀花, 茎下部无毛, 叶下面被柔毛, 总状花序有 10 花, 基部苞片似叶, 呈心状五角形, 小苞片较小, 长 3.5~5 mm, 萼距向上弯曲, 花瓣顶端 2 浅裂, 退化雄蕊瓣片 2 裂达中部, 子房被短柔毛。

2. 宽爪翠雀花 (图 2)

Delphinium platyonychium W. T. Wang, sp. nov. Fig. 2.

Species nova haec est affinis *D. gonggaensi* W. T. Wang, quod inflorescentia racemosa, rhachidi glabra, bracteolis majoribus linearibus vel anguste oblongis 7–8 (–28) mm longis, staminodiorum limbis basi truncatis, unguibus anguste linearibus circ. 5 mm longis 0.5 mm latis distinguitur.

Herba perennis. Caulis circ. 80 cm altus, inferne ramosus et patenter hispidus, superne glaber, circ. 6-foliatus. Folia caulina longe petiolata; laminae papyraceae, ambitu cordato-pentagonae, 6–7.8 cm longae, 8–11 cm latae, ad 7–12 mm supra basin 3-partitae, lobo primario mediano rhombico 3–4.5 cm lato apice acuto 3-lobato, lobo secundario mediano margine inciso-dentato, lobis primariis lateralibus oblique flabellatis leviter ultra medium inaequaliter 2-fidis, utrinque strigosae; petioli 7–15 cm longi, sparse hispidi vel subglabri. Panicula terminalis, circ. 35 cm longa, 22 cm lata, laxe 15-flora; bractae inferae foliaceae, petiolatae, superae sessiles, anguste lineares; rhachis inferne glabra, superne cum pedicellis patenter luteo-glanduloso-puberulae pilis albidis retrorsis tecta; pedicelli 2.8–6.5 cm longi, medio vel inferne 2-bracteolati; bracteolae anguste lineares, subfiliformes vel subulatae, (1–) 4–6 mm longae, 0.2–0.4 mm latae. Flos circ. 3 cm longus; sepala caeruleo-purpurea, extus sparse luteo-glanduloso-puberula, intus glabra, id superum ovatum, 10 mm longum, 7–9 mm latum, calcar sepalino subulatum u-formiter vel sub angulo recto decuvato circ. 2 cm longo basi 5 mm crasso, ea lateralia et infera obobato-oblonga, 1.2–1.4 cm long, 5–7 mm lata; petala glabra, apice obtusa; staminodia 7–10 mm longa, limbis caeruleis 5–6.2 mm longis 2.2–3.2 mm latis basi cuneatis ad medium 2-fidis ciliatis ventre medio luteolo-barbatis, unguibus anguste oblongis 3–3.5 mm longis 0.6–1.2 mm latis basi 1-appendiculatis; stamina 7 mm longa, glabra; carpella 3, 4.5 mm longa, glabra.

多年生草本。茎高约 80 cm, 下部分枝, 被开展硬毛, 上部无毛, 约有 6 叶。茎生叶有长柄; 叶片纸质, 心状五角形, 长 6~7.8 cm, 宽 8~11 cm, 3 深裂达距基部 7~12 mm 处, 中央深裂片菱形, 宽 3~4.5 cm,

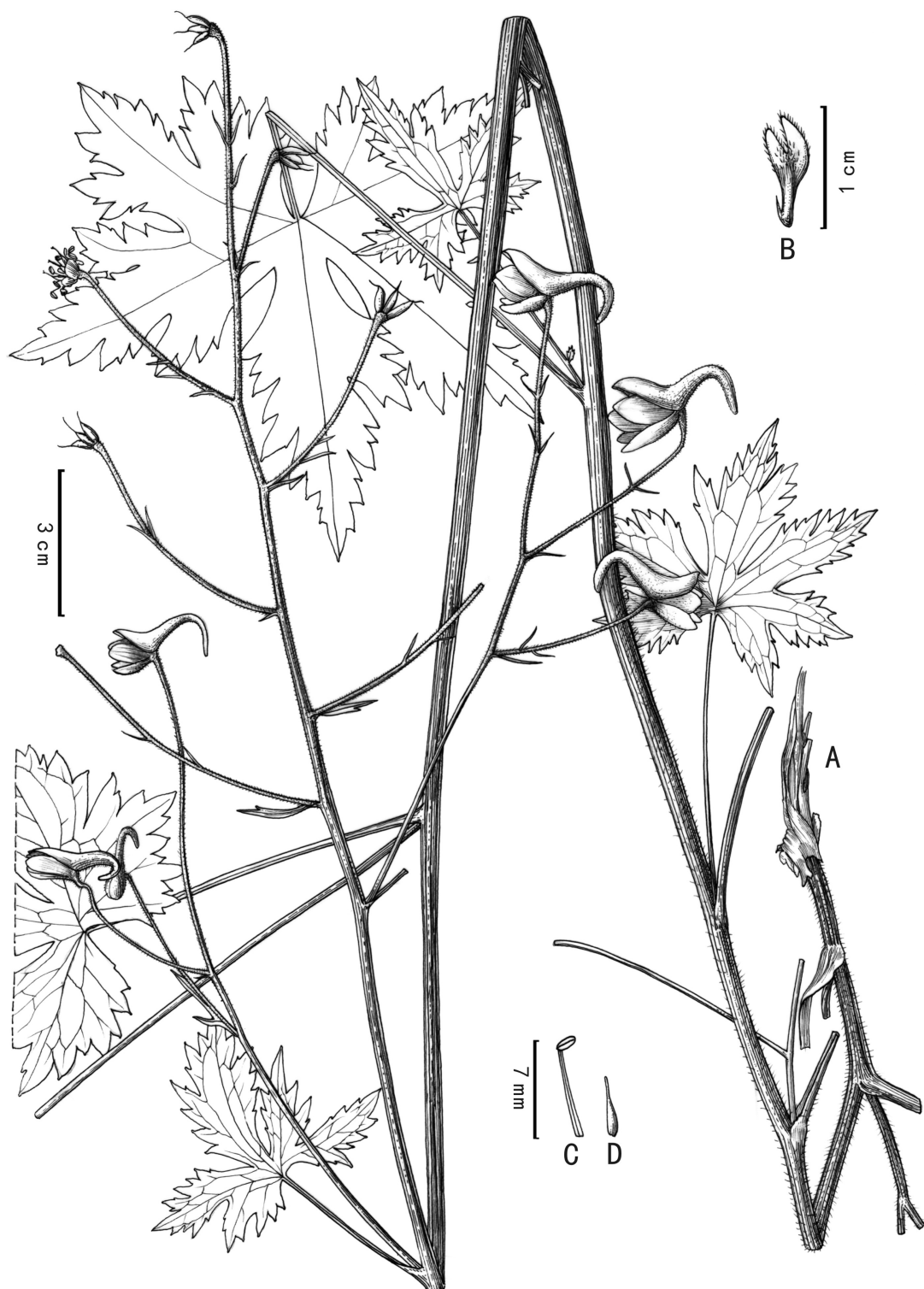


图 2 宽爪翠雀花 A. 植株全形; B. 退化雄蕊; C. 雄蕊; D. 心皮。

Fig. 2 *Delphinium platyonychinum* W. T. Wang A. Habit; B. Staminode; C. Stamen; D. Carpel. (from holotype)

顶端急尖, 3 深裂, 中央二回裂片边缘有缺刻和牙齿, 侧深裂片斜扇形, 不等 2 裂稍超过中部, 两面被

糙伏毛; 叶柄长 7~15 cm, 疏被硬毛或近无毛。圆锥花序顶生, 长约 35 cm, 宽 22 cm, 有稀疏 15 花; 下部

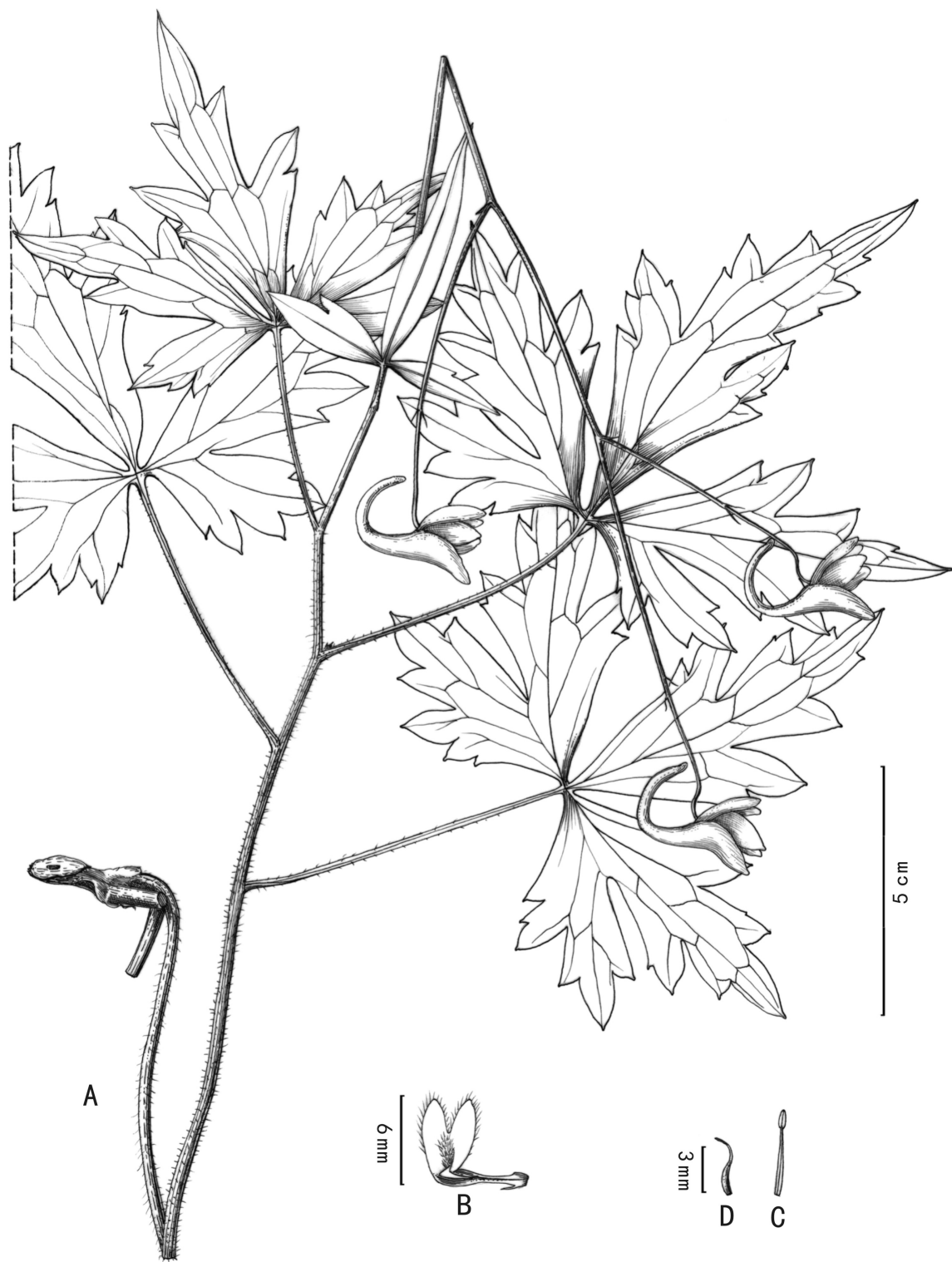


图 3 大藏翠雀花 A. 植株全形; B. 退化雄蕊; C. 雄蕊; D. 心皮。

Fig. 3 *Delphinium dazangense* W. T. Wang A. Habit; B. Staminode; C. Stamen; D. Carpel. (from holotype)

苞片叶状,具柄,上部苞片无柄,狭条形;轴下部无毛,上部及花梗被开展黄色短腺毛,并有反曲白色毛;花梗长 2.8~6.5 cm,中部或下部有 2 小苞片;小

苞片狭条形,近丝形或钻形,长(1~)4~6 mm,宽 0.2~0.4 mm。花长约 3 cm;萼片蓝紫色,外面疏被黄色短腺毛,内面无毛,上萼片卵形,长 10 mm,宽

7~9 mm, 萼距钻形, u 字形或成直角向下弯曲, 长约 2 cm, 基部粗 5 mm, 侧萼片和下萼片倒卵状长圆形, 长 1.2~1.4 cm, 宽 5~7 mm; 花瓣无毛, 顶端钝; 退化雄蕊长 7~10 mm, 瓣片蓝色, 长 5~6.2 mm, 宽 2.2~3.2 mm, 基部楔形, 2 裂达中部, 腹面中央被淡黄色髯毛, 爪狭长圆形, 长 3~3.5 mm, 宽 0.6~1.2 mm, 基部有 1 附属物; 雄蕊长 7 mm, 无毛; 心皮 3, 长 4.5 mm, 无毛。

Sichuan. Maerkang (马尔康 Barkam): Zhuoke-Ji Zhen, Lazhu Cun, N side of Mengbi Shan on highway 210 (road between Maerkang and Xiaojin). 31°44'8" N, 102°15'25" E; 3 350 m. Mixed forest with Picea, Salix, Betula, Populus along stream and adjacent meadows. Meadow. Sepals purple, apex with greenish spot in center. 14 August 2007. D. E. Boufford, K. Fujikawa, S. L. Kelley, R. H. Ree, B. Xu, J. W. Zhang, T. C. Zhang, W. D. Zhu no. 39605 (**holotype**, PE; isotype, GH).

本种与贡嘎翠雀花 (*D. gonggaense* W. T. Wang) 在亲缘关系上相近, 但花序圆锥状, 轴上部有开展黄色腺毛和反曲白色短柔毛, 小苞片较小, 狭条形, 近丝形或钻形, 长 (1~) 4~6 mm, 退化雄蕊瓣片基部楔形, 爪较宽, 狭长圆形, 长 3~3.5 mm, 宽 0.6~1.2 mm, 可以区别。在贡嘎翠雀花, 花序总状, 轴无毛, 小苞片较大, 条形或狭长圆形, 长 7~8 (~28) mm, 退化雄蕊瓣片基部截形, 爪狭条形, 长 5 mm, 宽 0.5 mm。

3. 大臧翠雀花 (图 3)

Delphinium dazangense W. T. Wang, sp. nov. Fig. 3.

Species nova haec est affinis *D. glabricauli* W. T. Wang, quod caule glabro, foliis subtus strigulosus, racemo majore 36 cm longo 8-floro, bractea basali majore lanceolata circ. 4 cm longa 5.5 mm lata, sepalis extus puberulis facile recedit.

Herba perennis. Caulis circ. 48 cm altus, basi 2 mm crassus, inferne patenter hispidus, superne glaber, simplex, 8-foliatus. Folia caulina petiolata; laminae herbaceae, ambitu pentagonae, raro triangulares, (5-) 6.8-9.4 cm longae, (5-) 8-11.5 cm latae, basi cordatae, raro subtruncatae, 3-sectae, segmento mediano rhombico 3-lobato pauce dentato raro lanceolato et integro (0.6-) 3.4-4 cm lato, segmentis lateralibus integris vel 1-lobulatis, supra strigulosae, subtus glabrae; petioli (0.8-) 4-7 cm

longi, apice sparse puberuli vel glabri. Racemus terminalis, circ. 13 cm longus, laxe 3-florus; bractae minimae, subulatae, 4-5 mm longae, 0.15 mm latae, glabrae; rhachis cum pedicellis glabra; pedicelli graciles, 5.2-8 cm longi, medio vel supra medium 2-bracteolati; bracteolae minimae, subulatae, 2-3 mm longae, 0.15 mm latae, glabrae. Flos circ. 3.8 cm longus; sepalae caeruleo-purpureae, utrinque glabra, id superum orbiculato-ovatum, 1.4 cm longum, 9 mm latum, calcari sepelino subulato u-formiter curvato circ. 2.8 cm longo basi 4 mm crasso, ea lateralia longe elliptica, 1.3 cm longa, 5-6 mm lata, ea infera suboblonga, 1.2-1.3 cm longa, 4-5 mm lata; petala glabra; apice obtusa; staminodia circ. 11 mm longa, limbis caeruleis 5.5 mm longis 3.2 mm latis prope medium 2-fidis ciliatis ventre medio dense luteo-barbatis, unguibus glabris basi 1-appendiculatis; stamina 7 mm longa, glabra; carpella 3.5 mm longa, glabra.

多年生草本。茎高约 48 cm, 基部粗 2 mm, 下部被开展硬毛, 上部无毛, 不分枝, 有 8 叶。茎生叶无柄; 叶片草质, 五角形, 稀三角形, 长 (5~) 6.8~9.4 cm, 宽 (5~) 8~11.5 cm, 基部心形, 稀近截形, 3 全裂, 中央全裂片菱形, 3 浅裂, 有少数牙齿, 稀披针形并全缘, 宽 (0.6~) 3.4~4 cm, 侧全裂片斜宽菱形, 不等 2 深裂, 稀长椭圆形, 全缘或有 1 小裂片, 上面被短糙伏毛, 下面无毛; 叶柄长 (0.8~) 4~7 cm, 顶端疏被短柔毛或无毛。总状花序顶生, 长约 13 cm, 有稀疏 3 花; 苞片极小, 钻形, 长 4~5 mm, 宽 0.15 mm, 无毛; 轴和花梗无毛; 花梗细, 长 5.2~8 cm, 中部或中部之上有 2 小苞片; 小苞片极小, 钻形, 长 2~3 mm, 宽 0.15 mm, 无毛。花长约 3.8 cm; 萼片蓝紫色, 两面无毛, 上萼片圆卵形, 长 1.4 cm, 宽 9 mm, 萼距钻形, u 字形弯曲, 长约 2.8 cm, 基部粗 4 mm, 侧萼片长椭圆形, 长 1.3 cm, 宽 5~6 mm, 下萼片近长圆形, 长 1.2~1.3 cm, 宽 4~5 mm; 花瓣无毛, 顶端钝; 退化雄蕊长约 11 cm, 瓣片蓝色, 长 5.5 mm, 宽 3.2 mm, 2 裂近中部, 有缘毛, 腹面中央密被黄色髯毛, 爪无毛, 基部有 1 附属物; 雄蕊长 7 mm, 无毛; 心皮 3, 长 5 mm, 无毛。

Sichuan. Maerkang (马尔康 Barkam) Xian: N of the city of Maerkang on road to Dazang Xiang (and Dazang Si) on N side of Xinggu Yakou (Xinggu Pass); Dazang (大臧). 32°5'0" N, 102°17'22" E; 3 975 m. (下转第 72 页 Continue on page 72)