

恢复粉红驴蹄草的种级地位及其一新近缘种

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: 恢复了过去被归并作为异名或被降级作为变型的粉红驴蹄草 (*Caltha rubriflora*) 的种级地位, 描述了产于西藏的与粉红驴蹄草亲缘关系相近的一新种——裂叶驴蹄草 (*Caltha lobulatifolia*), 并给出二种间的区别特征。

关键词: 毛茛科; 驴蹄草属; 种级地位的恢复; 新种; 西藏

中图分类号: Q949.746.5

文献标识码: A

文章编号: 2095-0837(2014)05-0446-04

Restoration of the Specific Status of *Caltha rubriflora* and a New Ally

WANG Wen-Tsai

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

Abstract: The specific status of *Caltha rubriflora* Burtt & Lauener, previously reduced to the synonymy of *C. palustris* L. var. *purpurea* Spare & C. E. C. Fisch. or relegated to form status under *C. sinogracilis* W. T. Wang, is restored. In addition, *C. lobulatifolia* W. T. Wang, a new ally of *C. rubriflora*, is described from southeastern Tibet, and the diagnostic differences between them are given.

Key words: Ranunculaceae; *Caltha*; Restoration of specific status; New species; Tibet

最近, 我在鉴定中国科学院植物研究所植物标本馆(PE)收藏的毛茛科驴蹄草属 (*Caltha*) 植物标本的过程中, 发现了产于西藏的一新种——裂叶驴蹄草 (*Caltha lobulatifolia*), 同时还注意到此新种的近缘种粉红驴蹄草 *Caltha rubriflora* Burtt & Lauener 自 1965 年发表后遭遇的 3 次不正确的分类学处理。

Smit(1973)将 *C. rubriflora* 归并到产于印度 Assam 北部高山地区的变种 *Caltha palustris* L. var. *purpurea* Spare & C. E. C. Fisch.^[1]。驴蹄草 *C. palustris*, 广布北半球, 其茎高 20~48 cm, 常分枝, 基生叶长 2.5~5 cm, 宽 3~9 cm, 边缘有数密小牙齿, 叶柄基部稍变宽, 无明显的鞘, 花通常 2 朵并组成单歧聚伞花序, 萼片黄色, 雄蕊多数, 长达 9 mm, 心皮 5~12 枚。而 *C. rubriflora*^[2] 茎低矮, 高 3~6 cm, 不分枝, 常无叶, 基生叶很小, 长 0.4~1 cm, 宽 1~1.7 cm, 边缘约有

14 个卵形牙齿, 叶柄基部有明显的鞘, 鞘顶端扩展成宽三角形膜质薄片, 花单朵顶生, 其萼片呈粉红色, 雄蕊较少, 约 11 枚, 长 1~6 mm, 心皮较少, 3~4 枚。这些区别特征说明此种与驴蹄草 *C. palustris* 具有明显的区别, 不应作为后者的变种, *C. rubriflora* 和 *C. palustris* 应为两个不同的种。

王文采(1979)于《中国植物志》第 27 卷中将 *C. rubriflora* 降级为细茎驴蹄草 *C. sinogracilis* W. T. Wang(萼片黄色)的粉红花变型^[3]。最近, 我再一次仔细观察了这 2 个种的标本, 它们在外部形态、株型等方面很相似, 在亲缘关系上很相近, 但存在一些区别特征。如 *C. sinogracilis* 的基生叶叶缘有波状浅圆齿, 叶柄基部有不明显狭叶鞘, 叶鞘无扩展的薄片, 花的萼片呈黄色, 雄蕊较多(约 20 枚), 心皮亦较多(5~10 枚)^[1], 这些显著的区别特征说明 *C. rubriflora* 和 *C. sinogracilis* 是 2 个不同的种。

Li & Tamura(2001)将 *C. rubriflora* 和 *C. sinogracilis* f. *rubriflora* 均归并到 *C. sinogracilis* ^[4]。如上所述, 因 *C. rubriflora* 和 *C. sinogracilis* 存在叶和花等方面的显著区别特征, 不应做出归并。*C. rubriflora* 应为一独立种, 对其种级地位, 应予以恢复。

1 粉红驴蹄草(图 1: A~H)

Caltha rubriflora Burtt & Lauener in Not. R. Bot. Gard. Edinburgh 26 (3): 349, figs. 1–7. 1965. ——*C. sinogracilis* W. T. Wang f. *rubriflora* (Burtt & Lauener) W. T. Wang in Fl. Reip. Pop. Sin. 27: 65. 1979; et in C. Y. Wu, Fl. Xizang. 2: 9. 1985, syn. nov. Type: Xizang: Motuo Xian, Duoxiongla, alt. 4115 m, 1938–07–14, Ludlow, Sherriff & Taylor 5263 (holotype, BM; isotype, E. non vidi). Fig. 1: A–H.

C. palustris L. var. *purpurea* Spare & C. E. C. Fisch. in Kew Bull. Misc. Inf. 1929: 248. 1929; Smit in Blumea 21 (1): 141. 1973. Lectotype: India. Assam: Kaso, Delei Valley, alt. 12000 ft, Kingdon Ward 8409 (K, non vidi).

C. sinogracilis auct. non W. T. Wang: L. Q. Li & Tamura in C. Y. Wu & P. H. Raven, Fl. China 6: 136. 2001.

Species haec est arcte affinis *C. sinogracilis* W. T. Wang, a qua foliorum basalium laminis margine ca. 14-dentatis, dentibus ovatis, petiolis basi conspicue vaginatis, vaginis apice in lamellis membranaceas late triangulares expansis, sepalis roseis, floris staminibus (ca. 11) et carpellis (3–4) paucioribus differt. In *C. sinogracilis*, foliorum basalium laminae margine repando-crenatae, petioli basi incospicue angusteque vaginati, vaginis lamellis carentibus, sepala flava, et floris stamina (ca. 20) et carpella (5–10) plura. A *C. palustri* L. ea caulibus humilibus simplicibus saepe efoliatis, foliorum basalium laminis multo minoribus margine ca. 14-dentatis, petiolis basi conspicue vaginatis, vaginis apice in lamellas ex-

pansis, floribus solitariis terminalibus, sepalis roseis, floris staminibus et carpellis paucioribus valde recedit.

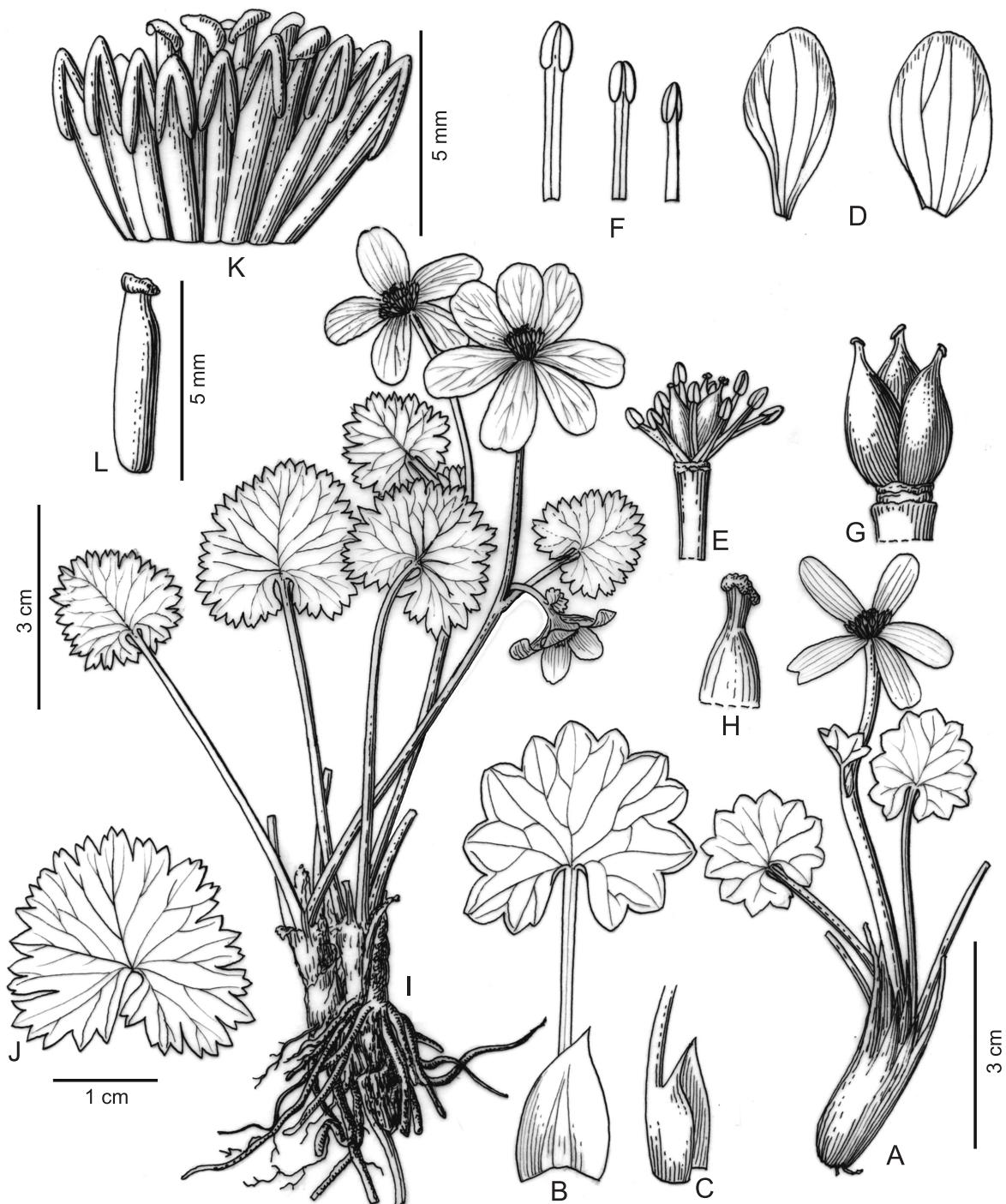
Small perennial herbs. Stems 3–6 cm tall, glabrous, leafless or 1-leaved. Basal leaves 5–7, glabrous; blades papery, reniform or orbicular-reniform, 0.4–1×1–1.7 cm, base deeply cordate, margin with ca. 14 (–20) ovate teeth; petioles 1.5–3 cm long, base vaginate, with vagina apex expanding into a membranous broadly triangular lamella. Cauline leaf small, shortly petiolate, depressed-ovate, ca. 7 mm broad, 3-lobed. Flower solitary, terminal, ca. 2.5 cm in diam. Sepals 5, pink, oblong or oblong-ovate, 1.2–1.3×0.4–0.6 cm, glabrous, longitudinally 3–4-nerved, apex obtuse. Stamens ca. 11, 3–6 mm long, glabrous; filaments linear; anthers oblong, 1.5–2 mm long. Carpels 3–4, sessile; ovaries ovoid, ca. 4 mm long, glabrous; styles 1 mm long, glabrous, at apex with depressed-capitate stigmas.

研究标本记录: 西藏(Tibet): 墨脱县(Motuo Xian), 那格—多雄拉(between Lage and Duoxiongla), alt. 3900 m, 山坡草地(on grassy slope), 1974–08–01, 青藏队(Qinghai-Tibet Exped.)74-3874 (topotype, PE).

分布于西藏墨脱和印度东部。生于山谷草坡上, 海拔3900~4115 m。

2 裂叶驴蹄草(图 1: I~L)

Caltha lobulatifolia W. T. Wang, sp. nov. Type: 西藏(Tibet): 波密县(Bomi Xian), 易贡(Yigong), 巴那山口(Bana Pass), alt. 3400~4000 m, 河谷山坡(on slope in valley), 花粉红(fls. pink), 1978–05–18, 李渤生, 倪志诚, 程树志(B. S. Li, Z. C. Ni & S. Z. Cheng)6631 (holotype & isotype, PE); 同地(same locality), 呷隆拉(Xialongla), alt. 4000 m, 山坡草丛(on grassy slope), 1980–09–06, 倪志诚, 汪永泽, 次多, 次旦(Z. C. Ni, Y. Z. Wang, Ci Duo & Ci



A~H 为粉红驴蹄草: A. 植株全形; B. 叶; C. 叶鞘(侧面观); D. 萼片; E. 雄蕊群和雌蕊群; F. 雄蕊; G. 雌蕊群; H. 心皮上部。I~L 为裂叶驴蹄草: I. 植株全形; J. 叶片; K. 雄蕊群和雌蕊群; L. 心皮。

A-H. *Caltha rubriflora* (A from Qinghai-Tibet Exped. 74-3847, and B-H from Burtt & Lauener, 1965); A. Habit; B. Leaf; C. Leaf sheath (lateral view); D. Sepals; E. Androecium and gynoecium; F. Stamens; G. Gynoecium; H. Upper part of carpel. I-L. *Caltha lobulatifolia* (from holotype); I. Habit; J. Leaf blade; K. Androecium and gynoecium; L. Carpel.

图 1 粉红驴蹄草和裂叶驴蹄草
Fig. 1 *Caltha rubriflora* and *Caltha lobulatifolia*

Dan) 1466 (paratype, PE). Fig. 1: I-L.

Species nova haec est affinis *C. rubriflorae* Burtt & Lauener, a qua plantis totis siccitate nigrescentibus, caulibus altioribus, foliorum laminis majoribus margine 14–20-lobulatis, lobulis plerumque 2–3-dentatis raro integris, petiolis basi haud vaginatis, sepalis longitudinaliter 5–6-nervibus, floris staminibus et carpellis pluribus facile distinguitur. In *C. rubriflora*, plantae siccitate haud nigrescentes, caules humiliores, 3–6 cm alti, foliorum basarium laminae minores, 0.4–1 cm longae, 1–1.7 cm latae, margine dentatae haud lobulatae, petioli basi conspicue vaginati, vaginis apice in lamellas membranaceas late triangulares expansis, sepala longitudinaliter 3–4-nervia, floris stamina 11 et carpella 3–4.

Small perennial herbs, turning black while drying. Fibrous roots dense, 5–7 cm long. Stems 1–2, 8–15 cm tall, glabrous, simplex or above shortly 1-branched, 1–2-leaved; branch ca. 9 mm long, with 2 small leaves. Basal leaves 4–7, glabrous; blades papery, orbicular-reniform, 0.5–1.5 × 1.1–3 cm, base deeply cordate, margin 14–20-lobulate, lobules rectangular or obtrapeziform, 2–3-dentate, rarely narrowly ovate and entire; petioles 3–8.5 cm long, base not vaginate. Cauline leaves similar to basal ones, but smaller, shortly petiolate; branch leaves ca. 2, subsessile, ca. 5 mm long, 2–5-lobed. Flowers 2.5–3 cm in diam., solitary and terminal, or 2 arranged in terminal simple monochasium. Sepals 5 or 7, pink, narrowly obovate or obovate-elliptic, 1–1.5 × 0.5–1 cm, glabrous, longitudinally 5–6-nerved, apex rounded or subtruncate. Stamens 28–32, 2.5–5.5 mm long, glabrous;

filaments linear, 0.8–3.4 mm long; anthers oblong, 1–1.2 mm long. Carpels 3–10, sessile; ovaries narrowly oblong, ca. 3.8 mm long, glabrous; styles ca. 0.4 mm long, glabrous, apex with depressed-capitate stigmas.

特产西藏波密。生于山谷草坡上，海拔3400~4000 m。

裂叶驴蹄草的植株低矮，萼片粉红色，与粉红驴蹄草 *C. rubriflora* 在亲缘关系上接近，但两者具明显的区别(图1)。裂叶驴蹄草的植株在干燥时全部变为黑色，植株较高(5~15 cm)，基生叶叶片较大(0.5~1.5 × 1.1~3 cm)，边缘14~20微裂，小裂片多具2~3枚牙齿，稀全缘，叶柄基部无鞘，萼片有5~6条纵脉，花的雄蕊(28~32)和心皮(3~10)较多。而粉红驴蹄草的植株干燥时不变为黑色，茎较低矮，高3~6 cm，基生叶叶片较小，0.4~1 × 1~1.7 cm，边缘具牙齿，不微裂，叶柄基部有明显的鞘，叶鞘顶端扩展成宽三角形膜质薄片，萼片有3~4条纵脉，花的雄蕊(约11枚)和心皮(3~4枚)数目较少。

本种的一个突出特征是基生叶叶片边缘14~20微裂，而驴蹄草属其它种的基生叶叶片均不分裂^[4]。

致谢：深切感谢孙英宝先生为本文绘图。

参考文献：

- [1] Smit PG. A revision of *Caltha* (Ranunculaceae). *Blumea*, 1973, 21(1): 119–150.
- [2] Burtt BL, Lauener LA. A red-flowered *Caltha* from Tibet [J]. *Notes from the Royal Botanic Garden, Edinburgh*, 1965, 26(3): 349–350.
- [3] 王文采. *Caltha* [M]//中国植物志: 第27卷, 第2分册. 北京: 科学出版社, 1979: 60–67.
- [4] Li LQ, Tamura M. *Caltha* [M]// Wu CY, Raven PH, eds. *Flora of China*: Vol. 6. Beijing: Science Press, St. Louis: Missouri Botanical Garden Press, 2001: 135–136.

(责任编辑: 刘艳玲)