

恢复粉红驴蹄草的种级地位及其一新近缘种

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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

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

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Abstract: The specific status of *Caltha rubriflora* Burt & 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* Burt & 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, 边缘有少数密集小牙齿, 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, 它们在外形形态、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 Burt & Lauener in Not. R. Bot. Gard. Edinburgh 26 (3): 349, figs. 1–7. 1965. — *C. sinogracilis* W. T. Wang f. *rubriflora* (Burt & 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. sinogracili* W. T. Wang, a qua foliorum basalium laminis margine ca. 14-dentatis, dentibus ovatis, petiolis basi conspicue vaginatis, vaginis apice in lamellas membranaceas late triangulares expansis, sepalis roseis, floris staminibus (ca. 11) et carpellis (3–4) paucioribus differt. In *C. sinogracili*, foliorum basalium laminae margine repando-crenatae, petioli basi inconspicue angustequae vaginati, vaginis lamellis carentibus, sepala flava, et floris stamina (ca. 20) et carpella (5–10) plura. A *C. palustris* 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, floris solitariis terminalibus, sepalis roseis, floris staminibus et carpellis paucioribus valde recedit.

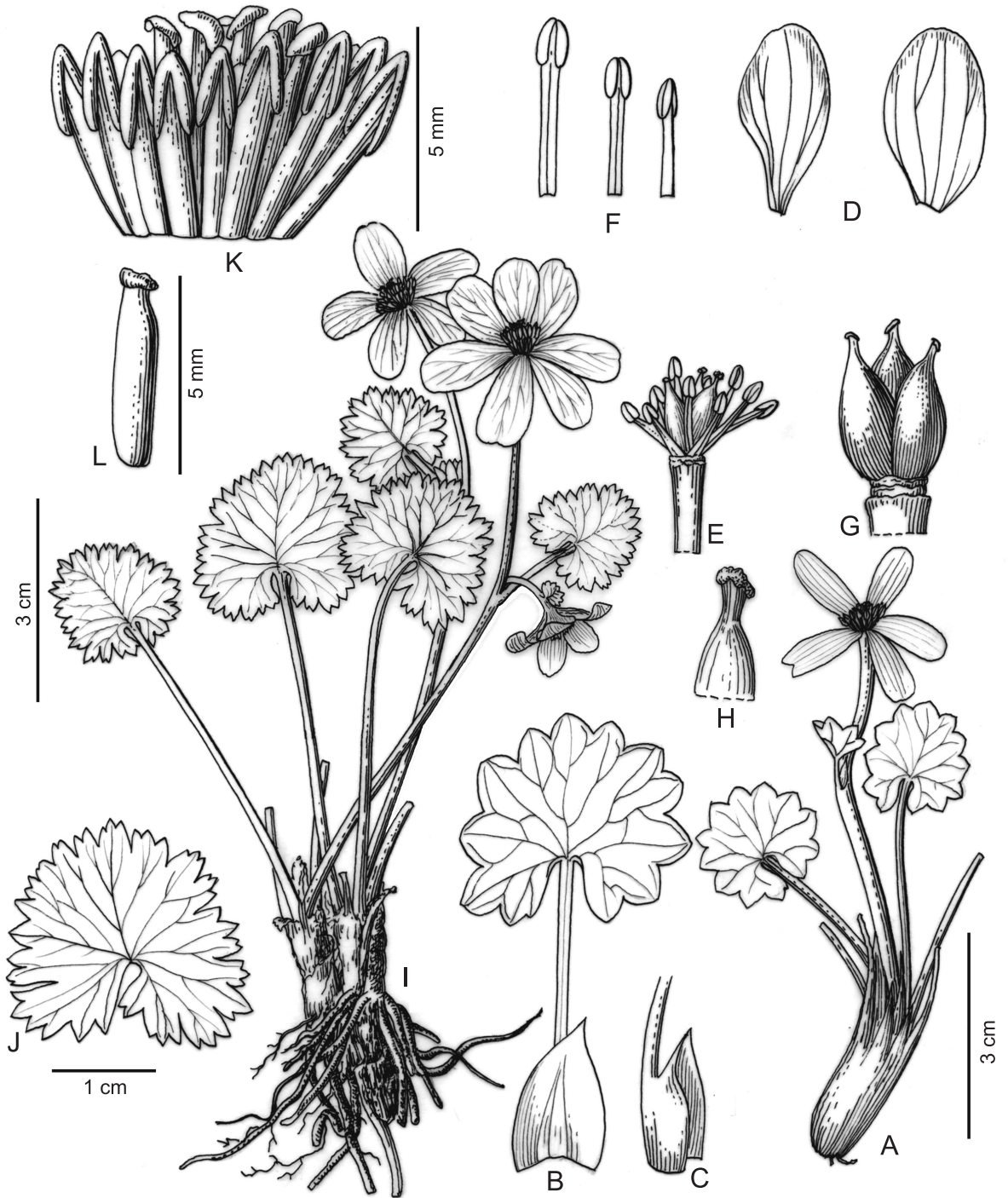
Small perennial herbs. Stems 3–6 cm tall, glabrous, leafless or 1-leaved. Basal leaves 5–7, glabrous; blades papery, reniform or orbicular-reniform, 0.4–1×1–1.7 cm, base deeply cordate, margin with ca. 14 (–20) ovate teeth; petioles 1.5–3 cm long, base vaginate, with vagina apex expanding into a membranous 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(fl. 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* Burt & 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-nervi- bus, floris staminibus et carpellis pluribus facile distinguitur. In *C. rubriflora*, plantae siccitate haud nigrescentes, caules humiliores, 3-6 cm alti, foliorum basium 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 obtuse, 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]。

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