

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,边缘有多数密集小牙齿,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、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。

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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: Koso, 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 basium 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 basium laminae margine repandocrenatae, petioli basi incospicue angustaque 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 basium laminis multo minoribus margine ca. 14-dentatis, petiolis basi conspicue vaginatis, vaginis apice in

lamellas expansis, 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(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 Burr & 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 basalium laminae minores , 0.4-1 cm longae , 1-1.7 cm latae , margine denta- tae haud lobulatae , petioli basi conspicue vagi- nati , 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-reni- form , 0.5-1.5 × 1.1-3 cm , base deeply cor- date , 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 mono- chasium. Se-pals 5 or 7 , pink , narrowly obovate or obovate-elliptic , 1-1.5 × 0.5-1 cm , gla- brous , 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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