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中国广西石灰岩地区苦苣苔科一新种 ——覃塘报春苣苔

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摘 要:报道了中国广西石灰岩地区一新种——覃塘报春苣苔(*Primulina qintangensis* Z. B. Xin, W. C. Chou & F. Wen), 本种与光叶报春苣苔 [*P. leiophylla* (W. T. Wang) Y. Z. Wang] 近似, 但叶轮生, 叶片两侧近对称, 侧脉 3 对; 花序数 5~8, 一回分枝, 每序 1~3 朵花; 花序梗成熟后近无毛或疏被微柔毛; 苞片明显较小, 约 8 mm × 2 mm; 雌蕊白色; 花盘鲜黄色, 可以区别。该种目前只发现有一个种群, 成熟个体约 3 000 株, 通过 IUCN 评估标准, 该种暂时被评为易危(VU C1)。

关键词:岩生植物; 广西植物; 石灰岩植物; 新分类群

中图分类号: Q949.778.4 文献标志码: A

Primulina qintangensis (Gesneriaceae), a New Species from Limestone Areas of Guangxi, China

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Abstract: *Primulina qintangensis* Z. B. Xin, W. C. Chou & F. Wen, a new species from limestone areas of Guangxi, China is described and illustrated. It resembles *P. leiophylla* (W. T. Wang) Yin Z. Wang, but can be easily distinguished by a combination of characteristics, especially in its leaves whorled, blade near aequilateral, lateral veins ca. 3; cymes 5-8, once-compound, 1-3-flowered per cyme; peduncle glabrescent or sparsely puberulent; obviously smaller bracts, ca. 8 mm × 2 mm; pistil white; disc bright yellow. We found only one population with 3 000 mature individuals at the type locality. This species is provisionally assessed as Vulnerable (VU C1) using IUCN criteria.

Key words: cliff-dwelling; flora of Guangxi; limestone flora; new taxa

The circumscription of *Primulina* Hance^[1] the genus *Primulina* s. l. comprises over 200 species has been revised based on molecular data^[2-3]. Now species (infraspecific taxa included)^[4-6], including

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many new species published in recent years^[7-12].

During a botanical survey on limestone karst plants biodiversity in Guangxi in early January 2019, a special plant of *Primulina* was discovered by the members of the Gesneriad Conservation Center of China (GCCC). It resembles *P. leiophylla* (W. T. Wang) Y. Z. Wang^[2,13] in appearance. Therefore, we took it and *P. leiophylla* collected from the type locality to conduct a homogenous garden experiment. After many times field observations and over one-year homogenous garden experiments, both phenotypes of the two species were stable. The leaves of the unknown plant smaller, fewer flowers per cyme and flower larger than those of *P. leiophylla*. We confirmed that it represents a new species of *Primulina*. Thus, we describe and illustrate it here.

Primulina qintangensis Z. B. Xin, W. C. Chou & F. Wen sp. nov. (Fig. 1)

TYPE: China, Guangxi, Guigang City, Qintang District, Zhangmu Town, 23°16'15"N, 109°15'14"E, altitude ca. 220 m, 9 January 2019, Chou W. C. *et al.*, 190109-01 (Holotype, IBK!; Iso-

type, IBK!).

Diagnosis: The new species differs from *P. leiophylla* by its leaves whorled, blade near aequilateral, lateral veins ca. 3 (*vs.* leaves opposite, blade extremely oblique; lateral veins ca. 6); cymes 5–8 per plant, 1-compound, 1-3-flowered per cyme (*vs.* cymes 1–3 per plant, 4-compound, >20-flowered per cyme); peduncle glabrescent or sparsely puberulent (*vs.* densely whitish villous); obviously smaller bracts, ca. 8 × 2 mm (*vs.* ca. 25 × 6 mm); disc bright yellow (*vs.* whitish).

Description: Perennial acaulescent herb, lithophytic. Leaves 15–25, whorled on a basal rosette; petiole 3–5 cm long, densely white lanate; leaf blades oblong or oval, 8–12 cm long, 5–8 cm wide at the widest point, margin serrate, adaxial and abaxial surfaces densely whitish villous; lateral veins ca. 3 on each side of midrib, conspicuous on both surfaces, apparently raised on abaxial surface. Cymes 5–8, lax, axillary, 1–3-flowered; peduncles 12–18 cm long, ca. 3 mm wide, glabrescent or sparsely puberulent; bracts 2, opposite, oblong, ca. 8 mm long, ca. 2 mm wide, apex with



A. Habitat; B. Habit; C. Opened corolla with stamens and staminodes; D. Adaxial surface of leaf blade; E. Abaxial surface of leaf blade; F. Top view of corolla; G. Lateral view of corolla; H. Bracts and bracteoles; I. Pistil; J. Calyx lobes; K. Front view of corolla (Photographs: A by F. Wen; B by W. C. Chou; C–K by Z. B. Xin).

Fig. 1 *Primulina qintangensis* Z. B. Xin, W. C. Chou & F. Wen sp. nov.

an obtuse tip, margin entire, outside whitish pubescent, inside sparsely pubescent; bracteoles 2, opposite, oblong, 4–6 mm long, ca. 1.5 mm wide, margin entire, outside whitish pubescent, inside with sparse pubescent; pedicels ca. 1 cm, whitish pubescent. Calyx 5-sect from base; lobes equal, lanceolate, ca. 8 mm long, ca. 2 mm wide, outside densely pubescent, margin entire. Corolla tubular, white or pale purple, zygomorphic, 5–6 cm long; corolla tube 2.4–2.7 cm long, ca. 1.5 cm at the mouth, ca. 6 mm at the base; limb 2-lipped, adaxial lip short, 2-lobed to the middle,

lobes oblong or broadly triangular, ca. 1.2 cm long, abaxial lip 3-lobed, ovate, central one longer than lateral ones, ca. 1.7 cm long, lateral ones ca. 1.6 cm long, with 2 conspicuous rows of orange-yellow glandular hairs on abaxial lip and corolla throat. Stamens 2, adnate to corolla tube ca. 1.1 cm from the base, filaments geniculate close to the base, ca. 9 mm long, glabrous; anthers yellow, dorsifixed, bearded at both ends, reniform to elliptic, ca. 2.5 mm long, ca. 1.5 mm wide, lightly constricted at the middle, coherent in pairs, thecae confluent at middle, densely pubescent; staminode 3, two



1. *P. qintangensis* sp. nov.; 2. *P. leiophylla*. A. Cymes with flowers; B. Front view of the corolla; C. Adaxial surface of leaf blade D. Top view of corolla; E. Lateral view of corolla; F. Calyx lobes; G. Pistil; H. Bracts (Photographs by Z. B. Xin).

Fig. 2 Comparison between *Primulina qintangensis* sp. nov. and *P. leiophylla*

Table 1 Morphological comparison of *Primulina qintangensis* and *P. leiophylla*

Character	<i>P. qintangensis</i>	<i>P. leiophylla</i>
Leaf	Whorled; Blade near aequilateral; Lateral veins ca. 3	Opposite; Blade extremely oblique; Lateral veins ca. 6
Cyme	5–8 per plant; Once-compound; 1–3-flowered	1–3 per plant; 4-compound; >20-flowered
Peduncle	Glabrescent or sparsely puberulent	Densely whitish villous
Bract	ca. 8 mm × 2 mm	ca. 25 mm × 6 mm
Pistil	White	Green
Disc	Bright yellow	Whitish

lateral ones linear, glabrous, ca. 1.6 cm long, adnate to corolla tube ca. 1.2 cm from the base, central one linear, glabrous, ca. 1.2 mm long, adnate to corolla tube ca. 1 mm from the base. Disc annular, ca. 2 mm high, margin entire. Pistil densely puberulent with both glandular and eglandular hairs; ovary linear, 1.8–2 cm long, ca. 2 mm wide, 1-loculed, placentas 2, parietal. Style 7–10 mm long, ca. 1 mm in diameter, with glandular hairs, stigmas translucent to white, obtrapeziform, apex 2-lobed up to the middle, ca. 3 mm long. Capsule linear, 4-valved, 2.5–3.5 cm long, ca. 3 mm in diameter, puberulent with both glandular and eglandular hairs. Seeds appendaged.

Phenology: Flowering occurs from February to April, and fruiting from March to May.

Etymology: The specific epithet “*qintangensis*” is derived from its type locality Qintang District.

Distribution and habitat: *Primulina qintan-*

gensis is hitherto only known from the type locality, Zhangmu Town, Qintang District, Guigang City, Guangxi, China, growing on moist and shaded limestone rock surfaces on the cliff in subtropical evergreen seasonal rain forest.

Conservation status: *Primulina qintangensis* is only known from a single population near a residential area in Zhangmu Town to date. The population consists of approx. 3 000 mature individuals, all growing on moist and shaded limestone rocky faces on the cliff. They are easily disturbed by human activities. Thus, following the IUCN Red List Categories and Criteria^[14], the new species is temporarily assessed as vulnerable [VU C1].

Notes: A morphological comparison between *Primulina qintangensis* sp. nov. and the most closely related taxa *P. leiophylla* is provided in Fig. 2 and Table 1.

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