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盛宇报春苣苔，中国广西石灰岩地区苦苣苔科一新种 ——兼述微斑报春苣苔花的形态补充描述

陈荻雅^{1,2}, 李瑞锋^{1,2}, 丁莉^{2*}

(1. 桂林理工大学旅游与风景园林学院, 广西 桂林 541006; 2. 广西植物研究所国家苦苣苔科种质资源库, 中国苦苣苔科植物保育中心, 广西壮族自治区中国科学院广西植物研究所, 广西 桂林 541006)

摘要: 报道了中国广西石灰岩地区苦苣苔科报春苣苔属一新种: 盛宇报春苣苔(*Primulina liangshengyui* R. F. Li & L. Ding), 该种形态上与微斑报春苣苔[*P. minutimaculata* (D. Fang & W. T. Wang) Yin Z. Wang]近似, 但可通过叶片且两面被极短的白色糙伏毛; 苞片正面无毛, 背面被白色短糙浮毛; 萼片密被腺毛; 花冠紫色, 基部逐渐褪为白色; 花丝具腺毛来区分。目前, 该种仅在广西大化县发现一个居群, 成熟个体不足 500 株, 通过 IUCN 评估标准, 该种暂时被评为易危[VU D2]。同时, 基于大量的有花标本和野外实地调查, 对微斑报春苣苔的花部形态进行了补充描述。

关键词: 广西植物; 新分类群; 石灰岩植物; 盛宇报春苣苔; 微斑报春苣苔

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Primulina liangshengyui (Gesneriaceae), a New Species from Guangxi, China with Supplementary Description of Floral Morphology of *P. minutimaculata*

CHEN Diya^{1,2}, LI Ruifeng^{1,2}, DING Li^{2*}

(1. College of Tourism and Landscape Architecture, Guilin University of Technology, Guilin 541006, Guangxi, China; 2. National Gesneriaceae Germplasm Resources Bank, Gesneriad Conservation Center of China, Guangxi Institute of Botany, Guangxi Zhuang Autonomous Region and Chinese Academy of Sciences, Guilin 541006, Guangxi, China)

Abstract: *Primulina liangshengyui* R. F. Li & L. Ding, a new species of Gesneriaceae from the limestone of Guangxi, China is described and illustrated. It resembles *P. minutimaculata* (D. Fang & W. T. Wang) Yin Z. Wang, but can be easily distinguished by a combination of characters, especially in its leaf blades both sides very short white strigillose; bracts adaxially glabrous, abaxially densely white strigillose; calyx lobes both sides densely glandular puberulent; corolla tube purple and gradually fading to white at the base; filaments glandular puberulent. There is only one population with less 500 mature individuals at the type locality. Thus, this species was provisionally assessed as Vulnerable Endangered [VU D2] by using IUCN criteria. Further, supplemented and described of floral morphology of *P. minutimaculata* is also appended, based on plenty of specimens with flowers and field works, and especially according to living plant in bloom.

Key words: Flora of Guangxi; New taxon; Limestone flora; *Primulina liangshengyui*; *P. minutimaculata*

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作者简介: 陈荻雅(1998年生), 女, 硕士, 从事植物应用研究。E-mail: chendiya1998@foxmail.com

* 通讯作者 Corresponding author. E-mail: dingli@gxib.cn

报春苣苔属(*Primulina* Hance)^[1]主要分布在中国南部和西南部以及越南北部的石灰岩地区^[2-5]。广西的热带和亚热带喀斯特石灰岩山区是该属植物的生物多样性中心。通过不断的探索和实地观察,已经正式发表了大量新的报春苣苔属分类群^[8-9],截至 2022 年底,报春苣苔属共有 231 种和 16 变种,其中 214 种和 16 变种分布在中国^[10-13]。2021 年,来自广西的苦苣苔科植物爱好者梁盛宇在野外发现一未知的报春苣苔属物种。他采集了几株活植物,并将其转移到了广西植物研究所国家苦苣苔科种质资源库(NGGRB)、中国野生植物保护协会苦苣苔科委员会(GC)和中国苦苣苔科保护中心(GCCC)进行进一步的栽培和观察。中心人员访问了模式产地并采集了其开花标本,通过仔细比较所有已知报春苣苔属物种的标本、活体材料、模式标本和原始文献,确认其形态特征与任何已知物种均不匹配,因此,它应被归类为报春苣苔属的一个新分类种,并在此进行描述。在进行微斑报春苣苔[*P. minutimaculata* (D. Fang & W. T. Wang) Yin Z. Wang]描述的查找过程中,发现微斑报春苣苔的花部形态从未被详细描述过。因此,本文补充了微斑报春苣苔的花部形态描述。

之前,微斑报春苣苔的花器官尚未被清晰且全面地描述过。原因可能是某些报春苣苔属物种在首次发表时由于当时条件的限制而缺乏详尽的描述。微斑报春苣苔于 1981 年发表,并被归类在唇柱苣苔属(*Chirita* Buch.-Ham. ex D. Don)^[14]中,命名为微斑唇柱苣苔(*C. minutimaculata* D. Fang & W. T. Wang),直到 2011 年现代中国苦苣苔科分类系统完成后改为微斑报春苣苔^[3,15]。然而,原始出版物缺乏对花器官的描述,这一遗漏在后续研究中未得到纠正,如《中国植物志》第 69 卷、《中国植物志》第 18 卷和《中国苦苣苔科植物》^[16]。只有在《华南苦苣苔科植物》中添加了模糊的描述,这并未有效描述该物种花器官的关键信息。由于本文描述的新物种与微斑报春苣苔在形态上相似,并考虑到花器官在物种鉴别中的重要性,本文补充了微斑报春苣苔的花形态学特征描述,以更全面地理解其特征。

1 材料和方法

Primulina liangshengyui R. F. Li & L. Ding, sp. nov. 盛宇报春苣苔 (图 1, 2)

Type (模式标本): CHINA (中国). Hechi City (河池市), Dahua County (大化县), Yalong Town (雅龙镇), on moist limestone rock surface in limestone area (生于石灰岩区域潮湿岩石表面), 23.9440° N, 107.8330° E, 海拔 700 m, 21 Sep. 2021, LSY210921-01 (Holotype: IBK!; Isotype: IBSC!).

命名规则: 本新种以梁盛宇先生命名,为第一位发现并采集该新种的人。

Diagnosis: *Primulina liangshengyui* is different from all known taxa of *Primulina*. However, morphologically, it mostly approaches *P. minutimaculata* because of their approximate size and texture of leaves and shape of flower. But it can be readily distinguished from the latter by following morphological combinations of two species (Table 1). **Leaf-Blades** both sides densely very short white strigillose in *P. liangshengyui* (vs. sparsely appressed puberulent in *P. minutimaculata*, same as order); **Peduncle** 8–10 cm long (vs. 15–28 cm long); **Calyx lobes** both sides densely glandular puberulent (vs. outside densely glandular puberulent, inside glabrous); **Corolla** multi-color, lip white with purple vein (vs. outside densely puberulent, inside puberulent), 1.5–2 cm×ca. 0.5 cm (vs. 2.5–2.8 cm×1–1.5 cm); **Filaments** glandular puberulent, ca. 5 mm long (vs. puberulent, ca. 12 mm long).

盛宇报春苣苔与已知的所有报春苣苔属植物均不同。然而,从形态学上看,它最接近于微斑报春苣苔,因为它们的叶片大小、质地和花形大致相似。但是,可以通过以下 2 种植物的形态组合特征来轻松区分这 2 种植物(表 1)。盛宇报春苣苔中,两侧叶片密被非常短的白色糙伏毛(微斑报春苣苔:疏被腺状毛,下同);花梗长 8–10 cm (长 15–28 cm);花萼裂片两侧密被腺状毛(外部密被腺状毛,内部无毛);花冠 1.5–2 cm×~0.5 cm (2.5–2.8 cm×1–1.5 cm);花丝具腺状微柔毛,5 mm 长(微柔毛,12 mm 长)。

Description: Perennial herb. Rhizome subterete, rosulate. Leaves 5–9, all basal, petiolate; leaf blades coriaceous, adaxial surface dark green to green and abaxial surface grey green, more and less asymmetric, elliptical to broadly ovate, 7–11 cm long, 4–6 cm wide at the middle, apex rounded, obtuse to acute, base obliquely cuneate, margin usually entire but occasionally inconspicuously crenate, both sides densely white

strigose; lateral veins inconspicuously in adaxial surface but obviously prominent in abaxial surface, 4–5 on each side of the midrib; petiole 2–8 cm long, dark green, densely white strigose. Cymes axillary, 1–4, 10–14 cm long, 2–4-branched, 12–18-flowered. Peduncle brown, 8–10 cm long, ca. 1 cm in diam., pale yellow to white appressed strigose and puberulent. Bracts 2, opposite, elliptic, adaxial surface brownish purple at base and green in the remainder, abaxial surface green, ca. 3 cm long, ca. 2 cm wide at the middle, margin

entire, apex acute, adaxially glabrous, abaxially densely white strigose. Pedicel green to brownish green, 2–3 cm long, ca. 8 mm in diam., densely glandular pubescent. Calyx 5-parted to the base, sepals lanceolate-linear to subulate, abaxial surface pale brownish at the base and gradually becoming green from the lower half to the top of lobes, adaxial surface green, ca. 5 mm long, ca. 1 mm wide, both sides densely glandular puberulent. Corolla tubular, multicolor, lip white with conspicuous or inconspicuous purple veins, tube purple but

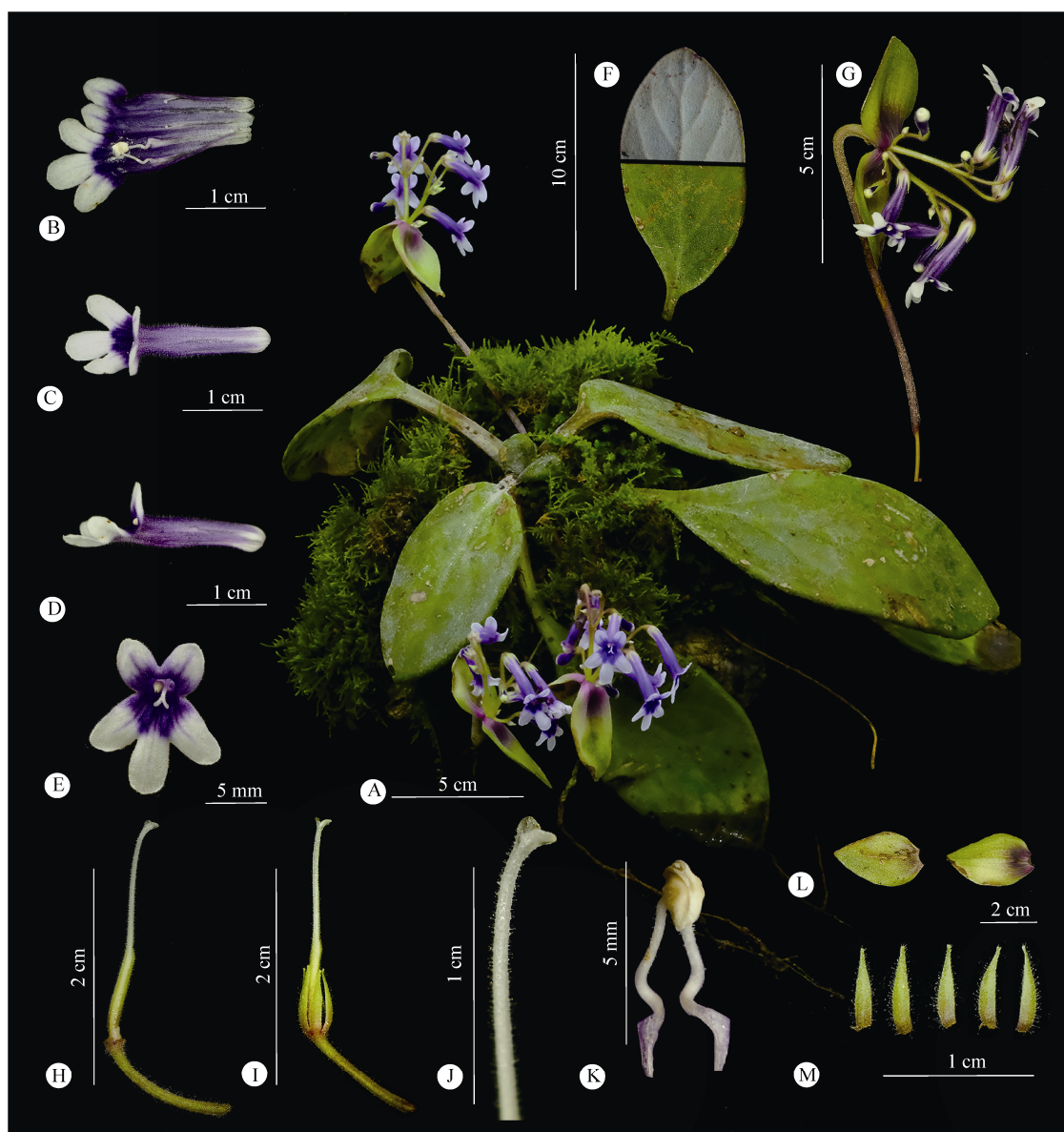


图1 盛宇报春苣苔。A: 植株; B: 包含雄蕊的剖开花冠; C: 花冠顶视图; D: 花冠侧视图; E: 花冠前视图; F: 叶片; G: 花序; H: 雌蕊、子房及花盘; I: 雌蕊和花萼; J: 柱头; K: 雄蕊; L: 苞片; M: 萼片。(李瑞峰拍摄)。

Fig. 1 *Primulina liangshengyui* R. F. Li & L. Ding. A: Habit; B: Opened corolla showing stamens; C: Top view of corolla; D: Lateral view of corolla; E: Frontal view of corolla; F: Leaf blades; G: Cymes; H: Pistil, ovary and disc; I: Pistil and calyx; J: Stigma; K: Stamens; L: Bracts; M: Calyx lobes. (Photoed by Rui-Feng Li).

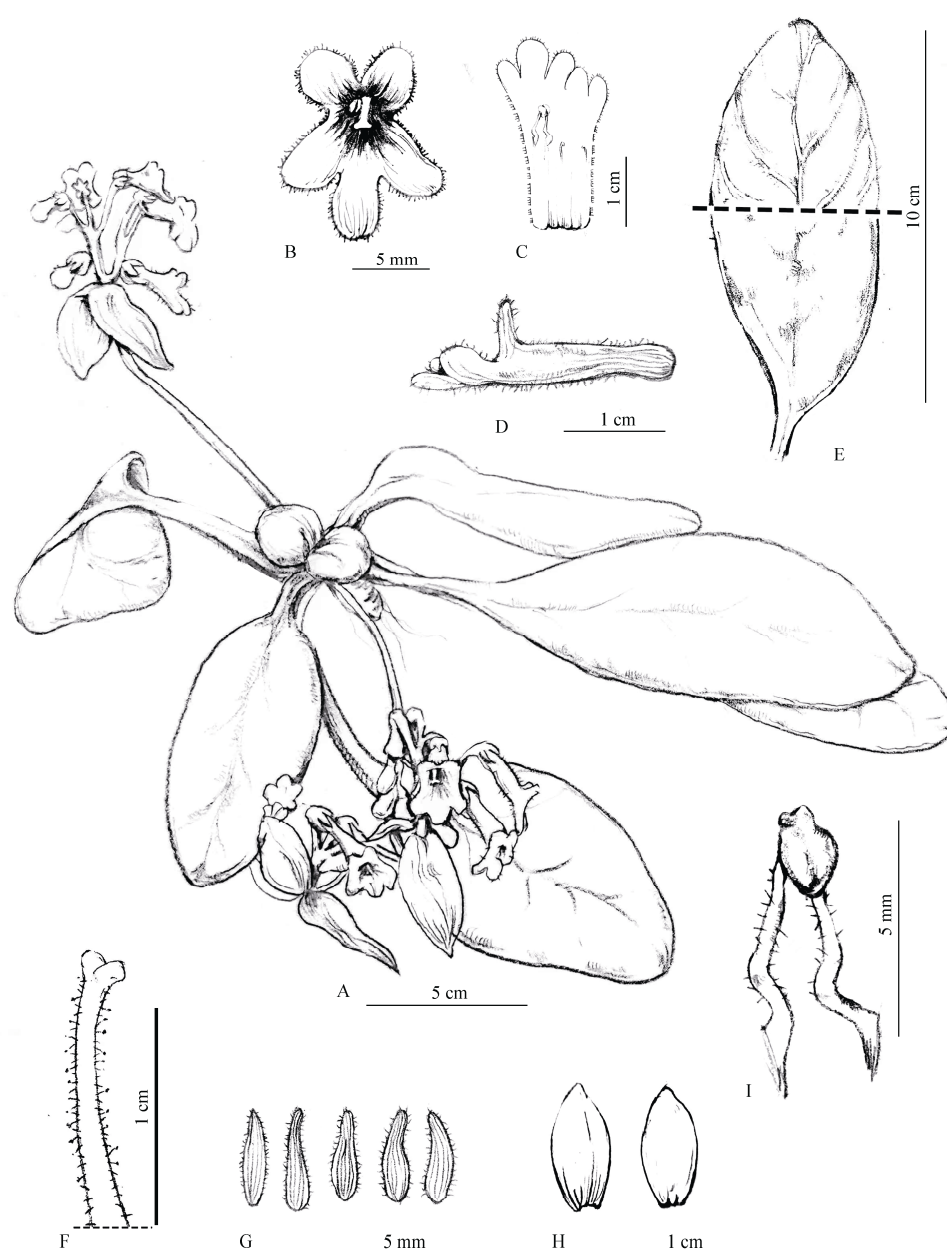


图2 盛字报春苣苔。A: 植株; B: 花冠前视图; C: 包含雄蕊的剖开花冠; D: 花冠侧视图; E: 叶片; F: 柱头; G: 萼片; H: 苞片; I: 雄蕊。(李瑞峰绘制)

Fig. 2 *Primulina liangshengyui* R. F. Li & L. Ding. A: Habit; B: Frontal view of corolla; C: Opened corolla showing stamens; D: Lateral view of corolla; E: Leaf blades; F: Stigma; G: Calyx lobes; H: Bracts; I: Stamens. (Drawn by Rui-Feng Li)

gradually fading to white at the base, zygomorphic, bilabiate, 2–2.5 cm long; corolla throat bright purple, not constricted, 3–5 mm in diam., outside densely glandular puberulent, inside glabrous; tube nearly cylindrical, 1.5–2 cm×ca. 0.5 cm; adaxial lip shorter, 2-lobed to over middle, lobes oblong, 4–6 mm long, ca. 3 mm wide at the base, apex lobes rounded, obtuse to rounded; abaxial lip 3-lobed to over middle, lobes obovate, the central one slightly longer than lateral ones,

ca. 6 mm long, ca. 3 mm wide at the base, lateral lobes slightly oblique oblong, ca. 5 mm long, ca. 3 mm wide at the base, apex of all lower lobes obtuse to rounded. Stamens 2, adnate to ca. 1 cm above the base of tube; filaments white, ca. 5 mm long, glandular puberulent, linear but gradually becoming flatter and broader from the middle to the base, geniculate near the base; anthers reniform, slightly constricted at the middle, both apices slightly blunt, pale yellow, ca. 1.5 mm long, ca. 0.8 mm

表 1 盛宇报春苣苔与微斑报春苣苔的形态对比

Table 1 Morphological comparison of *Primulina liangshengyui* R. F. Li & L. Ding sp. nov., and *P. minutimaculata* (D. Fang & W. T. Wang) Yin Z. Wang

形态特征 Character	盛宇报春苣苔 <i>P. liangshengyui</i>	微斑报春苣苔 <i>P. minutimaculata</i>
叶片数 Leaf number	5–9	约 10 ca. 10
叶片质地 Leaf indumentum	革质, 两面密被白色糙伏毛 Coriaceous; both sides densely white strigose	革质, 疏被贴伏微柔毛 Leathery; sparsely appressed puberulent
苞片质地 Bracts indumentum	正面无毛, 背面密被白色糙伏毛 Adaxially glabrous, abaxially densely white strigose	两面密被糙伏毛 Strigose on both surfaces
萼片质地 Calyx indumentum	两面密被腺状短柔毛 Both sides densely glandular puberulent	外部密被腺状短柔毛, 内部无毛 Outside densely glandular puberulent, inside glabrous
花冠大小 (cm) Corolla size	1.5–2×ca. 0.5	2.5–2.8×1–1.5
花冠颜色 Corolla color	筒部紫色, 至基部逐渐变为白色 Tube purple, gradually fading to be white at the base	浅紫色至紫色, 花冠筒表面具深紫色条纹 Pale purple to purple, with dark purple stripes on the corolla tube surface
花盘 Disc	高约 1mm, 无毛 ca. 1 mm high, glabrous	高约 1.5 mm, 密被短柔毛 ca. 1.5 mm high, densely short puberulent

in diam., glabrous. Stamnodes 3, the longer two glabrous, adnate ca. 8 mm to the base of the tube, straight, ca. 2 mm long, apex capitate, the smallest one glabrous, adnate at the base of tube. Disc annular, brownish-yellow, ca. 1 mm high, glabrous, margin entire. Pistil ca. 1.8 cm long; ovary narrowly cylindrical, pale green to yellowish green, ca. 7 mm long, ca. 1.5 mm in diam. in the middle, densely erect puberulent and glandular puberulent; style linear, white, indumentum same as ovary; stigma trapezoidal, 2-lobed, lobes ovate to inconspicuously triangular, ca. 1 mm long, ca. 1.5 mm wide at the base, translucent, pale green. Capsule not seen.

形态描述: 多年生草本, 根状茎近圆柱状, 莲座状叶 5~9, 全部基生, 具叶柄; 叶片革质, 正面深绿色至绿色, 背面灰绿色, 大小不对称, 椭圆形至宽卵形, 长 7~11 cm, 中部宽 4~6 cm, 先端圆形, 钝至锐尖, 基部斜楔形, 边缘通常全缘, 偶有不明显圆齿, 两面密被白色糙伏毛; 侧脉正面不明显但是背面明显突出, 中脉两边各 4~5; 叶柄长 2~8 cm, 深绿色, 密被白色糙伏毛。聚伞花序腋生, 长 1~4 cm, 分枝 2~4 支, 花 12~18 朵。花序梗棕色, 长 8~10 cm, 直径约 1 cm, 浅黄至白色贴伏, 具糙伏毛, 被微柔毛。苞片 2, 对生, 椭圆形, 正面基部褐紫色, 其余部分绿色, 背面绿色, 长约 3 cm, 中间宽约 2 cm, 边缘全缘, 先端锐尖, 正面无毛, 背面密被白色糙伏毛。花梗绿色至褐绿色, 长 2~3 cm, 直径约 8 mm, 密被腺状短柔毛。花萼 5 深裂至基部, 萼片披针形线形至钻形, 背面基部淡褐色, 从裂片下半部至顶部逐渐变为绿色, 正面绿色, 长约 5 mm, 宽约 1 mm, 两面密被腺状微柔毛。花冠管状, 多色, 唇白色, 具明显或不明显的紫色脉, 花冠喉亮紫色, 不缢缩,

直径 3~5 mm, 外面密被腺状微柔毛, 里面无毛; 筒部近圆柱形, 1.5~2 cm×约 0.5 cm; 上唇短, 2 裂至中部以上, 裂片长圆形, 长 4~6 mm, 基部宽约 3 mm, 先端裂片圆形, 钝至圆形; 下唇 3 裂至中部以上, 裂片倒卵形, 中央裂片稍长于侧裂片, 长约 6 mm, 基部宽约 3 mm, 侧裂片稍斜长圆形, 雄蕊 2 枚, 贴生于筒部基部以上约 1 cm 处; 花丝白色, 长约 5 mm, 被腺状微柔毛, 线形, 但由中部至基部逐渐变扁和变宽, 近基部膝曲; 花药肾形, 中部稍缢缩, 两尖稍钝, 浅黄, 长约 1.5 mm, 直径约 0.8 mm, 无毛。退化雄蕊 3, 较长的 2 枚无毛, 贴生于筒部基部约 8 mm, 直, 长约 2 mm, 先端头状, 最小的 1 个无毛, 贴生于筒部基部, 花盘环状, 棕黄色, 高约 1 mm, 无毛, 边缘全缘, 雌蕊长约 1.8 cm, 子房狭圆柱形, 浅灰绿色至黄绿色, 长约 7 mm, 中部直径约 1.5 mm, 密被直立微柔毛和腺状微柔毛; 花柱线形, 白色, 毛被与子房相同; 柱头梯形, 2 裂, 裂片卵形至不明显三角形, 长约 1 mm, 基部宽约 1.5 mm, 半透明, 淡绿色。蒴果未见。

花期: 6 月中旬至 7 月。

IUCN 濒危等级评估和保护现状: 目前, 广西大化县雅龙镇的盛宇报春苣苔只有 1 个居群, 该居群由约 500 株成熟个体和一些幼苗组成, 所有生长在潮湿和阴暗的岩石和石灰岩表面, 在距离种群中心 10 km 的半径内没有发现其他种群。它的占有面积只有约 500 m²。人类活动造成的环境破坏是该物种生存的主要威胁, 长期的自然干旱导致许多植物死亡。自从这个物种被发现以来, 许多成熟个体被植物猎人收集, 被作为一种观赏植物在网上出售, 因此, 根据《世界自然保护联盟红色名录分类和标准使用指南》(*Guidelines for Using the IUCN Red List*

Categories and Criteria), 盛字报春苣苔暂时被评估为易危[VU D2]^[17]。

2 微斑报春苣苔花部补充描述(图 3)

微斑报春苣苔 *Primulina minutimaculata* (D. Fang & W. T. Wang) Yin Z. Wang in Bull. Bot. Res.

1(4): 55, Photo. 8. 1981 & 5(3) 45. 1985; W.T. Wang, Fl. Reip. Pop. Sin. 69: 358, tab. 96: 6–7; W. T. Wang *et al.* in Z. Y. Wu & Raven, Fl. China 18: 325. 1998.

Type (模式产地): CHINA (中国). Guangxi (广西): Tiandeng County (天等县), Fuxin Town (福新镇), Songshan Village (松山村), growing on moist rock surfaces in limestone hill (生长于石灰岩山脉潮



图 3 微斑报春苣苔。A: 生境; B: 植株; C, D: 苞片正背面; E, F: 萼片正背面; G: 花冠正面; H: 花冠侧面; I: 花冠背面; J: 花冠顶部; K: 萼片; L: 剖开的花冠; M: 雄蕊; N: 雌蕊; O: 柱头。(熊驰摄)

Fig. 3 *Primulina minutimaculata* (D. Fang & W.T. Wang) Yin Z. Wang. A: Habitat; B: Habit; C, D: Adxial and abxial view of bracts; E, F: Adxial and abxial view of calyx; G: Frontal view of open flower; H: Lateral view of corolla; I: Back view of corolla; J: Top view of corolla; K: Indumentum of calyx; L: Opened corolla; M: Fertile stamens; N: Pistil; O: Stigma. (Photod by Chi Xiong).

湿岩石表面), 25 June 1978, B. Zhao 2-400 (Holotype!; GXMI; Isotype!; GXMI).

花冠筒状, 淡紫色至紫色, 有时淡紫色或粉红色, 花冠筒表面具深紫色条纹, 对称, 二唇形, 长4~4.5 cm, 直径1~1.2 cm, 外侧密被近直立的绒毛和腺状毛, 内部被微柔毛至无毛, 近圆柱形, 长2.5~2.8 cm, 口部直径1~1.5 cm; 上唇2裂, 裂片椭圆形, 长5~8 mm, 基部宽约5 mm, 顶端裂片圆钝至钝; 下唇3裂, 裂片近心形, 中间瓣片略长于侧瓣片, 长1.2~1.5 cm, 基部宽约5.5 mm, 侧瓣片稍斜, 椭圆形至长圆形, 长约1.2 cm, 基部宽约5 mm, 所有下唇裂片顶端圆钝至钝。雄蕊2, 贴生于距筒基部约1.5 cm处; 花丝淡紫色, 密被绒毛, 长约1.2 cm, 线形但逐渐变平和宽, 中部弯曲; 花药近肾形, 中部略收缩, 顶端稍钝, 淡黄色, 长约2 mm, 直径约0.8 mm, 无毛。退化雄蕊2, 密被绒毛, 贴生于距筒基部约1.5 cm处, 直立, 长约7 mm, 顶端膨大。花盘环状, 棕黄色, 高约1.5 mm, 密被短绒毛, 全缘。雌蕊长约2.8 cm; 子房狭圆柱形, 淡绿色至深绿色, 密被直立绒毛, 长约1.5 cm, 中部直径约1 mm; 花柱线形, 淡绿色至白色, 被毛与子房相同; 柱头2裂, 裂片卵形, 长约1.5 mm, 宽约1 mm, 半透明, 淡绿色。

Corolla tubular, pale purple to purple, sometime pale purple or pinkish purple, with dark purple stripes on the corolla tube surface, zygomorphic, bilabiate, 4~4.5 cm long, 1~1.2 cm in diam., outside densely nearly erectly puberulent and glandular puberulent, inside puberulent to glabrous, nearly cylindric, 2.5~2.8 cm long, orifice 1~1.5 cm in diam.; adaxial lip 2-lobed, lobes oblong, 5~8 mm long, ca. 5 mm wide at the base, apex lobes rounded to obtuse; abaxial lip 3-lobed, lobes obovate, the central one slightly longer than lateral ones, 1.2~1.5 cm long, ca. 5.5 mm wide at the base, lateral lobes slightly oblique, oblong to oblong-rounded, ca. 1.2 cm long, ca. 5 mm wide at the base, apex of all lower lobes rounded to obtuse. **Stamens** 2, adnate to ca. 1.5 cm above the base of tube; **Filaments** pale purple, densely puberulent, ca. 1.2 cm long, linear but gradually becoming flat and broad from the middle to the base, geniculate at the middle; **Anthers** reniform, slightly constricted in the middle, both apices slightly blunt, pale yellow, ca. 2 mm long, ca.

0.8 mm in diam., glabrous. **Staminodes** 2, densely puberulent, adnate ca. 1.5 cm to the base of the tube, straight, ca. 7 mm long, apex capitate. **Disc** annular, brownish-yellow, ca. 1.5 mm high, densely short puberulent, margin entire. **Pistil** ca. 2.8 cm long; **ovary** narrowly cylindrical, pale green to deep green, densely erect puberulent, ca. 1.5 cm long, ca. 1 mm in diam at the middle; **style** linear, pale green to white, indumentum same as ovary; **stigma** 2-lobed, lobes ovate, ca. 1.5 mm long, ca. 1 mm wide, translucent, pale green.

Additional specimens examined (其他标本鉴定): CHINA (中国). Guangxi (广西): Longzhou County (龙州县), Wulian Town (武联镇), Banlang Village (板廊村), Linjinye Hill (林金叶山), 5 May 1953, Shao Hing Chun 13506 (IBSC!); Longzhou County (龙州县), Wulian Town (武联镇), Banlang Village (板廊村), Paotai Hill (炮台山), 22 August 1954, Chi Hsin Tsoong 91053 (IBSC!); same locality, Yin Kun Li 00098 (IBSC!); Longzhou County (龙州县), Nonggang National Natural Reserve (弄岗自然保护区), Shangjin Station (上进站), from 49 to 46 Boundary Tablet (49至46边界板), 7 July 2011, Yu Song Huang, Yun Biao Liao LZ601 (IBK!); Longzhou County (龙州县) Nonggang National Natural Reserve (弄岗自然保护区), Nonggang District, 22 May 2008, Guangxi team of Zhongzhilian 0998 (IBK!); Longzhou County (龙州县), Nonggang National Natural Reserve (弄岗自然保护区), Nonggang Station (弄岗站), 14 April 2010, Wei Bin Xu, Bo Pan 10103 (IBK!); Longzhou County (龙州县), Nonggang National Natural Reserve (弄岗自然保护区), Sanlian Town (三联镇), Longjiang (龙江), 15 July 2009, Yu Song Huang, Xiao Xia Ye, Feng Lin Chen H09050 (IBK!); Longzhou County (龙州县), Jinlong County (金龙乡), Gaoshan Village (高山村), Banbi Community (半壁社), 4 August 1980, Ning Fen Kang 23179 (GXMG!); same locality, 15 July 2010, Wei Bin Xu, Wang Hui Wu 10905 (IBK!); Daxin County (大新县), Xialei Town (下雷镇), Xialei Natural Reserve (下雷自然保护区), 22 July 2014, Peng Wei Li LPW2014061 (PE!); Daxin County, Detian, 6 June 2014, Cui Yuan Feng FCY2014015 (PE!).

3 讨论

基于形态学差异, 盛宇报春苣苔被确认为一个新的物种, 与已知的所有报春苣苔属物种均不相同。这一结论是基于在中国南部和西南部以及越南北部进行的广泛野外调查得出的, 新物种的发现表明应进一步在上述地区进行植物区系调查。因此, 随着对喀斯特植物的持续研究, 将会有更多的新物种被发现, 从而丰富中国的植物区系和石灰岩植物区系。石灰岩栖息地丰富的生物多样性使得嗜钙的报春苣苔属植物成为研究中越石灰岩喀斯特植物辐射的理想对象^[7,11,19]。

新种盛宇报春苣苔在叶片形态上与微斑报春苣苔相似, 但可以通过一系列特定特征轻松区分。

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