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直果银莲花(毛茛科)确认在越南有分布

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摘要: 毛茛科直果银莲花(*Anemone orthocarpa* Hand.-Mazz.)长期以来仅记录分布于我国贵州西南部兴义县。通过标本检查,我们确认该种在越南北部老街省沙巴市也有分布。
关键词: 银莲花属; 卵叶银莲花组; 毛茛科; 分类学
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Confirmation of the Occurrence of *Anemone orthocarpa* (Ranunculaceae) in Vietnam

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Abstract: Examination of herbarium specimens has shown that *Anemone orthocarpa* Hand.-Mazz. (Ranunculaceae), a species which was previously reported to be endemic in Xingyi County, southwestern Guizhou Province, China, also occurs in Sa Pa District, Lao Cai Province, northern Vietnam.
Key words: *Anemone*; *Anemone* sect. *Begoniifolia*; Ranunculaceae; Taxonomy

Anemone orthocarpa Hand.-Mazz. was described on the basis of a collection, Cavalerie 4599 (K, P), from Hoang-tsao-pa (= Xingyi County), southwestern Guizhou Province, China[1]. This species is very rare in China and has long been reported to be endemic to the country[2–4]. In fact, after its first collection in 1915 by Cavalerie the species was not collected again until 2006 when it was rediscovered from Xingyi, the type locality[5].

Eichler[6], when dealing with the Ranunculaceae from the Malesian region, mentioned in passing that the specimens from Vietnam cited by Gagnepain[7] (Suppl. Fl. Gén. Indo-Chine **1**: 9. 1938) as *Anemone sumatrana* de Vriese all belong to *A. orthocarpa*. Regrettably this remark has been ignored or neglected by all later authors of the genus *Anemone*.

Our comparison of the specimens of *Anemone orthocarpa* from China with those from Vietnam cited by Gagnepain[7] as *Anemone sumatrana* has confirmed that the specimens from Vietnam should be referred to as *A. orthocarpa* (Fig. 1: A–C). The specimens from Vietnam are not essentially different from those of *A. orthocarpa* from China, but readily distinguishable from *A. sumatrana* by the simple, deeply 3-divided leaves with narrower middle lobes. In *A. sumatrana*, the leaves are ternate, with the leaflets petiolulate (Fig. 1: D).

Anemone orthocarpa Hand.-Mazz. in Acta Horti Gotob. **13**: 176. 1939; W. T. Wang in Fl. Reipubl.

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Fig. 1 *Anemone orthocarpa* (A−C) and *A. sumatrana* (D). A: Cavalerie 4599 (P, holotype), Xingyi, Guizhou, China; B: Pételot s.n. (P), Sa Pa, Lai Cai, Vietnam; C: Pételot 199 (P), Sa Pa, Lai Cai, Vietnam; D: Averyanov et al. VH057 (P), Ngoc Linh, Kontum, Vietnam.

Popularis Sin. **28**: 26. 1980; Y. K. Li in Fl. Guizhou. **3**: 80. 1990; W. T. Wang, Ziman & B. E. Dutton in Fl. China **6**: 319. 2001. TYPE: China: Guizhou, Hoang-tsao-pa (= Xingyi), Tien-hsin-chiao, Feb. 27, 1915, Cavalerie 4599 (holotype, P!; isotypes, K!, P!).

A. sumatrana auct. non de Vriese: Gagnep. in Suppl. Fl. Gén. Indo-Chine **1**: 9. 1938.

Additional specimens examined. China. Guizhou: Xingyi, Q. Yuan & Q. E. Yang 1080 (IBSC), Y. Zhang & M. Tang 76 (IBSC). **Vietnam. Lai Cai:** Sa Pa, Pételot s.n. (P), 195 (P), 199 (P).

Distribution and habitat. *Anemone orthocarpa* is distributed in southwestern Guizhou (Xingyi), southwestern China, and Lai Cai (Sa Pa), northern Vietnam (Fig. 2). It grows in shady, moist places in mountainous limestone karst areas at altitudes of 1000–1200 m.

Notes. Relationships of *Anemone orthocarpa* with other species of *Anemone* have been controversial. Handel-Mazzetti[1] considered that the species is most closely related to *A. rivularis* Buch.-Ham. This point of view was accepted by Ziman et al.[8], who placed *A. filisecta* C. Y. Wu ex W. T. Wang, *A. orthocarpa* and *A. rivularis* within their series *Rivularidum* never formally described. However, Eichler[6] regarded *A. orthocarpa* as most closely related to *A. sumatrana*, and also more or less related to *A. begoniifolia* H. Lév. & Vaniot, *A. chapaensis* Gagnep., and *A. howellii* J. F. Jeffrey & W. W. Smith. Wang[4] and Tamura[9] largely agreed with Eichler[6] and referred *A. begoniifolia*, *A. howellii*, *A. hokouensis* C. Y. Wu ex W. T. Wang, *A. orthocarpa*, and *A. sumatrana* to the same section [*A.* sect. *Begoniifolia* (Ulbr.) Tamura]. Yuan and Yang[2] added to the section their new species, *A. xingyiensis* Q. Yuan & Q. E. Yang, the closest relative of *A. begoniifolia*. Hopefully our ongoing molecular systematic studies on *Anemone* can provide some useful information for gaining a better understanding of relationships of these species. It should be noted that *A. chapaensis* from Vietnam has been determined to be conspecific

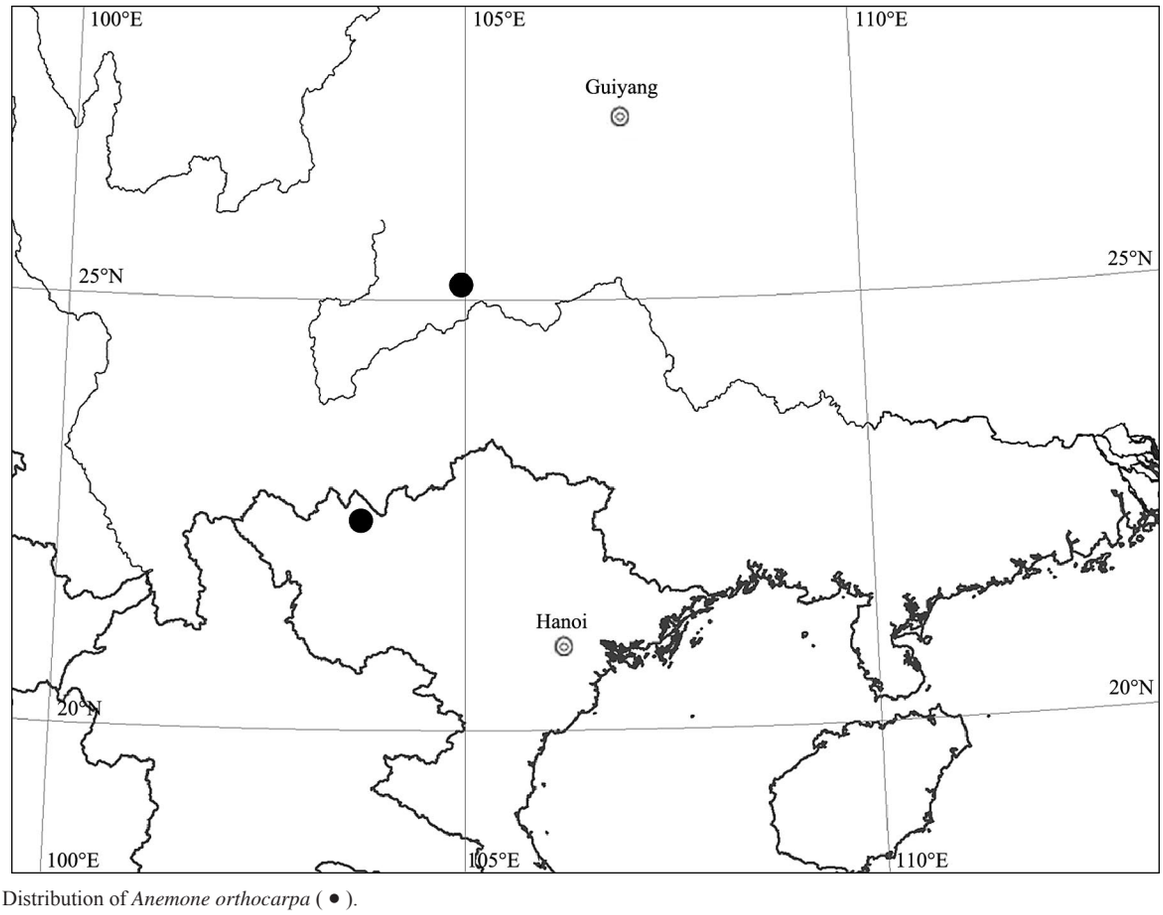

Fig. 2 Distribution of *Anemone orthocarpa* (●).

with *A. howellii*[10].

Within *Anemone* sect. *Begoniifolia* circumscribed by Tamura[9], we have determined that three species occur in Vietnam, i.e. *A. howellii*, *A. orthocarpa*, and *A. sumatrana*. They can be readily distinguished by features in the following key.

Key to species within *Anemone* sect. *Begoniifolia* from Vietnam

1a. Leaves ternate, with the leaflets petiolulate ····· *A. sumatrana*

1b. Leaves simple, 3-divided.

2a. Leaves deeply divided to 3–5 mm from the base, with the lateral lobes unequally deeply 2-divided ····· ····· *A. orthocarpa*

2b. Leaves divided to the middle, with the lateral lobes nearly undivided ····· *A. howellii*

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