

DOI: 10.11931/guihaia.gxzw202011028

王文采. 四川毛茛科二新种——乌头属一新种和唐松草属一新种 [J]. 广西植物, 2022, 42(1): 10–13.

WANG WC (WANG WT). Two new species of *Aconitum* and *Thalictrum* (Ranunculaceae) from Sichuan [J]. *Guihaia*, 2022, 42(1): 10–13.



四川毛茛科二新种——乌头属一新种和唐松草属一新种

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摘要: 该文描述了自四川西部发现的毛茛科二新种, 包括四川乌头属一新种, 即泸定乌头 (*Aconitum ludingense* W. T. Wang), 此新种隶属于乌头属乌头亚属, 以及四川唐松草属一新种, 即狭药唐松草 (*Thalictrum stenanthum* W. T. Wang), 给出了此新种与其近缘种六脉萼唐松草之间的形态区别。

关键词: 毛茛科, 乌头属, 唐松草属, 新种, 四川

中图分类号: Q949 文献标识码: A 文章编号: 1000-3142(2022)01-0010-04

Two new species of *Aconitum* and *Thalictrum* (Ranunculaceae) from Sichuan

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Abstract: Two species of the family Ranunculaceae are described as new from western Sichuan Province, including a new species of the genus *Aconitum*, *A. ludingense* W. T. Wang, belonging to Subgen. *Aconitum*, and a new species of the genus *Thalictrum*, *T. stenanthum* W. T. Wang, and the morphological differences between it and its close ally, *T. sexnervisepalum* W. T. Wang are given.

Key words: Ranunculaceae, *Aconitum*, *Thalictrum*, new species, Sichuan

在 2018 年和 2019 年两年中, 同事张树仁先生率队到四川横断山区, 考察那里丰富、复杂的植物区系, 采集到大量植物标本。我在鉴定其中毛茛科标本的过程中, 发现毛茛科二新种: 乌头属一新种, 即泸定乌头; 唐松草属一新种, 即狭药唐松草。

泸定乌头 图 1:1–11

Aconitum ludingense W. T. Wang, sp. nov. Fig. 1

Ob foliadissecta, flores interdum solitarios species nova haec est aliquantum similis *A. monantho* Nakai, a quo caulibus multo brevioribus 3 m longis, foliorum

basalium petiolis etiam multo brevioribus 0.9–2.2 cm longis, sepalis supero galeato-naviculari haud rostrato, gynoecio ex carpellis quinque dense sericeis constanti valde differt. In *A. monantho*, caules 14–30 cm longi, foliorum basalium petioli 5–20 cm longi, sepalum superum alte galeatum et rostratum, et gynoecium ex carpellis tribus glabris constans est.

Small biennial herbs 3–5 cm tall. Root tubers 2, small, ellipsoidal or conic, 7–9 × 3 mm. Stem very short, 3 mm long, 2 mm across, glabrous, near base 1–2-leaved, apex with a short raceme. Basal leaves ca. 4,

收稿日期: 2020–12–20

基金项目: 中国科学院植物研究所资助王文采院士科研活动经费(110100PZ07) [Supported by the Fund for WANG Wen-tsai Academician Scientific Research of Institute of Botany, Chinese Academy of Sciences(110100PZ07)].

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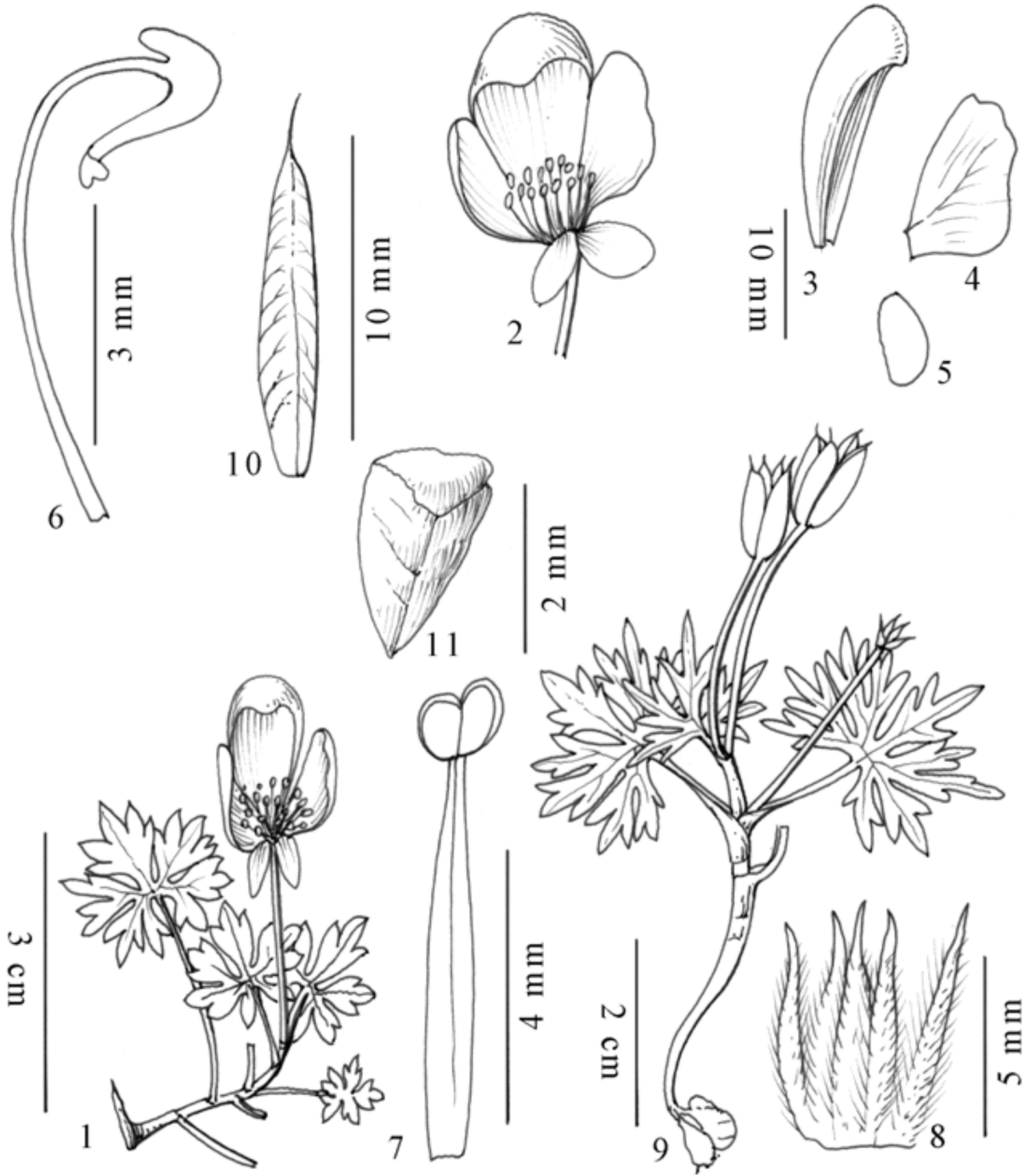


图 1 泸定乌头 1. 开花植株, 其总状花序具 1 花; 2. 花; 3. 上萼片; 4. 侧萼片; 5. 下萼片; 6. 花瓣; 7. 雄蕊; 8. 雌蕊群; 9. 具蓇葖植株; 10. 蓇葖; 11. 种子。(据模式标本, 孙英宝绘图)

Fig. 1 *Aconitum ludingense* 1. Flowering plant with a 1-flowered raceme; 2. Flower; 3. Upper sepal; 4. Lateral sepal; 5. Lower sepal; 6. Petal; 7. Stamen; 8. Gynoecium; 9. A plant with follicles; 10. Follicle; 11. Seed. (From holotype, drawn by Y. B. Sun)

glabrous; blades subcoriaceous, cordate-pentagonal, or reniform, $0.4-1.2 \times 1-2.5$ cm, 3-parted to $0.5-1$ mm above base, central lobe smaller, broad-rhombic, $0.4-0.7$

cm broad, 3-lobed, with lobules linear-ovate entire or 1-2-denticulate, lateral lobes larger, obliquely flabellate, $0.5-1.7$ cm broad, unequally 2-parted, with secondary

lobules 2-3-lobed or 2-parted; petioles 0.9-2.2 cm long. Cauline leaves similar to basal ones. Racemes terminal, 3-3.5 cm long, 1-3-flowered; bracts foliaceous, shortly petiolate; pedicels robust, 2-2.4 cm long, with dense spreading short hairs 0.1-0.2 mm long, below or above 2-bracteolate; bracteoles linear, 2-6 × 0.4-1 mm, glabrous. Flower: Sepals blue, membranous, upper sepal 13 mm long, apex galeate ca. 5 mm broad, else-where navicular, ca. 3 mm broad, adaxially glabrous, abaxially above with sparse hairs and ciliate; lateral sepals obliquely flabellate, ca. 10 × 11 mm, apex slightly undulate, adaxially and abaxially on the middle with sparse short hairs; lower sepals broad-elliptic, ca. 6 × 4 mm, adaxially glabrous, abaxially near apex puberulous, apex rounded. Stamens ca. 30, glabrous; filaments white, lanceolate-linear, 3.5-5 × 0.6 mm; anthers black, ca. 0.8 × 1 mm. Carpels 5; ovaries linear, 3.5-4 × 0.8 mm, densely sericeous; styles 0.8-1 mm, glabrous. Follicles narrow-oblong 10 × 3-4 mm, with sparse hairs and transverse nerves, persistent styles 2 mm long. Seeds whitish, compressed-tetrahedral, ca. 2 mm long.

四川(Sichuan): 泸定县, 雅家梗山口 (Luding Xian, Yajiageng Pass), alt. 3 950 m, 高山草甸 (on alpine meadow), 2018-09-06, 陈文俐, 蒋善文, 张中帅 (W. L. Chen, S. W. Jiang & Z. S. Zhang) 912 (**holotype**, PE)。

泸定乌头的叶细裂, 花有时单生, 与具上述特征的高山乌头 (*A. monanthum* Nakai) 有些相似, 两者的区别在于泸定乌头的茎很短, 长仅 3 mm, 基生叶叶柄也很短, 长 0.9~2.2 cm, 上萼片盔状船形, 不具喙, 雌蕊群由 5 枚密被卷毛的心皮组成。而高山乌头, 茎长 14~30 cm, 基生叶叶柄长 5~20 cm, 上萼片高盔形, 具喙, 雌蕊群由 3 枚无毛心皮组成 (王文采, 1979)。

狭药唐松草 图 2: 1-5

Thalictrum stenanthum W. T. Wang, sp. nov.

Fig. 2

[Sect. *Rutifolia* (Prantl) W. T. Wang]

Ob thyrso plus minusve racemiformes, foliola breviter hirtella, sepala glabra, ovaria brevissime pilifera species nova haec est affinis *T. sexnervisepalo* W. T. Wang, a quo sepalis 3-nervibus, androecio staminodiis

carenti, staminum filamentis filiformibus, stylis ovariis longioribus differt. In *T. sexnervisepalo*, sepala 6-nervia, androecium staminodiis aliquot praeditum, staminum filamenta anguste linearia, styli ovariis aequilongi sunt.

Perennial herbs 45-88 cm tall. Stems simple, subglabrous, smooth, above base inconspicuously and longitudinally 15-canaliculate, ca. 7-leaved. Cauline leaves shortly petiolate, twice or thrice ternate; blades nerly deltoid, 6.5-11 × 6-13 cm, 15-52-foliolate; leaflets papery, terminal ones broad-obovate, obovate or broad-rhombic, lateral ones ovate or broad-ovate, 5-14 × 5-15 mm, (2-)3-lobulate, with lobules 1-3-denticulate or entire, adaxially glabrous, abaxially on nerves with short and rigid hairs 0.05-0.1 mm long, with nerves adaxially concave and abaxially prominent; petioles 0.5-3 cm long, with rachis and petiolules subglabrous. Thyrses terminal, 10-23 × 3-11 cm, 5-30-flowered, with branches more or less racemiform; bracts foliaceous, once or twice ternate; pedicels slender, 0.3-2 cm long, with rachis glabrous. Flower: Sepals 4, yellowish, ovate, ca. 3.6 × 3 mm, with apex slightly acute, or oblong, 3.8-4 × 1.2-2 mm, glabrous, 3-nerved. Stamens 22-36, glabrous; filaments filiform, 2.5-4 mm long; anthers linear, 2.2-2.8(-3) × 0.3-0.5 mm, apex acute. Carpels 4-6; ovaries shortly stipitate, long elliptic, 1.2 × 0.5 mm, with very short hairs 0.05 mm long; styles ca. 1.6 mm long, glabrous, abaxially above with narrow-linear stigma 0.8-0.9 mm long.

四川(Sichuan): 九龙县, 汤古乡, 猎塔湖 (Jiulong Xian, Tangu Xiang, Lieta Lake), alt. 3 752 m, 路边, 花黄色 (roadside, fls. yellow), 2019-07-10, 张树仁, 单章建, 李邦泽 (S. R. Zhang, Z. J. Shan & B. Z. Li) 2880 (**holotype** and **isotype**; PE)。

狭药唐松草的聚伞圆锥花序多少成总状花序状, 小叶下面被短微硬毛, 萼片无毛, 子房有短毛, 与具上述特征的六脉萼唐松草 (*T. sexnervisepalum* W. T. Wang) (产四川崇州) 有相近的亲缘关系, 两者的区别在于狭药唐松草的萼片有 3 条脉, 雄蕊群无退化雄蕊, 雄蕊花丝丝形, 花柱长度大过子房。而六脉萼唐松草, 萼片有 6 条脉, 雄蕊群有一些退化雄蕊, 雄蕊花丝呈狭条形, 花柱与子房等长 (王文采, 2018)。

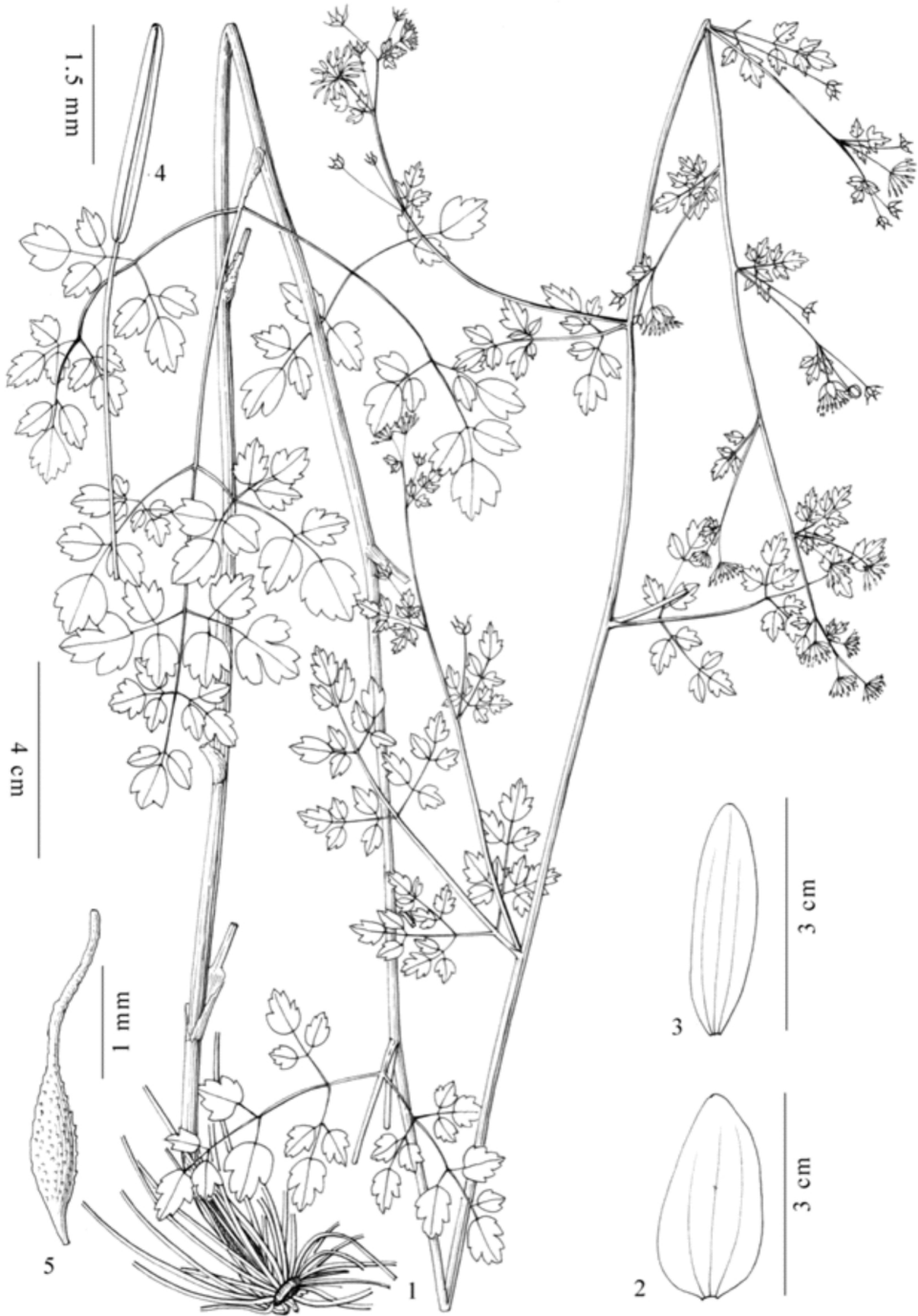


图 2 狭药唐松草 1. 开花植株；2,3. 萼片；4. 雄蕊；5. 心皮。（据模式标本，孙英宝绘图）

Fig. 2 *Thalictrum stantherum* 1. Flowering plant; 2,3. Sepals, 4. Stamen; 5. Carpel. (From holotype, drawn by Y. B. Sun)

致谢 深切感谢张树仁、陈文俐、班勤等先生提供珍贵标本，孙英宝先生绘图并打印文稿。

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