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中国—喜马拉雅植物亚区特有物种江孜乌头的分类学订正

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摘要: 中国—喜马拉雅植物亚区不仅是乌头属植物地理分布的频度中心、多样性中心, 原始类群的保存中心、分化中心, 而且是特有类群的分布中心。作为该亚区特有物种之一的江孜乌头(*Aconitum ludlowii* Exell), 是 Arthur Wallis Exell 于 1926 年根据采自我国西藏江孜的标本发表的新种。其繁殖器官特征及地理分布特点均与原始文献记载(狭域种)不尽一致。为此, 对其做分类学修订。该研究应用经典植物分类学方法, 进行野外考察、标本采集与鉴定, 查阅中国科学院植物研究所植物标本馆(PE)的相关标本并进行形态学观察比较。结果表明: 该物种不同标本心皮从无毛、近无毛至被毛, 呈现一连续过渡情况。因此, 考虑将心皮被毛一类不作为新分类群处理, 只在以上研究基础上, 做如下修订: 心皮 5, 无毛或上部被毛, 西藏拉萨、山南地区、那曲地区及日喀则地区均有分布。该研究结果可为国产乌头属植物的整理以及江孜乌头遗传多样性分析和物种保护提供基础资料。

关键词: 江孜乌头; 毛茛科; 中国—喜马拉雅植物亚区; 分类学订正; 西藏

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Taxonomic revision of Sino-Himalayan endemic *Aconitum ludlowii* Exell (Ranunculaceae)

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Abstract: *Aconitum* (Ranunculaceae) is a large genus with about 400 species, in which 211 species are in China. The Sino-Himalayan subregion is not only the preservation centre of the primitive groups and species, but also an actively differentiating region of the genus. Described by Arthur Wallis Exell in 1926, *A. ludlowii* Exell is a stenochoric species restricted to Gyantse (Jiangzi County) in the Rikaze Prefecture of the Southwestern Tibet, and its carpels were glabrous. However according to our survey, morphological observations and taxonomic identification of *A. ludlowii* Exell in Tibet, the actual situation is more complex. Its carpels were glabrous, subglabrous, or pilose. Mozhugongka County and Nimu County of Lhasa, Langkazi County, Cuona County and Naidong County of Shannan Prefecture, Jiangzi County, Namulin County and Yadong County of Rikaze Prefecture and Shenzha County of Naqu Prefecture are in Tibet are the main distribution areas of this species. Therefore, a taxonomic revision of the Sino-Himalayan endemic species is provided as follows: Carpellis 5 glabris vel dimidio superiore pilosis haud patentibus.

Key words: *Aconitum ludlowii* Exell; Ranunculaceae; Sino-Himalayan subregion; taxonomic revision; Tibet

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乌头属 (*Aconitum* L.) 为毛茛科一大属, 约有 400 种, 广泛分布于北半球温带, 主要分布于中国—喜马拉雅植物亚区和中国—日本植物亚区组成的东亚植物区。我国有 211 种, 其中 166 种为特有物种, 多分布于西南高山地带。中国—喜马拉雅植物亚区不但是乌头属植物地理分布的频度中心, 多样性中心, 原始类群的保存中心, 分化中心, 而且是特有类群的分布中心 (Li *et al.*, 2001; 李良千, 1988)。但由于该亚区地理条件复杂, 生态环境多样, 加之乌头属一些植物种内变异幅度较大, 相关标本资料有限等原因, 当务之急是开展深入的分类学研究工作。

近年来, 课题组在对西藏乌头属植物的野外考察、标本采集及分类学鉴定中发现, 作为中国—喜马拉雅植物亚区特有物种之一的江孜乌头 (*Aconitum ludlowii*), 其繁殖器官特征及地理分布特点均与原始文献记载不尽一致, 即心皮被毛 (图 1), 在西藏拉萨、山南地区、那曲地区及日喀则地区均有分布 (图 2)。江孜乌头为 Arthur Wallis Exell 于 1926 年根据采自我国西藏江孜的标本发表的新种, 其心皮 5, 光滑无毛 (Exell, 1926)。同时, 据《中国植物志 (英

文版)》记载, 该物种为一狭域种, 心皮光滑无毛, 仅分布于我国藏西南的日喀则地区江孜县 (Li *et al.*, 2001)。为此, 查阅中国科学院植物研究所植物标本馆 (PE) 相关标本, 结合实地观察结果发现, 该物种不同标本心皮从无毛、近无毛至被毛, 呈现一连续过渡情况。因此, 考虑将心皮被毛一类不作新分类群处理, 只在以上研究基础上做如下修订。

Hab. Lhasa (拉萨): Mozhugongka County (墨竹工卡县), Nimu County (尼木县); Shannan Prefecture (山南地区): Langkazi County (浪卡子县), Cuona County (错那县), Naidong County (乃东县); Rikaze Prefecture (日喀则地区): Namulin County (南木林县), Yadong County (亚东县), Jiangzi County (江孜县); Naqu Prefecture (那曲地区): Shenzha County (申扎县)。心皮 5, 无毛或上部被毛 (Carpella 5 glabra vel dimidio superiore pilosa)。

标本引证

西藏: 墨竹工卡县, 山坡路边, 2013-08-21, 赵志礼 2013 XZ 0 0 1, alt. 4 486 m, 29°41.859' N, 92°

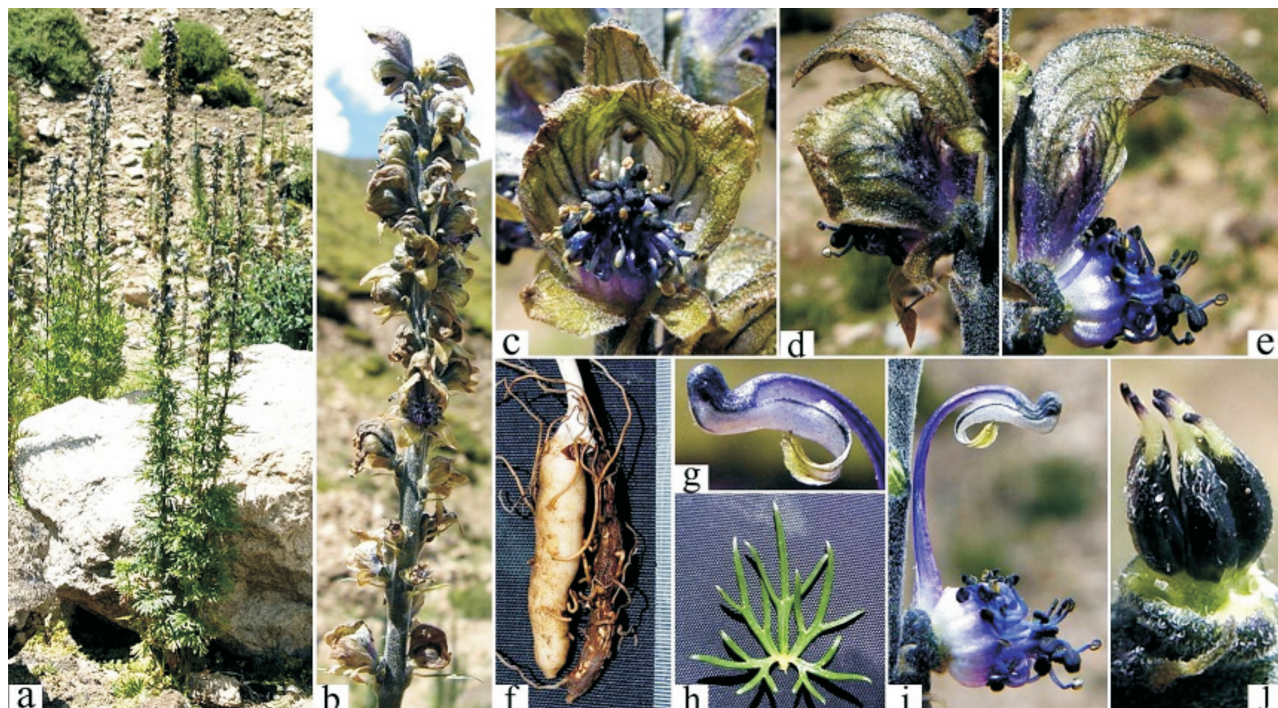


图 1 江孜乌头 a. 西藏墨竹工卡县的江孜乌头 (赵志礼 2013XZ001); b. 花序; c. 花 (正面观); d. 花 (侧面观); e. 上萼片与雄蕊群; f. 块根 (标尺: 1 mm); g. 花瓣; h. 叶片; i. 花瓣与雄蕊群; j. 雌蕊群 (被毛)。

Fig. 1 *Aconitum ludlowii* Exell a. *Aconitum ludlowii* Exell in Mozhugongka County, Tibet (Z. L. Zhao No. 2013XZ001); b. Inflorescence; c. A flower in frontal view; d. A flower in side view; e. A galea and stamens; f. Tubers (Scale bar 1mm); g. A nectar; h. A leaf; i. A nectar and stamens; j. Carpels pilose.

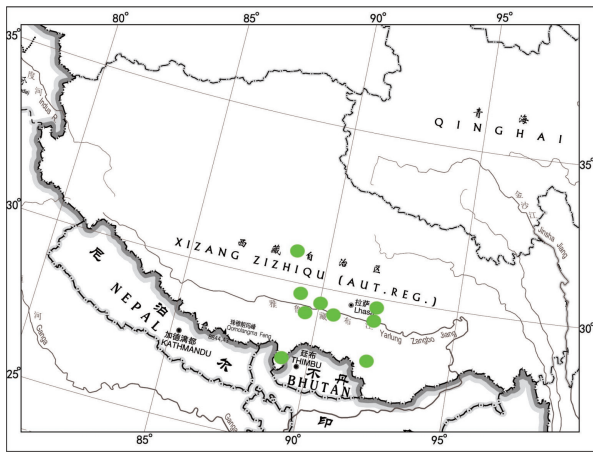


图 2 江孜乌头分布区

Fig. 2 Distribution of *Aconitum ludlowii* Exell in Tibet

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1975-08-21,青藏补点队 75-1489(PE),1975-07-17,吴征镒等 75-867(PE);乃东县,1975-08-21,青藏补点队 75-1466(PE);南木林县,1972-08-02,西藏中草药普查队 906(PE);亚东县,1975-09-04,青藏队 7370(PE);江孜县,1953-07-17,钟补求 5721(PE);申扎县,1975-09-07,青藏队 7501(PE)。

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