

Two New Subspecies of *Desmodium laxum* (Leguminosae) from China

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Two new subspecies of *Desmodium laxum* DC. are described from China. These subspecies agree with *D. laxum* subsp. *laxum* in the pods and venation pattern of the leaflets, but are entirely different from the typical subspecies in shape and nature of the leaves. One of the new subspecies, subsp. *falfolium* H. Ohashi, has leaves similar to *D. podocarpum* DC. subsp. *fallax* (Schindler) H. Ohashi, and the other, subsp. *lateraxum* H. Ohashi, has smaller leaflets similar to *D. laxum* subsp. *laterale* (Schindler) H. Ohashi or *D. podocarpum* var. *szechuenense*. Except these intermediate morphological features no evidence for hybrids is found in these subspecies.

During my studies on *Desmodium* of China, I found two unknown plants in the herbarium of the Kunming Botanical Institute (KUN) in Yunnan. These plants have deeply constricted and long-stipitate pods, hence, they belong clearly to the section Podocarpium in the subgenus Podocarpium. They are similar to *D. laxum* especially in the inflorescences, pods and venation pattern of the leaflets, but, show remarkable differences in the leaves. Both have seemingly deciduous leaves against the evergreen leaves of *D. laxum* and entirely differ in shape of their leaves from the known range of variation of leaves of *D. laxum*. The shape and nature of their leaves are similar to other species in the section Podocarpium or other subspecies of *D. laxum*.

These plants, accordingly, may possibly be regarded to be hybrids, if any supporting evidence could be found. Occurrence of hybrids between different species of the section Podocarpium may be possible, because the chromosome numbers of these taxa so far known are all $2n=22$ (Ohashi and Iijima 1980, Cui

1987) and their habitats are similar to each other. Seeds are usually not developed in hybrids. Fruits of these plants are too young, and cannot be judged whether the seeds are fertile or infertile, because they are not yet developed in the pod. At present, therefore, these plants are not judged as hybrids.

Though I could examine only one sheet for each plant and could not confirm the nature of leaves as well as other characters of both plants on other specimens, at present, however, I think that it must be worthwhile for giving a name and description to each of them for references of future researches, and that they are better to be recognized at the rank of subspecies in *D. laxum*.

Key to these new subspecies distinguishing from *D. laxum* subsp. *laxum* is as follows:

1. Leaves evergreen, usually sparse on stem or approximate on lower parts; terminal leaflets elliptic or ovate, 6-8.5 cm long, 3.5-5 cm wide
..... subsp. *laxum*
1. Leaves probably deciduous 2

- 2. Leaves approximate at the top of stem; terminal leaflets broadly elliptic or broadly ovate, 4–5 cm long, 2.7–3.2 cm wide subsp. *falfolium*
- 2. Leaves approximate on upper part of stem; terminal leaflets narrowly elliptic, about 4.5 cm long, 1.5 cm wide subsp. *lateraxum*

1. ***Desmodium laxum*** DC. subsp. ***falfolium*** H. Ohashi (Fig. 1).

This plant is characteristic in having a extremely short stem, approximate leaves at the top of stem, and broadly elliptic or broadly ovate leaflets with uniformly pubescent above. Such a habit and the shape of leaflets are similar to those of *D. podocarpum* DC.

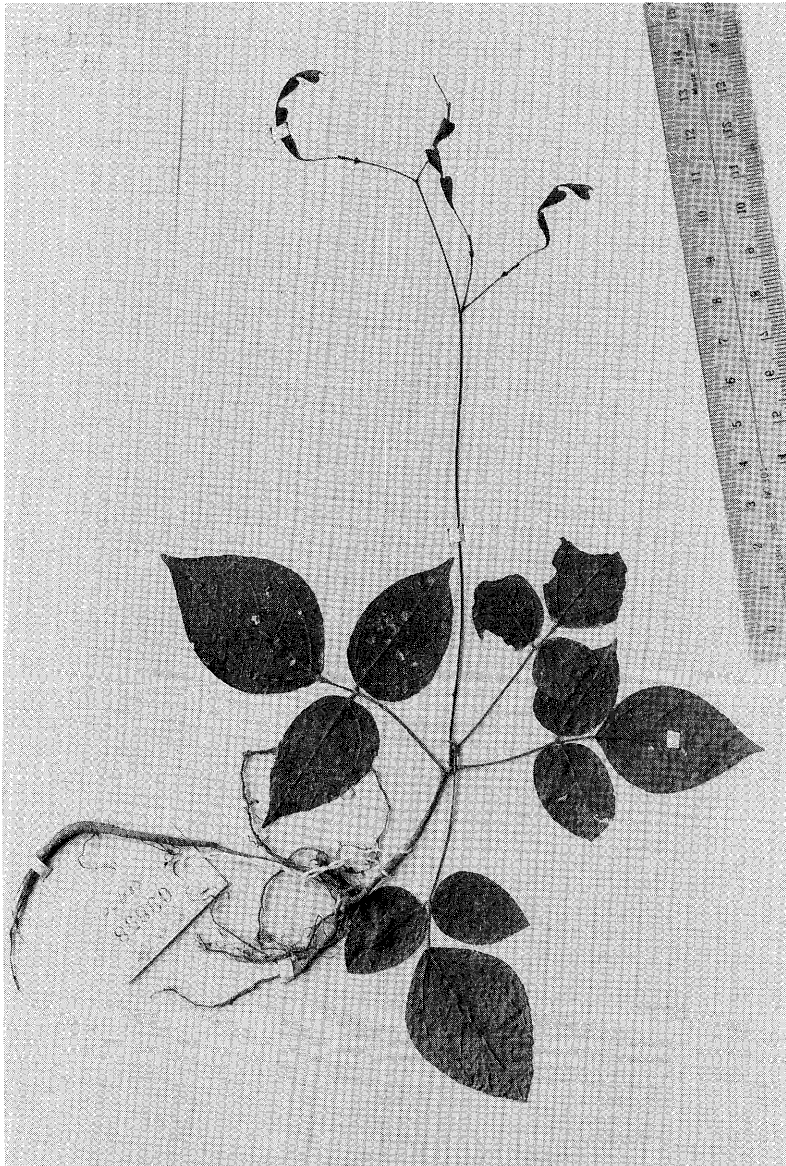


Fig. 1. Holotype of *Desmodium laxum* subsp. *falfolium* H. Ohashi.

subsp. *fallax* (Schindler) H. Ohashi. In leafy characters, however, its venation pattern agrees that of *D. laxum*, i.e., the lateral nerves looped within the margin. Based on these features as well as other characteristics on pods this new plant appears to be intermediate between *Desmodium podocarpum* subsp. *fallax* and *D. laxum* subsp. *laxum*.

Desmodium laxum DC. subsp. **falfolium** H. Ohashi, subsp. nov.

A typo caule brevissimo, foliis approximatis apicem, et foliolis late ellipticis vel late ovatis differt.

Typus: West Hunan. Baojin County: Shipong. In mountain forest, an erect herb with reddish pods. ǀ. H.

Liu 9858 (holotypus in KUN).

A perennial herb, with ligneous slightly tubular roots. A stem about 5 cm high, with closely approximate 4 leaves at the apex, densely retrorse short-pubescent. Leaves 3-foliolate, seemingly deciduous; stipules deciduous, lanceolate, about 2 mm long, pubescent on margin of the upper parts; petioles 2.5–4 cm long, densely pubescent. Terminal leaflets stipellate, broadly ovate or broadly elliptic, 4–5 cm long, 2.7–3.5 cm wide, pubescent above, uniformly pubescent beneath, principle lateral nerves 3 pairs and not reaching the margin directly; lateral leaflets sessile, smaller than the terminal one. An inflorescence

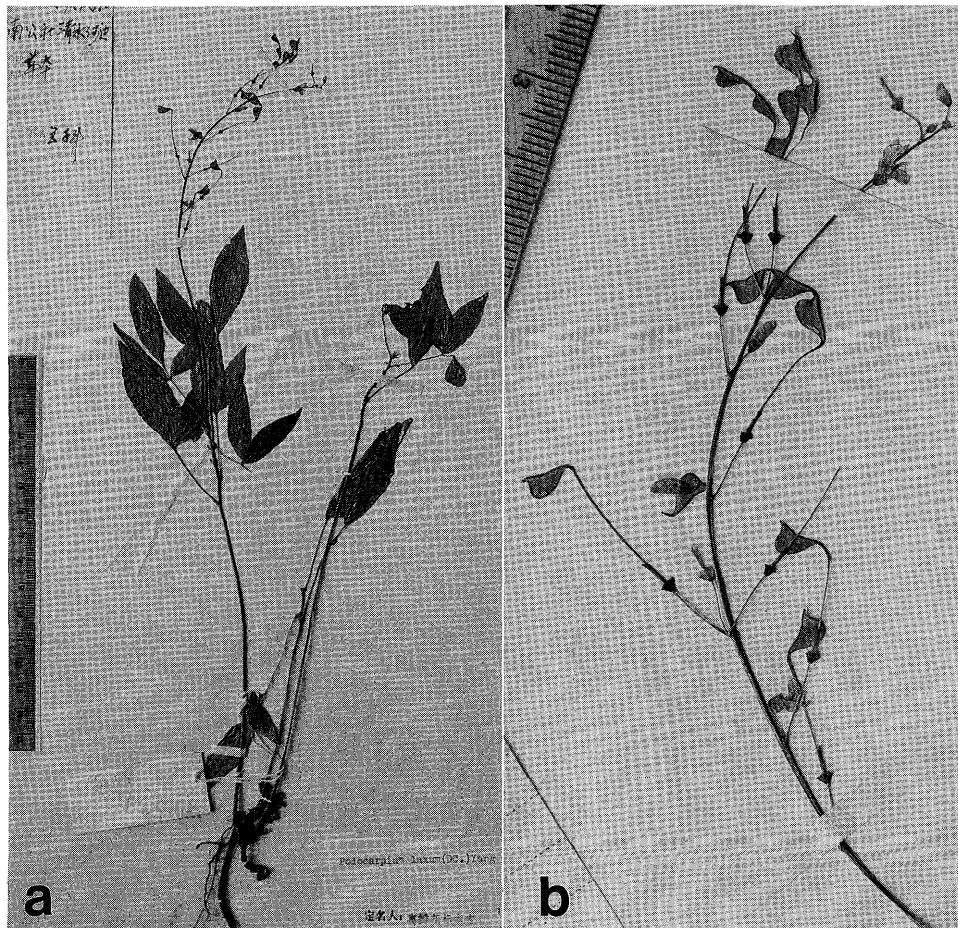


Fig. 2. a. The holotype of *Desmodium laxum* subsp. *lateraxum* H. Ohashi; b. The inflorescence of holotype.

terminal, about 15 cm long, with scattering minute hooked hairs. Pedicels about 1.2–1.5 cm long, with minute hooked hairs. Androecia monadelphous. Pods with 3–4 articles, the stipe 1.2–1.4 cm long, glabrous.

2. **Desmodium laxum** DC. subsp. **lateraxum** H. Ohashi (Fig. 2).

When I found a specimen of this plant in KUN, I thought it as a hybrid between *Desmodium laxum* subsp. *laxum* and *D. laxum* subsp. *laterale* (Schindler) H. Ohashi or between the former and *D. podocarpum* var. *szechuenense* Craib, but, I could not find more definite characters suggesting hybrid nature of this plant. Several young pods of the plant without mature seeds are not an evidence for the hybrid origin. I tentatively accommodate this plant as a subspecies of *D. laxum*. This new subspecies is characteristic in having small leaflets similar to those of *D. laxum* subsp. *laterale* or, except for the venation pattern, *D. podocarpum* var. *szechuenense*, but the flowers and fruits are almost entirely identical with those of *D. laxum* subsp. *laxum*.

Desmodium laxum DC. subsp. **lateraxum** H. Ohashi, subsp. nov.

A typo foliolis minoribus probabiliter deciduis differt. Foliola terminalia anguste elliptica, acuta, ca. 4.5 cm longa, 1.5 cm lata.

Typus. China. Guizhou. 8 Feb. 1959. Expedition team to Anxun no. 710 (holotypus in KUN).

A perennial herb with a woody root stock, about 35 cm high. Leaves 3-foliolate with persistent stipules,

probably deciduous, approximate on upper part of stem. Stipules lanceolate, striate 4–5 mm long, 0.7 mm wide, almost glabrous. Petioles 2.5–3 cm long, almost glabrous. Terminal leaflets narrowly elliptic, acute at both ends, about 4.5 cm long, 1.5 cm wide, appressed pubescent on main nerves on both surfaces, lateral nerves looped within the margin; lateral leaflets smaller than the terminal one, oblique at base, 3–3.5 cm long, 1–1.3 cm wide. Inflorescences pseudoracemose, about 17 cm long, glabrous, with 2–3 flowers at a node; bracts early deciduous; pedicels 5–6 mm long, minutely pubescent. Calyx about 1.5 mm long, 4-lobed, the upper lobe rounded, the lateral obtuse at apex, the lower broad triangular, 0.5 mm long, sparsely minute hooked hairy. Wings about 6 mm long; keel-petals about 5.5 mm long. Androecia about 5 mm long. Pods (when young) (2–)3-jointed, densely covered with hooked hairs on the lateral surfaces; stipes 12–18 mm long, glabrous.

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大橋広好：オオバナスビトハギの中国産 2 新亜種

オオバナスビトハギ *Desmodium laxum* DC. subsp. *laxum* は日本、中国、東南アジア、インドに分布する。日本では千葉県以西に比較的多く生育するが、中国では広く分布しているが個体数は多くないようである。当然生育すると思われる台湾ではまだ記録されていない。1994年8月に、昆明植物研究所所蔵のヌスビトハギ属の標本を調べ

ていたところ、全体的な形は非常に異なっているが、花序と果実の特徴からみてオオバナスビトハギの一形であると思われる標本を2種類、それぞれ1枚ずつ見つけた。これらは今まで知られていない形のものであった。1枚は湖南省で採集され、ケヤブハギの特徴を持つ葉をつけたもので、他の1枚は貴州省で発見されたリュウキュウヌスビト

ハギあるいは中国固有のヌスビトハギの変種 *Desmodium podocarpum* var. *szechuenense* の葉に似た葉をつけるものであった。両方の新植物ともオオバヌスビトハギとそれらの種類との間の雑種である可能性が考えられるが、形態上の類似性以外の特徴は確認できなかった。図1と2のように、いずれも若い果実をつけているが、種子はまだで

きていない。それぞれ1枚ずつの標本しか無かったため、分類群としての特徴を十分には調べられなかったが、形態的特徴が明らかであり、果実の形態と小葉の脈理がオオバヌスビトハギに一致するので、これらの標本の個体は両方とも *D. laxum* DC. の亜種として認めておくこととした。