

## Pollen Morphology and Systematic Position of *Alysicarpus* (*Leguminosae*, Tribe *Desmodieae*)

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(Accepted on July 13, 2022)

Except for the separation of *Desmodiastrum*, *Alysicarpus* has been recognized as a distinct genus in the tribe *Hedysareae* or *Desmodieae* of *Leguminosae* since its establishment. The taxonomic position of *Alysicarpus* and its allies has, however, not been fixed in previous taxonomic systems. Phylogenetically, the genus forms a distinct clade with *Bouffordia* and *Sohmaea* within tribe *Desmodieae* based on results of molecular phylogenetic analyses. Common apomorphic characteristics are, however, not found in pollen morphology as well as gross morphology among the three genera. Pollen grains of *Alysicarpus* differ from those of *Bouffordia* and *Sohmaea* in the pollen type and sculpturing pattern. Pollen morphological evidence strongly supports distinctness of *Alysicarpus* in tribe *Desmodieae*.

**Key words:** *Alysicarpus*, *Bouffordia*, *Desmodieae*, *Desmodium*, pollen morphology, *Sohmaea*, systematic position.

*Alysicarpus* Neck. ex Desv. of the tribe *Desmodieae* (*Leguminosae*, subfam. *Papilionoideae*) was published by Desvaux (1813) with a description and illustrations of the loment with calyx and the calyx enlarged, but without citation of a species. The generic name is conserved with *A. bupleurifolius* (L.) DC. (*Hedysarum bupleurifolium* L.) as the type. *Alysicarpus* has usually been recognized as a distinct genus since its establishment and contains 25–30 species distributed in the tropics and subtropics of the Old World (Mabberley 2017), but was divided by Pramanik and Thothathri (1986) into *Alysicarpus* s.s. and *Desmodiastrum* (Prain) A.Pramanik & Thoth. *Desmodiastrum* has usually been included in *Alysicarpus* s.l. (Mabberley 2017, POWO

2022), but is currently regarded by Ohashi et al. (2022) as distinct based on molecular phylogenetic data. The species of *Alysicarpus* s.s. (merely *Alysicarpus* hereafter) occur in Africa (ca. 10 spp.), India (17 spp.), Indo-China (3 spp.), Malesia (6 spp.), Australia (6 spp. +3 naturalized), China (4 spp.), Taiwan (3 spp.+1 nat.) and Japan (1 sp. +1 nat.). India, with 11 endemics, is considered to be the center of the diversity of the genus, followed by Africa (Lock 1989) and Australia (Pedley 2001) with five endemics each.

Morphologically, *Alysicarpus* is distinguishable from other genera of tribe *Desmodieae* in having predominantly unifoliolate leaves, a glumaceous or scarious calyx and cylindrical or moniliform, turgid

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#### 大橋広好<sup>1</sup>, 大橋一晶<sup>2</sup>, 葉 績<sup>3</sup>: マメ科アコウマイハギ連ササハギ属の花粉形態と分類学的位置

マメ科ササハギ属は旧世界熱帯・亜熱帯に25–30種あり、インドが分布の中心で11固有種を含む17種が知られている。日本には1種自生し、1種が帰化している。これまでの分類体系ではササハギ属は何属に近いのか一定していなかったが<sup>1</sup>(Table 1), 分子系統解析の結果得られた系統樹では従来の分類体系の位置と異なり、古い定義のヌスビトハギ属*Desmodium*に含まれていた*Bouffordia*とホソミハギ属*Sohmaea*に近縁であった。これら3属

の間に共有派生形質がないためにササハギ属と他の2属の花粉形態を比較した。しかし、花粉形態でもササハギ属は*Bouffordia*とホソミハギ属とは共通する特徴のないことが明らかとなった。

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