

Hubert Kurzweil is a taxonomist and has written the "The Genus *Habenaria* (Orchidaceae) in Thailand" and is one of the authors of "The genus *Habenaria* (Orchidaceae) in Myanmar".

From: Hubert Kurzweil
Sent: Wednesday, August 28, 2024 4:58 AM
To: Leon Glicenstein <glicenstein33@msn.com>
Subject: Re: Query

Hi Leon,

I had a close look at your *Habenaria austrosinensis*, and compared it with the text in Flora of China, and text + illustrations in Flora of Thailand and the 2018-paper reporting its occurrence in Vietnam. I can see the differences in your plants, although none of the differences is major and I would consider this as intraspecific variation. I realise, though, that this may not be a satisfactory explanation to growers.

Generally in *Habenaria* (as also in all other orchids) large-scale molecular studies are needed in order to establish a sound phylogeny of the genus and to define the species boundaries. As long as such studies are not available it is not possible to make new taxonomic proposals based on minor morphological differences.

With best wishes,
Hubert

On Monday 26 August 2024 at 00:47:39 GMT+7, Leon Glicenstein <glicenstein33@msn.com> wrote:

Hi Hubert,

I do hope that all is well, and you are settled in.

I was sent the attached letter [at the bottom of my response] and my response. I was hoping you could bring some scientific knowledge to the problem. I really don't know what to respond with. I know you have the knowledge that I don't. HELP!

Best,

Leon

Hi Nick,

Well, I IDed the *Hab. austrosinensis* that Greg has, and it is from one area of Vietnam. Having said that, Tang and Wang described *Hab. austrosinensis* from China. It is also supposed to have a pilose rachis, I noticed that yours is smooth, or it looks that way in the picture. What do the leaves look like on your plant. Greg's have pigment spots on the leaves.

This is Tang & Wang's description [which you may have already read]:

2. ***Habenaria austrosinensis*** Tang & F. T. Wang, Bull. Fan Mem. Inst. Biol. Bot. 7: 134. 1936.

薄叶玉凤花 *bao ye yu feng hua*

Plants 30-60 cm tall. Tubers narrowly ellipsoid, 3-5 × 1-3 cm, fleshy. Stem erect, terete, stout, pubescent, with 3-5 leaves below middle and 9-13 bractlike leaves above. Leaf blade narrowly elliptic to oblong-ob lanceolate, 13-25 × 2.5-6 cm, relatively thin, base contracted into amplexicaul sheath, apex acuminate. Raceme many flowered, 9-14 cm; rachis pubescent; floral bracts lanceolate, ca. 15 mm, shorter than ovary, ciliate, apex acuminate; ovary twisted, cylindric-fusiform, pubescent, including pedicel 15-27 mm. Flowers white. Dorsal sepal concave-hooded, broadly ovate, ca. 3.5 × 5 mm, abaxially pubescent, 3-veined, apex acute; lateral sepals reflexed, strongly obliquely triangular, ca. 5 mm, toward apex strongly dilated and ca. 8 mm wide, with 3 strongly curved veins. Petals forming a hood with dorsal sepal, obliquely linear, ca. 4 × 1 mm, 1-veined, apex obtuse; lip longer than sepals, above base deeply 3-lobed; lobes similar, linear, ca. 8 mm; spur curving upward above ovary, cylindric-clavate, 20-22 mm, ca. as long as or slightly shorter than ovary, apex dilated; connective narrow; stigmas elliptic, ca. 1 mm. Fl. Jul-Aug. Damp places in forests along valleys; 700-1400 m. S Yunnan [Thailand].

It does mention the white flowers and the hairy rachis. I have a feeling that yours is a very closely related species, or maybe a regional variation. The image in Jay Fahl's On line orchid encyclopedia, showing a plant, in habitat, in Thailand, looks close to yours although I can't see the flowers well enough.

Then I have a problem with this specimen which Tang and Wang identify as *Hab. austrosinensis*. I think it differs with their description. I don't know if they based their description on this specimen. The rachis appears smooth, the leaves appear unspotted. The side lobes of the lip look like they bend and twist. The apex of the nectary on his plant's flowers is greatly dilatated, yours is barely.

I will agree it is all confusing. I will see what I can find out.

Best,

Leon

Hey Leon,

Quick one: My Hab. austrosinensis hybrids are in bloom. I will get and send pictures this or next week. However...

Greg Griffis reached out to me about my Habenaria article and said he wasn't sure if my austrosinensis was, well, austrosinensis. He sent pictures of the plant he has labeled as austrosinensis, and it is remarkably different from mine.

Greg's plant: The rosette sits right on top of the soil and sends up a tall spike with flowers that measure about 1 cm wide and 2.5 cm long. The lip is tri-lobed and the three lobes are white and relatively orderly/parallel with one another.

My plant: The rosette sets on top of a 4-5" long stem and sends up a tall spike with flowers that measure about 1.0 cm wide by 1.0 cm long. The lip is tri-lobed but highly irregular - all three lobes bend and twist in opposite directions and make a very odd shape.

I attached pictures of both with Greg's on the left and mine on the right side of each composite.

I agree that his is the true austrosinensis after reading an article about its publication in 2018. As for mine... well, I have no clue. What are your thoughts?

ROYAL BOTANIC GARDENS KEW
K000796933



ROYAL BOTANIC GARDENS
H. 562/26
KEW

Habuaria austrosinensis
iauf + wang sp. nov.
Determinavit July 1936.
A. HENRY *Habuaria cilisiensis*
CHINA, No. 12, 467 *Thunberg*
YUNNAN *Sipsona*, S. *pubs*
4000 - *is elite*

Habuaria ? sp. nov. near *H. Kingii* Hook. f.

PRESENTED
BY
DR. A. HENRY, 1900.







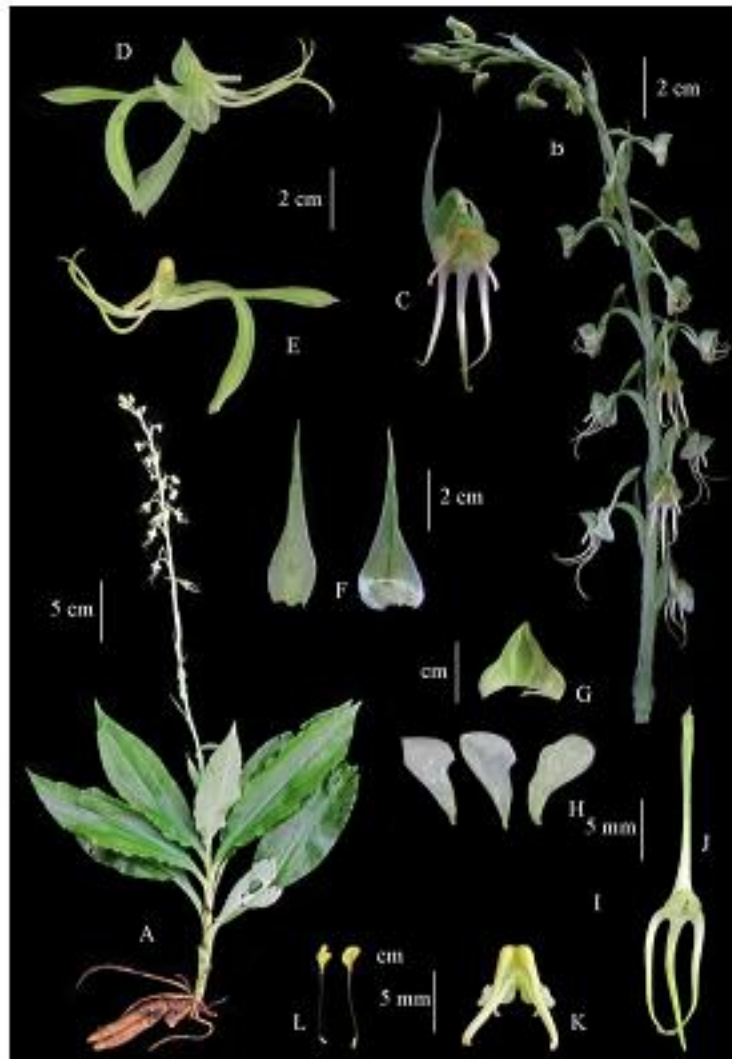


Figure 1. *Habenaria austrosinensis* Tang & F.T. Wang, detail of flowering plant; B, inflorescence; C, flower (front view); D, flower (side view); E, side view of flower without bract and dorsal sepal; F, sterile bracts; G, dorsal sepals (left); outer view of the dorsal sepal with petal connective forming a hooded apex and its inner view; H, lateral petals (outer and inner views); I, petals (inner and outer views), J, lip with spur; K, detail of column showing staminodes, anthers, stigma and rostellum; L, pollinicum. Scale bars: C-E: 1 cm; H-I: 10 mm; and K-L: 5 mm. Photo from type L \acute{y} -820.