

Nomenclature of Tahitian Bridal Veil

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Additional index words. floriculture, nomenclature, taxonomy, Commelinaceae, *Gibasis*, *Tripogandra*, *Tradescantia*

Summary. Tahitian bridal veil traditionally has been assigned the scientific name of *Tradescantia multiflora* (or *Tradescantia multifoila* in the floricultural industry). *Hortus Third* lacks the name Tahitian bridal veil. Other references also lack this vernacular name or assign this plant either to *Tripogandra* or *Gibasis* as *G. geniculata* or *G. pellucida*. Thus, modern literature references suggest three potential scientific names. Plants of Tahitian bridal veil were examined morphologically. A description was prepared and compared to literature descriptions of the taxa involved. Results indicated that Tahitian bridal veil was misidentified at least twice by earlier authors and that the correct name for Tahitian bridal veil is *G. pellucida*.

In 1993, 43 million foliage and flowering hanging baskets were grown in the United States and marketed as floricultural crops at the wholesale level for \$203 million (U.S. Dept. of Agriculture, 1994). One of these crops used extensively as a hanging basket plant in the United States, Canada, and Europe is Tahitian bridal veil or bridal veil (Fig. 1). Several factors contribute to its popularity. Tahitian bridal veil is propagated easily from terminal and sectional stem cuttings that are rooted

directly in the hanging basket. Environmental requirements are moderate; the plant requires medium light intensity and temperatures of 13 to 21C (John Henry Company, 1977). Growth is rapid and the creeping form produces a pendulous mound, which is ideal for a hanging basket. The deep green upper surface and purple undersides of leaves blend nicely with many, small, brilliant white flowers to give this plant exceptional sales appeal.

An inquiry by growers was made to faculty members at North Carolina State Univ. regarding the correct scientific name for Tahitian bridal veil. These growers indicated that the name may be *Tradescantia multiflora*, but they couldn't find this name in a reference. Problems encountered by us in searching the literature for a correct scientific name led to a morphological examination of Tahitian bridal veil to ascertain the correct genus to which it should be assigned.

Taxonomic literature

The name Tahitian bridal veil is lacking in *Hortus Third* (Liberty Hyde Bailey Hortorium, 1976) and other references that include floricultural crops (Bailey, 1917, 1949; Graf, 1978, 1982; Hessayon, 1991; Larson, 1992; Perry, 1974). Rathmell (1980) stated that Tahitian bridal veil was *Tradescantia multiflora* (no authority given). John Henry Company (1977) cited

Tahitian bridal veil as *Tradescantia multiflora* Swartz, a name similar to a grower's name of *Tradescantia multifolia*. These two epithets contain the basic Latin roots *-folius* and *-florus*, translated by Stearn (1992) as leaved and flower, respectively. These two Latin root words also appear in other epithets (e.g., *grandifolia* and *grandiflora*, *parvifolia*, and *parviflora*). These epithet pairs are similar in length, spelling, and appearance. Thus, each member of the pair is confused commonly with the other member by students in plant material courses and members of the landscape, nursery, and floricultural industries.

Hortus Third lacked the name *Tradescantia multiflora*, but cited the name *Tradescantia multiflora* as a synonym of *Tripogandra multiflora* (Swartz) Raf. Everett (1982), and Huxley (1992) listed *Tripogandra multiflora* with a brief description that could fit bridal veil. However, neither the vernacular name Tahitian bridal veil nor *Tradescantia multiflora* was cited under either *Tripogandra* Raf. or *Tradescantia* L. Graf (1978, 1982) cited *Tradescantia multiflora* as a synonym of *Gibasis geniculata* (Jacq.) Rohw. *Hortus Third* reported *G. geniculata* as sometimes cultivated as a laboratory plant, but not offered in the trade.

Everett (1981) reported Tahitian bridal veil as a selected form of *G.*



Fig. 1. Habit of Tahitian bridal veil as a hanging basket floricultural crop.

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Research Project NC0 6104 funded in part by the North Carolina Agricultural Research Service, Raleigh, NC 27695-7643. Use of nursery and trade names in this publication does not imply endorsement by the NCARS of the nurseries or the products mentioned nor criticism of similar ones not mentioned. The cost of publishing this paper was defrayed in part by the payment of page charges. Under postal regulations, this paper therefore must be hereby marked advertisement solely to indicate this fact.

Table 1. Morphological comparison of three genera of Commelinaceae.

Character	<i>Tripogandra</i>	<i>Tradescantia</i>	<i>Gibasis</i>
Inflorescence			
Stipe	Lacking	Lacking	Present
Cincinni	Fused	Fused	Free
Bracts	Inconspicuous	Conspicuous	Inconspicuous
Flowers			
Symmetry	Zygomorphic	Actinomorphic	Actinomorphic
Stamens			
Length	Long and short	Subequal	Subequal
Filament	Three curved	Straight	Straight
Trichomes	Bearded or glabrous	Bearded	Bearded
Connective	Narrow	Broad	Triangular

geniculata and cited *Tradescantia geniculata* Jacq. and *Aneilema geniculatum* (Jacq.) Woodson in synonymy, but he did not use the name *Tradescantia multiflora*. Also cited was a close relationship of *G. geniculata* with *G. oxacana* D.R. Hunt. Huxley (1992) associated the name bridal veil with *G. pellucida* (Martens & Gal.) D. Hunt. and noted that, under the entry *G. geniculata*, it is often confused with *G. pellucida* in cultivation. Everett (1981) described *G. geniculata* with hairless leaves, whereas Huxley (1992) described *G. geniculata* as bearing villous leaves.

Hunt (1986) associated bridal veil with *G. pellucida* but did not cite *Tradescantia multiflora* in synonymy, nor is *Tradescantia multiflora* cited in synonymy with *G. geniculata*.

Although Tahitian bridal veil is a well-known plant in the floricultural trade, its correct scientific name is not clear. Literature references suggest the following choices: 1) *Tripogandra multiflora*, 2) *G. geniculata*, or 3) *G. pellucida* or *G. oxacana*. Which name should horticulturists accept?

Taxonomic evidence

Plants of Tahitian bridal veil (Fig. 1) obtained from commercial sources were grown under greenhouse conditions at North Carolina State Univ., examined, and described morphologically from first-hand observation. The description presented below was the taxonomic evidence we used for comparison with literature descriptions to determine the correct identification of Tahitian bridal veil.

"Tahitian bridal veil." Stems creeping to decumbent, branching and rooting at the nodes; twigs slender, terete, to 1 mm diam., glabrate with scattered minute

trichomes and one conspicuous row of erect trichomes (ca 0.1–0.2 mm) from node to node on the opposite side from the leaf blade above. LEAVES asymmetrical, nearly distichate on twig, subsessile on the sheath, 1–5 cm long, 0.3–1.6 (3) cm wide, blade ovate to narrowly oblong to ovate-lanceolate to lanceolate, entire, acute to short acuminate, obliquely cordate, glabrate, dark green above, green to reddish-purple below, lateral veins 2–4/side; sheath closed, striate, 24 mm long, sericeous-ciliate on upper edge (trichomes 34 mm), ascending-spreading sericeous (trichomes 14 mm) on the surface. INFLORESCENCES borne from upper axils and seemingly terminal, stipitate. Cincinni free, binate above stipe. Stipe green, 12–24 mm long. Peduncular

bracts 2, membranous, narrow concave-lanceolate around peduncle, acute, sericeous, 1.8–2.5 mm long, ca 0.3–0.6 mm wide. Peduncles green, 12–17 mm long. Bracts inconspicuous, imbricate, ovate, membranous, acute, to 1 mm long, ca 0.7–0.8 mm wide. Pedicels in flower purple to blackish-purple, 7–14 mm long. Bracteoles 2, ovate, translucent, to 1 mm long. FLOWERS with only one open per cincinni. Sepals 3, green, elliptic-navicular, weakly keeled, acute, 2–2.2 mm long, 1 mm wide. Petals 3, white, ovate-orbicular, broadly obtuse, 3.64 mm long, 3.54 mm wide at base. Stamens 6, subequal, white, bearded basally and near apex; filaments 2.5–2.8 mm long; anthers versatile, yellow, connective deltoid; trichomes dense, spreading in a rosette pattern, moniliform, basal set 1.5–2 mm long, apical set ca 0.5–0.8 mm below anthers, to 1 mm long. Pistil white; ovary 3-locular, ca 0.6–0.8 mm long; style slightly exerted beyond stamens, 3 mm long; stigma capitate. Fruits not observed.

Taxonomic identification

The first step in identification was to determine the genus to which Tahitian bridal veil should be assigned. There were three possible genera: *Tripogandra*, *Tradescantia*, and *Gibasis*. Characters used for segregating the genera are compared in Table 1. Tahitian bridal veil is not a

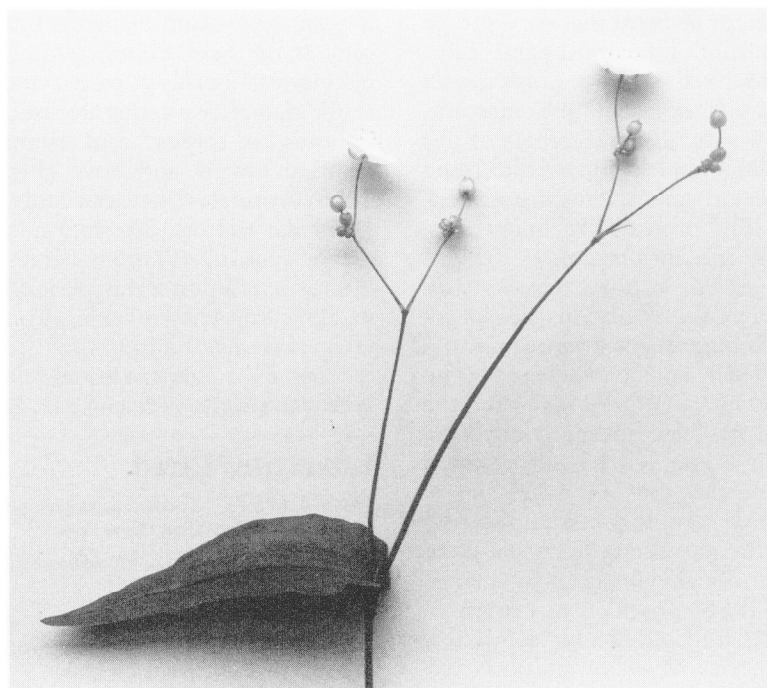


Fig. 2. Axillary inflorescence of Tahitian bridal veil with its paired, stalked, free cincinni.



Fig. 3. Stamens of a flower of Tahitian bridal veil bearded basally and apically.

Tripogandra (Greek *tri-*, three; *pogon*, beard; *andros*, male). Members of this genus differ from Tahitian bridal veil by possessing zygomorphic flowers; sessile, fused cincinni; a narrow anther connective; and unequal stamens, with the inner whorl of three stamens bearing a longer filament that curves to be erect in front of the upper petal. Tahitian bridal veil is not a *Tradescantia* (named in honor of John Tradescant, a British naturalist). Members of this genus differ by possessing sessile, fused cincinni and paired, conspicuous, enlarged leaf- or boat-like bracts subtending the inflorescence. *Gibasis* (Latin *gibbus*, swollen; Greek *basis*, base; reference to gibbous base of sepals) is distinguished by the free cincinni subtended by a pair of bracts and borne on a prominent stipe (Fig. 2) and the broad triangular anther connective. Tahitian bridal veil has all of these characteristics; thus it is a *Gibasis*.

The second step in identification was to identify the correct species of Tahitian bridal veil within the genus. Hunt (1986) provided a revision of *Gibasis* that included a key to species. Most species have flowers purple to violet-blue to pink, not white. There are three white-flowering species.

Gibasis oaxacana is distinguished easily by bearing three to eight cincinni in an umbel and petiolate leaves spirally arranged. *Gibasis geniculata* is distinguished easily by having paired cincinni; sessile, densely villous leaves that are distichate [2-ranked]; glandular-pubescent stipes; and filaments bearded only at the base. *Gibasis pellucida* is distinguished easily by paired cincinni, sessile glabrate leaves that are distichate, eglandular stipes, and filaments bearded basally and above (Fig. 3). Tahitian bridal veil keys out easily to *G. pellucida*, and our description, based on first-hand observations, agrees with Hunt's description of this species. Thus, we agree with Huxley (1992) from our taxonomic investigation that the correct name for Tahitian bridal veil is *G. pellucida* (Martens & Gal.) D. Hunt.

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