

A New Species of *Aristolochia* (Aristolochiaceae) from Bahia, Brazil

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ABSTRACT. *Aristolochia longispathulata*, a new species from the “Mata Atlântica,” is described and illustrated. The new species belongs to *Aristolochia* subser. *Hexandrae* F. González. It is easily recognized by flowers that are slightly curved and have a long, spatulate, fimbriate limb, which is pale green on the inner surface. *Aristolochia longispathulata* is similar to *A. arcuata* and *A. rumicifolia*, from eastern and southeastern Brazil. Its floral morphology also resembles that of *A. peltata*, from the West Indies, and *A. sessilifolia*, from southern Brazil, Argentina, and Uruguay.

RESUMO. Neste trabalho uma nova espécie de Aristolochiaceae da Mata Atlântica, Bahia, Brasil, *A. longispathulata*, é descrita e ilustrada. Esta espécie pertence a *Aristolochia* subser. *Hexandrae* F. González. É facilmente reconhecida por apresentar suas flores levemente curvadas, com o limbo longo, espatulado e fimbriado, além de possuir a face adaxial atipicamente alvo-esverdeada. *Aristolochia longispathulata* é semelhante a *A. arcuata* e *A. rumicifolia*, espécies da região oriental e sul-oriental do Brasil, embora a morfologia floral desta espécie assemelha-se a de *A. peltata*, das Índias Ocidentais, ou da espécie *A. sessilifolia*, do sul do Brasil, Argentina e Uruguai.

Although primarily pantropical, the genus *Aristolochia* (Aristolochiaceae) is more highly diverse in the Neotropics, especially in Brazil and Hispaniola. Following the description of several new species by Martius and Zuccarini (1824), the genus *Aristolochia* in Brazil has been reviewed by Masters (1875), Malme (1904), Schmidt (1935, 1936, 1938), Hoehne (1925, 1927, 1942, among others), and Bazzolo and Pfeifer (1977). Hoehne's (1942) comprehensive treatment lists some 75 species as native to Brazil. Since then, several local floras have included treatments of Aristolochiaceae (Ahumada, 1975; Capellari, 1996; Moore, 1915).

A new collection of *Aristolochia* from Bahía, Brazil, has come to my attention because of its long, spatulate, fimbriate flowers (Fig. 1). This collection does not match any species known to occur in

northeastern or eastern South America (see Ahumada, 1967, 1975, 1977, 1979, 1989; Feuillet & Poncy, 1998; Hauman, 1923; Hoehne, 1927, 1942; Masters, 1875; Moore, 1915). There is some resemblance with *A. rumicifolia* Martius & Zuccarini (see Martius & Zuccarini, 1824, tab. 54), from the states of São Paulo and Rio de Janeiro, and *A. arcuata* Masters (Fig. 2), from the states of Minas Gerais, São Paulo, and Rio de Janeiro. However, the last two species differ from the Bahian collection in several important diagnostic characters (Table 1), such as the shape and size of the leaves, the length of the peduncle and ovary, and the overall shape of the perianth. The discovery of a new *Aristolochia* species comes as no surprise as the area of Bahia is well known for endemism not only for plants but also for various groups of animals (see, e.g., Mori et al., 1983). Unfortunately, only a few patches of undisturbed forest remain in that area, which may be the reason for having no other specimens of this new species besides the type collection.

***Aristolochia longispathulata* F. González, sp. nov.** TYPE: Brazil. Bahia: Jussari, Serra do Teimoso, 7.5 km N of Jussari on road to Palmira, then 2 km W to Fazenda Teimoso, then 45 min. walk W to Reserva da Fazenda Teimoso, 15°10'S, 39°35'W, 300–450 m, 8 Feb. 1998 (fl), W. W. Thomas, A. M. Amorim & J. L. Paixao 11741 (holotype, CEPEC; isotype, NY). Figure 1.

Aristolochia arcuata et *A. rumicifolia* affinis, a qua imprimis differt perianthio subrecto, usque 9.5 cm longo, limbo spatulato longiore usque 7 cm longo, fimbriato, pagina interna viridi-glaucâ.

Glabrescent vine. Petioles to 2.5 cm long; blades narrowly ovate, 8–16 cm long, 3–4.5 cm wide, membranaceous, smooth, base slightly cordate, sinus 5–10 mm deep, lobes parallel, apex obtuse, glabrous and with small white, siliceous bodies above, pale green and puberulous especially along the veins below; venation acrodromous, basal primary veins 3, prominent on the lower side, higher order venation densely reticulate, prominulous on

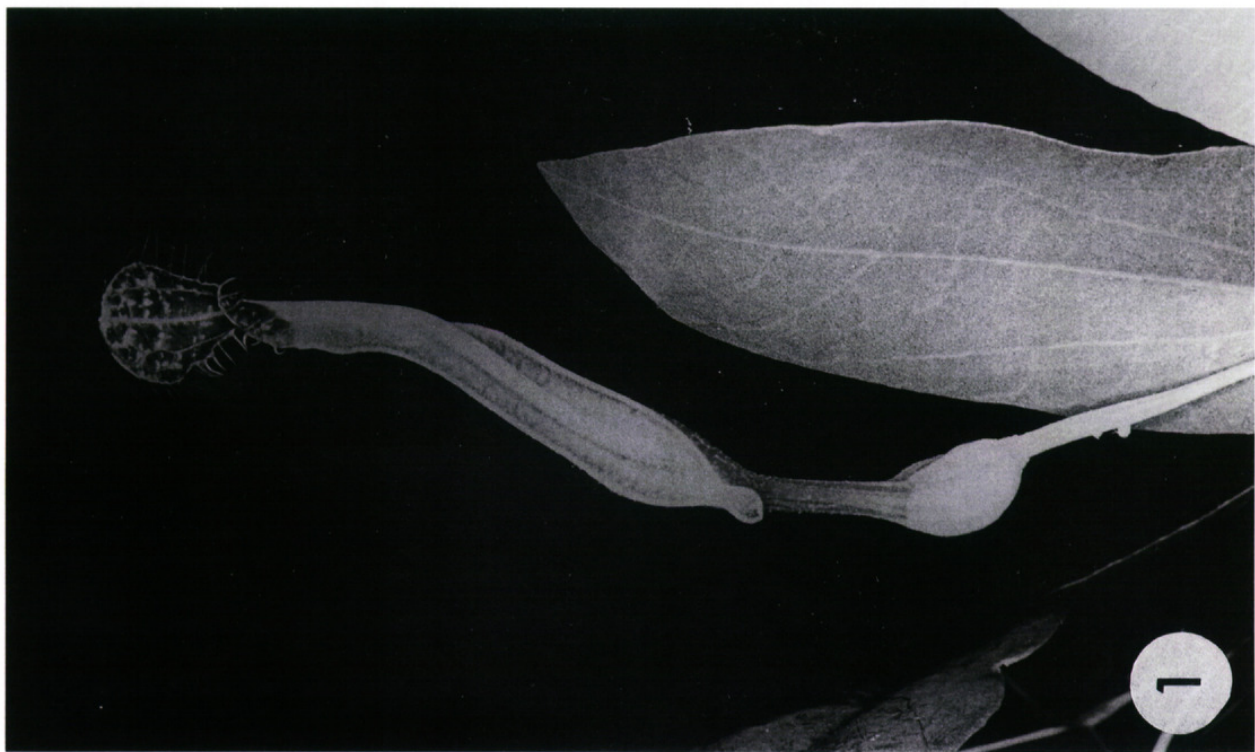


Table 1. Comparison of diagnostic features of *Aristolochia longispathulata*, *A. arcuata*, and *A. rumicifolia*.

	<i>A. longispathulata</i>	<i>A. arcuata</i>	<i>A. rumicifolia</i>
Leaves	narrowly ovate, with 3 basal veins	ovate, subhastate, with 5 to 7 basal veins	narrowly ovate, with 3 basal veins
Length of petiole	to 2.5 cm	to 4 cm	to 4 cm
Length of peduncle and ovary	to 5 cm	to 4 cm	to 2.5 cm
Shape of perianth	nearly straight	strongly reflexed	nearly straight
Total length of perianth	to 9.5 cm	to 5 cm	to 4 cm
Shape of utricle	ellipsoidal	obovoid	ellipsoidal
Shape of perianthial limb	very narrowly oblong, spatulate	oblong to obovate	narrowly obovate
Length of limb	to 7 cm	to 3.5 cm	to 2.5 cm
Apex of limb	obtuse	obtuse	emarginate
Surface of limb	fimbriate and with conical trichomes	fimbriate	glabrous

the lower side. Pseudostipules absent. Flowers axillary, solitary. Peduncle and ovary to 5 cm long, glabrescent. Perianth very slightly curved, puberulous and with small yellowish dots (*in siccus*) on the outside; utricle widely oblong, ovate, to 5.5 mm long, 2.5–3 mm diam., whitish, base symmetric, slightly constricted; syrx present, inequilateral, ca. 1 mm long; tube slightly enlarged distally, to 1.5 cm long, ca. 1.5 mm in proximal diam., 3–3.5 mm in distal diam., forming an angle of ca. 180° with the utricle, deep purple outside; limb very narrowly oblong, forming an angle of ca. 180° with the tube, to 7 cm long and 9 mm wide (12 mm on the spatulate part), pale green on the inner surface and the margins, deep maroon on the outer surface, with the ¼ distal portion spatulate and fimbriate especially along the margins, apex round, fimbriae vascularized, to 4 mm long, conical trichomes present on the ¾ of the inner surface. Gynostemium stipitate, stipe ca. 1.4 mm long; anthers six, narrowly oblong, ca. 1.6 mm long, stigmatic lobes six, ca. 1.5 mm long. Capsule and seeds unknown.

Aristolochia longispathulata is known only from the type specimen, collected in a semi-deciduous forest, which suggests that the species is very uncommon. The new species belongs to *Aristolochia* subser. *Hexandrae*, one of the three infrageneric taxa proposed for the neotropical species by González (1990, 1991). The species of this subseries are easily distinguishable as they all have solitary,

ebracteolate flowers along leafy branches, and both the petiole and the floral peduncle lack a basal abscission zone. This is the only species of subseries *Hexandrae* known to occur in the Mata Atlântica with long, straight, spatulate flowers, hence the epithet “*longispathulata*.” Within *Aristolochia* subser. *Hexandrae*, the new species is closely related to *A. arcuata* and *A. rumicifolia*. However, the new species differs in several diagnostic characters, such as the narrowly ovate shape of the leaf blade, the short petiole and the long floral peduncle, and especially the conspicuously spatulate and fimbriate perianth, which is at least twice longer than in the other two species (Table 1).

The long, spatulate perianth of *Aristolochia longispathulata* is remarkably convergent with that of *A. peltata* L. (see Jacquin, 1764, tab. 4) from Cuba, Haiti, and St. Thomas, and of *A. brevifolia* (Chamisso) Hauman and *A. sessilifolia* (Klotzsch) Malme (see Ahumada, 1967, 1975; Hauman, 1923; Hoehne, 1927, 1942; Malme, 1904) from southern Brazil, Argentina, and Uruguay. In addition to the disjunct distributions, these three species strongly differ from *A. longispathulata* in various vegetative traits, such as the length of the petiole, the shape of the leaves, and the pubescence on various parts of the plant. Whereas *A. brevifolia* and *A. sessilifolia* are both densely puberulous and have extremely short petioles and leaves with truncate bases, *A. peltata* has ovate to widely ovate and subhastate leaves.

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Figures 1, 2. —1. *Aristolochia longispathulata* F. González in field habit (Thomas *et al.* 11741). Note eggs of swallowtail butterfly on lower left of peduncle. Photograph by W. Thomas. —2. *Aristolochia arcuata* F. González (Royal Botanic Gardens, Kew, acc. 1982–8012). Photograph by F. González.

It is very likely that *Aristolochia longispathulata* is host to at least one species of *Battus*, a swallowtail butterfly. The type specimen bears the typical yellowish, round, gregarious eggs of this genus (Fig. 1; see also DeVries, 1987; Tyler et al., 1992), and some leaves display signs of herbivory.

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