

A NEW ARISTOLOCHIA FROM AMAZONIAN COLOMBIA

BY
RICHARD EVANS SCHULTES¹

The caatingas of the upper Rio Negro area of Brazil, Colombia and Venezuela are fascinating to the naturalist because of the curious adaptation of their flora to xerophytism and because of the extraordinary number of endemics and primitive species which they harbor.

It was Spruce who, a century ago, first investigated these formations. Notwithstanding the thoroughness of Spruce's work and the collections of a number of later botanists, the composition and history of the caatinga-flora is but little understood. Every expedition into the upper Rio Negro basin brings back novelties and rare plants. Some of these indicate phytogeographical relationships with the flora of the great Venezuelan-Guianan land-mass; others, like the new concept which is described below, appear to stand alone with no close allies amongst the known species of South America.

***Aristolochia Amesiana* R. E. Schultes sp. nov.**

Frutex scandens, robustissimus. Caulis volubilis, elongatus, paulo ramosus; rami volubiles, teretes, striolati,

¹Botanist, Division of Rubber Plant Investigations, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, U. S. Department of Agriculture; Research Fellow, Botanical Museum of Harvard University.

cum cortice nunc nigro nunc fusco-cinereo, tenui, glabro levique. Folia exstipulata, magnopere coriacea, elliptica, apice breviter apiculata vel subacuminata, basi rotundata (numquam cordata), margine valde revoluta, 13–16 cm. longa, 6–8 cm. lata, robustius petiolata (petiolis fusco-nigris, plerumque 2–3 cm. longis), nervis lateralibus quattuor, supra vivo cyaneo-viridia et nitidissima (siccitate straminea), cum nervis non elevatis, superficie oculo armato minutissime tessellata, subtus vivo pallide viridia, cum nervis omnibus prominenter elevatis, subdense sed minute albido-tomentulosa. Flores in racemis brevissimis, congestis, paucifloris et axillaribus, usque ad 8 cm. longi, pedunculo glabro gracili, usque ad 2 cm. longo. Perianthii pars basalis valde ovoideo-dilatata, 18 mm. longa, 10–11 mm. in diametro, extus glabra vel glabrescens et flavo-brunnea vel pallide purpurea; tubus obconicus, purpureo-venosus, stramineus vel flavo-brunneus, usque ad 3 cm. longus, basi 4 mm. sed apice 20 mm. in diametro, intus purpureo-papillosus, in os parvum constrictus; limbus altero latere expansus, altero truncatus, membranaceus, intus atrosanguineus, extus basi purpureus et prope apicem fusco-viridis, ovalis, 42 mm. longus, 20 mm. latus, ecaudatus, apice usque ad 2 mm. incisus, vivo subcucullatus, omnino glaber. Columna genitalis 5 mm. longa, apice 2.5 mm. in diametro, breviter stipitata, per dimidium sex-divisa, lobis pseudostylinis acutis. Stamina sex in serie unica, columnae adnata, antheris linearibus, usque ad 2.2 mm. longis, longitudinaliter dehiscentibus. Fructus adhuc ignotus.

A very robust vine. Stem twining, elongate, little branched. Branches twining, terete, striolate; bark either black or brownish grey, thin, glabrous, smooth. Leaves without stipules, extremely coriaceous, elliptic, apically short-apiculate or subacuminate, basally rounded (never cordate), the margin strongly revolute, 13–16 cm. long,

6–8 cm. wide, lateral veins four, in life glossy and bluish green above (straw-colored when dried), the surface very minutely tessellate under a glass, nerves not elevated, in life paler green beneath with all nerves prominently elevated, rather densely but minutely whitish tomentulose. Petiole robust, brownish black, mostly 2–3 cm. long. Racemes very short, congested, few-flowered, axillary. Flowers up to 8 cm. long with glabrous, slender peduncles up to 2 cm. long. Basal portion of perianth strongly ovoid-dilated, 18 mm. long, 10–11 mm. in diameter, glabrous or glabrescent, yellowish brown or pale purple without; tube obconic, purple-veined, straw-colored or yellow-brown, up to 3 cm. long, basally 4 mm. but apically 20 mm. in diameter, constricted into a small mouth, distantly papillose within; one lip expanded only on one side, truncate on the other, membranaceous, dark blood-red within, but outside, purple at the base and brownish green near the apex, oval, 42 mm. long, 20 mm. wide, ecaudate, apically with a slit up to 2 mm. deep, subcucullate in life, glabrous. Column 5 mm. long, apex 2.5 mm. in diameter, short-stipitate, divided into six parts for half its length; the pseudo-styline lobes acute. Stamens six in a single whorl, adnate to the column; the anthers linear, up to 2.2 mm. long, longitudinally dehiscent. Fruit unknown.

COLOMBIA: Comisaría del Vaupés, Río Negro, San Felipe (El Castillo), below confluence of Ríos Guainía and Casiquiare. "Vine. Leaves thick. Flowers brownish red outside, tip greenish brown outside. In caatinga." December 12, 1947, *Richard Evans Schultes & Francisco López 9296*.

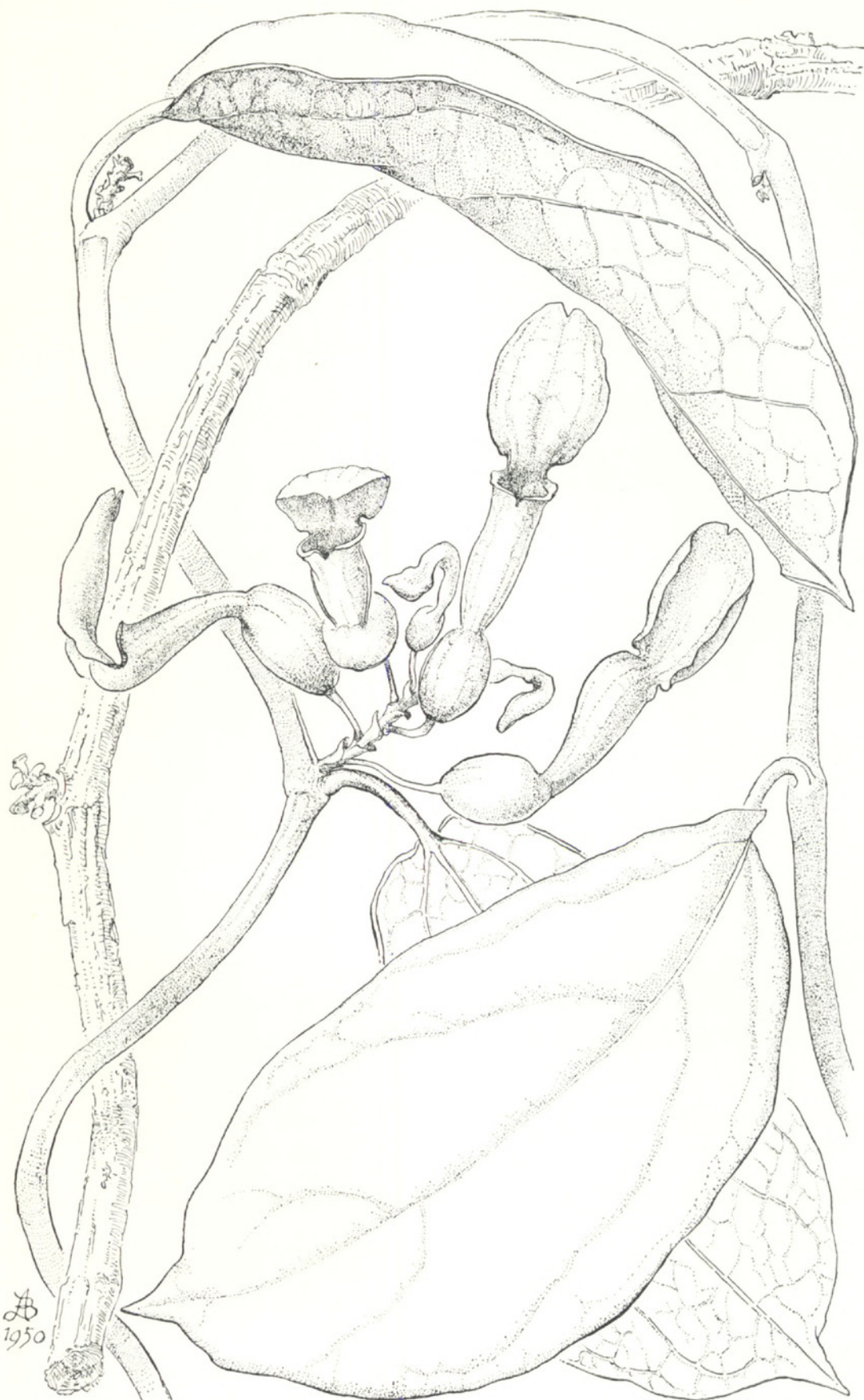
Aristolochia Amesiana does not appear to be closely related to any of the described species of this interesting genus. It is at once set off as distinct by the extremely thick-coriaceous texture of its leaves. In having leaves which are elliptic with a rounded (never even slightly

EXPLANATION OF THE ILLUSTRATION

PLATE LX. ARISTOLOCHIA AMESIANA *R. E. Schultes.*

Habit and flowers about three quarters natural size.

Drawn by BLANCHE AMES



ARISTOLOCHIA *Amesiana* R. E. Schult.

cordate) base, *Aristolochia Amesiana* is also sharply distinct from most other species, approaching, amongst the South American representatives, only *A. maxima* Jacquin from which it differs markedly in the texture of the leaves, structure of the inflorescence and in floral characters.

In the key to the subgeneric sections of *Aristolochia* which Hoehne has published (Flora Brasílica 15, pt. 2 (1942) 25), *Schultes & López 9296* traces out to his section *Exstipulatae* (devoid of pseudo-stipules), sub-section *Euunilabiatae* (flowers unilabiate, or with the lip usually not surrounding the mouth of the tube but developed on one side alone). *Aristolochia Amesiana* does not approach any of the concepts included in these sections, resembling *A. disticha* Masters, a species known only from the Rio Tapajóz in Amazonian Brazil, in having an extremely abbreviated racemose inflorescence.

In addition to the extraordinarily coriaceous and basally rounded leaves, *Aristolochia Amesiana* exhibits several other characters which are either rare or unknown in the genus. The curious triangular indentation or incision at the apex of the lip is much deeper and more strongly marked than in any other known South American species, although a similar condition is seen in *Aristolochia Macbrideana* Standl., *A. Eggersii* Hoehne and *A. papillaris* Mast. The column of *Aristolochia Amesiana* is unusually short in relation to the length of the tube, a condition seen in few of the South American species. In life, the leaves have a blue or steel-green sheen which, so far as I have been able to ascertain, has not been reported for other species.

It is obvious that *Aristolochia Amesiana*, like all other plants of the caatingas of the upper Rio Negro, is highly adapted to xerophytic conditions. It climbs in the low, light, semi-open groves of *Hevea pauciflora* var. *coriacea*,

Didymopanax Spruceanum, *Retiniphyllum* spp., *Bombax humile* and bushy species of *Clusia*. Apparently it is a rare element of the caatingas, since only one flowering plant was located during a year's stay in the region, although at least five other vines in sterile condition were seen in the same caatinga at San Felipe where the type was found.

Of the 137 South American species of *Aristolochia* treated by Hoehne in his monograph (loc. cit.), thirty-nine are known from the Amazon basin, and a number of other species, which as yet have not been collected from this area, are suspected to occur there. *Aristolochia*, it is evident, is well represented in this part of the continent. It is curious that all of the botanical activity along the Rio Negro has turned up only four species—all of them endemic to the basin—in this area which is one of the richest in diversification of species of plants. A century ago Spruce collected the type of *Aristolochia Sprucei* Mast. at São Gabriel, and in the 1880's Barbosa Rodrigues collected *A. sylvatica* Barb. Rodr. at Manáos and *A. chrysochlora* Barb. Rodr. at Tarumá. These three species, like *Aristolochia Amesiana*, are apparently rare elements of the flora, for they are known only through the type collections. None is closely allied to *Aristolochia Amesiana* nor to each other.

It is an honor for me to dedicate this new endemic, albeit belatedly, to the late Professor Oakes Ames, in commemoration of his more than fifty years of service to Harvard University and his widespread influence as an outstanding orchidologist and economic botanist, a quietly inspiring teacher and a far-sighted administrator.



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