

NEW RECORDS AND TAXONOMIC NOTES OF *HERRANIA MARIAE* (MALVACEAE) FROM THE BRAZILIAN AMAZON

Ricardo de S. Secco¹
Alessandro S. do Rosário²
Talita de S. Praia³

Recebido em 06.06.2016; Aceito 15.06.2016

Abstract.

Herrania is a Neotropical genus comprising 17 species, with its diversity center in Colombia. Five species occur in Brazil, mostly concentrated in wetlands in the Amazon (várzea and igapó forests). The first occurrences of *Herrania mariae* in the states of Amapá and Rondônia are reported here, and its distribution in the State of Pará is expanded. Comments on the taxonomy, morphology, nomenclature, and geographical distributions of this species are provided together with diagnostic illustrations.

Key words: Amazonia, “cacau-jacaré”, phytogeography, *Theobroma*

Resumo

Herrania é um gênero neotropical com 17 espécies e centro de diversidade na Colômbia. No Brasil ocorrem cinco espécies, a maioria concentrada nas áreas alagadas da Amazônia (matas de várzea e igapó). A primeira ocorrência de *Herrania mariae* nos Estados do Amapá e de Rondônia é aqui registrada e sua distribuição no Estado do Pará é expandida. São apresentados comentários sobre a taxonomia, morfologia, nomenclatura e distribuição geográfica da espécie, juntamente com ilustrações diagnósticas.

Palavras-chave: Amazônia, “cacau-jacaré”, fitogeografia, *Theobroma*

Introduction

According to Schultes (1958), *Herrania* Goudot is a Neotropical genus (then considered in the Sterculiaceae, but currently in the Malvaceae) comprising 17 species distributed in Ecuador, Peru, Colombia, and Brazil, with only five species in Brazil, including *H. mariae* (Mart.) Decaisne ex Goudot in the states of Amazonas and Pará. The center of diversity of the genus is situated in Colombia, with 15 species. There are records of five species in Brazil, all of them in the Amazon (Esteves, 2015), including *H. mariae* (in the states of Amazonas and

1Coordenação de Botânica, Museu Paraense Emílio Goeldi, Av. Perimetral 1901, 66040-170, Terra Firme, Belém, Pará, Brazil; CNPq Productivity Fellowship; rsecco@museu-goeldi.br

2 Departamento de Tecnologia da Madeira, Centro de Ciências Naturais e Tecnologia, Universidade do Estado do Pará, Trav. Enéas Pinheiro 2626, 66.095-100, Marco, Belém, Pará, Brazil; Substitute. Lecturer

3 Universidade Federal Rural da Amazônia, Av. Perimetral s/n, Terra Firme, Belém, PA, Brazil; CNPq M.Sc. Fellowship

Acre) and *H. amazonica* Hub., this being a *nomen nudum* of the collection *Ducke MG 7679*, which is actually *H. nitida* (Poepp.) R.E. Schultes.

The first records of *Herrania mariae* for the states of Amapá and Rondônia are presented here, together with a distribution map as well as illustrations of the species. Additionally, the new records from State of Pará reported here increased the species' distribution well beyond that recorded in the monograph by Schultes (1958) and the Brazilian listing of plants (Esteves 2015).

Materials and Methods

The present study was undertaken as part of a field and herbarium survey designed to update collections stored at the Museu Paraense Emilio Goeldi, Embrapa Amazônia Oriental, Instituto Nacional de Pesquisas da Amazônia, and Instituto de Pesquisas Jardim Botânico do Rio de Janeiro (herbaria acronyms MG, IAN, INPA and RB, respectively, according to Thiers [2015]), as subsidies to the projects Flora do Brasil online, SIBBr (Sistema de Informação da Biodiversidade do Brasil), and IFN (Inventário Florestal Nacional).

Results

Herrania mariae (Figure 1) occurs as a small tree or shrub 2-9 m tall with trunks up to ca. 30 cm in diameter, with approximately five or six unbranched stems arising from the root stock, with large, digitate, palmatisect leaves arranged on the stem apex, with 6-9 leaflets, chartaceous to membranous, long-petiolate, petioles 30-50 cm long, trichomes stellate; flowers bisexual, in fascicles, inserted directly on the stem, petals cucullate, reddish, 0.5-1.2 cm long, with long ligule, filiform, pendant, 1.5-18 cm long, staminal tube with 5 stamens, inserted in the basal portion of the petals (cucullate), staminodes 9, conspicuous, petaloids reddish or purplish, alternate with petals, ovary 5-locular, sessile, densely pilose, trichomes stellate, multi-ovulate, fruit baccaceous or subdrupaceous, indehiscent, ellipsoid, strongly costate, with five alar projections, yellowish or greenish, various seeds, covered by a mucilaginous pulp, sweetish or acidulous in taste.

Material examined: BRAZIL. AMAPÁ: Cachaço, Serra do Navio, igarapé margin forest, 07-II-1980, *B. Rabelo 334* (MG); Serra do Navio, Amapari River, 22-XI-1954, *R. E. Cowan 38514* (RB); Araguari River, 11-IX-1961, *J.M. Pires et al. 50.858* (IAN, MG). RONDÔNIA: Machado River, igapó forest, II-1981, *M. Goulding 1419* (INPA, MG).

Additional material examined: BRAZIL. PARÁ: Almeirim, Monte Dourado, várzea forest, 28-X-1985, *M. J. Pires et al. 707* (MG); Ananindeua, right margin of the Aurá River, Evangelista's farm, várzea forest, 14-IV-2003, *J. Oliveira & M. C. Nascimento 626* (MG); Juruá River, Marari, IX-1900, *Ule 5031* (MG); Marituba, CEPLAC, 28-V-2010, *S.T. Rodrigues 410* (IAN, MG); Barcarena, Ilha das Onças, várzea forest, Furo Santo Antônio, 14-I-1985, *Anne Gély 214* (MG); Belém, outskirts of town, humid forest remains, 14-X-1940, *A. Ducke 595* (MG); Trombetas River, Castanhal do Jacaré, 15-XII-1907, *A. Ducke 9159* (MG); Marajó, Ilha Mexiana, Igarapé Pinto, 30-X-1901, *M. Guedes MG 2452* (MG); Marajó, municipality of Anajás, Moções River, 28-X-1984, *G. L. Sobel & J.*

Strudwick 4850 (INPA, MG); Lageira, Maicuru River, 18-VII-1981, *J. J. Strudwick & G. L. Sobel 3092* (INPA, MG).

Discussion and Conclusions

Schumann (1886) considered *Herrania* to be a section of the genus *Theobroma* L., and Ducke (1954) considered *H. mariae* to be *Theobroma mariae*. Authors such as Schultes (1958), Cuatrecasas (1964), and Cristóbal *et al.* (2005), however, considered *Herrania* as a taxon independent from *Theobroma*, a concept that persists until today. Schultes (1958) considered two sections for *Herrania*: *Herrania* section *Herrania*, with calyx patelliform; and *H.* section *Subcymbicalyx* R.E. Schultes (with calyx partially boat-shaped) comprising most of the species, including *H. mariae* (being similar to *H. nitida* [Poepp.] R.E. Schultes). *Herrania mariae*, however, is distinct by the following characteristics: leaflets obovate-rhomboid, abaxial faces densely pilous (vs. leaflets lanceolate-elliptical, abaxial face glabrous in *H. nitida*), petiole densely tomentose (vs. petiole sparsely pubescent, glabrescent), petals large, 7-9 mm long, 6-7 mm wide (vs. smaller petals, 4-5 mm long, 4-5 mm wide), fruit with long peduncle, up to 2.5 cm long (vs. fruit with short peduncle, 1.4 cm long in *H. nitida*). The affinities of *H. mariae* still need to be better clarified, however, as it will be necessary to update the taxonomy of *Herrania*, whose most recent revision was a monograph by Schultes (1958).

Herrania mariae, known in the region as "cacau-jacaré" and "cacau-bravo", is a typical wetlands species (igapó and várzea forests) that draws attention by the beauty of its bright red or purple ornamental flowers, in large pillow-like arrangements inserted directly on the trunk (cauliflory). The fruits are morphologically exotic, being strongly costate and pointed, hence its common names.

Herrania mariae is found in several localities in the State of Pará, but in Rondonia it was only collected once. As this state has been subject to intensive human activity, with deforestation and burning of large areas (Lisboa *et al.*, 1991), this species is here considered as Vulnerable (VU) according to the IUCN Red List (IUCN, 2012). The State of Amapá is still poorly collected, and there are few records of *H. mariae*, so that for this state this species can be considered to be Data Deficient (DD) according to the IUCN Red List (IUCN, 2012).

Acknowledgements

The authors are grateful to the Brazilian Research Council - Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) for the fellowship (processo n. 303424/2010-9) awarded to the first author to study Amazonian species, for the fellowship awarded to Talita Praia, to Dr. Paul E. Berry for suggestions to improve the English text, and to the curators of the cited herbaria for their permission to examine the collections.

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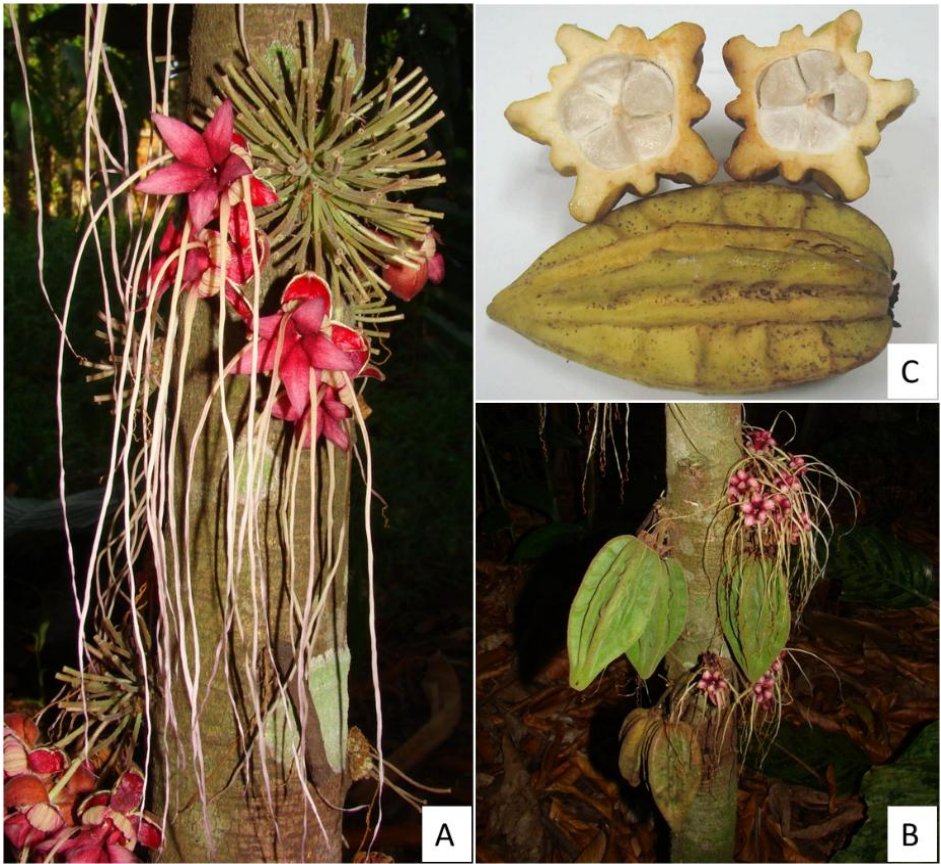


Figura 1. *Herrania mariae*. A, Flowers inserted on the stem (cauliflory). B, Fruits inserted on the stem. C, Whole fruit (below) and in cross-section (above). (Images A, B by Luiz Adão Teixeira and C by Alessandro Rosário).

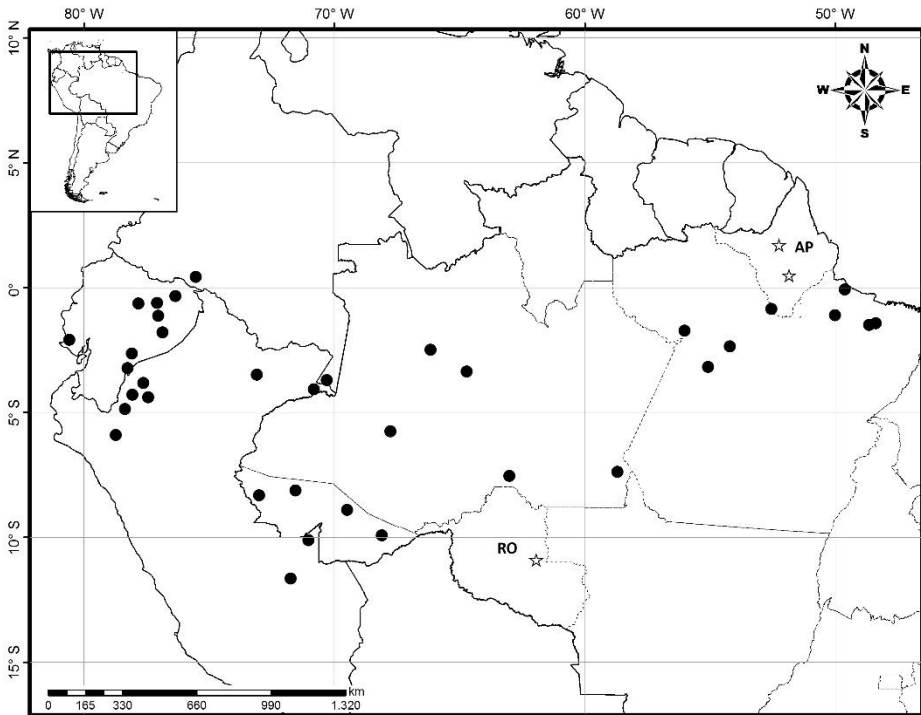


Figura 2. Current geographical distribution of *H. mariae* in South America, highlighting the new records in Brazil (star). Acronyms of the new records from each state: AP = Amapá; RO = Rondônia.