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MALPIGHIACEAE NOVAE, I
BLEPHARANDRA

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RESUMO

É descrita a nova espécie **Blepharandra cachimbensis,** endémica à Serra do Cachimbo, Pará. As outras espécies do gênero são todas no norte do Amazonas e nas serras da Venezuela do sul e Guyana do oeste. A disjunção transamazônica desta espécie sugere uma distribuição contínua antiga para o gênero, que seria de interesse para pesquisadores da fitogeografia da Amazônia.

Blepharandra is a genus of about five species of trees and shrubs. It is notable for the many straight, basifixed hairs on the anther and filament and the small, dry, indehiscent, nut-like fruit. Its nearest relatives are **Diacidia** and **Byrsonima.** The distinctions between these genera will be discussed in my treatment of the Malpighiaceae of the Guayana Highland, which will be published in the near future. The only species of **Blepharandra** that will not be treated in that paper is an undescribed endemic of the Serra do Cachimbo in southern Pará. The purpose of this paper is to describe that species and discuss the implications of its disjunct distribution.

Blepharandra cachimbensis W. R. Anderson, sp. nov. Fig. 1

Frutex 1-2 m altus; ramis teretibus, laevibus praeter cicatrices prominentes, glabris (infra inflorescentiam). Folia glabra, eglandulosa; lamina (2.0-) 2.5-6.0 (-6.6) cm longa, 1.5-4.0 cm lata, elliptica, basi cordata, apice rotundata et saepissime emarginata, supra atroviride nitidaque, subtus pallidiore, margine perlucido 0.3-0.5 mm lato plana vel leviter revoluta; nervis lateralibus utrin-

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que 12-17 reticulo supra prominenti subtus obscuro connexis; petiolo 2-4 mm longo, crasso; stipulis 4-8 mm longis, abaxialiter glabris, adaxialiter versus basim pilis rectis basifixisque dense barbatis, intra- et epipetiolaribus, apice rotundatis, intrapetiolariter distinctis, interpetiolariter base connatis. Inflorescentia 5-15 cm longa, terminalis, thyrsiformis, dense et pertinaciter albo- vel brunneo-velutina, floribus in cincinnis 3-6-floriferis, gemmis circinnatis; bracteis 4-8 mm longis, 3-5 mm latis, triangularibus vel ovatis, concavis, denticulatis, base extus pilosis margine ciliatis aliter glabris, rubris, caducis; bracteolis bracteis similibus sed brevioribus et abaxialiter sericeis; pedicellis 5-12 mm longis, velutinis, usque 0.5 mm diametro pilis exceptis, 1.5 mm pilis inclusis. Sepala 5, omnes biglandulosa, glandibus rubris 1.0-2.5 mm longis obovatis; lobis calycis 2.5-4.0 mm longis, 1.7-2.5mm latis, ovatis, apice latissime rotundatis, proximaliter adpressis, distaliter revolutis et in ciliis glandularibus laceratis, utrinque velutinis. Petala 5, glabra, in fructu persistentes. Petala 4 lateralia rosea demum alba, patentia vel reflexa, ungue 1.5-2.3 mm longo, tenuiore, limbo 3.5-5.0 mm longo, 4.0-5.3 mm lato, orbiculari, paulo concavo, integro vel minute denticulato. Petalum posticum atroroseum demum album erectum, ungue 2.5-4.0 mm longo, crassiore, limbo 5.5-6.5 mm longo, 6.0-7.5 mm lato, plano vel concavo vel parum corrugato, obtuse denticulato. Staminum 10 filamenta 2.5-4.2 mm longa, tenuia, libera vel brevissime connata, utrinque densissime pilosa praesertim in dimidio proximali, pilis longissimis tenuibus basifixis. Antherae aequales, 1.0-2.0 mm longae, connectivo atrorubro glabroque apice loculos parum superanti, loculis 2, lateribus pilosis pilis saepe caducis, utroque loculo apice fasciculo pilorum 8-16 rectorum basifixorum ca. 0.5 mm longorum ornato. Ovarium sphaeroideum, 1.4-2.0 mm in diametro, glaberrimum, triloculare, loculis omnibus uniovulatis. Styli 3, 4.0-5.0 mm longi, glabri, in gemma curvi, sub anthesi recti; stigmate apicali, minuto. Fructus subsphaeroideus, 2.5-3.0 mm latus, 2.0-2.5 mm altus, glaber, siccus, indehiscentis (?), endocarpio rugoso osseoque, trilocularis. Semines 3 vel abortu 2 vel 1, matura ignota.

TYPE: Pará, Alto Tapajós, Rio Cururú, region of Missão Velha, a Mundurukú village ca. 2 km N of Rio Cururú; elev. ca. 200 m; 57° 20' W, 7° 45' S; sandy floodplain between river and village; upper, drier part of campo. 13/II/1974. **William R. Anderson 10896** (IAN, holotype; K, MICH, MO, NY, P, RB, U, US, VEN, isotypes).

PARATYPES: Pará: Serra do Cachimbo, VI/1955, **Alvarenga** s. n. (RB 90557); northwest edge of Serra do Cachimbo, 25 km NE of Missão Velha on Rio Cururú, 57° ca. 15' W, 7° ca. 30' S, outcrop of blocky sandstone, shrub among rocks, above wetter places, 14/II/1974, **Anderson 10965** (IAN, MICH, NY); Cachimbo, no campo, no meio das pedras, 21/V/1955, **Bockermann 185** (SP

64091); Alto Tapajós, Rio Cururú, Missão Velha, campo alagavel, 25/VII/1959, **Egler 1040** (HB 12357, IAN 102340, MICH, MG 23698, NY); Serra do Cachimbo, 14/IX/1955, **Pereira 1777** (RB 91338); Serra do Cachimbo, 425 m, 12/XII/1956, **Pires et al. 6112** (IAN 91520, NY); Serra do Cachimbo, 25/IX/1953, **Helmuth Sick B.621** (HB 4623, RB 87254).

Blepharandra cachimbensis is a common shrub in the rocky uplands of the Serra do Cachimbo. It also grows in the sandy campos at the base of the Serra; indeed, the type came from such a campo. Its dense inflorescences of pink and white flowers make it very attractive, and like many plants of the uplands of central Brazil it would be a good candidate for cultivation. It is distinguished by its rounded epipetiolar stipules, its cordate subsessile leaves, the dense whitish tomentum of the inflorescence, the glandular-ciliate margin of the sepals, and the petals pink, turning white in age.

The nearest relative to this species is an undescribed plant of northern Amazonia, extending from the Rio Urubú up the Rio Negro to the headwaters of the Rio Orinoco. That species will be described in my contribution to Dr. Bassett Maguire's series on The Botany of the Guayana Highland. The presence of these close relatives on each side of the forested lowlands suggests that they may be descended from a common ancestor that formerly occurred in some abundance between the present disjunct species; such a conclusion is supported by the fact that the fruit in this genus is quite devoid of obvious adaptations for dispersal over long distances. Such a distribution of the ancestor in turn requires a series of suitable habitats, which would not have to be rocky uplands, since several collections of **B. cachimbensis** have been made in sandy campos just above the floodplain of the Rio Cururú. A series of similar sandy campos with open vegetation of shrubs and small trees would provide the necessary route by which **B. cachimbensis** could have arrived at its present outpost in the Serra do Cachimbo. Perhaps further exploration of the scattered sandy campos of Pará and Amazonas will reveal extant populations linking Cachimbo and the Rio Urubú. However, it is also quite possible that such links have been lost, and that **B. cachimbensis** reached Cachimbo at a time when the forests were less extensive than at present. Several authors (e.g. Haffer, 1967 and 1969, and Prance, 1973) have suggested that the Amazonian forests were reduced to refugia during dry periods of the Pleistocene and post-Pleistocene, but these authors have been concerned with the plants of the forest and associated animals. The areas abandoned by the forests during those dry periods must have supported some vegetation, but there has been little or no attempt to specify the aspect or composition of that vegetation. Haffer (1969) simply postulates that the forests "were isolated from each other by tracts of open, nonforest

vegetation." Since the drier areas north and south of Amazonia are presently occupied by various forms of savanna (in a broad sense), it seems probable to me that elements of those savannas filled the void created by the withdrawal of the forests during the dry periods. If so, evidence of that fact should be discoverable in the distributions and relationships of extant species of the campos and savannas. In this connection the presence of a species of **Blepharandra** in Cachimbo is significant, and it is to be hoped that other such cases of transamazonian distributions of savanna and campo plants may shed further light on the question of what was growing in Amazonia when the forests were in retreat. The conclusion that I draw from this line of reasoning is the following paradox: One way to make progress in understanding the history of the vegetation of Amazonia is to pay special attention to the distribution and relationships of groups that are well represented in the open vegetations north and south of Amazonia.

LITERATURE CITED

Haffer, Jürgen

1967. Speciation in Colombian forest birds west of the Andes. American Museum Novitates 2294: 1-57.

1969. Speciation in Amazonian forest birds. Science 165: 131-137.

Prance, Ghillean T.

1973. Phytogeographic support for the theory of Pleistocene forest refuges in the Amazon basin, etc. Acta Amazônica 3 (3): 5-28.

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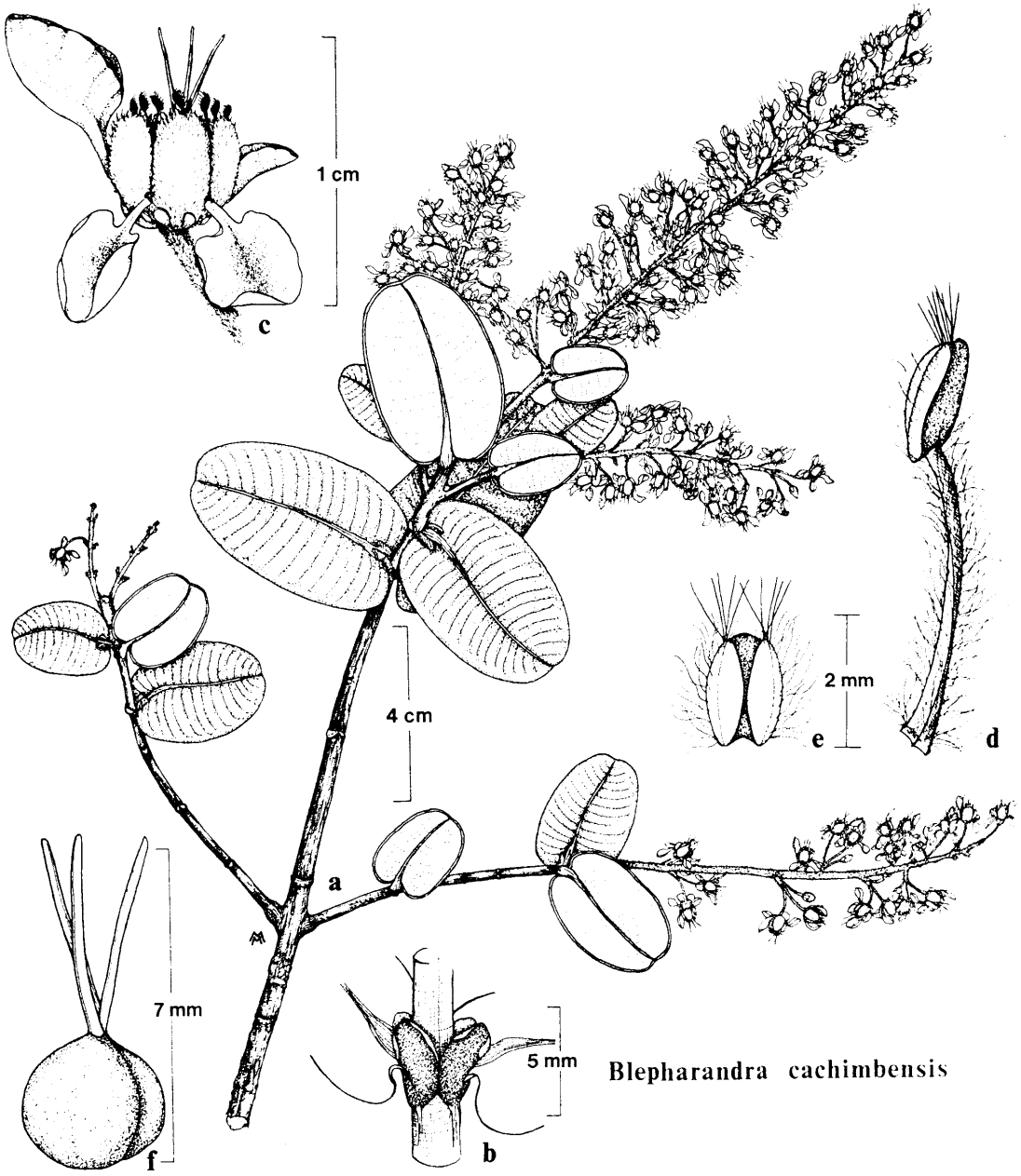

Fig. 1: **Blepharandra cachimbensis.** a: Flowering branch. b: Stipules. c: Flower. d: Stamen, side view. e: Anther, adaxial view. f: Gynoecium. Drawn from **Egler 1040** by Melissa Marshall.