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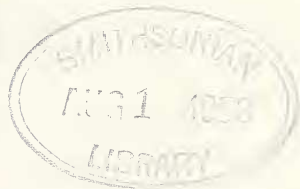
June 25, 1958

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THE MACHRIS BRAZILIAN EXPEDITION

BOTANY: PHANEROCAMAE

ALSTROEMERIACEAE AND OTHER FAMILIES

By LYMAN B. SMITH AND COLLABORATORS



CONTRIBUTIONS IN SCIENCE is a series of miscellaneous technical papers in the fields of Biology, Geology and Anthropology, published at irregular intervals by the Los Angeles County Museum. Issues are numbered separately and numbers run consecutively regardless of subject matter. Number 1 was issued January 23, 1957. The series is available to scientists and scientific institutions on an exchange basis. Copies may also be purchased at a nominal price.

The MACHRIS BRAZILIAN EXPEDITION from the Los Angeles County Museum was sponsored by Mr. and Mrs. Maurice A. Machris and Mrs. Maybell Machris Low. It was conducted under the auspices of the Museu Nacional do Brasil. Botanical and zoological collections were made from April through June, 1956, in the region of the headwaters of the Rio Tocantins in the state of Goiás. General accounts and itineraries are given in papers 1 and 2 of this series. Technical type specimens of new entities are deposited in the Museu Nacional in Rio de Janeiro.

HILDEGARDE HOWARD

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THE MACHRIS BRAZILIAN EXPEDITION

BOTANY: Phanerogamae, Alstroemeriaceae and other families

By LYMAN B. SMITH¹ AND COLLABORATORS

The plant collections reported upon below were obtained by E. Yale Dawson, Expedition Botanist, and are cited by his field collection numbers. Detailed locality data for these may be found in his general account of the botany of the Expedition². Briefly, however, specimens bearing numbers from 14133 to 14815 came from the Chapada dos Veadeiros, between São João da Aliança and Veadeiros, April 13-May 3, 1956. Those bearing numbers from 14816 to 15236 came from the region between Amaro Leite and Peixe, especially in the southern Serra Dourada, May 15-June 10, 1956.

The families are arranged alphabetically. The treatments are by L. B. Smith unless otherwise indicated.

The first set of specimens, including isotypes of the three new species, is deposited in the Los Angeles County Museum.

ALSTROEMERIACEAE

(Amaryllidaceae – Tribe Alstroemerieae)

Alstroemeria brasiliensis Spreng. 14204; 14818 A species of Minas Gerais and Goiás. The present material shows great variation in the bracts and rays of the umbel and casts grave doubt on their value in making distinctions between species.

Reference: A. Schenk, Fl. Brasiliensis 3, pt. 1: 171-180. 1855.

BOMBACACEAE

Bombax marginatum (St.-Hil.) K. Schum. 14495; 15235 The flowers of number 15235 attain 16 cm. in length but such large size is probably not significant in this variable species.

Reference: K. Schumann, Fl. Brasiliensis 12, pt. 3: 201-250. 1886.

CAMPANULACEAE (Lobelioideae)

det. by Rogers McVaugh, University Herbarium

University of Michigan, Ann Arbor, Michigan

Centropogon cornutus (L.) Druce 14532 Central America and the Lesser Antilles to Bolivia and Brazil.

Siphocampylus corymbiferus Pohl 14571 Bolivia, central Brazil.

¹Curator, Division of Phanerogams, U.S. National Museum, Smithsonian Institution, Washington, D.C.

²Dawson, E. Yale. 1957. The Machris Brazilian Expedition. Botany: General. Los Angeles Co. Mus. Contr. Sci. (2): 1-20.

COMMELINACEAE

Commelina virginica L. 14666 Common in tropical and subtropical America.

Floscopa glabrata (Kunth) Hassk. 14959; 15132 Widely distributed in Brazil and Paraguay.

♀ *Phaeosphaerion persicariifolium* (DC.) C. B. Clarke 14972 The lack of fruit in the specimen makes determination uncertain. Vegetative characters vary greatly but seem to indicate this widespread species of the American tropics. I am following Woodson (Ann. Missouri Bot. Gard, 29: 150. 1942) in using *Phaeosphaerion* instead of *Athyrocarpus*.

Reference: C. B. Clarke in DC. Monogr. Phan. 3: 113-324. 1881.

CONVOLVULACEAE

Evolvulus lagopodioides Meissn. 14797 A species of Minas Gerais and Goiás.

Ipomoea alba L. (*Calonietyon album* House) 15008 Pantropical.

Ipomoea hederifolia L. (*Quamoclit coccinea hederifolia* House) 14975 Tropical and subtropical America.

Ipomoea martii Meissn. 14978 Pernambuco, Minas Gerais and Goiás.

Ipomoea tubata Nees 14377 Venezuela, Brazil.

Merremia cissoides (Lam.) Hallier 14505 Tropical and subtropical America.

Merremia tomentosa (Choisy) Hallier (*Batatas tomentosa* Choisy; *Ipomoea tomentosa* Pohl ex Meissn.) 14155 Central and eastern Brazil.

Note: Determinations were made in this family largely by comparison with material in the United States National Herbarium annotated by the late Dr. Carlos A. O'Donell, who had large revisions under preparation at his untimely end.

References: C. F. Meissner, Fl. Brasiliensis 7: 199-370. 1869. *Evolvulus*: S. J. van Oostroom, A Monograph of the Genus *Evolvulus* 1-267. 1934. *Merremia*: C. A. O'Donell, Lilloa 6: 467-554. 1941.

LILIACEAE

Herreria glaziovii H. Lecomte 14995 Heretofore this species was known from the type, *Glaziou* 14354, and one other specimen, both without locality data. We now find that it is native in southern Goiás, a region in which Glaziou collected extensively.

Reference: K. Krause, Nat. Pflanzenfamilien, ed. 2, 15a: 276. 1930.

MARANTACEAE

Monotagma plurispicatum (Koern.) K. Schum. 14895 Tropical South America especially the Amazon Basin.

Reference: K. Schumann, Pflanzenreich IV. Fam. 48: 1-184. 1902.

SCROPHULARIACEAE

Bacopa monierioides (Cham.) Robinson (*B. ranaria* (Benth.) Chodat & Hassler). 15150 This species ranges from Amazonas to Minas Gerais and Paraguay but judging from collections, is of rather infrequent occurrence.

Buchnera palustris (Aubl.) Spreng. 14646; 14795 Tropical South America.

Buchnera virgata H. B. K. 14609 Colombia, Venezuela, Guiana, Brazil.

Esterhazyia macrodonta Cham. & Schlecht. 14614 Minas Gerais, São Paulo. Apparently a new record for Goiás.

Esterhazyia splendida Mikan 14217; 15060 No attempt is made to assign a form name here, because the variation of the leaves can be so great on a single plant. The species is widespread in central Brazil from Bahia to Matto Grosso and São Paulo.

***Lindernia barrosorum* L. B. Smith, sp. nov.** Figs. 1, 2

Ab omnibus speciebus brasiliensibus facie subaquatica, caulibus tumidis, staminum anteriorum dimidia parte fertili differt.

Plant subaquatic, glabrous; stems simple or branched, at least 4 dm. long, 4 mm. in diameter, tumid, prostrate and rooting at the nodes, the internodes 5-25 mm. long; leaves sessile, entire, very variable, those toward the base of the stem linear, acuminate, 18 mm. long, 2 mm. wide, those near the apex elliptic with a broad base of attachment, acute, 8 mm. long, 4 mm. wide; inflorescence laxly racemose; bracteal leaves distinctly reduced; pedicels filiform, 15-25 mm. long, erect at anthesis, deflexed in fruit; sepals free, unequal, the posterior linear, 2.5 mm. long, the anterior lanceolate, 3 mm. long; corolla 15 mm. long, pale blue, the posterior lip short, bifid, the anterior lip of 3 large sub-orbicular lobes with dark blue markings at base; posterior stamens fertile, anterior stamens branched, the erect branch sterile and capitate, the horizontal branch fertile; stigma 2-lobed; capsule (immature) slenderly ellipsoid, 7 mm. long; seeds deeply pitted.

TYPE: Museu Nacional do Brazil, Rio de Janeiro, collected in flowing rivulet 35 km. southwest of Peixe on the Peixe-Porangatú road, Goiás, Brazil, June 2, 1956, by E. Yale Dawson (No. 15158). Isotypes in the

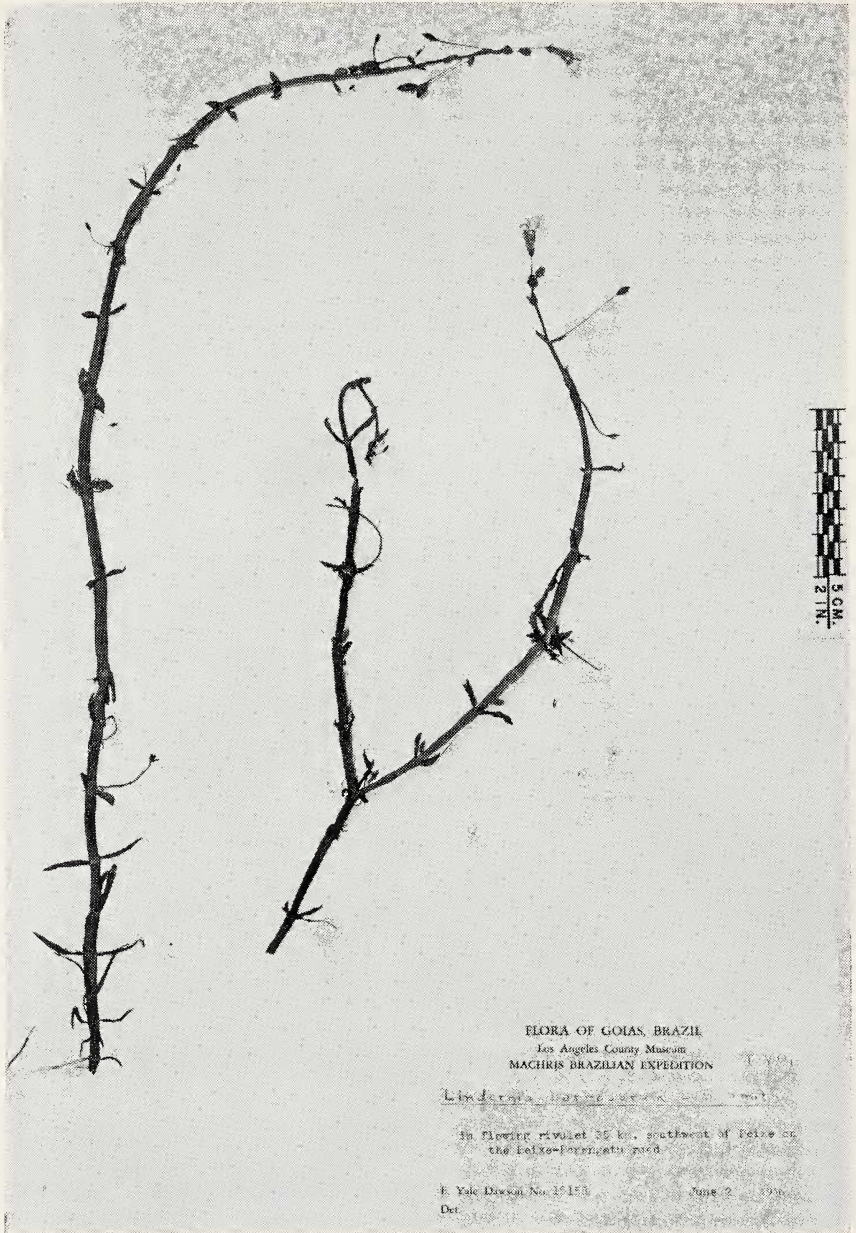


Fig. 1. *Lindernia barrosorum* sp. nov. The holotype specimen.

United States National Herbarium, the Los Angeles County Museum, and the Jardim Botânico do Rio de Janeiro.

The specific name is in honor of Dr. Liberato Joaquim Barroso and Dra. Graziela Maciel Barroso whose scholarly treatment of the Brazilian Scrophulariaceae greatly facilitated the identification of the collections listed here.

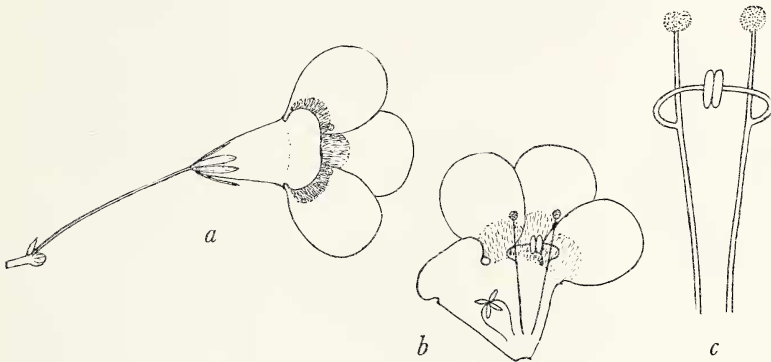


Fig. 2. *Lindernia barrosorum* sp. nov. a. Flower x 2; b. dissected corolla x 2; c. anterior stamens x 5.

Scoparia dulcis L. 14438; 14988; 15155 A pantropical weed.

SOLANACEAE

det. by C. V. Morton, Division of Ferns, U. S. National Museum,
Smithsonian Institution, Washington, D.C.

Solanum crinitum Lam. 14283 French Guiana, Brazil. Probably includes *S. jubatum* Willd. and *S. cyananthum* Dunal.

Solanum nigrum L. var. *americanum* Miller 14391 General in tropical America.

Solanum tenellum Bitter 14938 Brazil. This is probably no more than a variety of *S. nigrum*.

STERCULIACEAE

Byttneria dawsonii L. B. Smith, sp. nov.

Figs. 3, 4

A *B. benensis* Britton, cui affinis, pilis stellatis subappressis minutissimis, dentibus foliorum erectis haud patentibus, pedicellis paulo supra medium distincte articulatis differt.

Vine, unarmed; indument of younger parts minute, stellate, white, subappressed; stems slightly flexuous, slender; stipules deciduous, lanceolate, 1.5 mm. long, red-brown; petioles slender, to 45 mm. long; leaves broadly ovate or elliptic-ovate, abruptly acuminate, deeply

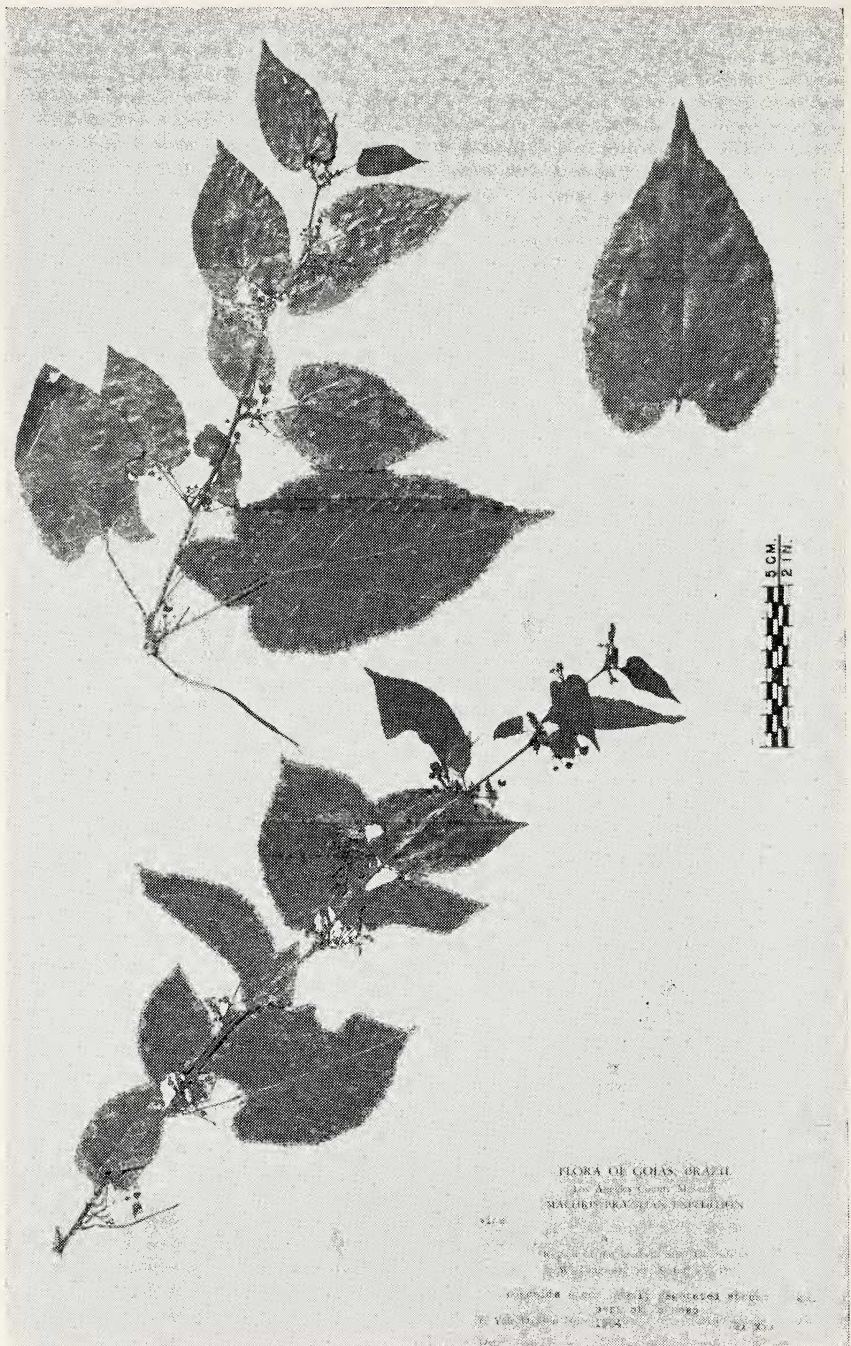


Fig. 3. *Byttneria dawsonii* sp. nov. An isotype specimen.

cordate at base, 10.5 cm. long, 6 cm. wide, green, soon essentially glabrous, the nerves prominent on both sides, the gland basal on the midnerve beneath; inflorescence on short lateral branches, subumbellate, about 10-flowered, the peduncle 8 mm. long; bracts like the stipules, deciduous; pedicels slender, 7 mm. long, articulate slightly above the middle; calyx 6 mm. long, the lobes lanceolate, acuminate, 4.5 mm. long, 1-nerved, pale green; petals spatulate, cucullate, 2 mm. long, whitish, the slenderly cylindrical ligule 2.5 mm. long, pubescent toward base; stamen tube 0.5 mm. long, staminodes bidentate; ovary subglobose, coarsely echinate.

TYPE: Museu Nacional do Brasil, Rio de Janeiro, collected by roadside along openly vegetated stream 23 km. east of Formoso, region of the southern Serra Dourada at W. Long. $48^{\circ} 50'$; S. Lat. $13^{\circ} 45'$, Goiás, Brazil, May 21, 1956, by E. Yale Dawson (No. 15042). Isotypes in the United States National Herbarium and the Los Angeles County Museum.

Curiously enough *Byttneria dawsonii* is widely different from all Brazilian species and bears its closest resemblance to *B. benensis* of Bolivia. The combination of prominent veins on both sides of the leaf and leaves that are ovate and cordate make it quite impossible to relate it to anything in the "Flora Brasiliensis."

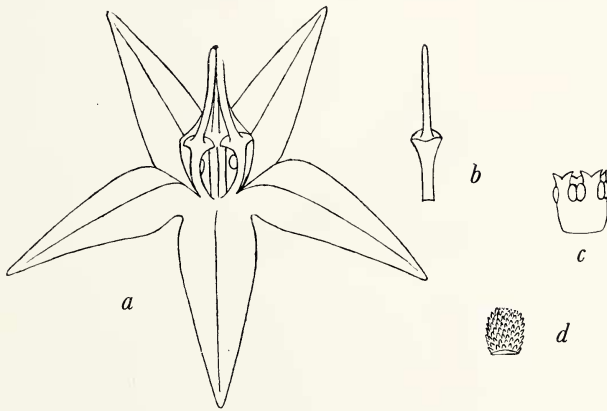


Fig. 4. *Byttneria dawsonii* sp. nov. a. Flower x 5; b. petal, ventral side x 5; c. androecium x 5; d. ovary x 5.

Byttneria melastomifolia St.-Hil. 14817 Endemic in Goiás.

Helicteres guazumifolia H. B. K. 15182 Tropical America.

Helicteres macropetala St.-Hil. 14997 Rio de Janeiro (?), Minas Gerais, Goiás.

Helicteres sacarolha St.-Hil. 14214; 14914 São Paulo, Minas Gerais, Goiás.

Waltheria americana L. 14197 Tropical and subtropical.

Waltheria ferruginea St.-Hil. 14368; 15037 Piauí, Bahia, Minas Gerais. Apparently the first record for Goiás.

Waltheria machrisiana L. B. Smith, sp. nov.

Figs. 5, 6

A *W. viscosissima* St.-Hil., cui affinis, inflorescentiae ramis gracilioribus, inferioribus folia multo superantibus, petiolis brevibus, glandulis calycis stipitatis, alibi sessilibus minutissimis differt.

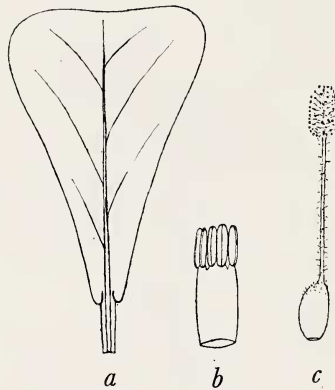


Fig. 6. *Waltheria machrisiana* sp. nov. a. Petal x 5; b. androecium x 5; c. pistil x 5.

Shrub, except for the flowers vestite with a mixture of fine white non-glandular hairs and minute sessile nearly colorless glands; stems straight or slightly flexuous, very slender; stipules linear-lanceolate, acuminate, subfalcate, 4 mm. long; petioles slender, those of the upper leaves 3 mm. long; leaves ovate or lance-ovate, acuminate, broadly rounded and shallowly cordate at base, to 9.5 cm. long and 5 cm. wide, thin, crenate-serrate, green above, whitish green beneath; inflorescences terminal with foliaceous bracts, very laxly paniculate with the flowers in small dense clusters at the ends of the branches, the lowest branches spreading, much longer than their foliaceous subtending bracts; prophyllae unequal, linear, acuminate; flowers sessile; calyx 4 mm. long, the lobes linear, acuminate; petals 8 mm. long, bright yellow when dry, the claws linear, the blades broad, spreading; stamen tube about 1 mm. long in the presumably longistylous flower, anthers oblong, 1 mm. long; pistil 7 mm. long, white-pilose.

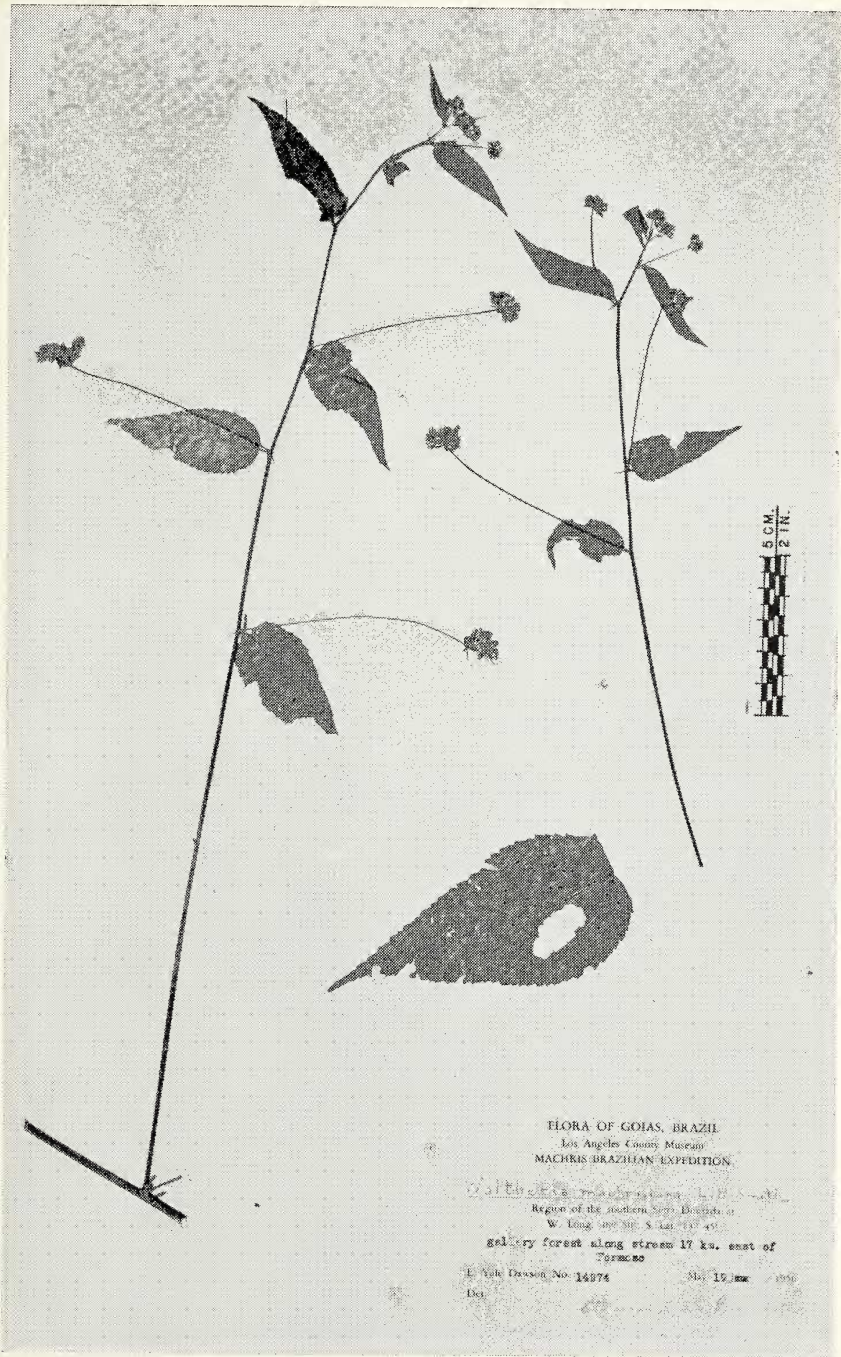


Fig. 5. *Waltheria machrisiana* sp. nov. An isotype specimen.

TYPE: Museu Nacional do Brasil, Rio de Janeiro, collected in gallery forest along stream 17 km. east of Formoso, region of the southern Serra Dourada at W. Long. $48^{\circ} 50'$; S. Lat. $13^{\circ} 45'$, Goiás, Brazil, May 19, 1956, by E. Yale Dawson (No. 14974). Isotypes in the United States National Museum and the Los Angeles County Museum.

Melochia

det. by Aaron Goldberg, Animal Parasite Laboratory
U. S. Department of Agriculture, Beltsville, Maryland.

Melochia pyramidata L. 15098 Pantropical weedy shrub.

Melochia villosa (Mill.) Fawcett & Rendle (*M. hirsuta* Cav.) 14247
Tropical America.

Reference: K. Schumann, Fl. Brasiliensis 12, pt. 3: 1-114. 1886.

VITACEAE

Cissus erosa L. C. Rich. 15078 Tropical America.

Cissus scabri caulis (Baker) Planch. 14677 Minas Gerais, Goiás.

References: J. G. Baker, Fl. Brasiliensis 14, pt. 2: 197-220. 1871. J. E. Planchon in DC. Monogr. Phan. 5: 305-637. 1887.