

Los
Angeles
County
Museum

CONTRIBUTIONS ★ IN SCIENCE ★

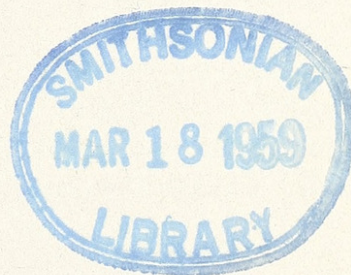
Number 28

March 2, 1959

7. 73
L 868 THE MACHRIS BRAZILIAN EXPEDITION

BOTANY: PHANEROGAMAE,
MELASTOMATACEAE AND POLYGALACEAE

By J. J. WURDACK



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
Editor

E. YALE DAWSON
Associate Editor



THE MACHRIS BRAZILIAN EXPEDITION

BOTANY: Phanerogamae, Melastomataceae and Polygalaceae

By J. J. WURDACK¹

This account continues the reporting of the plant collections obtained by Expedition Botanist, E. Yale Dawson. The specimens are cited by his field collection numbers for which detailed locality data have been provided in the 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 first set of specimens, including isotypes of the four new species, are deposited in the Los Angeles County Museum.

The data for the distribution records of species represented in the Melastomataceae collections have been culled from Cogniaux' classic familial monograph, Glaziou's list of central Brazilian plants, Hoehne's enumeration of the collections at the larger Brazilian herbaria, and herbarium data from the New York Botanical Garden and the U. S. National Museum.

For study of the Polygalaceae, the collections at the New York Botanical Garden and U. S. National Museum have been consulted; through the courtesy of Dr. Alcides Teixeira, a generous loan of species of *Polygala* from São Paulo supplemented the materials available in the United States. From these three sources and Chodat's publications, especially his generic monograph, distributional records were compiled.

MELASTOMATACEAE

Cambessedesia espora (St. Hil. ex Bonpl.) DC. 14162; 14566
A wide-spread species in southeastern Brazil.

Cambessedesia adamantium DC. 14796 Known also from
Minas Gerais and Rio de Janeiro.

Stenodon suberosus Naud. 14718 Endemic to Goiás.

Microlicia cupressina D. Don ex char. 14692 Known
definitely only from Goiás. *Malme* 1698 (US), which had been determined
by Ekman as this species is rather *Chaetostoma armatum* (Spreng.) Cogn.

¹Associate Curator, The New York Botanical Garden; New York 58, N.Y.

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

***Microlicia psammophila* sp. nov.**

Fig. 1 B, a-e

A speciebus 32-34 Monographiae Cogniauxii et *M. reichardtiana* Cogn. et *M. setosa* (Spreng.) DC. differt foliis parvioribus.

Sect. *Microlicia*. Fruticulus statim ramosus glaber ad 18 cm. altus. Folia sessilia plerumque $2.5(-3) \times 0.7-0.9$ mm. (seta exclusa) anguste lineari-triangularia apice acuta et uniaristata (arista 0.4-0.6 mm. longa) integerrima appressa superficie rugulosa et epunctata laxe imbricata (internodiis 2-6 mm. longis) obscure uninervata. Flores 5-meri solitarii terminales; hypanthium 2.5 mm. longum glabrum; calycis lobi 2.6×1.3 mm. (setis exclusis) triangulares apice uniaristati (arista ca. 0.6 mm. longa) glabri. Petala ut videtur rosea $7 \times 5-5.4$ mm. obovata apice (0.7 mm.) mucronulato-acuminata. Stamina maiorum: filamenta 3.3 mm.; thecae (rostrum excluso) 1.9 mm. longae, rostrum 1.5 mm. longo; connectivum sub theca 1.0 mm. prolongatum lineare 0.25-0.3 mm. latum non incrassatum. Stamina minorum: filamenta 3 mm.; thecae (rostrum excluso) 1.7 mm. longae, rostrum 0.7 mm. longo; connectivum sub theca 0.8 mm. prolongatum 0.2 mm. latum non incrassatum. Stylus 6.1×0.4 mm.; stigma truncatum; ovarium 3-loculare glabrum.

TYPE: *Dawson* 14620 (holotype R; isotype NY, LAM), "wet sandy margins of sandstone outcrop 7 km. south of Veadeiros, region of the Chapada dos Veadeiros, Goiás, Brazil, April 24, 1956". PARATYPE: *Dawson* 14774, "wet spring area among some rocks on gentle slope 10 km. from Veadeiros on Cavalcante road, elev. 5600 ft., Goiás, Brazil, May 1, 1956".

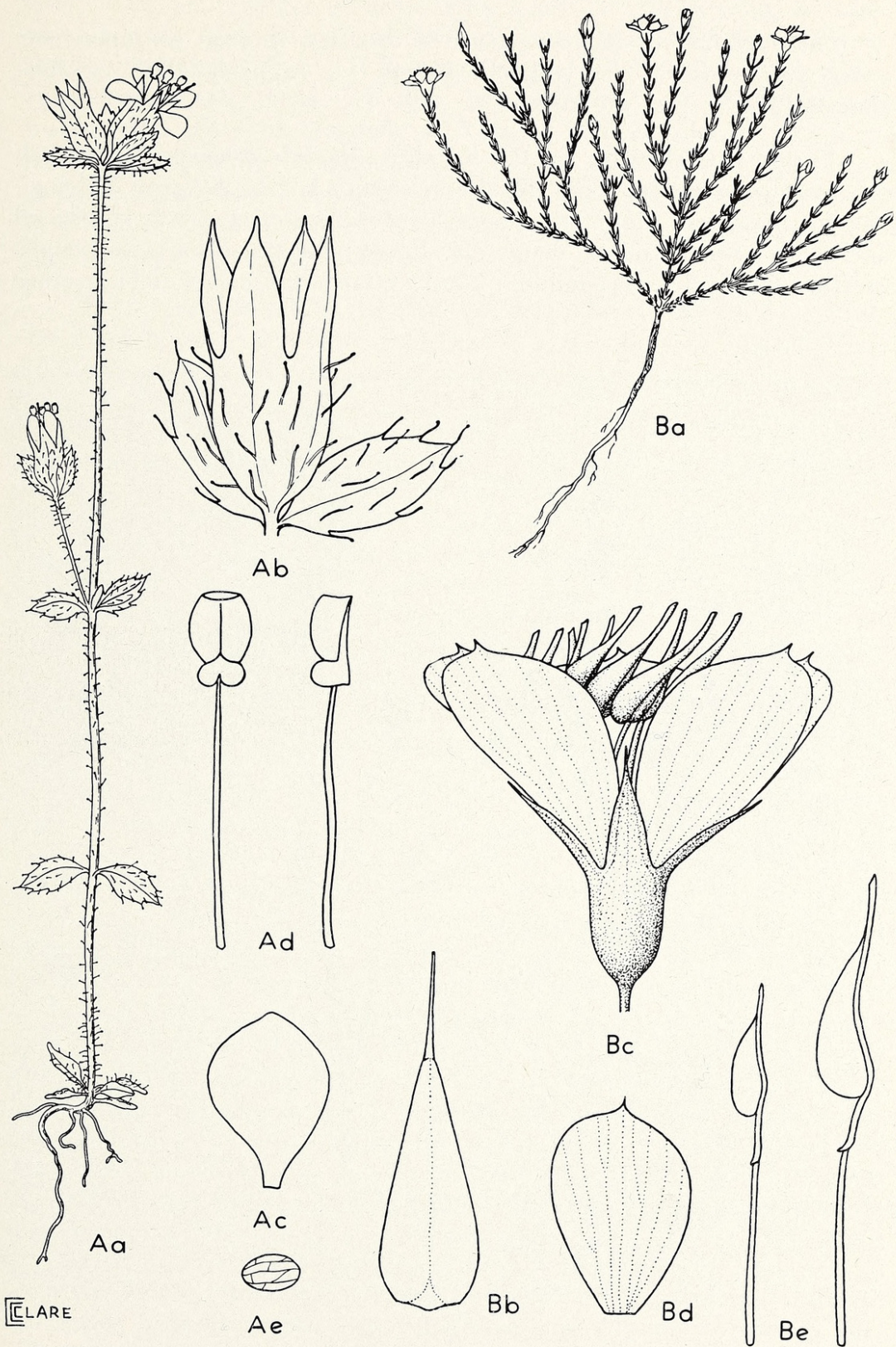
Among the postulated relatives with unexpanded connective of *M. psammophila*, *M. ericoides* D. Don has densely imbricate merely acute leaves and merely acute calyx lobes, *M. martiana* Berg ex Triana has acute densely impressed-punctate leaves, *M. juniperina* St. Hil. has proportionately longer calyx lobes, and *M. setosa* shows apical hypanthial setae. All of the relatives have leaves 1.5-4 times as long as in *M. psammophila*, while *M. reichardtiana* (ex descr. and photo) is a more robust species with expanded stamen connective.

Microlicia cryptandra Naud. ex char. 14611 Endemic to Goiás.

Microlicia vestita DC. 14240 Known also from Bahia and Piahy.



Fig. 1. A. *Siphanthera dawsonii* sp. nov. a, habit, $\times 2$; b, hypanthium and calyx, $\times 10$; c, petal, $\times 10$; d, stamen, $\times 15$; e, seed, $\times 15$. B. *Microlicia psammophila* sp. nov. a, habit $\times 0.5$; b, leaf, $\times 15$; c, flower, $\times 5$; d, petal, $\times 3.5$; e, small and large stamens, side view, $\times 7.5$.



***Microlicia consimilis* sp. nov.**

Fig. 2

Sect. *Microlicia*. Ab congeneribus distincta propter conjunctionem connectivi staminis non dilatati subtus vix appendiculati et folia angustiora.

Frutex multiramis ca. 0.3 m. altus. Ramuli densiuscule puberuli et glandulosi vetustiores efoliati. Folia sessilia $5-9 \times 1-2$ mm. oblongo-linearia acuta laxe imbricata obscure trinervia supra et subtus sparse vel modice brevi-puberula et dense glanduloso-punctata. Flores in ramulis brevibus terminales. Hypanthium 3.2×2 mm. cum calycis lobis modice

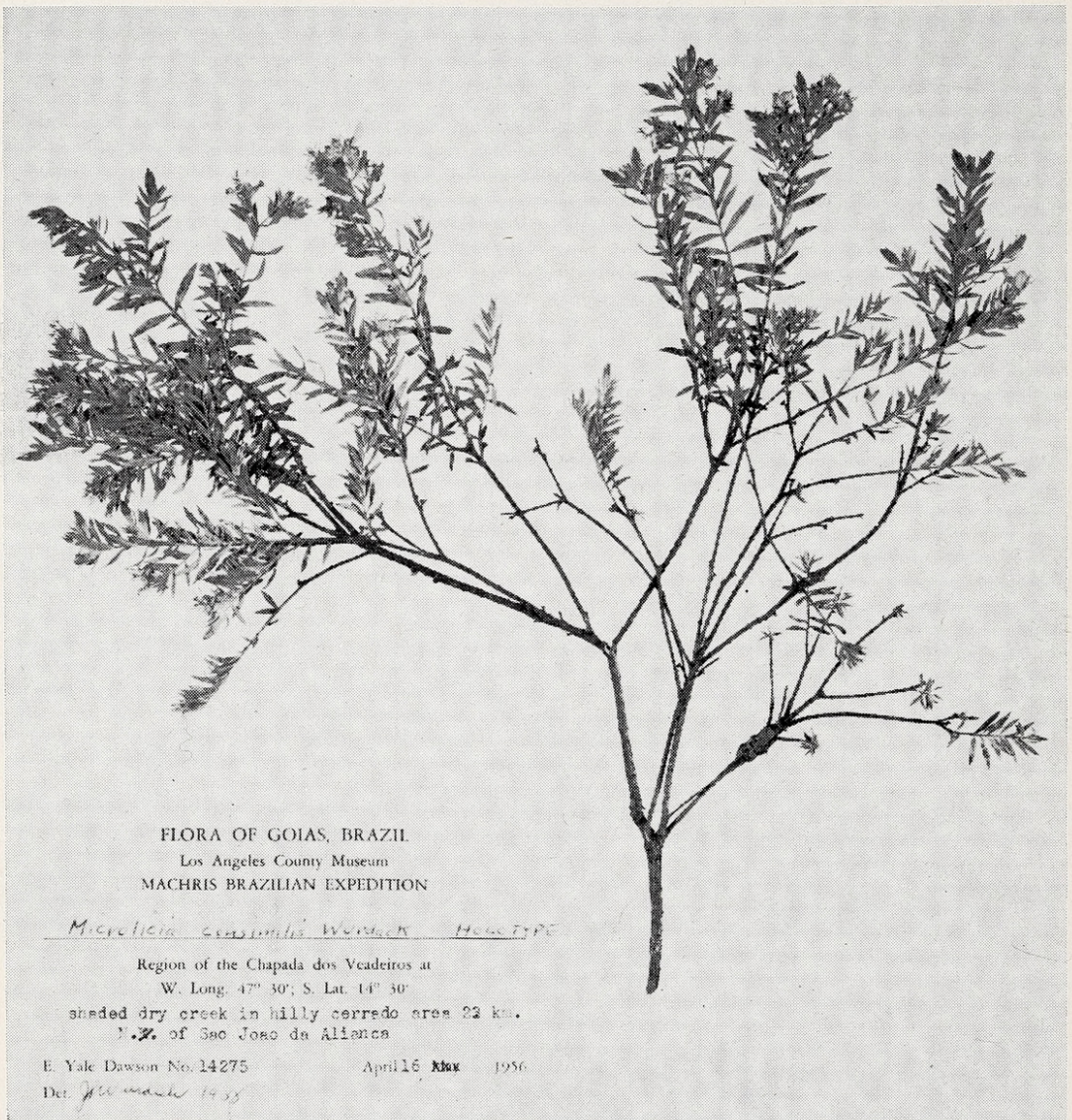


Fig. 2. *Microlicia consimilis* sp. nov. The holotype specimen.

brevi-puberulum et densiuscule glanduloso-punctatum, calycis lobis 2.5×0.9 mm. anguste oblongis apice acutis. Petala rosea $5 \times 3.1-3.4$ mm. obovata apice late acuta. Stamina maiorum: filamenta 2.2 mm.; thecae (rostro excluso) 1.5 mm. longae, rostro 0.3 mm. longo; connectivum sub theca 1.4 mm. prolongatum non dilatatum infra insertionem filamenti breviter (0.5 mm.) bicorniculatum. Stamina minorum: filamenta 1.8 mm.; thecae (rostro excluso) 1.4 mm. longae, rostro 0.3 mm. longo; connectivum sub theca 0.8 mm. prolongatum infra insertionem filamenti non prolongatum. Stylus 7.7×0.35 mm.; stigma punctiforme; ovarium 3-loculare.

TYPE: Dawson 14275 (holotype R; isotype fragment LAM), "shaded dry creek in hilly cerrado area 23 km. N. of São João da Aliança, region of the Chapada dos Veadeiros, Goiás, Brazil, April 16, 1956."

M. consimilis is suggestive of such vegetatively polymorphic species as *M. euphorbioides* Mart., *M. fasciculata* Naud., and *M. fulva* (Spreng.) Cham., all of which have proportionately wider leaves and well-defined stamen connective expansion below the anther. *M. glandulifera* Cogn. has proportionately wider apically obtuse leaves. *M. decussata* Naud. is vegetatively suggestive of *M. consimilis*, but has leaves proportionately slightly wider and the large stamen connective prolongation dilated and truncate at the base. *M. neglecta* Cogn. has larger leaves and the basally obtuse large stamen connective prolongation 10-11 mm. long. *M. cuneata* Naud. differs at least in its lance-ovate proportionately wider leaves with sparser glandular punctation.

Dawson 14597, from a sandstone outcrop 7 km. south of Veadeiros, has not been placed generically, despite the excellent material. The collection is superficially quite like *Microlicia macrophylla* Naud., differing in such minor details as the shorter calyx lobes and in one important feature, a 5- rather than a 3-celled ovary. The photograph of *Microlicia pilosissima* Cogn. shows a great similarity also to the Dawson material, but with smaller dimensions throughout as well as (ex char.) a 3-celled ovary. I have combed the genera *Lavoisiera*, *Rhynchanthera*, and *Trembleya*, as far as material at New York and Washington permits, for a possible relative, but have had no satisfaction when such details in the Dawson collection as the 5 lobes prolonged above the ovary and the stamen connective prolongation shape are considered. Yet I feel sure that 14597 should be placed in one of these genera; it seems best to plead ignorance until these predominantly Brazilian genera are better understood.

Lavoisiera suberosa Cogn. ex char. 14720 Known otherwise only from Serra da Balisa and a Glaziou collection from Chapada dos Veadeiros.

***Siphanthera gracillima* (Naud.) comb. nov.**

Tulasnea gracillima Naud. Ann. Sci. Nat. III, 2: 143. 1844.

Poteranthera gracillima (Naud.) Cogn. DC. Monog. Phan. 7: 121. 1891.

I have examined the holotype (*St. Hilaire C*¹, 700, P). *S. gracillima* is in general aspect quite like the next-described species, but has distinct staminodia.

***Siphanthera dawsonii* sp. nov.**

Fig. 1 A, a-e

S. vaupesanae Wurdack affinis sed cum antherarum thecis ovalibus erostratis.

Herba pusilla ad 8 cm. alta, caulibus foliis bracteis hypanthiisque sparse pilosulis, pilis erectis gracilibus glanduliferis. Petioli 0.3-1 mm. longi; lamina 2.5-4.5 × 1.5-2.5 mm. ovata apice acuta ad margines pauciserrulata uninervata vel debiliter trinervata. Flores 4-meri in apicibus ramulorum singuli vel plerumque 2-3-aggregati bracteati subsessiles (vix 0.5 mm. supra bracteas pedicellati); bracteae foliaceae subsessiles ca. 2.5 mm. longae oblongo-ovatae. Hypanthium 1.8 × 1.5 mm.; calycis lobi 1.8 × 0.8 mm. triangulares acuti glabri vel basim versus sparse glanduloso-pilosuli. Petala 2.2 × 1.5 mm. obovata subligulata apice obtusa glabra. Stamina 4, ante sepala; antherae 0.55 × 0.55 mm. (connectivo excluso) rostro nullo, poro lato 0.3 mm. diam.; connectivum sub anthera 0.2 mm. longum et 0.4 mm. latum rotundato-bilobatum; filamenta 2.2 mm. longa; staminodia ut videtur in alabastris et floribus maturis desunt. Ovarium biloculare; stylus 3.5 × 0.15 mm. apicem versus ad 0.7 mm. expansus; stigma subcapitatum. Semina ellipsoidea 0.5 × 0.3 mm. laxa elongato-areolata.

TYPE: *Dawson* 14626 (holotype R; isotype NY, LAM), "wet sandy margins of sandstone outcrop 7 km. south of Veadeiros, region of the Chapada dos Veadeiros, Goiás, Brazil, April 24, 1956".

S. vaupesana has short-rostrate oblong anthers with a minute pore, as well as relatively shorter calyx lobes. *S. dawsonii* is much like the Brazilian species, *S. tenera* Pohl, *S. subtilis* Pohl, and *S. gracillima* (Naud.) Wurdack, all of which have alternisepalous staminodia. *S. pratensis* Mgf. was described as having rostrate anthers but staminodia were not mentioned. Unfortunately at present, the Rio Museu Nacional sheet (*Comm. Rondon Hoehne* 1926, labeled "unica") shows only fruiting hypanthia, but this specimen differs from *S. dawsonii* at least in its much longer hypanthia. Incidentally, the erroneous statement in the original description of *S. vaupesana* concerning the stamen position should be corrected to "stamina ante sepala", as the perfect stamens are in all species of the genus.

Acisanthera limnobios (DC.) Triana 15163 A wide-spread species from Central America and the West Indies through tropical South America.

Pterolepis glaziovii Pilger ex char. 14152, 14292, 14551
Endemic to Goiás and otherwise known only by the original Glaziou collection.

Tibouchina stenocarpa (DC.) Cogn. 14205 Wide-spread in southern Brazil.

Tibouchina pogonanthera (Naud.) Cogn. 15056 Known also from Maranhão and Mato Grosso.

***Tibouchina nodosa* sp. nov.**

Fig. 3

T. tuberosae (Gardn. ex Tr.) Cogn. et *T. crassirami* Cogn. affinis sed calycis lobis brevioribus.

Frutex ut videtur parvus, ramis primum dense brevi-strigosis demum decorticantibus et nodosis. Petioli 5-10 mm. longi dense brevi-strigosi; lamina ad 9×4 cm. ovato-elliptica apice hebeti-acuta basi subcordata supra modice tuberculato-strigulosa, subtus densissime villosula ad nervos densissime brevi-strigosa, 5-vel vix 7-nervatis nervis lateralibus usque ad basim liberis, subtus dense reticulato-venosa. Panicula ca. 4-6 cm. longa multiflora cum pedicellis brevi-strigosa; flores 5-meri breviter (ca. 1.5 mm.) pedicellati ad basim bibracteati; bractae caducae ca. 8 mm. longae et latae apice rotundatae extus modice sericeo-strigulosae intus glabrae. Hypanthium 5.3×5 mm. cum calycibus densissime sericeo-strigosum; calycis tubus ca. 1 mm. longus, lobis 3.5×2.7 mm. oblongis apice rotundatis intus glabris. Petala $9.5-10 \times 8-8.5$ mm. obovata apice rotundata dense ciliolata. Stamina fere isomorphica; filamenta 5.5-7 mm. longa basim versus inconspicue et sparsissime glanduloso-pilosula; thecae 5.6-6 mm., connectivo sub thecis 0.5-0.6 mm. prolongato ad basim vix bilobulato. Stylus $11 \times 0.4-0.7$ mm. basim versus sparsissime glanduloso-pilosulus; stigma punctiforme; ovarium apice per 2 mm. dense strigosum.

TYPE: *Dawson* 14596 (holotype R; isotype fragment LAM), "sandstone outcrop 7 km. south of Veadeiros, region of the Chapada dos Veadeiros, Goiás, Brazil, April 24, 1956."

As compared to *T. nodosa*, the New York isotype of *T. tuberosa* shows much finer, denser, upper leaf-surface pubescence and much longer, acute calyx lobes. The same differences apply (ex char.) for *T. crassiramis*, which has much larger flowers. From the Macbride photograph (*F16775*), *Glaziou* 21354 (*T. nodosa* Cogn. ined.) seems to be the same as *Dawson* 14596. *Glaziou* cited 21354 (*Bull. Soc. Bot. Fr.* 54 Mem. 3C: 266. 1908) as "*T. tuberculata* Glaz. n. sp.?" *Glaziou* 21354 and *Ule* 2905 (type no. of *T. crassiramis*) both were collected on the Serra dos Pyreneos in Goiás.

Miconia macrothyrsa Benth. 14230 A wide-spread species
in eastern South America from Trinidad and Venezuela to southern Brazil.

Heterotrichum octonum (Bonpl.) DC. 15009 Ranging
throughout tropical America.

POLYGALACEAE

Polygala hebeclada DC. 14643; 14715 Widespread in
the Brazilian campos.



Fig. 3. *Tibouchina nodosa* sp. nov. The holotype specimen.



Wurdack, John J. 1959. "The Machris Brazilian Expedition. Botany: Phanerogamae, Melastomataceae and Polygalaceae." *Contributions in science* 28, 1–11. <https://doi.org/10.5962/p.241074>.

View This Item Online: <https://www.biodiversitylibrary.org/item/214421>

DOI: <https://doi.org/10.5962/p.241074>

Permalink: <https://www.biodiversitylibrary.org/partpdf/241074>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: In Copyright. Digitized with the permission of the rights holder

Rights Holder: Natural History Museum of Los Angeles County

License: <https://creativecommons.org/licenses/by-nc-sa/4.0/>

Rights: <https://www.biodiversitylibrary.org/permissions/>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.