



## Article

### *Herreria glaziovii* (Agavoideae, Asparagaceae)—typification and a new synonym

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#### Abstract

This paper provides a new circumscription, typification, and synonym of *Herreria glaziovii*. It also presents a full description, with illustrations and a distribution map, and with new records and pertinent comments.

#### Resumo

O presente trabalho consiste de uma nova circunscrição, a tipificação e um novo sinônimo para *Herreria glaziovii*. Também é apresentada uma descrição detalhada para a espécie, ilustrações, e um mapa contendo a distribuição geográfica com as novas ocorrências, além de comentários.

**Key words:** geographic distribution, *Herreria coriacea*, Neotropical, nomenclature, taxonomy

#### Introduction

*Herreria* Ruiz & Pavon (1794: 38) was validly published based on Feuillée's (1714) polynomial "*Salsa foliis radiatis floribus subluteis*". The name was given in honor of the Spanish writer Alonso de Herrera, the author of numerous works related to agriculture (Ruiz & Pavon 1794). It is distinguished by having a climbing habit, with rhizophore branches, leaves rosulated near the base and fasciculate along the stem, and winged seeds with a thin margin. The genus contains eight species and occurs in temperate, tropical, and sub-tropical regions of South America, in Paraguay, Uruguay, Argentina, Bolivia, Chile and Brazil. The species can be found mainly in forest but also in open habitats, like Campos Sulinos (prairies), in Cerrado (savanna), Caatinga (dry land), and Restinga (near shore) formations (Alvarez *et al.* 2008).

*Herreria glaziovii* Lecomte (1909: 347) was validly published based on a collection by Glaziou without any precise type indication or illustration. Later, Smith (1958) commented that the species is known only by the type specimen and another Glaziou collection, both lacking precise localities.

The most recent study of this group was presented by Lopes (2003). In the last decade, taxonomic efforts directed towards the genera *Herreria* and *Clara* Kunth (1850: 44) have provided information about their morphology, anatomy and phylogeny. The same author highlighted also many taxonomic and nomenclatural inconsistencies, including the lack of precise circumscriptions at the generic level. Many of these difficulties were solved by Lopes & Andreato (2003).

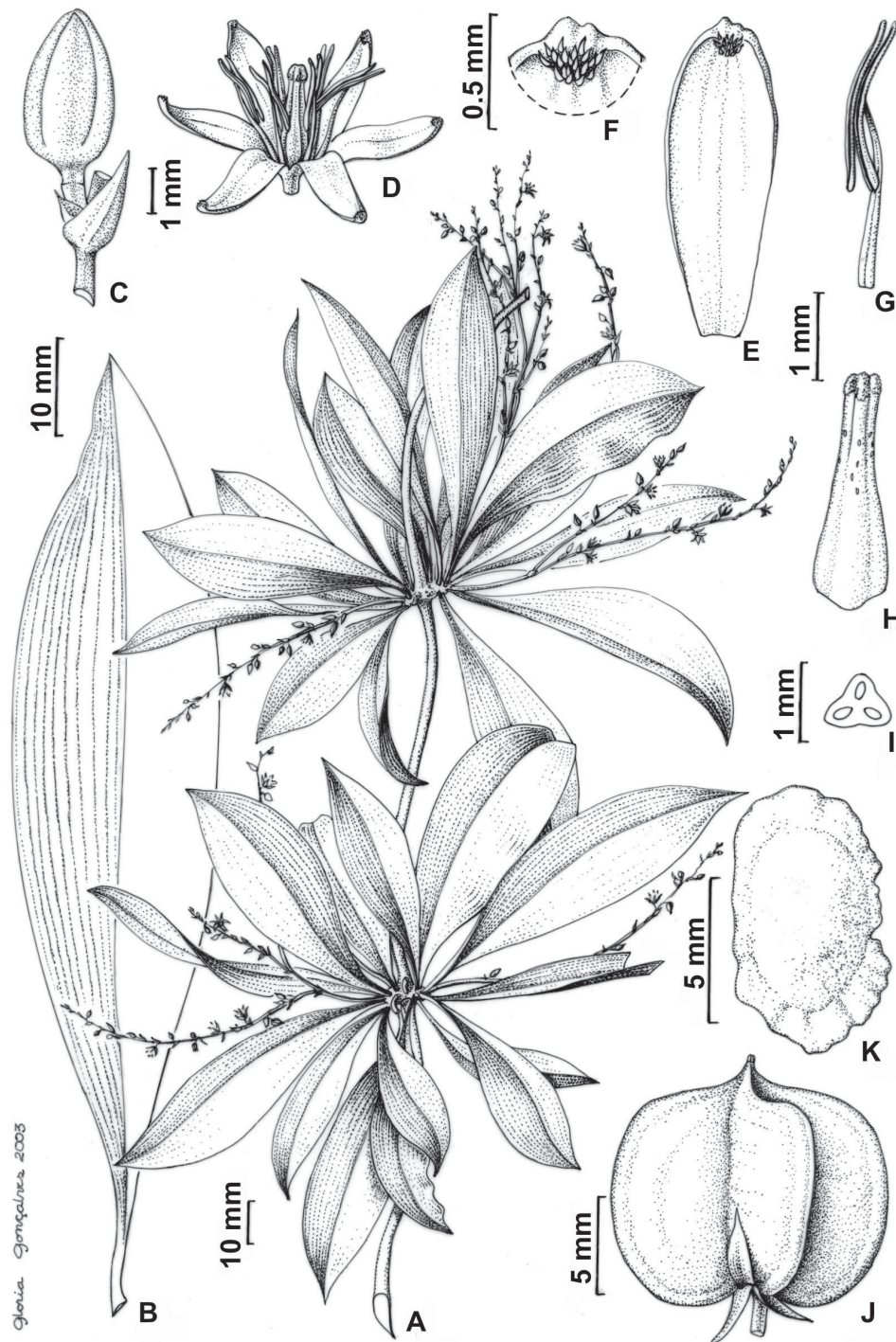
This paper provides a new circumscription and typification, and a new synonymy for *Herreria glaziovii*. A full description, illustrations, and an up-to-date distribution map are also presented.

## Taxonomy

### *Herreria glaziovii* Lecomte (1909: 347) (Fig. 1)

**Type:**—BRAZIL. Rio de Janeiro: without locality, 1883, *A.F.M.Glaziou* 14354 (lectotype P! here designated, isolectotypes C!, K!).

*Herreria coriacea* Ravenna (2003: 12), *syn. nov.* **Type:**—BRAZIL. Rondônia: Rio Jamari, Santa Cruz, 29 June 1965, *J.M.Pires* 9997 (holotype UB!, isotype INPA!).



**FIGURE 1.** *Herreria glaziovii*. A. Detail of flowering branch. B. Leaf detail. C. Flower buds. D. Flower. E. External tepal. F. Detail of papillae on adaxial surface of tepal. G. Stamens. H. Gynoecium. I. Cross section of the ovary. J. Fruit. K. Seed. A–B based on *D.Araujo* 9297; C–I based on *R.S.Pinheiro* 130; J–K based on *M.L.Fonseca* 1957. Illustrator: Glória Gonçalves.

Perennial vine, cylindrical stem, cylindrical or angular branching, glabrous, sparsely aculeate. Leaves usually in 2 fascicles per node; blade membranaceous or coriaceous, obovate to oblanceolate, 8.0–15.0 × 1.9–5.1 cm, base decurrent, margin entire, flat, apex acute to obtuse-mucronate; veins 19–25, conspicuous above and below, midvein thicker, more conspicuous below, similar to the other veins above. Inflorescence of 3–5 racemes, 12.5–22.0 cm long with flowers solitary or in fascicles of 2–3; proximal bract present, first order bract ovate, ca. 0.3–0.15 cm long; prophyll 1, ovate, ca. 0.15 × 0.1 cm, margin entire, apex acute. Flower buds greenish-white, ovoid, 0.5–0.6 cm long. Flowers white, 0.6–0.7 cm long; pedicel ca. 0.2 cm long, glabrous; tepals reflexed, oblong, ca. 0.4–0.5 × 0.15 cm, margin involute, apex cucullate, papillae adaxially forming a dense tuft at center of apex; stamens 0.35–0.4 cm long; filaments filiform, 0.2–0.25 cm long; anthers linear, 0.15–0.25 cm long, theca free basally and apically (dorsifixed); gynoecium ca. 0.35 cm long; ovary trigonous-oblong; style trigonous; stigma trilobate. Fruit a loculicidal capsule opening from the apex to the base, obloid, 0.9–1.2 × 1.4–1.8 cm, cordate at base, truncate apically, winged with each wing with a thick margin, drying black; seeds 0.9–1.3 × 0.6–0.9 cm.

**Distribution and ecology:**—Bolivia and Brazil, where the species occurs in the states of Bahia, Espírito Santo, Goiás, Mato Grosso, Minas Gerais, Rio de Janeiro, Rondônia and São Paulo. The species can be found mainly in Amazonian forest, Atlantic forest and tropical semideciduous forest, but also in Cerrado (savanna), Caatinga (dry land) and Restinga (near shore).

**Phenology:**—Flowering from February to July. Fruiting from February to November.

**Etymology:**—The epithet was given in honor of the French collector Auguste F. M. Glaziou (1828–1906).

**Vernacular name:**—Cipó-salsa (ES), falsa-erva-de-passarinho (RJ), japecanga (BA), salsaparrilha (BA, RJ, SP), salssa-parrilha (BA).

**Notes:**—*Herreria glaziovii* was described by Lecomte (1909) based on a poorly prepared Glaziou collection. After the analysis of that work, a Glaziou collection (no. 14354), collected in Rio de Janeiro, was localized at P, C, and K. Study of the type collection allowed for a new species delimitation as well as its typification based on the specimens deposited in these three herbaria.

When Smith (1958) studied *Herreria glaziovii*, he reported that the species was known only by the type specimen and another Glaziou collection, probably gathered in Goiás, where Glaziou collected extensively. Until that date, the species had been known to occur only in the states of Rio de Janeiro and Goiás. Lopes (2003) located a specimen cited by Smith (1958), namely *Glaziou s.n.* (IAN 93675), and confirmed that the second Glaziou collection was from Goiás. After analyzing the entire genus, Lopes (2003) extended the occurrence of the species to Minas Gerais, Espírito Santo, São Paulo, Bahia, Mato Grosso and Rondônia, as well as Bolívia. Here, we add new occurrences and a new distribution map based on recent collections.

Although some workers (Wurdack 1970) have contested the validity of the information often contained in the type specimens collected by Glaziou, including the identity of the collector, the locality of Rio de Janeiro in this species is incontestable and the species is known to be well-distributed throughout the state. On the other hand, the collection numbers of the three type collections reveal incongruities as there is a different number written in pencil (15676) on the material deposited in K. It has not yet been possible, however, to attribute this to another collector, thus maintaining the most probable collection number, which was repeated in the three collections analyzed. This may represent another case of the adulteration of data attributed to Glaziou, but remains without substantiation in the present work.

*Herreria glaziovii* is characterized mainly by the presence of leaves with a decurrent base, inflorescence with 3–5 racemes at each node, flowers with linear anthers and filiform filaments. It is similar to *H. salsaparilha* Mart. (in Martius & Spix 1828: 545), which may be characterized by basally attenuate leaves, 1–2 racemes at each node, flowers with oblong anthers and sarcous-subulate filaments. In *H. glaziovii* the ombrophilous specimens usually have membranaceous leaves, and the heliophytic specimens have coriaceous ones.

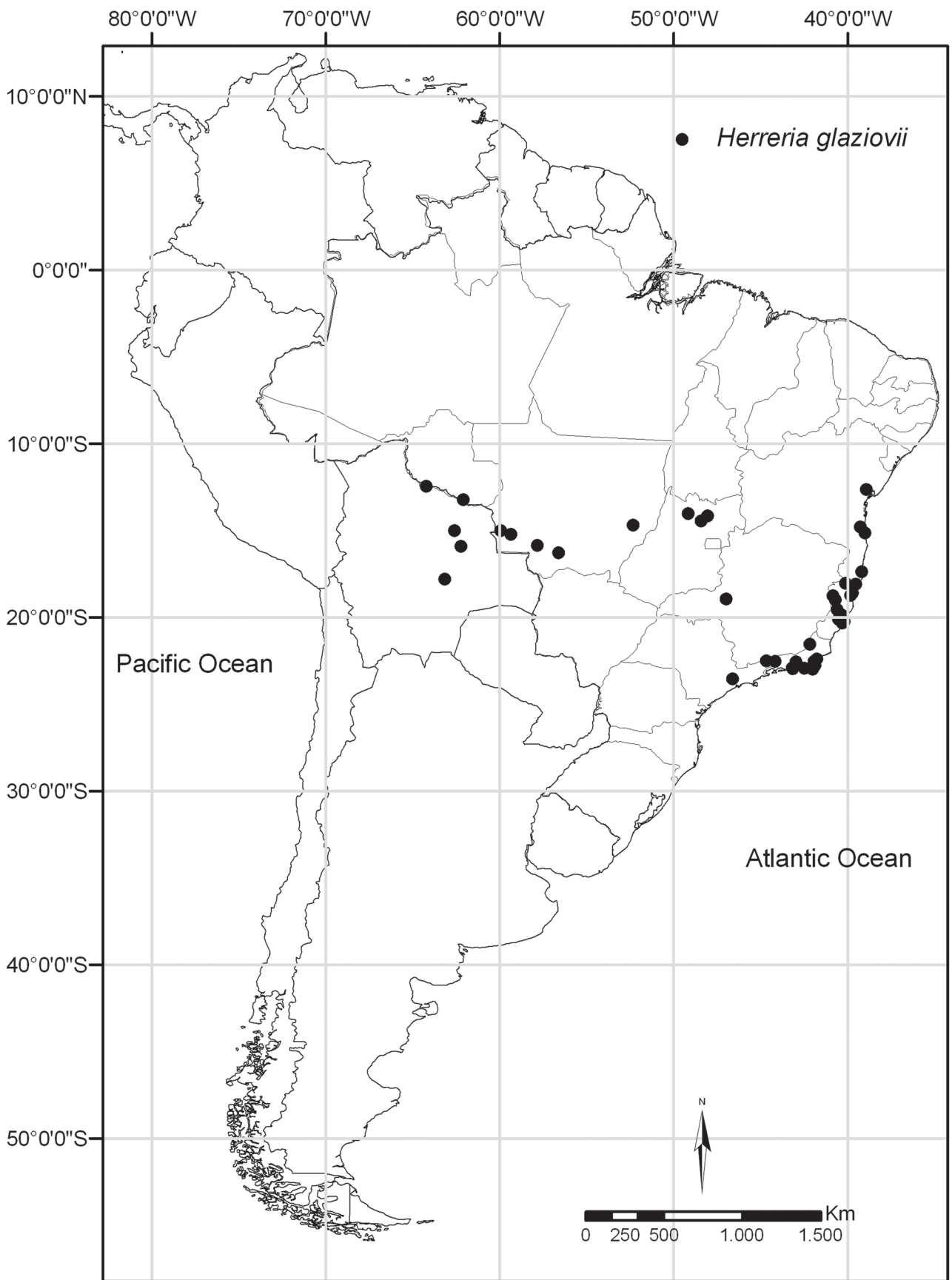


FIGURE 2. Distribution Map of *Herreria glaziovii* based on the specimens examined.



*Herreria coriacea* Ravenna (2003: 12) was considered by its author as allied to *H. latifolia* Woodson (1950: 397). He pointed out that its coriaceous leaves were unique within the genus. Current taxonomic knowledge suggests that *H. coriacea* falls within the broad morphological range of variation of *H. glaziovii*. The latter usually shows coriaceous leaves in dry habitats. It is quite different from *H. latifolia*, closer to *H. salsaparilha*. In conclusion, we consider *H. coriacea* as a new synonym of *H. glaziovii*.

**Additional Specimens Examined:**—BRAZIL. Bahia: Cachoeira, vale dos rios Paraguaçu e Jacuípe, 12°37'06"S, 38°57'21"W, July 1980, *G.P.Cavalo* 472 (ALCB, MBM, RB); Itabuna, Jupari, 14°47'08"S, 39°16'49"W, 20 July 1967, *R.S.Pinheiros* 130 (MBM); Mucuri, 18°05'11"S, 39°33'03"W, 13 September 1978, *S.Mori et al.* 10465 (RB); Estrada Olivença–Una, 15°07'49"S, 39°01'05"W, 08 August 2001, *M.C.Marques et al.* 436 (RB); Prado, rodovia que liga Prado ao povoado de Cumuruxatiba, 17°21'00"S, 39°13'00"W, 04 September 1986, *L.A.Mattos Silva et al.* 2111 (MBM); Espírito Santo: Águia Branca, Águas Claras, Escola Agroecológica, 18°58'59"S, 40°43'59"W, 06 June 2006, *V.Demuner et al.* 2383 (MBML); Águia Branca, Assentamento Dezesseis de abril, 18°58'59"S, 40°43'59"W, 15 March 2006, *V.Demuner et al.* 2002 (MBML); Barra de São Francisco, Boa Sorte, propriedade do Vitorino Cortellette, 18°45'00"S, 40°52'00"W, 10 July 1984, *R.M.Pizziolo* 177 (MBML, R); Colatina, Alto Moacyr, 19°31'59"S, 40°37'00"W, 11 September 2007, *R.R.Vervloet et al.* 3400 (MBML); Conceição da Barra, Itaúnas, 18°35'36"S, 39°43'56"W, 20 May 1999, *G.Hatschbach et al.* 69188 (MBM, RFA); Ibiraçú, Estação Ecológica do morro da Vargem, 19°49'55"S, 40°22'11"W, 26 May 1990, *H.Q.Boudet Fernandes et al.* 2933 (MBML, R, RB, UEC); Linhares, Reserva Florestal de Linhares, 18°42'58"S, 39°51'32"W, 15 May 1987, *D.A.Folli* 648 (CVRD, R, RB); Pedro Canário, Fazenda São Joaquim, 18°01'49"S, 40°09'02"W, 06 November 1986, *G.Martinelli et al.* 11855 (RB); Rio Bananal, Alto Bananal, 22°31'59"S, 44°10'59"W, 25 April 2007, *V.Demuner et al.* 3805 (MBML); Santa Leopoldina, Bragança, Rancho Chapadão, 20°06'00"S, 40°31'59"W, 30 March 2006, *V.Demuner et al.* 2117 (MBML); Santa Leopoldina, Fazenda Caicaba, 20°06'00"S, 40°31'59"W, 18 July 2007, *R.R.Vervloet et al.* 2915 (MBML); São Mateus, vale do rio Cricaré, próximo à cachoeira do inferno, 18°42'58"S, 39°51'32"W, 08 September 1989, *H.Q.Boudet Fernandes et al.* 2806 (MBML, R, RB); Goiás: Colinas do Sul, estrada Serra da Mesa-Colinas, 14°09'05"S, 48°04'42"W, 12 March 1992, *T.B.Cavalcanti et al.* 1210 (CEN, RB); Mara Rosa, Amarolândia, Fazenda Pedra Preta, 14°00'59"S, 49°10'38"W, 25 June 1999, *M.L.Fonseca et al.* 1957 (IBGE); Niquelândia, Estrada de ferro vicinal a GO-237 Niquelândia–Colinas, 14°27'00"S, 48°27'00"W, 14 April 1992, *B.M.T.Walter et al.* 1277 (CEN, RUSU, SPF); Mato Grosso: Caramujo, Km 330 da Rod. BR 174, Margem da Fazenda Vale do Tucumã, 15°51'01"S, 57°51'18"W, 10 June 1979, *M.G.Silva & C.Rosário* 4851 (RB); Nova Xavantina, 14°40'24"S, 52°21'11"W, 07 June 1966, *H.S.Irwin et al.* 16706 (MBM, UB); Poconé, estrada transpantaneira, 16°15'35"S, 56°37'37"W, 25 May 1983, *C.N.da Cunha et al.* 1099 (MG); Vila Bela da Santíssima Trindade, estrada para Fazenda Arrozal, km 5 da estrada Vila Bela-Pontes e Lacerda, 15°00'29"S, 59°57'00"W, 07 May 1983, *L.Carreira et al.* 923 (MG); Minas Gerais: Patrocínio, rodovia MG-188, 18°56'38"S, 46°59'31"W, 28 February 1989, *M.Pereira Neta et al.* 208 (IBGE); Rio de Janeiro: Búzios, estrada Cabo Frio–Búzios, entre a Serra das Emeranças e a praia de José Gonçalves, 22°45'00"S, 41°52'59"W, s.d., *J.M.A.Braga et al.* 4856 (RB); Cabo-Frio, estrada Cabo Frio–Búzios, próximo ao condomínio Bosque Perú, à beira da estrada, 22°52'46"S, 42°01'07"W, 01 June 1989, *D.Araujo & H.C.de Lima* 8977 (GUA, RB); Cabo Frio, Arraial do Cabo, Ilha de Cabo Frio, trilha para o farol velho, 22°57'58"S, 42°01'40"W, 08 August 1953, *F.Segadas-Vianna et al.* 754 (R); Carapebus, estrada entre a cidade e a praia de Carapebus, 20°13'59"S, 40°13'00"W, 25 September 1996, *A.Costa et al.* 650 (R); Guapimirim, Fazenda Sendas de propriedade das organizações Sendas, 22°32'14"S, 42°58'55"W, 06 February 2000, *F.M.B.Pereira et al.* 76 (RFA); Macaé, Fundos da lagoa de Cabiúnas, 22°22'59"S, 41°46'59"W, 08 July 1994, *C.Farney et al.* 3404 (GUA); Rio das Ostras, 22°31'37"S, 41°56'42"W, 07 April 1971, *L.Krieger s.n.* (CESJ 10471); Rio das Ostras, Reserva Biológica União, estrada em direção a rede elétrica, 22°31'37"S, 41°56'42"W, 18 January 2000, *J.M.A.Braga* 5655 (RFA); Rio das Ostras, Reserva Biológica União, início da antiga estrada do Cardoso, 22°31'37"S, 41°56'42"W, 22 August 2000, *J.M.A.Braga* 6168 (RFA); Rio de Janeiro, Horto Florestal, saindo à esquerda do caminho para Barris,

22°54'08"S, 43°12'27"W, 29 July 1992, *R. Marquete et al 602* (IBGE, RB); Rio de Janeiro, Horto Florestal, Cachoeira dos Primatas, 22°54'08"S, 43°12'27"W, 01 February 2001, *R.C.Lopes & C.H.R.de Paula 144* (RFA); Parque Nacional da Serra dos Pretos Forros, Represa dos Ciganos, 22°54'11"S, 43°12'27"W, 30 September 1977, *G.Martinelli et al. 3189* (RB); Rio de Janeiro, Bairro de Botafogo, morro Mundo Novo, propriedade da USU, 22°57'00"S, 43°10'59"W, 01 February 2001, *R.C.Lopes & C.H.R.de Paula 142* (RFA); Rio de Janeiro, morro da Urca, trilha para o bondinho e Pão de Açúcar, 20°19'20"S, 40°20'20"W, 01 February 2001, *R.C.Lopes & C.H.R.de Paula 143* (RFA); Santo Antônio de Pádua, loteamento Monte Líbano, 21°31'59"S, 42°10'59"W, 08 November 2000, *J.M.A.Braga et al. 6434* (RFA); Saquarema, Comorros da Lagoa Vermelha, 22°55'12"S, 42°30'37"W, 26 March 1991, *D.Araujo 9297* (GUA); Rondônia: Costa Marques, 12°26'42"S, 64°13'38"W, 29 March 1987, *M.Nee 34554* (SP); São Paulo: Engenheiro Passos, margem do rio do Salto, limite entre os estados do RJ e SP, 22°30'06"S, 44°40'30"W, 03 June 1995, *P.T.Sano et al. 130* (R); São Paulo, Jardim Botânico, 23°32'24"S, 46°37'48"W, 15 May 1940, *O.Handro s.n.* (R 197123).

BOLÍVIA. Santa Cruz: Guarayos, Reserva de vida silvestre rios Blanco e Negro, 14°59'02"S, 62°36'27"W, 28 October 1993, *I.Vargas 2822* (LPB); Nuflo de Chavez, Perseverancia, margem do rio Negro, 15°54'29"S, 62°15'01"W, 12 June 1990, *I.Vargas 591* (LPB); Santa Cruz de la Sierra, Jardim Botânico, 17°47'56"S, 63°09'58"W, 21 April 1977, *A.Krapovickas & A.Schinini 31633* (SI).

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