

New record in the Brazilian Atlantic Forest: *Specklinia aristata* (Orchidaceae: Pleurothallidinae)^a

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Abstract

Specklinia aristata, previously known from Central America, the Antilles, the Andes, northern South American countries, and northern Brazil (state of Amazonas), is first recorded in the Atlantic forest in the São Paulo State, Southeastern Region of Brazil.

Résumé

Un taxon nouveau pour la forêt atlantique brésilienne : *Specklinia aristata* (Orchidaceae : Pleurothallidinae) – *Specklinia aristata*, jusqu'ici connu en Amérique centrale, aux Antilles, dans les Andes, dans les régions du nord de l'Amérique du Sud et dans le nord du Brésil (Amazonas), est ici pour la première fois enregistré dans la forêt atlantique brésilienne (état de São Paulo, région du Sud-Est).

Resumo

Novo registro para a Floresta Atlântica brasileira: *Specklinia aristata* (Orchidaceae: Pleurothallidinae) – *Specklinia aristata*, anteriormente conhecida da América Central, Antilhas, Andes, países do norte da América do Sul e Norte do Brasil (estado do Amazonas), é registrada pela primeira vez para a Floresta Atlântica, no Estado de São Paulo, Região Sudeste do Brasil.

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Introduction

Specklinia Lindley belongs to subtribe Pleurothallidinae of the subfamily Epidendroideae (Pridgeon, 2005; Luer, 2006). Its delimitation is not clear and presents about 100-420 binomials according to several taxonomic treatments (Barros, 2005; 2006; Luer, 2004; 2007; Pridgeon, 2005; Barros & Rodrigues, 2009; Barros & Barberena, 2010). The species are dispersed along the Neotropical region and about 17 (or less, according to Chiron *et al.*, 2012) occur in Brazilian flora, remarkably in the Atlantic Rainforest of eastern Brazil (Barros *et al.*, 2014). Species of *Specklinia* are mostly epiphytic, caespitose, small herbs, occurring in environments with high humidity like cloud forests and rainforests (Luer, 2006).

Specklinia aristata (W.J.Hooker) Pridgeon & M.W.Chase is relatively frequent and was previously documented through the Central America (Costa Rica and Panama), the Antilles (Puerto Rico, Haiti, Dominican Republic, Guadeloupe, Martinique, Dominica and St. Lucia), the Andes (Ecuador, Bolivia and Peru), northern South America (Colombia, Venezuela), and the Guyana shield (Venezuela, Guyana, French Guiana and Suriname) (Chiron & Bellone, 2005; Luer, 2006; Govaerts, 2011), and Brazil, occurring in the state of Amazonas (Barros *et al.*, 2014). One collection was made in Brazilian Amazonian area.

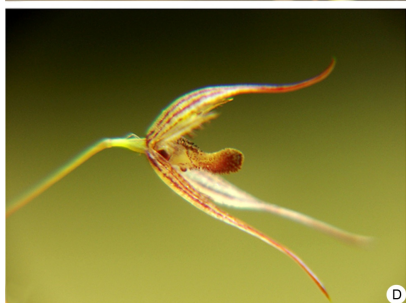
Luer (2006), alternatively, considered this taxon as a part of genus *Muscarella*, which is distinguished from *Specklinia* by a “loose raceme with delicate flowers, with long-tailed sepals, and petals denticulate, fringed or fimbriate”. According to the same author the geographic distribution of species assigned to *Muscarella* is similar to that of *Specklinia aristata*, with the addition of Mexico.

This article aims to present a second record for Brazil and, above all, the first recorded in the Atlantic forest in the São Paulo State, Southeastern Region of Brazil.

Material and methods

The specimen examined was collected in the year 2009 by M.R.Miranda in a section of riparian forest of Rio Claro river, in the municipality of Caraguatatuba, along the northern littoral of São Paulo state. This region is part of the Atlantic Domain, where the vegetation is characterized by dense

rainforest in the hills and the coastal plains (Souza & Luna 2008). The specimen was deposited in CESJ Herbarium, Universidade Federal de Juiz de Fora (acronym according to Thiers, 2012).



Results and Discussion

Specklinia aristata (W.J.Hooker) Pridgeon & M.W.Chase

Lindleyana 16: 256 (2001).

Basionym:

Pleurothallis aristata W.J.Hooker

Annals of Natural History 2(11): 329-330, t. 15 (1839).

This tiny orchid is characterized by short ramicauls and leaves, both measuring less than 4 cm in length, flexuous inflorescences in racemes of successive flowers, flower with long-tailed, translucent petals, with ciliate margins, and a lip with convex and papillose apex (Fig. 1 and 2). A detailed description is presented in Luer (2006).

Examined specimen: BRAZIL. São Paulo: Caraguatatuba, Rio Claro margins, IX.2009, fl. and fr. M.R. Miranda 55 (CESJ).

Fig. 1 : *Specklinia aristata*.

A. Habitat, B. General view of plant;

C-D. Flower detail.

(Photo by Marcelo R. Miranda)

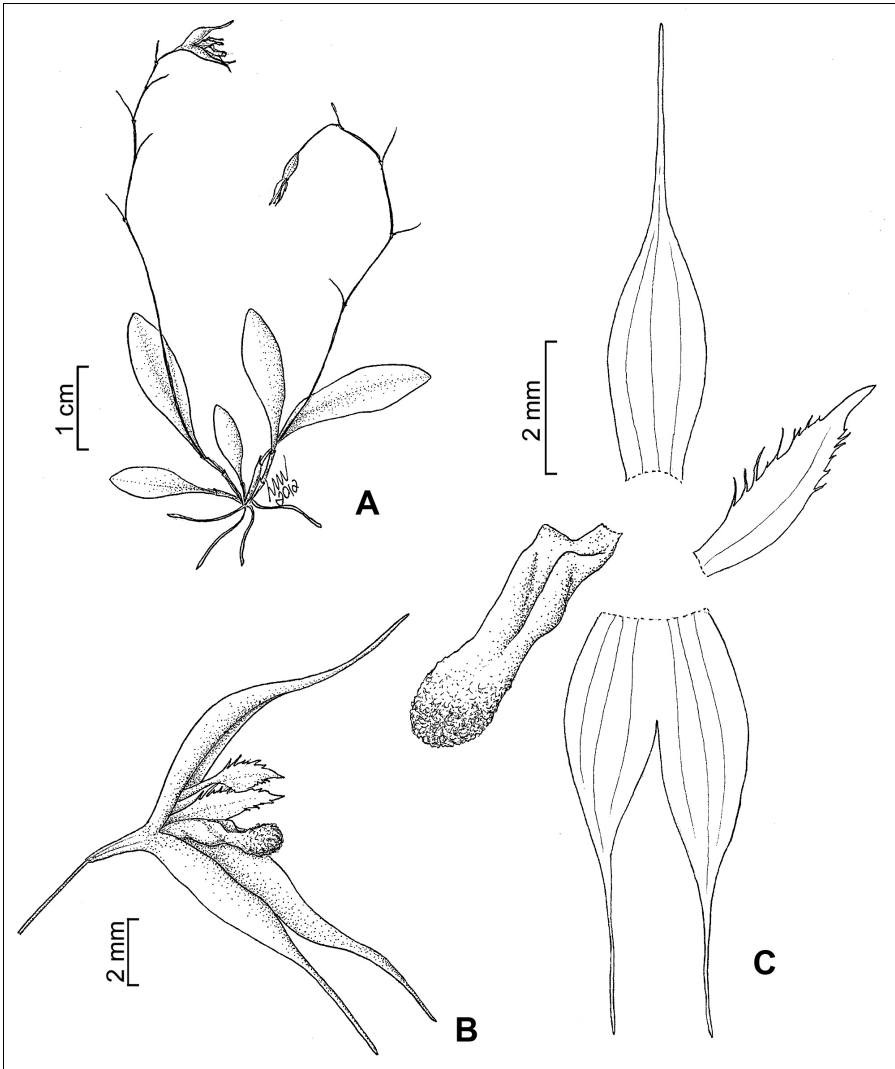


Fig. 2: *Specklinia aristata*

A. General view of plant; B. Side view of flower; C. Dissected flower. (Drawn by L. Menini Neto)

Figure 3 shows the known geographic distribution of *Specklinia aristata* and the location of present record. This species is previously known to Brazil by only one record from Santa Isabel do Rio Negro (Parque Nacional do Pico da Neblina), near the border of Venezuela (deposited in the INPA

Herbarium, collected in 2004, *F.A.Carvalho* 258). The disjunction between flora of the Andes, the Guyana Shield or Amazonia and Atlantic Forest is relatively common and pointed out, for instance, by Fiaschi & Pirani (2009), in a review of plant biogeographic study in Brazil. As only a little population composed by few specimens were observed in the studied area, the species is probably endangered in the Brazilian flora, according to criteria of International Union for Conservation of Nature (IUCN, 2001). However, additional studies are necessary to better define the conservation status of this species.

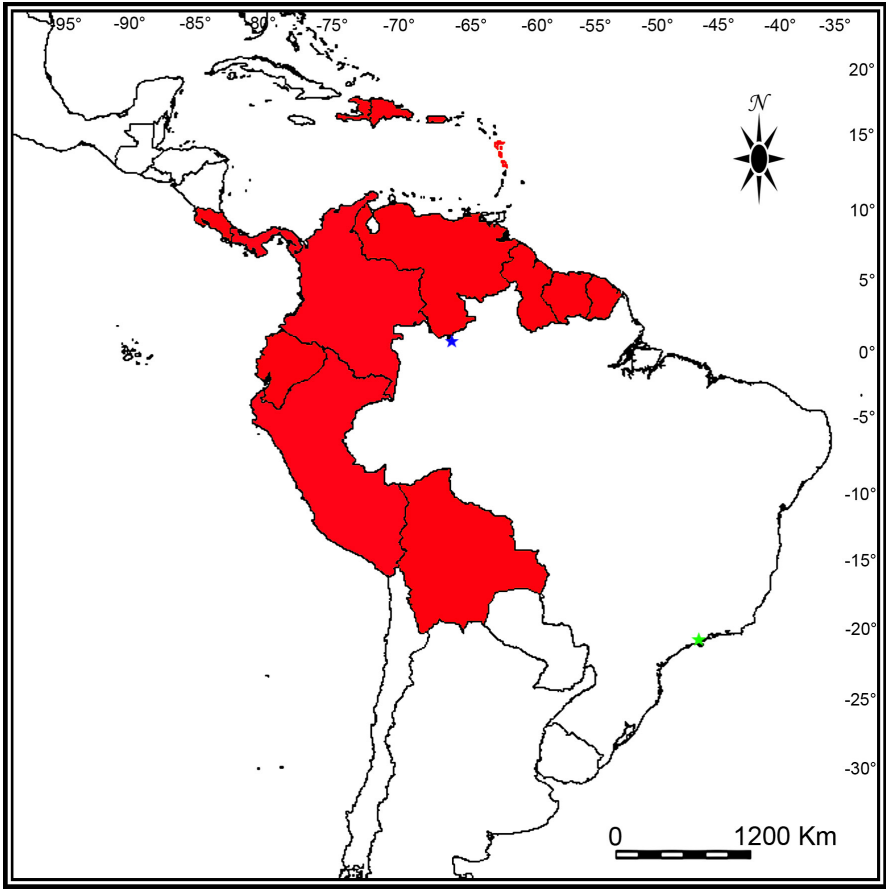


Fig. 3: Distribution of *Specklinia aristata* (red)

The blue star represents the previous record to Brazil, and the green star represents the new record reported in the present note.

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References

- Barros, F., 2005. Notas taxonômicas para espécies brasileiras dos gêneros *Acianthera*, *Anathallis*, *Specklinia* e *Heterotaxis* (Orchidaceae). *Hoehnea* 32(3): 421-428.
- Barros, F., 2006. Seis novas combinações para orquídeas brasileiras. *Bradea* 11(1): 29-32.
- Barros, F. & F.F.V.A.Barberena, 2010. Nomenclatural notes and new combinations on *Anathallis* and *Specklinia* (Orchidaceae). *Rodriguésia* 61(1): 127-131.
- Barros, F. & V.T.Rodrigues, 2009. Nomenclatural notes and new combinations on *Acianthera* Scheidw. and *Specklinia* Lindl. (Orchidaceae). *Bradea* 14: 21-26.
- Barros, F., F.Vinhos, V.T.Rodrigues, F.F.V.A.Barberena, C.N.Fraga, E.M.Pessoa, W.Forster & L.Menini Neto, 2014. Orchidaceae. In: Lista de espécies da flora do Brasil. Jardim Botânico do Rio de Janeiro. Available at <http://floradobrasil.jbrj.gov.br/jabot/floradobrasil/FB129362>. Access on 23 April 2014.
- Chiron, G. & R.Bellone, 2005. *Les orchidées de Guyane française*. Tropicalia, France. 376pp.
- Chiron, G.R., J.Guiard & C. van den Berg, 2012. Phylogenetics relationships in Brazilian *Pleurothallis sensu lato* (Pleurothallidinae, Orchidaceae): evidence from nuclear ITS rDNA sequences. *Phytotaxa* 46: 34-58.
- Fiaschi, P. & J.R.Pirani, 2009. Review of plant biogeographic studies in Brazil. *Journal of Systematic and Evolution* 47(5): 477-496.
- Govaerts, R., 2011. World Checklist of Orchidaceae. Available at <http://apps.kew.org/wcsp/>. Access on 22 October 2012.
- IUCN, 2001. IUCN Red list categories and criteria: version 3.1. IUCN Species Survival Commission, Cambridge. 18p.
- Luer, C.A., 2004. New genera and combinations in Pleurothallidinae. *Icones Pleurothallidarum XXVI. Monographs in Systematic Botany from the Missouri Botanical Garden* 95: 253-265.
- Luer, C.A. 2006. *Icones Pleurothallidarum XXVIII: A reconsideration of Masdevallia*, Systematics of *Specklinia* and vegetatively similar taxa

(Orchidaceae). *Monographs in Systematic Botany from the Missouri Botanical Garden* 105: 1-274.

Luer, C.A. 2007. Miscellaneous new combinations. *Icones Pleurothallidinarum XXIX. Monographs in Systematic Botany from the Missouri Botanical Garden* 112: 118-121.

Pridgeon, A.M., 2005. Pleurothallidinae. In: Pridgeon, A.M.; Cribb, P.J.; Chase, M.W. & Rasmussen, F.N. (eds.) *Genera Orchidacearum, Volume 4: Epidendroideae (Part 1)*: 319-421. Oxford University Press, Oxford.

Souza, C.R.G., & G.C.Luna, 2008. Unidades quaternárias e vegetação nativa de planície costeira baixa encosta da Serra do Mar no litoral norte de São Paulo. *Revista do Instituto de Geologia* 29(1/2): 1-18.

Thiers, B., 2012. *Index Herbariorum*: A global directory of public herbaria and associated staff. Available at <http://sweetgum.nybg.org/ih/>. Access on 18 October 2012.

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