



## ***Macradenia grandiflora* (Cymbidieae; Epidendroideae; Orchidaceae), a new species from southeastern Brazil**

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### **Abstract**

*Macradenia grandiflora* a new species from southeastern Brazil is described and illustrated. It is related to *M. lutescens*, but differs by the number of lip calli, the size of sepals, petals and lip, the number of flowers per inflorescence, the cuspidate apex of sepals and petals, and the irregularly lacerate margin of the clinandrium.

**Key words:** *Macradenia*, Oncidiinae, southeastern Brazil

### **Introduction**

*Macradenia* Brown (1822: 612) is a small Neotropical genus of the subtribe Oncidiinae, which is closely related to eight genera of the “twig epiphyte clade” (Chase *et al.* 2009). Currently, the genus is composed by 12 species, ranging from Mexico and south Florida, throughout Central America, West Indies, to Bolivia, Brazil and Peru, growing in places with high humidity from sea level up to 300 m above sea level (Pupulin & Ossenbach 2002, Chase *et al.* 2009). In Brazil, *Macradenia* is represented by 10 species distributed in 13 states (Barros *et al.* 2015).

The genus was described by Robert Brown in 1822, however it was never reviewed. After 1945, when *Macradenia tridentata* Schweinfurth (1945: 62) was published, only two more taxa were described up to the present day: *M. brassavolae* var. *albiflora* Senghas & Seeger (1996: 831) and *M. purpleorostrata* Gerlach (2012: 72). The gap of new publication involving *Macradenia* can be mainly explained by the difficulty of finding material during field trips and get type material from most of the species. The consequence is the poor knowledge about the genus and its low representation in herbaria.

During the preparation of a taxonomic review of *Macradenia*, which included the examination of herbarium specimens and new collections, two specimens differed from the remaining species of the genus. Morphologically, the specimens resemble *M. lutescens* Brown (1822: 612), but proved to belong in a new species. Therefore, the aim of this paper is to describe this new *Macradenia* from southeastern Brazil.

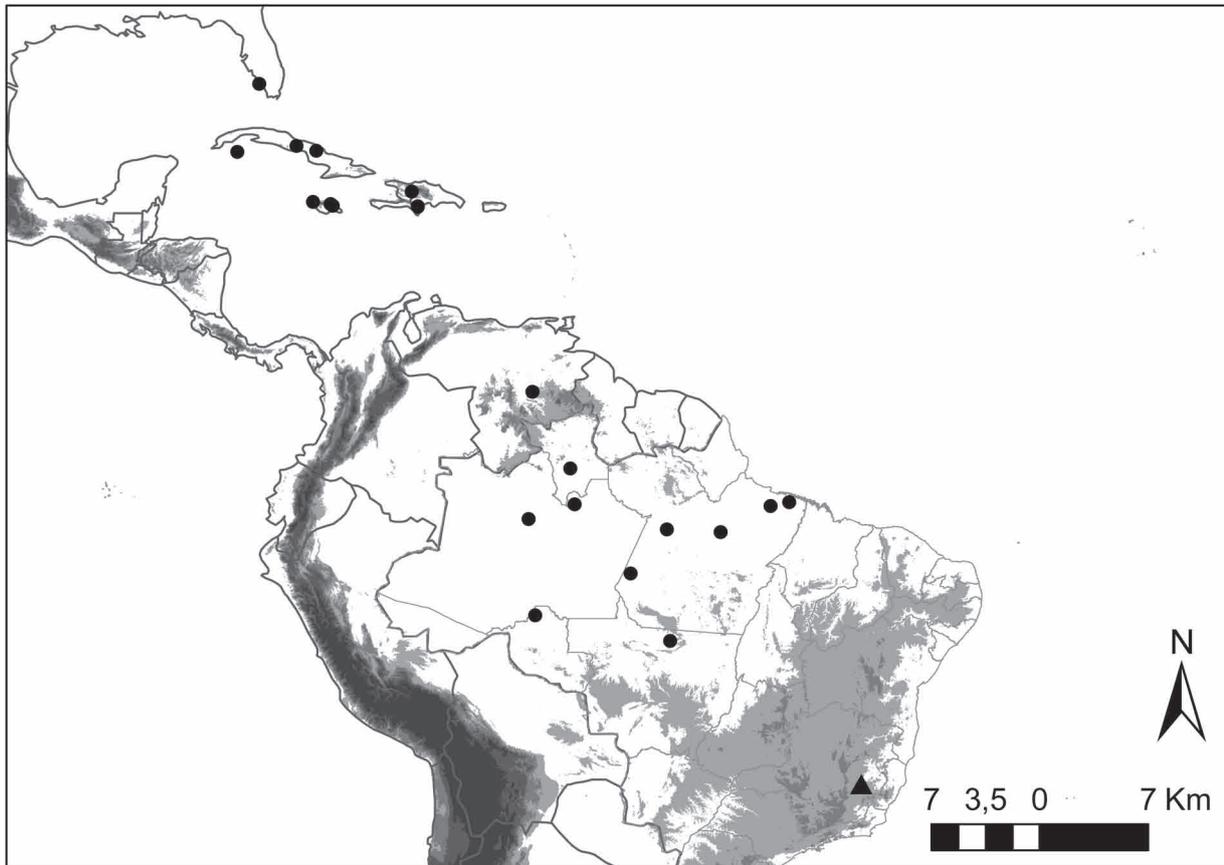
### **Taxonomy**

*Macradenia grandiflora* A.K.Koch, Ilk.-Borg. & F.Barros. *sp. nov.* (**Fig. 1**)

*Macradenia grandiflora* is closely related to *M. lutescens* differing by the larger size of leaves, flowers, lip and column, by the cuspidate apex of sepals and petals, and by the number of lip calli.

Type:—BRAZIL. Minas Gerais, Mun. Timóteo, Macuco, Parque Estadual do Rio Doce 19°35'28"S, 42°34'07"W, 03 March 2004, G. S. França & F. Raggi 500 (holotype: BHCB!)

Herb, epiphytic, caespitose, ca. 27 cm tall. Roots slender, flexuous, glabrous. Pseudobulbs terete-oblong, 4.5–5 cm



**FIGURE 2.** Type location of *Macradenia grandiflora* represented by triangles. Circles represent geographical distribution of *M. lutescens*.

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## References

- Barros, F. de, Vinhos, F., Rodrigues, V.T., Barberena, F.F.V.A., Fraga, C.N., Pessoa, E.M., Foster, W., Menini Neto, L., Furtado, S.G., Nardy, C., Azevedo, C.O. & Guimarães, L.R.S. (2015) Orchidaceae. In: *Lista de Espécies da Flora do Brasil*. Jardim Botânico do Rio de Janeiro. Available from: <http://reflora.jbrj.gov.br/jabot/floradobrasil/FB11813> (accessed 26 January 2015).
- Brown, R. (1822) *Macradenia lutescens*. *Botanical Register* 8: 612.
- Chase, M.W., Pridgeon, A.M., Veitch, N.C. & Grayer, R.J. (2009) 521. *Macradenia*. In: Pridgeon, A.M., Cribb, P.J., Chase, M.W. & Rasmussen, F.N. (Eds.) *Genera Orchidacearum*, v. 5. Epidendroideae (Part two). Oxford University, Oxford, pp. 290–291.
- Gerlach, G. (2012) *Macradenia purpureorostrata*, eine neue, bisher unerkannte Orchideenart aus den Wäldern Amazoniens. *Orchideen Journal* 2: 72–75.
- Govaerts, R. (2015) World Checklist of Monocotyledons. Royal Botanic Gardens. Available from: [http://apps.kew.org/wcsp/namedetail.do?name\\_id=116929](http://apps.kew.org/wcsp/namedetail.do?name_id=116929) (accessed 26 January 2015).
- IUCN (2014) *The IUCN red list of threatened species, version 3.1*. IUCN Red List Unit, Cambridge U.K. Available from: <http://www.iucnredlist.org/> (accessed 18 November 2014).
- Pupulin, F. & Ossenbach, C. S. (2002) *Macradenia* (Orchidaceae): a confirmed genus for Costa Rican flora. *Lankesteriana* 3: 15–17.
- Schweinfurth, C. (1945) A new *Macradenia* from Peru. *American Orchid Society Bulletin* 14 (2): 62–64.
- Senghas, K. & Seeger, H.G. (1996) *Macradenia brassavolae* Rehb.f. 1852. *Die Orchidee* 47 (4): 831–832.