New records of Orchidaceae for the Northeast of Brazil

Novas ocorrências de Orchidaceae para o Nordeste brasileiro

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Resumo


Abstract

The new occurrences of nine species of Orchidaceae belonging to six genera: Acianthera Scheidw. (2 spp.), Bifrenaria Lindl. (1 sp.), Grandiphyllum Docha Neto (1 sp.), Maxillaria Ruiz & Pav. (2 spp.), Pabstiella Brieger & Senghas (2 spp.) and Saundersia Rchb. f. (1 sp.) are documented here for the first time in Poções, Bahia State, extending their distribution to Northeast of Brazil. Of the nine species presented here, six are endangered. Diagnostic morphological characters of the species are briefly described. These new records highlight the importance of studies in under-sampled areas.

Introduction

In southern Bahia the forests changes from the littoral restinga forest to rain forest, and then to subdeciduous forest to the liana forest (seasonally dry deciduous forest) (Gouvêa et al., 1976). The liana forest in Bahia is restricted to the plateau of Conquista, southwestern Bahia, which is 800 to 1000 meters above sea level (Mori; Silva, 1979; Mori et al., 1981). It is characterized by trees that lose their leaves in the dry season, lianas are abundant, and form a network of stems of about 10 to 12 meters tall (Gouvêa et al., 1976; Mori et al., 1983).

Recent studies show that the flora of this region is poorly known, with insufficient number of samples for its knowledge (Caires et al., 2021). Studies carried out in the Plateau area have discovered new species (e.g. Fiaschi, 2005; Castro; Rapini, 2006; Leme, 2008; Luer; Toscano de Brito, 2011; Leme et al., 2014; Azevedo et al., 2018; Goldenberg et al., 2020) and new records (e.g. Marinho; Azevedo, 2011; Azevedo; Marinho, 2012; Dittrich; Souza, 2013; Santos et al., 2013; Souza et al., 2015; Rêgo; Azevedo, 2017; Azevedo et al., 2021; Moura; Caires, 2021; Caires et al., 2021). Even though, the Plateau area has been suffering big environmental degradation, most of this forest has been converted to pasture and coffee plantations. Therefore, studies in the region are still needed to know the local flora, in addition to demonstrating the need for conservation.
Methods

Field expeditions were conducted at the municipality of Poções, Bahia State, Northeastern of Brazil. Samples were collected at Morrinhos district, from August 2019 to June 2020, and deposited at Mongoyós herbaria - HVC (acronyms according to Thiers, 2021). The known geographical distribution of the species is based on the occurrence data obtained at BFG (2018) and the Brazilian Flora 2020 (http://floradobrasil.jbrj.gov.br).

Results

Nine species were recently collected in Bahia State, at the municipality of Poções, being registered for the first time for the State of Bahia, extending their distributions to the Northeast of Brazil. Of which six species are endangered.


Identification. *Acianthera bragae* is characterized by the curved sepalline tube, formed by the fusion of the sepals until close to their apaxes.

Distribution and conservation. Endemic to Brazil, its occurrence was recorded only in the Atlantic Forest, in the Southeast and South regions of Brazil. During the development of this work, it was found for the first time for the Brazilian Northeast. This species was considered Vulnerable (VU) in the Red List of the flora of Espírito Santo State (Simonelli; Fraga, 2007; Fraga et al., 2019).

New records. BRAZIL, Bahia: municipality of Poções, 05/VII/2020, Santana 68 (HVC).


Identification. *Acianthera luteola* can be recognized by its linear-oblong leaves, that is flat to slightly conduplicate and very fleshy. Flowers yellow with red dots and lip red, slightly three lobed.

Distribution. At Brazil it is found in the Southeast and South regions. During the development of this study, it was found for the first time in the Northeast.

New records. BRAZIL, Bahia: municipality of Poções, 19/IX/2020, Santana 70 (HVC).

3. *Bifrenaria charlesworthii* Rolfe, Bull. Misc. Inform. Kew 1894: 184, 1894. Figure 1c

Identification. *Bifrenaria charlesworthii* can be distinguished by the lateral sepals divergent to each other, and the lip is pubescent, with a yellow callus.

Distribution and conservation. Endemic to the Brazilian Atlantic Forest, it is mentioned only for the Southeast region (to Espírito Santo, Minas Gerais and Rio de Janeiro States), being registered here for the first time for the Northeast of Brazil. This species was considered Vulnerable (VU) in the new list of the flora of Espírito Santo State (Fraga et al., 2019).

New records. BRAZIL, Bahia: municipality of Poções, 06/II/2020, Santana 66 (HVC).


Identification. *Grandiphyllum hians* is characterized by having flowers with greenish yellow sepals and petals with large brown macules. The lip is bilobed, whitish, with four calluses, two larger and two smaller, white with brown spots.

Distribution and conservation. An endemic species in Brazil, until now it was known only for the Southeast and South regions. It is mentioned here for the Northeast for the first time. This species was considered as Vulnerable (VU) (Martinelli; Moraes, 2013; Fraga et al., 2019) and Critically Endangered (CR) for the flora of the State of São Paulo (SMA, 2004).

New records. BRAZIL, Bahia: municipality of Poções, 19/IX/2020, Santana 70 (HVC).


Identification. *Maxillaria pachyphylla* can be identified by its linear-oblong leaves, that is flat to slightly conduplicate and very fleshy. Flowers yellow with red dots and lip red, slightly three lobed.

Distribution. In Brazil it is found in the Southeast and South regions. During the development of this study, it was found for the first time in the Northeast.

New records. BRAZIL, Bahia: municipality of Poções, 30/VIII/2019, Santana 49 (HVC).

6. *Maxillaria puntila* Hook., Bot. Mag. 64: t. 3613, 1837. Figure 1f

Identification. *Maxillaria puntila* can be recognized as a small plant with fleshy leaves, flowers red to brownish with yellow at the apex.

Distribution and conservation. In Brazil until then, it was mentioned for the North (Amazonas), Southeast and South regions, being mentioned here for the first time for the Brazilian Northeast. Species categorized as Endangered (EN) in the Red List of Flora of Espírito Santo State (Simonelli; Fraga, 2007) and as Vulnerable (VU) in the Red List of Flora of Paraná State (SEMA, 1995).

New records. BRAZIL, Bahia: municipality of Poções, 30/VIII/2019, Santana 51 (HVC).


Identification. Flowers yellow, with sepals fleshy, pubescent internally, lateral sepals fully connate into a very briefly bifid at apex.

Distribution. So far, *Pabstiella pomerana* was known only for the state of Espirito Santo, in the southeastern region of Brazil (Chiron; Bolsanello, 2012).
New records. BRAZIL, Bahia: municipality of Poções, 04/VI/2019, Santos 36 (HVC).


Identification. It has whitish flowers with vinaceous stripes, yellowish petals and vinaceous lip with yellowish base.

Distribution and conservation. Pabstella castellensis is registered only in the state of Espírito Santo, in the southeast region of Brazil, here record for the first time for the northeast of Brazil. This species has been assessed as Critically Endangered (CR) (Martinelli; Moraes, 2013). It was considered Locally Extinct (LE), according to the Red List of the flora of Espírito Santo State (Simonelli; Fraga, 2007).

New records. BRAZIL, Bahia: municipality of Poções, 19/IX/2020, Santos 72 (HVC).


The genus Saundersia Rchb. f. is endemic to Brazil (Neubig et al., 2012) and as currently recognized, includes only two species: S. mirabilis Rchb. f. and S. paniculata Brade (Meneguzzo, 2020).

Identification. Saundersia mirabilis is characterized by having a dense pendent raceme, with hairy flowers (with dense indumentums). Brown sepals, white petals and lip white, with bilobulate apex.

Distribution and conservation. It is endemic to Brazil, with confirmed occurrence in all states in the Southeast of Brazil. During the development of this study, it was recorded for the first time for the Northeast region. Saundersia mirabilis is classified as Endangered (EN) (Martinelli; Moraes, 2013; Fraga et al., 2019).


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Authorship Contributions

Conceptualization: COA, MGS. Data curation: COA, MGS. Formal Analysis: COA, MGS. Funding acquisition: COA. Investigation: COA, MGS. Methodology: COA, MGS. Project administration: COA. Resources: COA. Supervision: COA. Validation: COA, MGS. Visualization: COA, MGS. Writing – original draft: COA. Writing – review & editing: COA, MGS.

Conflict of Interest

The authors declare that there are no conflicts of interest to report.

Data Availability

The complete set of data analyzed during the current study are presented in the body of the manuscript.

Ethical compliance

Not applicable.

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