



# Article

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## The species of *Eulaema* (*Eulaema*) Lepeletier, 1841 (Hymenoptera: Apidae: Euglossina) from eastern Brazil, with description of *Eulaema quadragintanovem* sp. n. from the state of Ceará

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### Abstract

*Eulaema* (*Eulaema*) *quadragintanovem* sp. n., a species similar to *Eulaema* (*E.*) *seabrai* Moure, 1960 and *Eulaema* (*E.*) *helvola* Moure, 2003, is described from ‘Serra do Baturité’ and ‘Parque Nacional de Ubajara’, state of Ceará, northeastern Brazil. This species seems to be restricted to ‘brejos de altitude’—Atlantic Forest physiognomies at the top of mountains in northeastern Brazil—in the state of Ceará. Since these forested areas are rapidly disappearing, it is possible that in the near future no suitable habitat will be left for this species. The recent record of *Eulaema bombiformis* (Packard, 1869) in Ceará is also discussed. Six species of *Eulaema* (*Eulaema*) are now known to occur in eastern Brazil and an updated identification key for them is provided.

**Key words:** Atlantic Forest, ‘Brejo de altitude’, conservation, new species, orchid bee, taxonomy

### Resumo

*Eulaema* (*Eulaema*) *quadragintanovem* sp. n., uma espécie semelhante à *Eulaema* (*E.*) *seabrai* Moure, 1960 e à *Eulaema* (*E.*) *helvola* Moure, 2003, é descrita da Serra do Baturité e do Parque Nacional de Ubajara, estado do Ceará, nordeste do Brasil. Essa espécie parece ser restrita aos ‘brejos de altitude’—vegetação de Mata Atlântica típica de topos de montanhas no nordeste do Brasil—do estado do Ceará. Considerando-se que essas áreas estão desaparecendo rapidamente, é possível que em poucos anos não haja habitat adequado para essa espécie. O registro recente de *Eulaema bombiformis* (Packard, 1869) no Ceará também é discutido. Seis espécies de *Eulaema* (*Eulaema*) são agora conhecidas do leste do Brasil e uma chave de identificação atualizada para elas é apresentada.

**Palavras-chave:** ‘Brejo de altitude’, conservação, espécie nova, euglossina, Mata Atlântica, taxonomia

### Introduction

The species of *Eulaema* Lepeletier, 1841 are among the largest orchid bees (Hymenoptera: Apidae: Apini: Euglossina), an exclusively Neotropical group of bees well known for the association between their males and orchids (reviewed by Dressler, 1982). Contrary to most other genera of orchid bees, for which taxonomy and phylogeny remain in flux (e.g. Kimsey 1982, 1987; Michener 1990; Engel 1999; Cameron 2004; Oliveira 2006b; Nemésio, 2009b; Ramírez *et al.* 2010; Nemésio & Ferrari 2011a, b), the identity of the species of *Eulaema* as well as their relationships are almost consensual (e.g. Moure 2003; Michel-Salzat *et al.* 2004; Oliveira 2006b; Ramírez *et al.* 2010), with only a few disagreements on the status of some species by Moure (2003) and Oliveira (2008) and by Nemésio (2005, 2009a) and Oliveira (2008) [see Nemésio (2009a: 239–242) for a review of these disagreements]. The subdivision of *Eulaema* into two monophyletic subgenera, *Eulaema s. str.* and *Apeulaema* Moure, 1950, is also currently a matter of agreement among researchers (e.g. Moure 2003; Oliveira 2006; Ramírez *et al.* 2010).