

# New records of *Gerstaeckerella irrorata* and *Plega zikani* (Neuroptera: Mantispidae) for Minas Gerais state, Brazil

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**Abstract:** This note extends the geographical distribution of two rare species of Mantispidae (Neuroptera) in Minas Gerais state, Brazil. This is the first record of *Gerstaeckerella irrorata* and the second record of *Plega zikani* for the state.

**Key words:** mantisfly; semideciduous forest; riparian forest; Mata do Baú; biodiversity

After the pioneer studies on the biodiversity of the Brazilian Mantispidae published by Penny (1982) and Penny and Costa (1983), little has been studied about the distribution of this group in the country (Machado and Rafael 2010). According to Ohl (2004), 50 species are listed from Brazil, mostly occurring at the Amazon region. An updated identification key for the Mantispidae genera occurring in Brazil was presented by Machado and Rafael (2010).

The genus *Gerstaeckerella* Enderlein, 1910 is distributed in the South and Central America and the Caribbean and is represented by two species in Brazil, *G. irrorata* (Erichson, 1839) and *G. gigantea* Enderlein, 1910. *Gerstaeckerella irrorata* was previously recorded from Cuba and Brazil (Espírito Santo, Santa Catarina, Paraná and the Federal District) (Penny and Costa 1983; Ohl 2004). Both species are very similar, but *G. gigantea* is larger and has a dark brown transversal stripe at the M-A area in the forewing. The two species can also be differentiated by the shape of the male gonocoxites (Penny and Costa 1983).

*Plega* Navás, 1928 has a Nearctic and Neotropic distribution, occurring from northern Brazil northward to the southern USA. Five species have been recorded in Brazil, including *P. beardi* Penny, 1982, *P. duckei* Penny, 1982, *P. hagenella* (Westwood, 1867), *P. paraensis* Penny, 1982, and *P. zikani* Navás, 1936 (Ohl 2004).

*Plega zikani* is a small species easily identified by the extensive pigmentation on the apex of both wings (Penny

and Costa 1983). In Brazil, the species has been recorded from the states of Minas Gerais, Rio de Janeiro and São Paulo (Penny and Costa 1983). The distribution records of this species were published as *Trichoscelia zikani* by Penny and Costa (1983). Penny (1982) transferred the species to the genus *Trichoscelia* Westwood, 1852, but it was posteriorly restored to *Plega* (the original genus) by Ohl (2004).

This note reports new records of *G. irrorata* and *P. zikani* from Minas Gerais state in Brazil. The samples were collected every two weeks between March 2010 and February 2011, in a fragment of natural vegetation known as “Mata do Baú”, located at the Barroso municipality, Minas Gerais, Brazil (21°11′–21°12′S, 043°55′–043°58′W, 900–1,250 m altitude). The forest fragment is ca. 400 ha with the vegetation characterized by montane semideciduous forest, riparian forest and cerrado fields (Menini-Neto et al. 2004). The typical weather is high humid subtropical, characterized by hot and rainy summers and cold and dry winters (Cwb climate, mesothermal [Köppen 1936]).

The samples were collected at the semideciduous and riparian forest areas with a sweep net. During each collecting event, two hours were spent on each area, where the specimens were captured by beating and sweeping the vegetation along paths around one meter wide. Voucher specimens are deposited at the Entomological Collection from the Universidade Federal de Lavras (UFLA), Lavras, Minas Gerais, Brazil, under registration numbers MS0001 *Gerstaeckerella irrorata* and MS0002 *Plega zikani*.

The identification key presented by Penny and Costa (1983) and comparisons with previous identified specimens were used to determine the species presented here.

The single captured specimen of *G. irrorata* (Figure 1) was collected at the riparian forest in June 2010, and the only specimen of *P. zikani* (Figure 2) was collected in November 2010 at the semideciduous forest. This is the first record of *G. irrorata* in Minas Gerais and the



**Figure 1.** *Gerstaeckerella irrorata* collected in the Mata do Baú, Barroso, Minas Gerais, Brazil. Photo by M. Silva.



**Figure 2.** *Plega zikani* collected in the Mata do Baú, Barroso, Minas Gerais, Brazil. Photo by M. Silva.

second record of *P. zikani*, which previously was known only by three specimens collected from the Serra do Caraça, Santa Barbara municipality (Penny and Costa 1983). These two new records increase the geographical distribution of these two rare species of mantidflies, highlighting the importance of preserving natural forest fragments such as this.

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