



The GSG Newshopper

Newsletter of the IUCN SSC Grasshopper Specialist Group

Issue 5 - March 2017



**Threatened
New Zealand
Gravel-hoppers**

**Conservation Planning for the
Adriatic Marbled Bush-cricket**

**The threatened
Cave Cricket
Fauna in Brazil**

Cave cricket fauna in Brazil

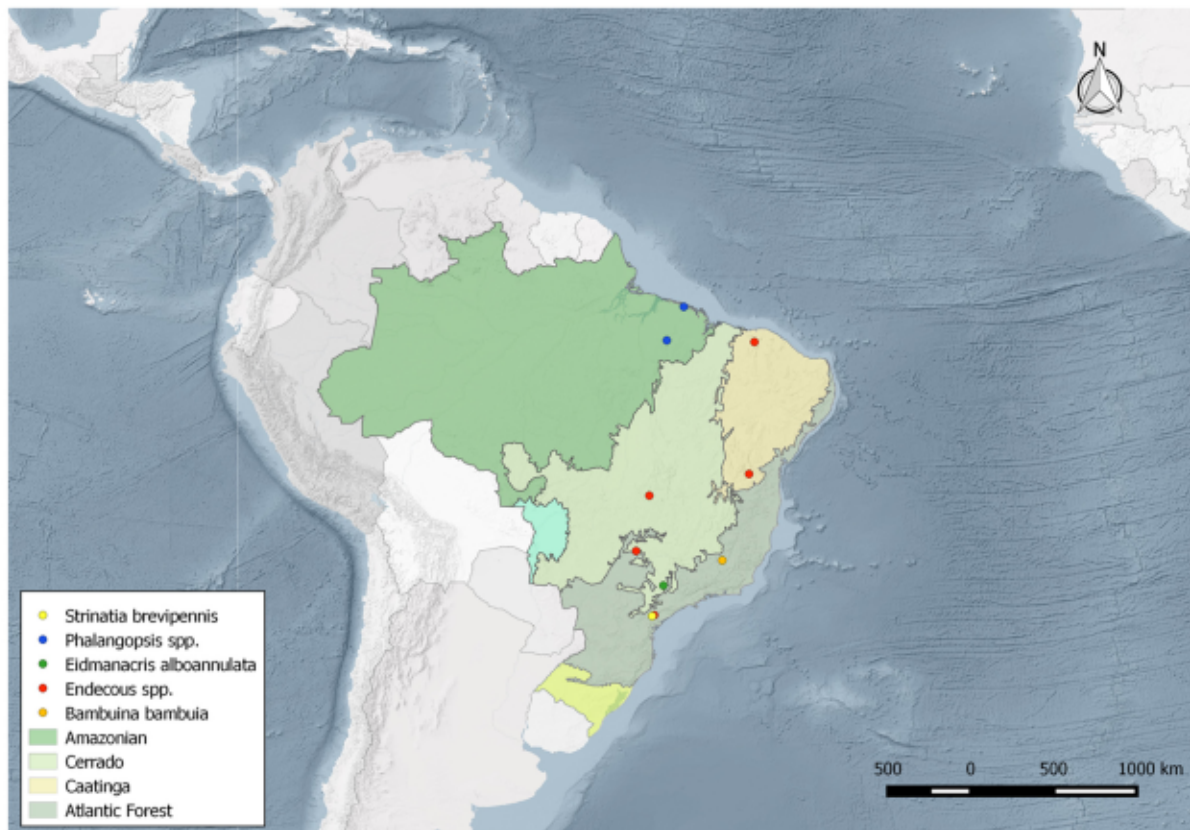
Marcio P. Bolfarini and Pedro Guilherme B. Souza Dias

In Brazil cricket taxonomy is still in its early stages in which species descriptions are very much needed. The number of taxa described is less than expected, resulting in several undescribed taxa deposited in museum collections beyond those collected in field works. Consequently, there are no biogeographic or phylogenetic studies published. According to the Orthoptera Species File (OSF), Brazil has only 154 species of crickets, grouped in 72 genera. Recently, we have seen an effort of Brazilian specialists in describing new cricket taxa. Over the last decade, 41 new species have been described and it is expected that there will be an increase in taxonomic studies and phylogenetic hypothesis regarding Brazilian taxa of crickets.

Regarding cave crickets the taxonomic knowledge is also incipient. The Brazilian cave cricket fauna comprises at the moment of ten species grouped in five genera: the species of *Strinatia* Chopard, 1970 are found near the entrance zones of caves and occur in the Atlantic Forest of southeast Brazil; *Eidmanacris* Chopard, 1956 is found in the entrance and twilight zones of cavities and occurs in almost all Brazilian territory, mainly in the Cerrado and the Atlantic Forest; *Bambuina* de Mello, Horta & Bolfarini, 2013, a monotypic genus, is recorded for “Gruta do Centenário” (Centenario Cave) in the Atlantic Forest of southeast Brazil; *Phalangopsis* Serville, 1831, the only Amazonian genus recorded for caves; and *Endecous* Saussure, 1878.

Endecous is widely distributed throughout South America, with five species recorded from caves in Brazil. Cave species of *Endecous* present troglobiomorphic characteristics, and at least one species is restricted to caves: *E. apterus* Bolfarini & Souza-Dias, 2014, the first troglobitic cricket recorded from Brazil. For more information about cave crickets from Brazil, see Souza-Dias *et al.* (2014).





The cave cricket fauna has special issues for its conservation since it has high rates of endemism and it is directly connected to the hypogean environment. Thus, cave crickets are highly sensitive to environmental alterations mainly resulting from human actions, such as the exploitation of water resources for agriculture and livestock which causes extreme alterations in the subterranean environment. However, the main threat is the mining industry concentrated in the main karst areas of Brazil and responsible for the exploitation and destruction of several caves.

Consequently the conservation of caves and its fauna is associated with political decisions, since Brazil is globally a major exporter of mineral commodities. Furthermore, the non-application of environmental laws by politicians and mining industries, together with the lack of studies, greatly exacerbates this scenario.

We expect that publishing taxonomic descriptions, faunal and systematic studies will provide valuable information for the scientific community in order to substantiate environmental policy actions that protect caves and their fauna.