PARTIAL REPORT
Jun.2021

INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA SUL DE MINAS GERAIS Câmpus Poços de Caldas

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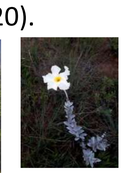
Population structure of *Pithecopus ayeaye* (Lutz, 1966 - Anura - Phyllomedusidae) in the Morro do Ferro region - Poços de Caldas Plateau –MG (Offer Letter: 32714-2)

The population of *Pithecopus ayeaye* from Morro do Ferro, Poços de Caldas Plateau - MG (locality - type of species)

Until recently, it was considered that the species *Pithecopus ayeaye*, Phyllomedusidae family anuran, was endemic from Poços de Caldas Plateau, its type locality. However, the specie's geographic distribution expanded with the synonymization of *Phyllomedusa itacolomi* made by Caramaschi, Cruz, and Feio (2006) and Baêta et al. (2009), besides the founding of new populations (MAGALHÃES et al., 2017). Due to the geographical distances among the sites of occurrence and the geology of the Poços de Caldas Plateau (~75m.a), which promoted high altitudes and a closed volcanic caldera shape, it is possible that the local populations are genetically unique examples of the species (MAGALHÃES et al., 2017).

There are high richness and endemism of species of Brazilian fauna and flora in the **Altitude Natural Fields (Campos de altitude)**, that are phytosociological features of the Atlantic Forest (CRUZ and FEIO, 2007; MARTINELLI, 2007; REZENDE, ELIAS, et al., 2013; MAGALHÃES, LEMES, et al., et al., 2013; al., 2017; PINHEIRO, PEREIRA and BRAGA, 2020).



***Altitude Fields from Morro do Ferro being changed by** Eucalyptus* spp.

Drainage line in high altitude fields where the puddles occur, habitats of the P.ayeaye.

Due to the higher regional altitudes, these features are widely distributed in the Plateau of Poços de Caldas – MG and have been replaced in the latest decades by eucalyptus plantations in more rural areas and real-estate expansion in urban areas.

On the sides of the hills from the Campos de Altitude, are formed drainages in the soil, which allows the shaping of deep natural puddles, that are supplied by the regional climate. These puddles are the habitats of the *Pithecopus ayeaye*, which uses a specific species of the Melastomataceae family that occurs in the region, to make their nests and lay their eggs.

Temporary puddles naturally formed in relief, on hillsides.** Pithecopus ayeaye **nests in** Melastomataceae **spp. and tadpoles of the species.

Captures and recaptures September/2020 to April/2021 at Morro do Ferro

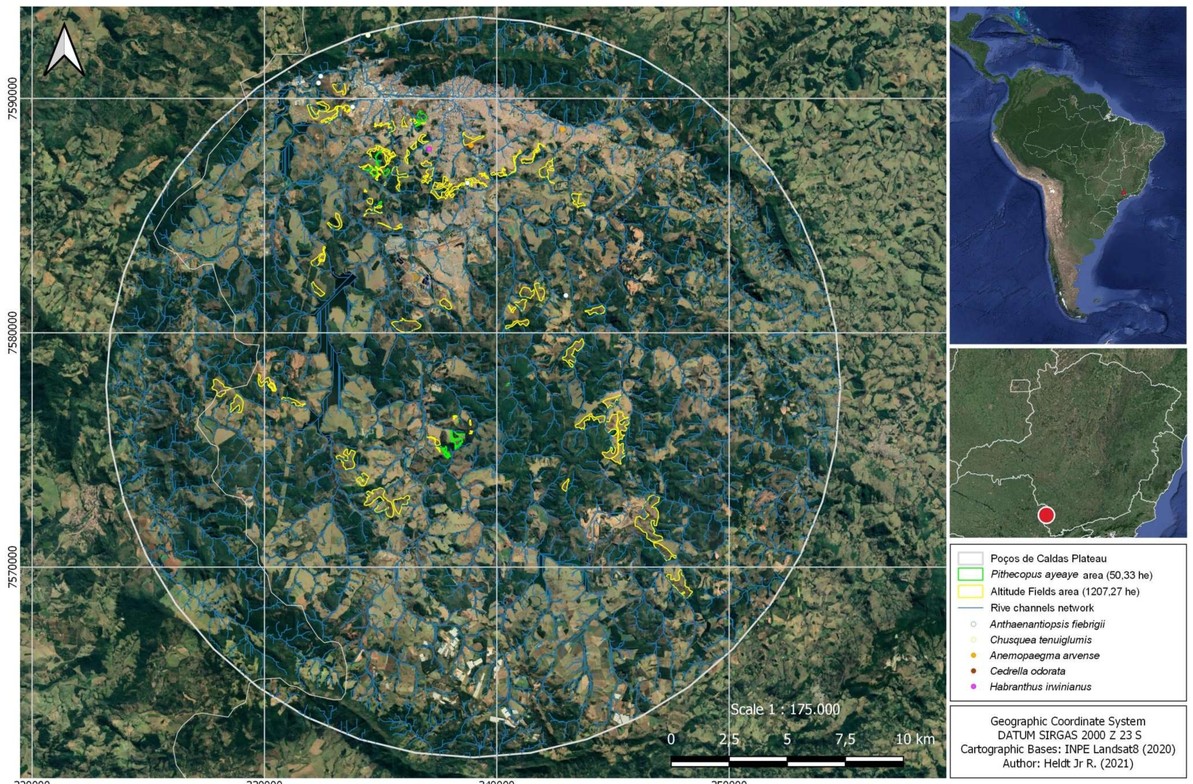
Up to now, only in the type-locality of the species (Morro do Ferro) we carry out 13 field days from September 2020 to March 2021. We registered 110 specimens, of which 34 were recaptured during the season sampling. The photos were taken in a standardized way in the field, were treated and processed in the Wild-id software to verify the recaptured specimens. The longest capture-recapture interval was 117 days (October 7, 2020, and February 1, 2021). The animal was a male and there was weight loss through the capture interval (3.20 grams and 40.42 mm in October and 3.00 grams and 40.00 mm in February).

The same animal captured in October 2020 and recaptured in February 2021. Standardization of photos methods of specimens sampled in the field.

New discoveries...

While that we studied the population of *Pithecopus ayeaye* from Morro do Ferro, we also sampled another 24 remaining areas of Altitude Natural Fields in the Plateau region, anthropized or not. We found the species in 04 areas located close to the urban center of the city of Poços de Caldas.

Mapping of altitude fields and occurrence points of the species *Pithecopus ayeaye* in the Poços de Caldas Plateau



We found the species *Pithecopus ayeaye* in another 05 new areas in the Morro do Ferro region (type locality). With these new records, we expanded the species' distribution to the Poços de Caldas Plateau – MG. Unfortunately, many of these areas are under strong pressure from human activities, such as allotment and agriculture

Next steps

In September 2021, next breeding season one, we will continue the population study of species from Morro do Ferro and also of those new populations registered in the Poços de Caldas Plateau.

Puddles marked cattle branding and species record area close to urbanization

Now, with the purchase of the drone, we will be able to map more potential areas for the occurrence of the species and also those where we have already found it.

Partnerships and prospects for conservation

We have already signed partnerships with a local Non-Governmental Organization - NGO (Instituto Fernando Bonillo) and also with The Fauna and Conservation Units Laboratory (Laboratório de Fauna e Unidades de Conservação - LAFUC) at the University of Brasilia (Universidade de Braília-UNB) to continue practices for the conservation of the species. We have submitted a project for the acquisition and/or lease of areas where the species occurs to the International Union for Conservation of Nature - IUCN and we are also already planning an workshop for landowners where the species occurs. We will try to establish protected areas in the region.

IFB Instituto FERNANDOBONILLO

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