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NOTES ON THE DISTRIBUTION AND CONSERVATION OF *Ceratophrys stolzmanni* (STEINDACHNER, 1882) (Anura: Ceratophryidae) IN ECUADOR

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ABSTRACT: The purpose of this study was to perform for the first time a sampling in Forest Protector Cerro Prosperina de Guayaquil to determine the presence of *Ceratophrys stolzmanni*, also known as Pacific Horned Frog. The samples were taken during the wet season. The observation carried increased the distributional range of this species within the Chongon Colonche Mountain range and added a new locality in the Guayas province as a new habitat area. Also the altitude range is extensive already *C. stolzmanni* was registered in Prosperina the forest guard to about 130 meters above sea level, since these places remain damp for a longer time.

Key words: *Ceratophrys*, dry forest, Guayaquil, new record.

Introduction

The genus *Ceratophrys* (Fam: Ceratophryidae) lives only in South America where there have been eight species (Frost, 2013), they are found in various environments ranging from rain forests, dry or semidry areas, operated or primary forests (Lynch, 1982).

Ceratophrys stolzmanni has recorded it is in four provinces within the country (Guayas, Santa Elena, Manabí and El Oro) in dry forest ecosystems. In Machalilla National Park (Manabí) (Cisneros-Heredia, 2006), Loma Alta Community Ecological Reserve (Santa Elena) (Amador and Martinez, 2011), Cerecita and in the Más Vale Hill (Guayas) and Huaquillas and Arenillas (El Oro) (Ortiz, 2013).

Materials and Methods

Study Area

The Forest Protector Cerro Prosperina of Guayaquil has an extension of 154, 82 ha and it is part of the Chongon Colonche coastal mountain range. It is located in the province of Guayas, in the city of Guayaquil and in it lays the Campus of the Escuela Superior Politécnica del Litoral.

The Forest has a series of ravines and fortifications of natural and artificial origin. Despite being private protected area, there are human settlements and the presence of agriculture within the Protected Forest.

Results and Discussion

The samples were taken during the wet season. It was found for the first time the

presence of *Ceratophrys stolzmanni* in one of the fortifications called "Las Cañas" within the Forest Protector Cerro Propesrina de Guayaquil, on March 2012. This point corresponds to an area of transition between grassland and forest, with a seasonal creek. The specimen was located between the rocks, only it could be appreciated a small part of his head jutting out of it. A second visit was carried on between May 5 and 6, in a transect called "rutas de las cascadas" that runs through a part of the protective forest is considered one of the wettest areas of the forest; however, not any living individual was observed, but a dead specimen was found near the "rutas de las cascadas" path possibly hasted by a vehicle (Figure 1).

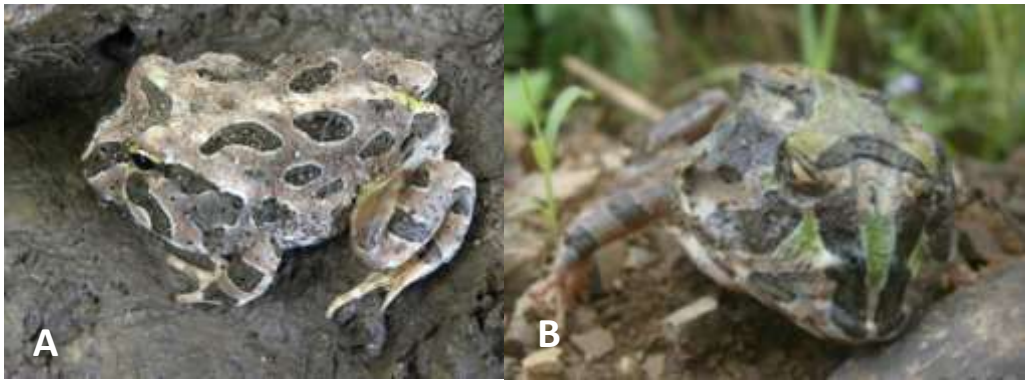

Figure 1. (A) *Ceratophrys stolzmanni* registered in Prosperina Forest (Guayaquil, Ecuador) in the town called "la albarrada de las Cañas", (B) an individual of *Ceratophrys stolzmanni* found dead on the road. Photo: Joel Alava.

They were three additional outlets at the end of June 2012 but not observed to *Ceratophrys stolzmanni*, surely because of seasonal habits presented, since the greater part of the year the species live buried, and emerge during the rainy season to reproduce (Angulo et al., 2004).

These surveys were conducted in near the fortifications transects and had an area of 500 meters. And considering the points where previous observations were made.

Distribution

In this manuscript we report the presence of *C. stolzmanni* at two new locations in the coast of Ecuador: Loma Alta Community Ecological Reserve and Forest Protector Cerro Prosperina de Guayaquil (Figure 2). Also expands the known for the species altitude range (0-100 msnm; Angulo et al., 2004) and *C. stolzmanni* was registered in the Cerro Prosperina at some 130 meters (2° 09'08 S; 79° 57'52 O).

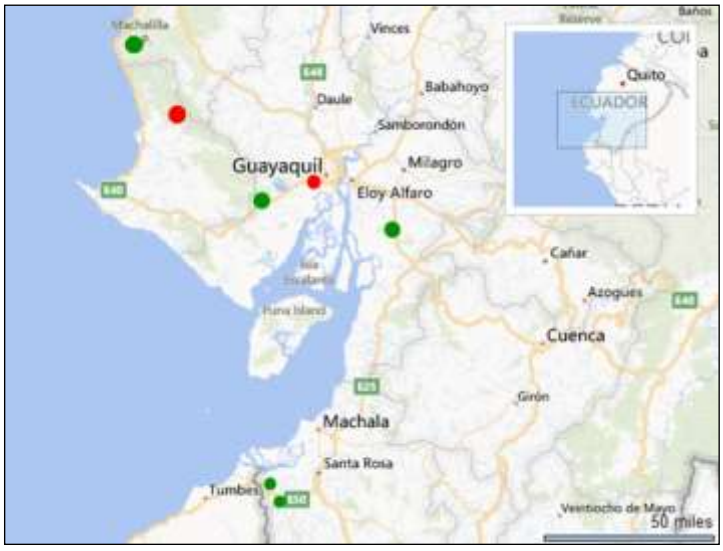

Figure 2. Map of distribution of *Ceratophrys stolzmanni*. Green circles = records of literature (see text); red circles = new records: Loma Alta Community Ecological Reserve (Amador and Martinez, 2011) and Forest Protector Cerro Prosperina de Guayaquil.

State of Conservation

According to the red list of the International Union for Conservation of Nature and Natural Resources IUCN, *C. stolzmanni* is considered endangered and categorized as Vulnerable (VU) (Angulo et al., 2004) but it is necessary to generate more information about its current population status and its natural history to be able to define with certainty their real status; Ortiz et al. (2013) indicate that populations of *C. stolzmanni* may be declining due to habitat fragmentation and degradation.

Since a few years ago *C. stolzmanni* has been marketed as a pet in countries of North America and Europe (El Comercio, 2010), however their inclusion in the Convention on International Trade in Endangered Species of Wild Fauna and Flora CITES has not even been considered.

Threats within the Forest Protector Cerro Prosperina de Guayaquil for Ceratophrys stolzmanni

Principal threats to this species within the Forest Protector Cerro Prosperina of Guayaquil are the human expansion (informal settlements on the slopes of the mountain), forest fires that occur at certain times of the year and the change of the use of the soil due to agriculture. Also due to the use of the trails by vehicles causing road kill of wildlife (see Figure 1).

Conclusions

Ceratophrys stolzmanni is present in a kind of seasonal habits restricted to zones of dry forest, however apparently in the Chongon-Colonche mountain range this species is doing new niches to greater altitude possibly at the time when there is no rain, already that these places where met *C. stolzmanni* in the Forest Protector Cerro Prosperina de Guayaquil remain wet for longer.

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