

COMUNICAÇÕES

***Proceratophrys bigibbosa* (PETERS, 1872), (AMPHIBIA, ANURA, ODONTOPHRYNIDAE): AMPLIAÇÃO DA DISTRIBUIÇÃO GEOGRÁFICA**

Proceratophrys bigibbosa (Peters, 1872), (Amphibia, Anura, Odontophrynidae):
expanding the geographical distribution

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Data do recebimento: 18/01/2014 - Data do aceite: 15/04/2014

ABSTRACT: Distribution expansion data are important in order to understand the relationship between the species and the environment, as well as for the conservation of species. Many areas are not studied and hinders the knowledge of many species. There is a lack of information about *Proceratophrys bigibbosa* and its distribution data, which are important for further studies on their behavior and reproductive mode. This is the first record of *P. bigibbosa* in the municipality of Erechim, southern Brazil.

Keywords: Atlantic Forest. Breeding activity. Conservation. Forest fragments. *Proceratophrys bigibbosa*.

RESUMO: Dados de expansão de distribuição são importantes para compreender as relações entre as espécies e o meio ambiente, bem como para a conservação das espécies. Muitas áreas não são estudadas, o que dificulta o conhecimento sobre muitas espécies. Há uma falta de informações sobre a espécie *Proceratophrys bigibbosa* e dados de sua distribuição que são importantes para aprofundar estudos sobre o seu comportamento e modo reprodutivo. Este é o primeiro registro de *P. bigibbosa* no município de Erechim, sul do Brasil.

Palavras-chave: Floresta Atlântica. Atividade reprodutiva. Conservação. Fragmentos florestais. *Proceratophrys bigibbosa*.

Trustworthy data on the geographic distribution of the organisms in a specific region are necessary and are also a prerequisite to understand the ecological inter-relations among the biological communities. This information also contributes to understand the historical component of the region making the determination of origin centers and the establishment of diversity patterns (Ron 2000) possible. Data about distribution of the anurans in Alto Uruguai region in the north of Rio Grande do Sul are rare and it is limited to a low, but crescent, publication number. These data are essential to search alternatives for conservation of anurans species in this region. In this study, we extended the distribution of *P. bigibbosa* (Peters, 1872) species in the state of Rio Grande do Sul, southern Brazil.

There are records of occurrence of *P. bigibbosa* in the municipalities of Arroio do Tigre, Bom Jesus, Canela, Nova Petrópolis, Nonoai, Rondinha, São Francisco de Paula and Sertão in the state of Rio Grande do Sul, Anita Garibaldi and Campo Belo do Sul in the state of Santa Catarina, both in southern Brazil, and the municipality of Dos de Mayo, in Misiones, a province in northern Argentina (Figure 1) (Zanella and Busin 2007; Santos et al. 2009). *Proceratophrys bigibbosa* is a nocturnal species, with breeding activity observed between the months of September and November in streams of clean water in preserved forest fragments (Kwet and Faivovich 2001; Santos et al. 2009).

During the period between August 2011 and July 2012, specimens of *P. bigibbosa* were sampled in a forest fragment in a transition between Araucaria forest and semideciduous forest, surrounded by small farmers who grow in family farming in the rural zone of Erechim, RS (Budke et al. 2010). The municipality is located in the northern region of the state of Rio Grande do Sul, to 27°37'54" S latitude and 52°16'52" W longitude (Fi-

gure 2). Erechim has an area of 425.86 km² and is located 768 m above sea level, with a subtropical climate with an average annual temperature of 18.7°C (Rampazzo 2003). Males in vocalization of *P. bigibbosa* were collected through the visual encounter survey method, and, at night, using the method of census random display, combined with a audio strip transects method, which means that the shift observation began at dusk and ended when the anurans decreased or ceased the activity of vocalization (Heyer et al. 1994).

Figure 1 - Map of occurrence of *Proceratophrys bigibbosa* in southern Brazil. Solid circles: published records of *P. bigibbosa* in isolation. Open triangle: new record of one isolated population of the specie *P. bigibbosa* in Erechim



The species identification was made from characteristics observed of animals with field guide (KWET et al. 2010) and vocalizations emitted by males and individuals collected were deposited in the zoological collection of the Museu Regional do Alto Uruguai (MURAU, number 215) of the Universidade Regional Integrada do Alto Uruguai e Missões (URI - Câmpus Erechim), Rio Grande do Sul, Brazil.

The specimens were found and captured always in vocalizing activity using different protected sites as potholes and rocks near the banks of a small creek located at the study area. In one year of collection, we found 59

individuals in reproductive activity, vocalizing buried in leaf litter, under rocks and mud on the banks of a stream of clear water running through the study area (Figure 3).

Figure 2 - Location of the study area in the municipality of Erechim, Rio Grande do Sul, Brazil.

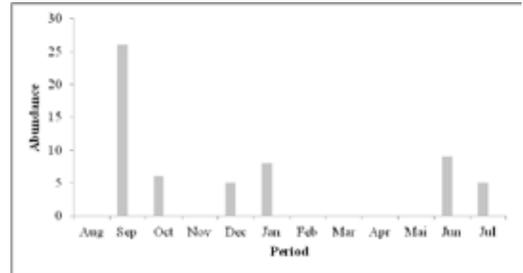


Figure 3 - *Proceratophrys bigibbosa* found hidden among stones in dorsal (A) and ventral view (B).



The largest number of males vocalizing activity was recorded in spring between September and December (Figure 4). Some vocalizing males were sampled in autumn and winter season.

Figure 4 - Occurrence of *Proceratophrys bigibbosa* during the sampling period in the study area.



Proceratophrys bigibbosa was observed frequently between September and November, the reproductive season of this species (Kwet and Faivovich 2001; Santos et al. 2009).

The new register for the municipality of Erechim, Rio Grande do Sul, Brazil, extended the distribution of this species for around 50 km to the north of the locality of Sertão/RS, and 245 km of the locality of Dos de Mayo, Province of Misiones, northern Argentina, reaching the region of Alto Uruguai/RS. *Proceratophrys bigibbosa* is classified as “near threatened” by extinction according to the International Union for Conservation of Nature (IUCN, 2014). This study extends the distribution and brings more important data on an isolated population, which is important for the future situation of this species. The occurrence of *P. bigibbosa* in the locality was expected because is an intermediate localities in larger and preserved forest fragments in Atlantic Forest. The conservation of forest fragments is essential for the survival of this species and all biodiversity.

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