

NOTES ON GEOGRAPHIC DISTRIBUTION

**Amphibia, Anura, Leiuperidae, *Physalaemus cicada*:  
distribution extension in the state of Ceará, Brazil**

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The genus *Physalaemus* comprises 41 recognized species (Frost 2007) distributed from northern to southern South America, east of the Andes (Nascimento et al. 2005). *Physalaemus cicada* is typically found in lowland open areas (around 200 m ASL) of the *Caatinga* and *Cerrado* Biomes (IUCN et al. 2006) in the Brazilian states of northeastern (Ceará, Paraíba, Pernambuco, Bahia), and southeastern regions (Minas Gerais) (see Table 1 and references therein).

On 17 April 2008, we observed five adult males (mean snout-vent length  $\pm$  standard deviation =  $22.83 \pm 1.04$ ) (Figure 1A) and three foam nests (Figure 1B) of *P. cicada* in the municipality of Nova Russas, state of Ceará (04°41'07.5" S, 40°33'56.7" W; 270 m ASL). Individuals were calling in a temporary pond (6 m maximum length

and 0.3 m maximum depth) formed after a storm on the day before, located at the margins of the road CE-187. Other six species of anurans were also registered in the same pond: *Phyllomedusa nordestina*, *Pleurodema diplolister*, *Elachistocleis* cf. *piauiensis*, *Pseudopaludicola* gr. *falcipes*, *Physalaemus albifrons*, and *Leptodactylus fuscus*. Voucher specimens are deposited at the amphibian collection Célio F. B. Haddad (CFBH 19389-92; 19385), at *Laboratório de Herpetologia, Departamento de Zoologia, Universidade Estadual Paulista*, Rio Claro, São Paulo state, Brazil. Collecting permits was authorized by Brazilian Institute of Environment and Renewable Natural Resources (*Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis - IBAMA*) (Proc. number - SISBIO/14130-1).

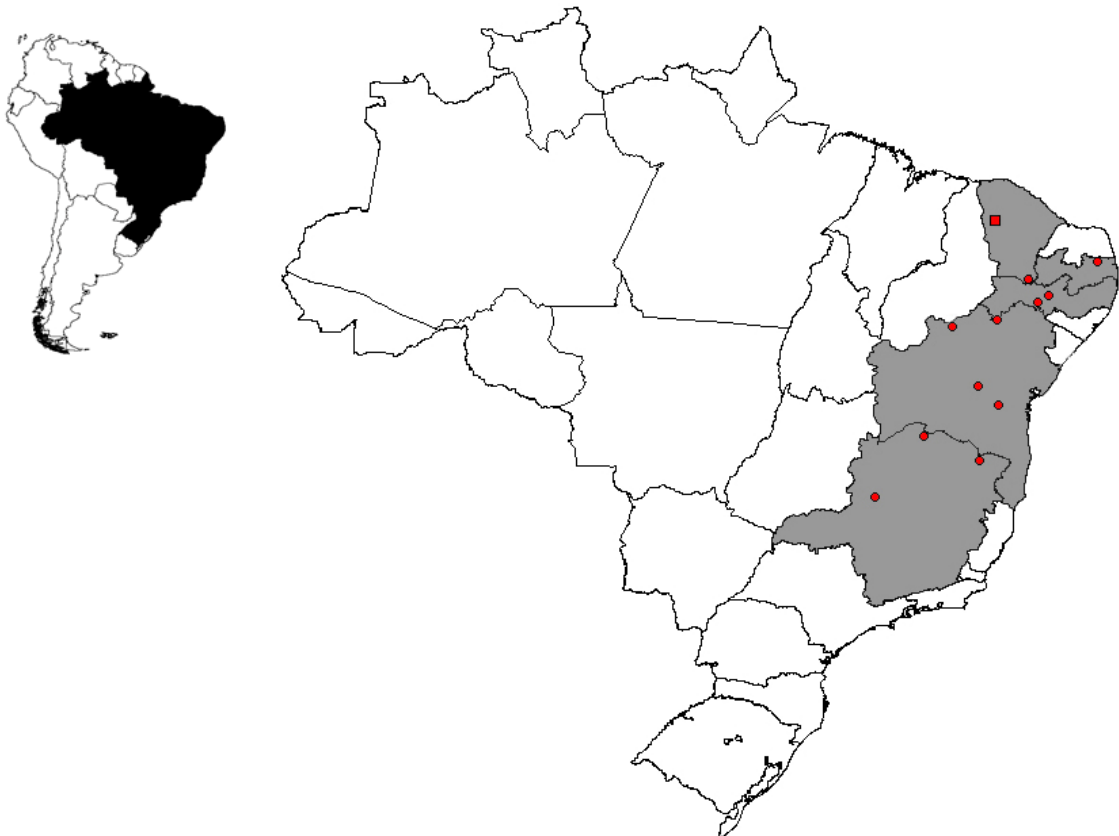
**Table 1.** Localities with records of *Physalaemus cicada* and their respective literature references.

Municipality	State	Latitude	Longitude	Source
Araruna	Paraíba	06°27'13" S	35°40'49" W	Arzabe et al. 2005
Betânia	Pernambuco	08°16'29" S	38°02'03" W	Borges-Nojosa and Santos 2005
Floresta	Pernambuco	08°36'04" S	38°34'07" W	Borges-Nojosa and Santos 2005
Lençóis	Bahia	12°33'47" S	41°23'18" W	Santana and Juncá 2007
Maracás	Bahia	13°26'28" S	40°25'51" W	Bokermann 1966
Juazeiro	Bahia	09°24'42" S	40°29'55" W	Nascimento et al. 2005
Carnaíba	Bahia	09°27'06" S	41°52'43" W	Nascimento et al. 2005
João Pinheiro	Minas Gerais	17°43'59" S	46°10'00" W	Silveira 2006
Pedra Azul	Minas Gerais	16°00'19" S	41°17'50" W	Nascimento et al. 2005
Matias Cardoso	Minas Gerais	14°51'17" S	43°55'19" W	Nascimento et al. 2005
Brejo Santo	Ceará	07°29'36" S	38°59'14" W	Nascimento et al. 2005
Nova Russas	Ceará	04°41'07" S	40°33'56" W	New Record

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**Figure 1.** *Physalaemus cicada* found in the municipality of Nova Russas, state of Ceará; a) adult male, b) nest.



**Figure 2.** Geographic distribution of *Physalaemus cicada*. Red circles represent bibliographic data (see Table 1) and the red square represents the new record for the species (present study). The Brazilian states where species were recorded are shown in gray.

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This finding extends species' range in ca. 360 km northwest from the previous report at the municipality of Brejo Santo, southern region of the Ceará state. Moreover, based on the known records for this species (Table 1) it was possible to create a map of the distribution of *P. cicada* (Figure 2). Considering that *P. cicada* does not occur in other nearby areas such as Serra das Almas (Almas Mountains) (Borges-Nojosa and Cascon 2005), Serra da Ibiapaba (Ibiapaba Mountains) (DL pers. obs.), and coastal areas of Piauí and Ceará (Cascon and Borges-Nojosa 2003; Silva et al. 2007; Loebmann and Mai 2008), the present record currently represents the northwest limit in the distribution of this species.

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