PANAMJAS
Pan-American Journal of Aquatic Sciences

Scientific Note

Parastacus pilimanus (von Martens, 1869) (Decapoda, Parastacidae): new species record at Lagoa do Peixe National Park, state of Rio Grande do Sul, Brazil

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Abstract. *Parastacus pilimanus* shows distribution in Argentina, Uruguay and Brazil. In Brazil occurs only in some areas of Rio Grande do Sul. The present paper report a new occurrence of *P. pilimanus* at Lagoa do Peixe National Park (LPNP), state of Rio Grande do Sul, Brazil.

Key words: crustacean, coastal plain, conservation, crayfish

Resumo. *Parastacus pilimanus* (von Martens, 1869) (Decapoda, Parastacidae): novo registro para espécie, Parque Nacional da Lagoa do Peixe, estado do Rio Grande do Sul, Brasil. *Parastacus pilimanus* apresenta distribuição na Argentina, Uruguai e Brasil. No Brasil ocorre somente em algumas áreas do Rio Grande do Sul. O presente trabalho descreve uma nova área de ocorrência para *P. pilimanus* no Parque Nacional da Lagoa do Peixe, Rio Grande do Sul, Brasil.

Palavras chave: crustáceo, planície costeira, conservação, lagostim

The Parastacidae family includes 14 genera and 129 species of freshwater crayfishes occurring in the southern hemisphere, distributed in Australia, Tasmania, New Zealand, Madagascar, South America and New Guinea (Noro & Buckup 2008, Gherardi *et al*. 2010). Currently, there are 12 species (Toon *et al*. 2010) and three genera (*Parastacus*, *Samastacus* and *Virilastacus*) in South America, from which only the *Parastacus* is found in Brazil (Buckup 1999, 2003). Species of such genera can be found in aquatic habitats, such as flood plains, wetland and lotic ecosystems with low water volume, where they play an important role in the food web as forage prey for birds and mammals (Buckup & Rossi 1980). *Parastacus pilimanus* (von Martens 1869) (Fig. 1) is reported to Brazil, Uruguay and Argentina. In Brazil it occurs only at Rio Grande do Sul, the southernmost state in Brazil, where it is quite common in swampy lowlands, in the central depression and in the southern reaches of this state. The species is identified by the following characteristics (Buckup 2003): rostrum generally triangular, slightly elongate, dorsally flat; rounded tip and usually reaching the distal half of the penultimate segment antennules; post-orbital carina sharp and elevated in the anterior portion, beginning in the proximity of the orbits, external to the lateral carina of the rostrum, disappearing behind, on the surface of the cephalothorax, halfway between the orbits and the cervical groove; third maxilliped with dense hairy cover; sharp margins of the cheliped fingers completely hidden under dense tuffs of long hair that hide even their teeth; dorsal surface of the movable finger of chelipeds with irregular series of tubercles; inner surface of the carpus of chelipeds with numerous tubercles; width of the areola smaller than the basal width of rostrum at orbital sinus; distal margin of telson armed bilaterally with a spine.

Figure 1. Picture of *Parastacus pilimanus* (von Martens, 1869) collected in a wetland area of the Lagoa do Peixe National Park, Rio Grande do Sul state, Brazil. (Picture by Fabiano Corrêa).

On October 25th, 2008, we collected one female specimen of *P. pilimanus*, with total length of 70mm and total weight of 6.3g, in a temporary pool at a locality known as 'Talha Mar' (31°15'21.52" S, 50°58'57.50" W). This site is located approximately 12 km northeastern to Tavares city and is inside the borders of the Lagoa do Peixe National Park (LPNP) (Fig. 2). The specimen was collected with a dip net during a field trip conducted by the Ichthyology Laboratory of the Rio Grande Federal University, FURG (SISBIO license for field collection number 14443-1). In the laboratory, was preserved in 10% formalin and was identified according Buckup (2003) and subsequently housed at the Decapod Crustacean Laboratory of the same University (FURG#3285). The LPNP has an area of approximately 35 Km^2, is considered as a "Biosphere Reserve" by UNESCO and was declared a national park by Brazilian authorities in 1986 (Corrêa *et al.* 2009).

Previous research in this region (Santos *et al.* 2000, Loebmann & Vieira 2005) have reported the occurrence of 11 species of decapods crustaceans from marine, estuarine and freshwater origins. The present work is the first to report the occurrence of *P. pilimanus* in this national park. The wide variety of habitats, associated with the ephemeral appearance of flooded areas during wet periods, could explain why the species has not been found in prior studies. Furthermore, its behavior to live inside burrows built in the substrate (Buckup & Rossi 1980, Buckup 2010) would disfavor its capture during sampling of epifaunal organisms.

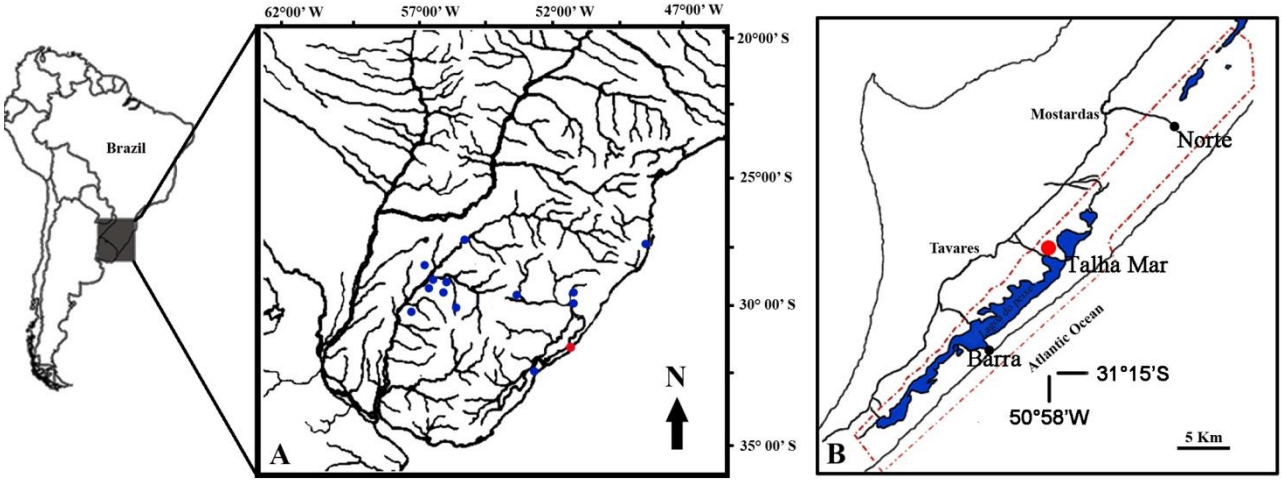

Figure 2. Southern Brazil (A) and the Lagoa do Peixe National Park (B) showing the location of wetland area where the specimens of *Parastacus pilimanus* were captured. Blue dots denote the previous known geographic distribution of *P. pilimanus*, whereas the red dot denotes the current record of *P. pilimanus* inside the borders of the national park. Red line dotted delimitation of Lagoa do Peixe National Park.

Although there is no prior work on the ecology of this species within this national park, other authors suggested that the fossorial life style of this species would favor other organisms due to the aeration of the substrate and because this species builds tunnels that can be used as microhabitats for other aquatic organisms (Buckup 2010). According with IUCN (2011), the current anthropogenic activities negatively affecting this species are domestic, industrial and agricultural non-treated wastes dumped into their aquatic habitat. How *P. pilimanus* is an endemic species, restricted living south of South America, this species becomes more vulnerable to the impacts of human actions. Nevertheless, there is no specific conservation measures in place for this species. The current record of *P. pilimanus* highlights the importance of the Lagoa do Peixe National Park for conservation of aquatic macrofauna inhabiting freshwater wetlands along the coastal plain of southern Brazil. Future sampling surveys focusing this species are needed to reveal its distribution and abundance patterns inside this national park.

Acknowledgements

We are grateful to Dr. Luiz Felipe Cestari Dumont and Dr. Marcos Alaniz Rodrigues for their assistance in species identification.

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Received September 2012
Accepted November 2012
Published online June 2013