



NOTES ON GEOGRAPHIC DISTRIBUTION

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## Range extension of the genus *Fredilocarcinus* Pretzmann, 1978 (Crustacea: Decapoda: Trichodactylidae) to Colombia

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**Abstract:** The genus *Fredilocarcinus* is recorded herein for the first time in Colombia, based on a male of *Fredilocarcinus raddai* (Pretzmann, 1978) collected in El Vergel, Amazon River, Leticia municipality, Amazonas department. The external morphology and first gonopod are illustrated.

**Key words:** Amazon region, freshwater crab, new record, Peru, taxonomy

The Neotropical freshwater crab family Trichodactylidae is mainly a lowland group, usually occurring in bodies of water below 300 m, with most of its representatives being distributed along the Amazon River basin (Rodríguez 1981, 1992; Magalhães 2003). Currently, eight genera have been reported to occur in Colombia: Bottiella Magalhães & Türkay, 1996, Dilocarcinus H. Milne Edwards, 1853, Forsteriana Ng & Low 2010, Moreirocarcinus Magalhães & Türkay, 1996, Poppiana Bott, 1969 Sylviocarcinus H. Milne Edwards, 1853, Trichodactylus Latreille, 1828, and *Valdivia* White, 1847, with a total of 14 species (Campos 2005). The three species of the genus Fredilocarcinus Pretzmann, 1978, seem to be restricted to the western and southwestern portion of the Amazon basin since the few and scattered records currently available report F. apyratii Magalhães & Türkay, 1996, from the state of Acre, in Brazil; F. musmuschiae (Pretzmann & Mayta, 1980), from the departments of Huánuco and Loreto, in Peru; and F. raddai (Pretzmann, 1978), also from the department of Loreto, in Peru (Magalhães and Türkay, 1996).

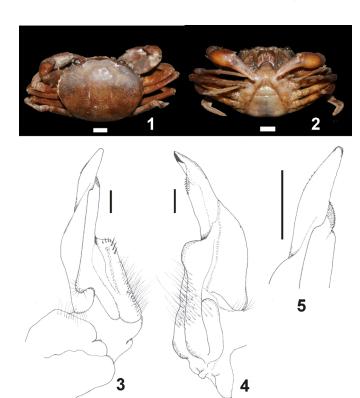
One adult male (carapace width 29.8 mm; carapace length 27.9 mm) of *Fredilocarcinus raddai* was collected by Diego A. Gómez in the Amazon River, El Vergel, 03°51′39″S, 070°12′36″W, municipality of Leticia,

Amazonas department, Colombia, in a small wetland near the Amazon River, on 29 July 2014. The specimen was fixed in 10% formalin and subsequently preserved in 70% ethanol and deposited in the collection of invertebrates of the Museo de Historia Natural ANDES, Departamento de Ciencias Biológicas, Facultad de Ciencias, Universidad de los Andes, Bogota (catalogue number ANDES I-2792). The identification was based mainly on the morphology of the male first gonopod. The key, descriptions and illustrations provided by Magalhães and Türkay (1996) were followed.

The specimen has six anterolateral teeth behind the exorbital tooth of the carapace (Figure 1) and a broadly triangular abdomen, with nearly straight lateral margins; the somites III—VI are fused (Figure 2). The male first gonopod (Figures 3–5) of the present specimen has a similar morphology to that described and illustrated by Magalhães and Türkay (1996), but exhibits a slight difference: the flattened apex is well distinct and longer that the subdistal lobe, but it is not as long as in the specimen illustrated by Magalhães and Türkay (1996: 136, fig. 6). Even so, the apex allows a clear differentiation from its closest congener *F. musmuschiae*, which has an apex shorter than the subdistal lobe.

Fredilocarcinus raddai has so far been recorded from two localities in the Loreto Department, Peru: one from approximately 20 km SW from Iquitos, and the other from Yurimaguas, on the Huallaga River. Both records are in the watershed of Marañon River, the name of the Amazon River in Peru. The new record presented herein is the first report of the species, as well as of the genus, in Colombian territory and extends its range more than 300 km eastwards in the same river system (Figure 6).

This information is relevant not only because it increases the knowledge about the Colombian carcinofauna, which already has one of the most diverse



**Figures 1–5.** Fredilocarcinus raddai (Pretzmann, 1978), Colección de Invertebrados, Museo de Historia Natural, Universidad de los Andes (ANDES I-2792): 1: male, habitus, dorsal view; 2: same, ventral view; 3: male left first gonopod, ventral-mesial view; 4: same, dorso-lateral view; 5: distal part, ventro-mesial view. Scale bars: 1, 2: 10 mm; 3, 4, 5: 1.26 mm.

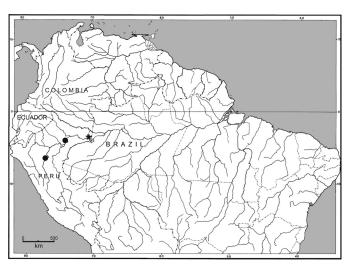
freshwater crab fauna in the world (Cumberlidge et al. 2009), but also because it suggests that the distribution of other little known Amazonian trichodactylid species might be wider than the available records are indicating.

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## LITERATURE CITED

Campos, M.R. 2005. Freshwater crabs from Colombia. A taxonomic and distributional study. Bogotá: Academia Colombiana de



**Figure 6.** Distribution map for *Fredilocarcinus raddai* (Pretzmann, 1978): new record (star); former records (circle).

Ciencias Exactas Físicas y Naturales, Col. Jorge Álvarez Lleras No. 24, pp. 1–363. http://www.accefyn.org.co/PubliAcad/Cangrejos/Freshwater.pdf

Cumberlidge, N., P.K.L. Ng, D.C.J. Yeo, C. Magalhães, M.R. Campos, F. Álvarez, T. Naruse, S.R. Daniels, L.J. Esser, F.Y.K. Attipoe, F.L. Clotilde-Ba, W. Darwall,; A. McIvor, M. Ram and B. Collen. 2009. Freshwater crabs and the biodiversity crisis: importance, threats, status, and conservation challenges. Biological Conservation 142(8): 1665–1673. doi: 10.1016/j.biocon.2009.02.038

Magalhães, C. 2003. Famílias Pseudothelphusidae e Trichodactylidae; pp. 143–287, in: Melo, G.A.S. (ed.). Manual de identificação dos Crustacea Decapoda de água doce do Brasil. São Paulo: Editora Loyola.

Magalhães, C. and M. Türkay. 1996: Taxonomy of the neotropical freshwater crab family Trichodactylidae. III. The genera *Fredilocarcinus* and *Goyazana* (Crustacea: Decapoda: Brachyura). Senckenbergiana biologica 75(1/2): 131–142.

Rodríguez, G. 1981. Decapoda; pp. 41–51, in: Hurlbert, S.H., G. Rodríguez and N.D. Santos. (eds.). Aquatic biota of tropical South America, part 1: Arthropoda. San Diego: San Diego State University.

Rodríguez. G. 1992. The freshwater crabs of America. Family Trichodactylidae and supplement to the Family Pseudothelphusidae. (Collection Faune Tropicale 31). Paris: Editions ORSTOM. 189 pp.

**Authors' contribution statement:** JYAP made the analysis, illustrations and wrote part of the text; DAG collected the data and edited the images; CM contributed to the analysis, edited the illustrations, and wrote part of the text.

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