



Range extension for three species of South American freshwater crabs (Crustacea: Decapoda: Trichodactylidae)

PABLO A. COLLINS*, FEDERICO GIRI & VERÓNICA WILLINER

Instituto Nacional de Limnología (INALI - CONICET - UNL), Ciudad Universitaria Pje El Pozo s/n, 3000 Santa Fe, Santa Fe, Argentina. E-mail: pcollins@arnet.com.ar

Abstract

New sampling programs have extended the distribution of three species of freshwater crabs (family Trichodactylidae): *Dilocarcinus septemdentatus* and *Sylviocarcinus pictus* from the Amazon basin to southern South America, and *S. australis*, from the north of Argentina southwards. The three species are now found in the floodplain of the middle Paraná River (31°39'S, 60°45'W). The extension of their distribution is approximately 500 km and 2000 km further south. The number of freshwater crab species in the alluvial valley of the Paraná River has increased by 30% with these new records.

Key words: freshwater crabs, Trichodactylidae, Paraná River, *Dilocarcinus*, *Sylviocarcinus*

Introduction

Nine species belonging to five genera (*Trichodactylus* Latreille 1828, *Dilocarcinus* Milne-Edwards 1853, *Sylviocarcinus* Milne-Edwards 1853, *Valdivia* White 1847, and *Zilchiopsis* Bott 1969) of Trichodactylidae, a family restricted to Central and South America (Manning & Hobbs 1977; Magalhães 1998), are known to inhabit the Paraná River floodplain in Argentina (Magalhães & Türkay 1996a; Magalhães 1999a; b; Morrone & Lopretto 2001; Collins *et al.* 2002). Although there are records from almost all sites in the Paraguay-Paraná River (Lopretto 1976; 1981), these samples were obtained as part of sporadic sampling programs.

Trichodactylid crabs inhabit the floodplains of great rivers. Some species are more frequently found among aquatic macrophytes, others in caves or under rocks and trunks of dead trees. Furthermore, some species can walk long distances across land (Fernandez & Collins 2002). Both habitat preference and behaviour are tools that allow these crabs to inhabit unstable environments with large variations of abiotic conditions (Collins *et al.* 2007).

Materials and methods

The new data records correspond to environments in the Río de la Plata basin, mainly formed by large rivers such as the Paraná and Paraguay. Fluctuations in water level, which follow an annual periodicity, cause the aquatic fauna to colonize and/or abandon transition zones (ATTZ aquatic-terrestrial transition zones) during each hydric cycle. The environments are characterized by their constituent abundant macrophytes, algae and fauna of shallow lakes, secondary rivers and streams. The pH is close to neutral, and the water is fairly rich in dissolved nutrients, its conductivity being of approximately 110 µScm (Depetris & Pasquini 2007).