

## New localities for Crustacea Decapoda in the Magellan region, southern South America\*

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**SUMMARY:** We report the occurrence of *Lithodes turkayi* (Anomura), *Libidoclaea granaria*, and *C. edwardsii* (Brachyura), in the Beagle Channel. This observation extends their range of distribution south of the previously reported limit of the Straits of Magellan. *Acanthocyclus albatrossis* (Brachyura) occurs south of Isla Navarino and also in the Beagle Channel, however in a particular habitat of its northern coast. The occurrence of *Lithodes confundens* (formerly identified as *L. antarcticus*) north of the eastern entrance of the Straits of Magellan is also reported. We extend its range of distribution northerly and its bathymetric distribution to the intertidal.

**Key words:** Southwestern Atlantic, southeastern Pacific, Subantarctic, Anomura, Brachyura, crabs.

**RESUMEN:** NUEVAS LOCALIDADES PARA CRUSTACEA DECAPODA EN LA REGIÓN MAGALLÁNICA, EN LA AMÉRICA DEL SUR AUSTRAL. – En este artículo describimos la presencia de *Lithodes turkayi* (Anomura), *Libidoclaea granaria*, y *Cancer edwardsii* (Brachyura) en el Canal del Beagle, que extienden su rango de distribución al sur del Estrecho de Magallanes. Notificamos aquí la presencia de *Acanthocyclus albatrossis* (Brachyura) en un único habitat con particulares características de la costa norte del Canal del Beagle. También describimos la aparición de *Lithodes confundens* (registrado previamente como *Lithodes antarcticus*) en el intermareal al norte de la entrada oriental del Estrecho de Magallanes, extendiendo su rango de distribución hacia el norte y su distribución batimétrica hasta el intermareal.

**Palabras clave:** Atlántico sudoccidental, Pacífico sudoriental, subantártico, Anomura, Brachyura, cangrejos.

### INTRODUCTION

The inventory of Crustacea Decapoda of the Magellan region can be considered to be almost complete (Arntz and Ríos, 1997). However, some localities of the distribution of Decapoda should be added to the distribution lists currently in use (Vinuesa, 1977; Retamal, 1981; Boschi *et al.*, 1992; Spi-

vak, 1997; Gorny, 1999) to know their exact range of distribution in the southern tip of South America and therefore the paths of interchange between both oceans. In this article we provide new localities and extend the range of distribution of 4 species of benthic Decapoda, previously reported in the Magellan zoogeographic Province. We also give the only locality of the northern coast of the Beagle Channel where *Acanthocyclus albatrossis* Rathbun, 1898 occurs.

\*Accepted February 10, 1999.

## MATERIAL

All of the following species are part of the collection of the Laboratorio de Biología de Crustáceos of the Centro Austral de Investigaciones Científicas (CADIC), in Ushuaia.

Infraorder ANOMURA H. Milne Edwards, 1832

Family Lithodidae Samouelle, 1819

*Lithodes confundens* Macpherson, 1988

Previous known distribution: south of Islas Malvinas (Falklands I.) at 54°02'S, 58°40'W and in the Strait of Magellan on muddy bottoms, from 50 to 119 m depth (Macpherson, 1988).

Between 12-14 December 1997, 222 males from 23.7 to 145.0 mm carapace length (CL) and 104 females between 38.4 and 94.4 mm CL were caught near Monte Tigre (51°21'S; 69°02'W), 120 km north of the eastern entrance of the Strait of Magellan. Specimens were caught by tangle nets and by hand in the intertidal during ebbside, when they left tidal pools at the moment of draining. One hundred specimens were found in mating couples. Further information was reported by Lovrich *et al.* (1998).

*Lithodes turkayi* Macpherson, 1988

Previous known distribution: off the Pacific coast of Chile (ca. 32°S; Revuelta and Andrade, 1978), Strait of Magellan (Campodónico and Guzmán, 1972) and off Islas Malvinas (Falklands I.; Macpherson, 1988), from 70 to 600 m depth.

On 16 August 1997, 7 males from 57.4 to 72.5 mm CL and 22 ovigerous females from 40.3 to 69.0 mm CL were collected in the Beagle Channel (54°54.3'S; 68°36.0'W) at 230 m depth with commercial traps used for fishing kingklip *Genypterus blacodes* (Schneider, 1801).

Infraorder BRACHYURA Latreille, 1803

Family Majidae Samouelle, 1819

*Libidoclaea granaria* Milne Edwards and Lucas, 1842

Previous known distribution: in the Pacific, from Valparaíso to the Strait of Magellan, and in the Atlantic from the Strait of Magellan to Golfo San Matías (Retamal, 1981), and off Buenos Aires Province (Boschi *et al.*, 1992).

On 18 July 1985, one male of 92.5 mm CL, 81.2 mm carapace width (CW) was caught at 60 m depth near Islotes Lucas (54°52.7'S; 68°12.2'W) by com-

mercial traps for fishing king crabs. Captured along with specimens of *Lithodes santolla*.

Family Belliidae Dana, 1852

*Acanthocyclus albatrossis* Rathbun, 1898

Previous known distribution: from Talcahuano, Chile (Retamal, 1981) to Seno Grandi Isla Navarino (55°12'S; 67°55'S; Garth *et al.*, 1967), and Islas Malvinas (Falkland Is.) (Boschi *et al.*, 1992).

A sample of 24 male specimens, ranging from 4.3 to 17.8 mm of CL and 34 female specimens, with CL from 9.5 to 18.5 mm, with only one ovigerous female were captured on 12 February 1998 in Bahía Varela (54°52.2'S; 67°15.0'W). A grouping of this species was found in intertidal mussel beds in a beach with an even slope. Crabs were inside interstices formed by mussels, their bissus and (or) stones. Crabs were found in an environment sheltered from waves and strong currents. This is the only locality on the northern coast of the Beagle Channel, Argentina that this species was found.

Family Cancridae Latreille, 1803

*Cancer edwardsii* Bell, 1835

Previous known distribution: from Ecuador to Strait of Magellan (Retamal, 1981).

One male of 78.1 mm CL, 122 mm CW, formalin fixed weight 350 g. Caught on 30 August 1990 at 30 m depth near Islotes Haskenyaska (54°54.3'S; 67°08.9'W) by a commercial trap for fishing king crabs. Captured with >100 specimens of *Paralomis granulosa*, which occurred in the same trap.

## DISCUSSION

The occurrence of *Lithodes turkayi*, *Libidoclaea granaria*, and *C. edwardsii* in the Beagle Channel extends their range of distribution south to the previously reportedly limit of the Strait of Magellan (Retamal, 1981; Boschi *et al.*, 1992).

Although the southern limit of the distribution of *Acanthocyclus albatrossis* is the Seno Grandi (55°12'S; 67°56'W; Garth *et al.*, 1967), this is the first mention of its occurrence in the Beagle Channel, Argentina. We believe that the environment of Bahía Varela is unique on the northern coast of the Beagle Channel. By contrast, in very similar habitats but with a greater energy of waves and currents, only the hymenosomatid *Halicarcinus planatus* (Fabricius, 1775) occurs.

*Lithodes turkayi* Macpherson, 1988 is morphologically very similar to *L. murrayi* Henderson, 1888 (see Macpherson, 1988), and the latter species is the only lithodid from the high Antarctic (Klages *et al.*, 1995). Therefore, in future studies we recommend meticulous morphometric examinations of specimens from all the range of distribution of these species to resolve whether they belong to the same species, and whether this/these species has/have Antarctic and Subantarctic distribution.

The occurrence of *Lithodes confundens* here reported extends its range of distribution northerly and its bathymetrical distribution range to the intertidal. Moreover, to our knowledge this is the only lithodid species that occur in this habitat.

So far, *Lithodes santolla* (Molina, 1782) (formerly *L. antarcticus* Jacquinet 1844) and *L. confundens* were confused because of their very similar morphological characters, and thus individuals may have been misidentified as *L. santolla* (= *L. antarcticus*). From anecdotal evidence, *Lithodes confundens* may occur from the latitude of Puerto San Julian (ca. 49°S) to Cabo San Pablo (54°20'S, personal observations). Off the Patagonian Atlantic coast *L. santolla* occurs in the Golfo San Jorge between 45° and 47°S (Vinuesa, 1985) and off the Atlantic coast of Tierra del Fuego (Cabo San Pablo, pers. obs.). *Lithodes santolla* has occurred at high densities in the Strait of Magellan and south of the Isla Grande (Tierra del Fuego). Hence, it is probable that *L. santolla* exhibits a disjointed distribution off the Atlantic Patagonian coast south to 45°S: one population in the Golfo San Jorge and the other(s) in the surrounding waters of Tierra del Fuego. Furthermore, from the evidence presented here and by Macpherson (1988), *L. confundens* likely occurs in the Strait of Magellan. Detailed surveys are needed to resolve the pattern of mixing, occurrence and abundance of both species in the Strait of Magellan and south Atlantic waters.

## ACKNOWLEDGEMENTS

JHV and GAL are Senior Researchers of the Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET) and FT has a postgraduate Fellowship of the CONICET.

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