NOTES AND NEWS

FIRST RECORD OF *NOTOBALANUS FLOSCULUS* (DARWIN, 1854) (CIRRIPEDIA, ARCHAEOBALANIDAE) FROM THE SOUTH ATLANTIC COAST OF SOUTH AMERICA

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The distribution of the barnacle fauna has been documented especially for the Northern Hemisphere (Southward & Newman, 1977; Zullo, 1979). As regards South America, the latest revision of the distribution of the group has been made by Young (1995). The distribution of barnacles constitutes an interesting subject, due to their great dispersal abilities. Despite the virtual absence of barnacles in Antarctica because of ice scouring, there are strong links between the southern South American and the Antarctic fauna (Arntz & Gallardo, 1994). For balanomorph barnacles, this may be particularly supported by the fact that they became almost extinct, relatively recently (Dayton, 1990). Furthermore, a single species of barnacle occurs in the deep waters of the southwestern Atlantic and in Antarctica (Young, 1995). Therefore, in the hypothetical case of global warming of the seawater, the South American fauna has distinct chances to colonize Antarctica.

Notobalanus flosculus (Darwin, 1854), has commonly been found attached to *Concholepas concholepas* (Bruguière, 1789) (Gastropoda, Muricidae) and other mollusks, as well as on any hard substrate including inanimate objects (wood, rocks, etc; Pilsbry, 1916). This species was previously reported from the coasts of Chile and Peru (Pilsbry, 1916; Newman & Ross, 1976; Young, 1995) but exact localities were not given. So far, *N. flosculus* has not been reported from the southwestern Atlantic.

In this note, we report the presence of *N. flosculus* in the Bahía Ushuaia (54° 54′S 68° 24′W) located in the Beagle Channel; in the Bahía Aguirre (54° 55′S 65° 55′W); and on the Atlantic coast of Tierra del Fuego (53° 36′S 67° 58′W). These three localities are new additions to the previously reported range of distribution of this species (fig. 1).

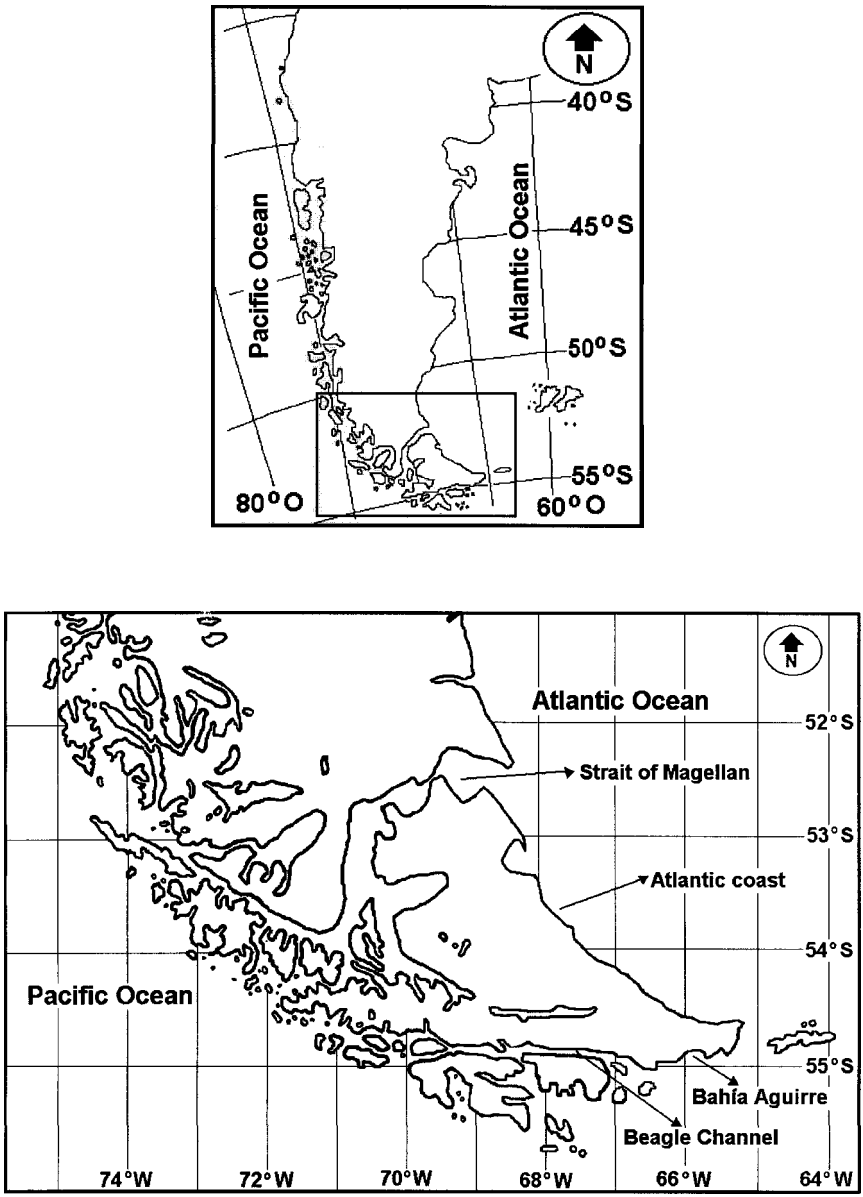

Fig. 1. Geographical situation of the area.

In the Beagle Channel and coastal waters of Tierra del Fuego, lithodid and brachyuran crabs are abundant in shallow waters between 2 and 50 m depth (pers. obs.) and offer a hard substrate for barnacle attachment. *N. flosculus* occurs on large individuals of *Paralomis granulosa* (Jacquinot, 1847); i.e., on females of > 60 mm carapace length (CL) and on males > 80 mm CL (Lovrich, 1991; 1997).

N. flosculus can be found as an epibiont of *P. granulosa* throughout the year. In a sample of 300 male specimens of *P. granulosa* > 75 mm CL from the Beagle Channel, the average density was 50.3 (sd: ± 69.7) *N. flosculus* attached on the carapace, or 1.28 individuals×cm^{-2}. The maximum density was 542 individuals per carapace of *P. granulosa* or approximately 7.26 *N. flosculus*×cm^{-2}.

In the Beagle Channel and Bahía Aguirre, *N. flosculus* has also been found as an epibiont of *Lithodes santolla* (Molina, 1782) between December and March of each year since 1995. In December 1995, *N. flosculus* were fouling 48 out of 68 male specimens of *L. santolla*. The size range of male *L. santolla* with *N. flosculus* as epibionts was 83.5-143.5 mm CL. In a sample of 26 specimens of *L. santolla*, *N. flosculus* occurred at an average density of 39.07 (sd: ± 49.35) individuals per carapace. Finally, *N. flosculus* also occurred, less frequently, on *Peltarion spinosulum* (White, 1843) and on *Eurypodius latreillii* Guérin, 1828 in an average density of 10.9 (sd: ± 6.0) individuals per carapace.

We also recorded the presence of *N. flosculus* on artificial collectors deployed at 8-25 m depth in the Bahía Ushuaia and in the Beagle Channel. The artificial collectors were plates of 8 × 15 cm with one face smooth and the other one grilled. The highest densities of *N. flosculus* were 1.5 individuals×cm^{-2} in the port of Ushuaia and 0.1 individuals×cm^{-2} in the Beagle Channel.

On the Atlantic Coast of Tierra del Fuego, *N. flosculus* has been found attached on rocks in the low intertidal.

Our findings extend the distributional range of *N. flosculus* in southern and eastern directions with regard to the distribution previously reported (Pilsbry, 1916; Newman & Ross, 1976; Young, 1995). So far, and from studies of those authors, this species was considered to occur on the Pacific coast of South America. Our report extends its distributional range into the Atlantic Ocean, and confirms once more the Beagle Channel as one of the corridors of interchange of organisms between the Atlantic and Pacific Oceans (Arntz & Gorny, 1996).

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