August 6, 1979

BULL. BIOL. SOC. WASH.
No. 3 (1979), pp. 134–143

# GEOGRAPHIC DISTRIBUTION OF ARGENTINIAN MARINE DECAPOD CRUSTACEANS

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*Abstract.*—Decapod crustaceans are listed from the two main subregions of the Argentinian continental shelf: A. warm-temperate, from shore to 40–60 m and between 23° and 44°S latitude; and B. cold-temperate, 150–200 km from the continent in the north at a depth of 80 m or more, and extending from 34°–35°S latitude southward to the Patagonian shelf, Magellanic region and the Malvinas Islands. Eighty-one mainly benthonic species are included from the two subregions, 54 from the warm-temperate and 45 from the cold-temperate. Some species are found in part of the two subregions.

ГЕОГРАФИЧЕСКОЕ РАСПРОСТРАНЕНИЕ
АРГЕНТИНСКИХ МОРСКИХ ДЕСЯТИНОГИХ РАКООБРАЗНЫХ

*Реферат.*--Перечисляются десятиногие ракообразные в двух основных подрайонах Аргентинского континентального шельфа: А. умеренного теплом 40-60 м от берега и южных широтах от 23° до 44°; и Б. умеренно холодном, 150-200 км от материка на севере, на глубине 80 м или больше и южных широтах 34-35° на юг до Патагонского шельфа, Магелланого района и Мальвинских остров. Включается 81 вид из этих двух подрайонов; они в большинстве бентонные - 54 из умеренно теплого и 45 из умеренно холодного. Некоторые виды встречаются в части двух подрайонов.

## Introduction

The decapod crustaceans in Argentine marine waters are relatively poor in number of species, and their distribution is related to two main biogeographical subregions, according to the different characteristics of the water masses:

A. Warm-temperate subregion. This subregion extends from the littoral of Buenos Aires southward to the coastal waters of Chubut (43°–44°S), showing certain seasonal fluctuations in the southern area. The depths of the external boundaries range between 40 and 60 m; temperature varies from 8° to 23°C throughout the year, and according to latitude. This subregion also reaches northward to Cape Frio, Brazil (23°S). It is known as the "Argentine Biogeographical Province," a name that was given by malacologists, although it is rather inappropriate because of the scarce endemic species in the Argentine area (Fig. 1).

B. Cold-temperate subregion. This subregion is influenced by subantarctic

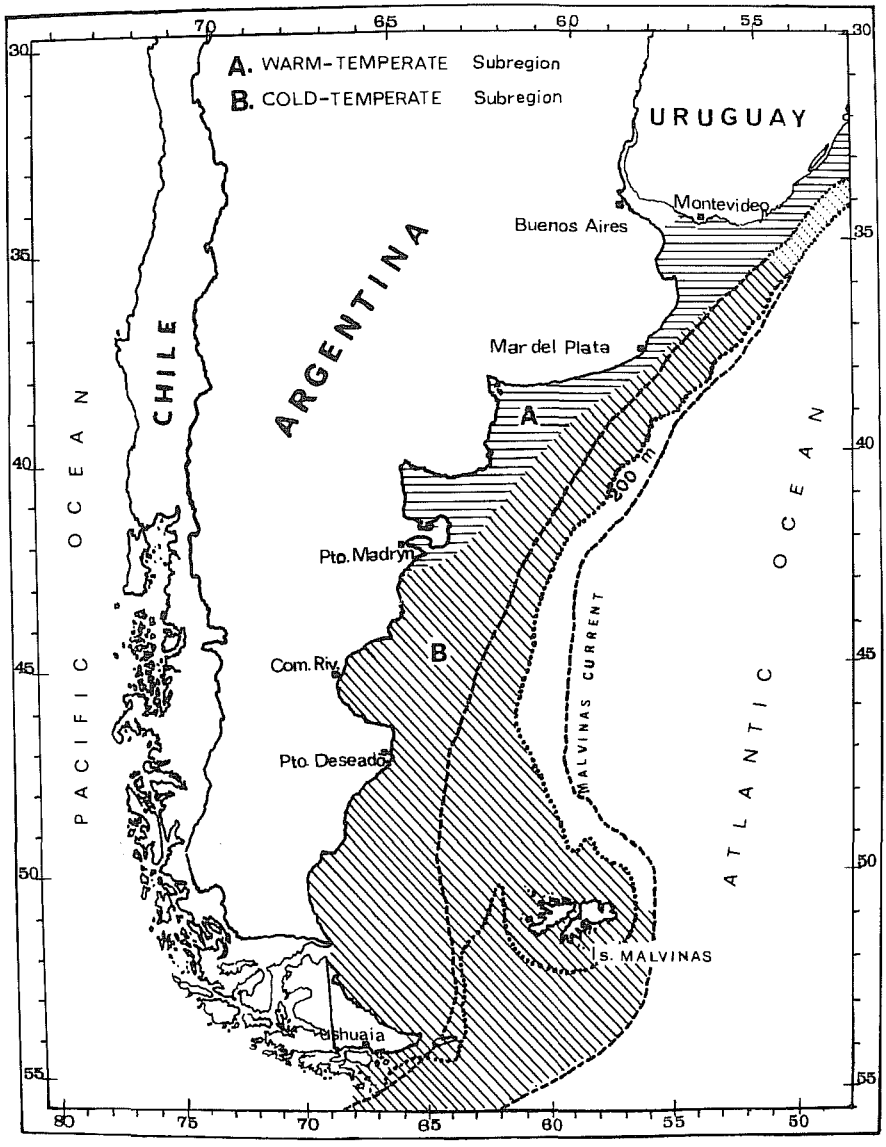


Fig. 1. Biogeographical subregions in Argentinean marine waters. A. Warm-temperate (horizontal lines). B. Cold-temperate (oblique lines). Area between dashed lines, approximate location of Malvinas Current. Dots indicate 200-m isobath.

Table 1. Distribution of marine decapod crustaceans in the Argentine shelf and adjacent slope, according to subregions and lesser zone; xxx very common, xx common, x scarce, — absent.

| Species | Subregion A Warm-temperate | Subregion B Cold-temperate | | |
|---|---|---|---|---|
| | Bs. Aires and northern Patagonia, 36–44°S | Deep water Bs. Aires 36–41°S | Deep water southern Patagonia 41–52°S | Tierra del Fuego, Malvinas Is. Magellanic region 51–56°S |
| NATANTIA | | | | |
| PENAEIDEA | | | | |
| Fam. Penaeidae | | | | |
| *Pleoticus muelleri* (Bate) | xxx | — | x | — |
| *Artemesia longinaris* Bate | xxx | — | — | — |
| *Penaeus paulensis* Pérez Farfante | x | — | — | — |
| Fam. Sergestidae | | | | |
| *Peisos petrunkevitchi* Burkenroad | xxx | — | — | — |
| *Sergestes arcticus* Kröyer | — | — | — | x |
| CARIDEA | | | | |
| Fam. Hippolytidae | | | | |
| *Nauticaris magallanica* (A. Milne-Edwards) | — | — | — | xx |
| *Chorismus antarcticus* (Pfeffer) | — | — | — | xx |
| Fam. Alpheidae | | | | |
| *Betaeus truncatus* Dana | — | — | x | x |
| *Betaeus lilianae* Boschi | xx | — | — | — |
| *Alpheus* sp. | xx | — | — | — |
| Fam. Campylonotidae | | | | |
| *Campylonotus vagans* Bate | — | x | xx | xx |
| *Campylonotus semistriatus* Bate | — | — | — | xx |
| *Campylonotus capensis* Bate | — | — | — | x |
| Fam. Pandalidae | | | | |
| *Austropandalus grayi* (Cunningham) | x | x | xx | xx |
| *Pandalopsis ampla* Bate | — | x | x | x |
| Fam. Pasiphaeidae | | | | |
| *Pasiphaea acutifrons* Bate | — | — | — | x |
| Fam. Oplophoridae | | | | |
| *Acanthephyra pelagica* | | x | x | xx |

Table 1. Continued.

| Species | Subregion A Warm-temperate | Subregion B Cold-temperate | | |
|---|---|---|---|---|
| | Bs. Aires and northern Patagonia, 36–44°S | Deep water Bs. Aires 36–41°S | Deep water southern Patagonia 41–52°S | Tierra del Fuego, Malvinas Is. Magellanic region 51–56°S |
| REPANTIA | | | | |
| MACRURA | | | | |
| Fam. Scyllaridae | | | | |
| *Scyllarides deceptor* Holthius | x | — | — | — |
| Fam. Callianassidae | | | | |
| *Anacalliax argentinensis* (Biffar) | x | — | x | — |
| *Callianassa* spp. | xx | — | xx | — |
| Fam. Nephropidae | | | | |
| *Metanephrops rubellus* (Moreira) | x | — | — | — |
| *Thymops birsteini* (Zarenkov et Semenov) | — | x | xx | xx |
| ANOMURA | | | | |
| Fam. Galatheidae | | | | |
| *Munida subrugosa* (White) | x | xx | xxx | xxx |
| *Munida gregaria* (Fabricius) | — | — | x | xx |
| *Munida spinosa* Henderson | — | x | x | x |
| Fam. Porcellanidae | | | | |
| *Pachycheles haigae* Rodrigues de Costa | xxx | — | — | — |
| *Pachycheles chubutensis* Boschi | xx | — | — | — |
| Fam. Lithodidae | | | | |
| *Lithodes antarcticus* Jacquinot | — | xx | xxx | xxx |
| *Paralomis granulosa* Henderson | — | xx | xxx | xxx |
| *Paralomis formosa* Henderson | — | — | — | x |
| *Paralomis* sp. | — | — | x | xx |
| Fam. Albuneidae | | | | |
| *Blepharipoda doelloi* Schmitt | xx | — | — | — |
| Fam. Hippidae | | | | |

Table 1. Continued.

| Species | Subregion A Warm-temperate | Subregion B Cold-temperate | | |
|---|---|---|---|---|
| | Bs. Aires and northern Patagonia, 36–44°S | Deep water Bs. Aires 36–41°S | Deep water southern Patagonia 41–52°S | Tierra del Fuego, Malvinas Is. Magellanic region 51–56°S |
| *Pelia rotunda* A. Milne-Edwards | x | — | — | — |
| *Leucippa pentagona* H. Milne-Edwards | xxx | — | — | — |
| *Leurocyclus tuberculosus* (Milne-Edwards et Lucas) | xx | — | — | — |
| Fam. Portunidae | | | | |
| *Ovalipes trimaculatus* (de Haan) | xxx | — | x | — |
| *Coenophthalmus tridentatus* A. Milne-Edwards | xxx | — | x | — |
| *Callinectes* sp. | x | — | — | — |
| Fam. Xanthidae | | | | |
| *Platyxanthus crenulatus* A. Milne-Edwards | xxx | — | — | — |
| *Platyxanthus patagonicus* A. Milne-Edwards | xx | x | x | — |
| *Pilumnoides hassleri* A. Milne-Edwards | xx | — | x | — |
| *Pilumnus reticulatus* Stimpson | xx | — | — | — |
| *Panopeus* sp. | x | — | — | — |
| Fam. Pinnotheridae | | | | |
| *Pinnotheres maculatum* Say | xxx | — | — | — |
| *Pinnotheres garthi* Fenucci | xx | — | — | — |
| *Dissodactylus crinitichelis* Moreira | xx | — | — | — |
| *Fabia emiliani* (De Melo) | xx | — | — | — |
| *Pinnixa patagoniensis* Rathbun | xx | — | — | — |
| *Pinnixa brevipollex* Rathbun | xx | — | — | — |
| *Pinnixa rapax* | x | — | — | — |
| ?*Pinnaxodes chilensis* A. Milne-Edwards | — | — | — | x |
| Fam. Grapsidae | | | | |
| *Cyrtograpsus angulatus* | xxx | — | xx | — |
| *Cyrtograpsus altimanus* Rathbun | xxx | — | x | — |

Table 1. Continued.

| Species | Subregion A Warm-temperate | Subregion B Cold-temperate | | |
|---|---|---|---|---|
| | Bs. Aires and northern Patagonia, 36–44°S | Deep water Bs. Aires 36–41°S | Deep water southern Patagonia 41–52°S | Tierra del Fuego, Malvinas Is. Magellanic region 51–56°S |
| *Cyrtograpsus affinis* (Dana) | x | — | — | — |
| *Chasmagnathus granulata* Dana | xxx | — | — | — |
| *Metasesarma rubripes* (Rathbun) | x | — | — | — |
| Fam. Atelecyclidae | | | | |
| *Peltarion spinosulum* (White) | — | xxx | xx | xx |
| *Corystoides chilensis* Milne-Edwards et Lucas | xx | — | — | — |
| *Acanthocyclus albatrossis* Rathbun | — | — | — | x |
| Fam. Ocypodidae | | | | |
| *Uca uruguayensis* Nobili | xx | — | — | — |
| Fam. Geryonidae | | | | |
| *Geryon quinquedens* Smith | — | x | — | — |

gellanic region, Malvinas Islands and Patagonian shelf. At a latitude of 44°–45°S, it leaves the coastal region following the Malvinas current; upon reaching 37°S, it is about 150–200 km from the continent, with a depth of 80 m or more. The northern boundary of this subregion could be tentatively placed at 34°–35°S. Water temperature ranges from 4° to 16°C throughout the year. This subregion is part of the so-called Antiboreal region (Ekman 1963), which extends to the Pacific Ocean along the southern coastline of Chile. Marine biologists call it the "Magellanic Province." Antiboreal is a rather inadequate name for this biogeographical region of the Southern Hemisphere, it being much more appropriate to call it "notal," and specificially for our continent, South American Notal, with the same connotations as for the Magellanic Province mentioned above (Boschi 1964, Semenov 1972) (Fig. 1).

## Decapod Crustaceans of the Argentine Marine Shelf

Knowledge of the distribution of marine decapod crustaceans in Argen-

several international oceanographic expeditions in the South Atlantic Ocean, such as the one accomplished by the West German vessel, *Walther Herwig*. However, some groups of decapods need more intensive study, and some areas need more extensive exploration. The following summary is based on a previous contribution of the author (Boschi 1976) on this fauna.

Table 1 shows the different species of marine decapods known to date, with their relative abundance indicated for both subregions. It must be remembered that, as the greater part of the species are benthonic or live near the bottom, they have been fairly easily captured by bottom trawl nets. It is expected that from research with the aid of mid-water trawls, often in the deeper areas of the shelf and slope, the total number of species will be increased.

It is interesting to point out the presence of the nephropid lobster *Thymops birsteini* (Zarenkov and Semenov 1972) which, because of its size, might be considered a potential resource. This lobster is usually captured at depths between 200 and 1,500 m. The lobster *Metanephrops rubellus* (Holthuis 1974) is occasionally found in water of the Argentine shelf, since it belongs to warmer environments. Boschi (1973a) gave distributional data for *Scyllarides deceptor* in 45–200 m depths off northern Argentina and southern Brazil, and a new mud shrimp, *Anacalliax argentinensis*, was described from waters of 50 m and less off the provinces of Santa Cruz, Rio Negro and Buenos Aires (Biffar 1971). de Saint Laurent (1973) created a new genus for this species. Boschi and Fenucci (1972) gave distributional data from a survey of a gulf in Chubut. The penaeid shrimps have been investigated by Boschi (1963, 1966, 1968) and Pérez Farfante (1969, 1977). There are also some interesting species of caridean shrimp of the genus *Campylonotus* (Torti and Boschi 1973), as well as *Acanthephyra pelagica* and *Pandalopsis ampla* (Boschi 1973b).

The pagurids of the South Atlantic have been studied by Forest and de Saint Laurent (1967), with valuable biogeographical considerations. Scelzo (1971, 1973) and Scelzo and Boschi (1973) have also contributed with the discovery of a new species and new information on distribution of anomurans from Recife, Brazil, to Tierra del Fuego, Argentina. Boschi (1963) has also worked on porcellanid crabs. Efford (1976) included a Pacific sand crab in the southern Argentine region. With regard to the Brachyura, one of the last contributions by Fenucci (1975) on the taxonomy and distribution of the Pinnotheridae should be mentioned. *Geryon* is also mentioned by Scelzo and Valentini (1974). Vinuesa (1977) contributed to knowledge of the marine decapod crustaceans of Tierra del Fuego.

Finally, Semenov (1972) has made a very important contribution on the distribution of 290 species of benthonic invertebrates of both coasts of America, including decapod crustaceans. According to Boschi (1976) there

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Contribución No. 367 del INIDP(Ex-IBM).