

# Gastropods from raised marine deposits along the Beagle Channel, southern Argentina: the ancestors of the living fauna

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*This contribution focuses on the diversity of gastropods that lived in the Beagle Channel during the Early and Middle Holocene (from ca. 7500 to 4000 years BP). This temporal framework has special interest because it allowed us to evaluate the colonization process of a relatively recent marine ecosystem, the Beagle Channel (originated 8000–7500 years ago), and the possibility that this channel has represented a 'faunistic corridor' between the Atlantic and Pacific waters of the Magellan Region. Fossil material from four sampling localities was studied; 31 species of gastropods were identified. Additional records of four species of gastropods from six other sites at the Beagle Channel are provided. The fauna described in this work represents the ancestors of the living fauna in the region. In addition, most of these species are also currently found both in the Atlantic and Pacific Magellanic waters, strongly suggesting that the Beagle Channel represented a favourable route for the dispersal of molluscs.*

**Keywords:** gastropods, systematics, distribution, Beagle Channel, Argentina

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## INTRODUCTION

The Beagle Channel is located at the southern tip of South America, limited by the Isla Grande de Tierra del Fuego to the north and a group of islands to the south (Navarino, Hoste, Gordon, Picton, Nueva, Lenox, and several smaller islets) (Figure 1). This channel, joining the Atlantic and Pacific Oceans, is a drowned ancient glacial valley, running from west to east for about 250 km. During the Pleistocene, the entire basin repeatedly was glaciated (Rabassa *et al.*, 2000). Presently available evidence, strongly suggests that a glacial lake resulting from ice melting was formed about 12,000 years ago (Heusser, 1989, 1998). Later, about 8000 years ago, the area was flooded progressively with marine waters from the open oceans, becoming a marine ecosystem about 7500 years before present (Rabassa *et al.*, 1986). Therefore, the Quaternary appears to be a key period for the understanding of the origin of the present marine fauna of the Beagle Channel.

The present paper updates the knowledge about the gastropods inhabiting the Beagle Channel at the time when marine conditions were being established in this area. This information updates the preliminary list of molluscs by Gordillo *et al.* (2005) and other faunistic data (Hägg *in* Halle (1910); Porter *et al.* (1984); Rabassa *et al.* (1986)).

## Quaternary marine deposits in Tierra del Fuego

The first descriptions on the Fuegian Quaternary deposits were made by Charles Darwin in 1833, on the basis of observations made during his visit to South America on-board the HMS 'Beagle'. Later on, Anderson (1906), Halle (1910), Caldenius (1932), Feruglio (1950), Auer (1956, 1959, 1965, 1970, 1974), Urien (1966), Codignotto & Malumián (1981), Porter *et al.* (1984), Rabassa *et al.* (1986, 1990, 2000), Codignotto (1987), Mörner (1987, 1991), Gordillo *et al.* (1992), Gordillo (1993), Bujalesky (1998), and Bujalesky *et al.* (2001), provided additional information. The Quaternary of Tierra del Fuego is represented by glacial, glaciofluvial, glaciolacustrine, marine, and aeolian deposits. Marine deposits were formed during the Pleistocene interglacial stages and during the Holocene. Pleistocene marine deposits are not well preserved in the Beagle Channel area due to the erosive effect of the last glaciations. The only known Pleistocene beach not eroded by glacial activity is a marine terrace remnant containing various fauna of molluscs, recently found on the southern coast of the Beagle Channel, on Navarino Island (Gordillo *et al.*, 2010). In contrast, littoral Holocene deposits are very common in the area. The southern coast of Tierra del Fuego, under the Scotia Plate Domain, is located in the active seismotectonic setting of the Fuegian Andes (Bujalesky, 1998). Consequently, Holocene deposits along the Beagle Channel originated from isostatic recovery and neotectonic uplift (Rabassa *et al.*, 1986; Gordillo *et al.*, 1992, 1993).

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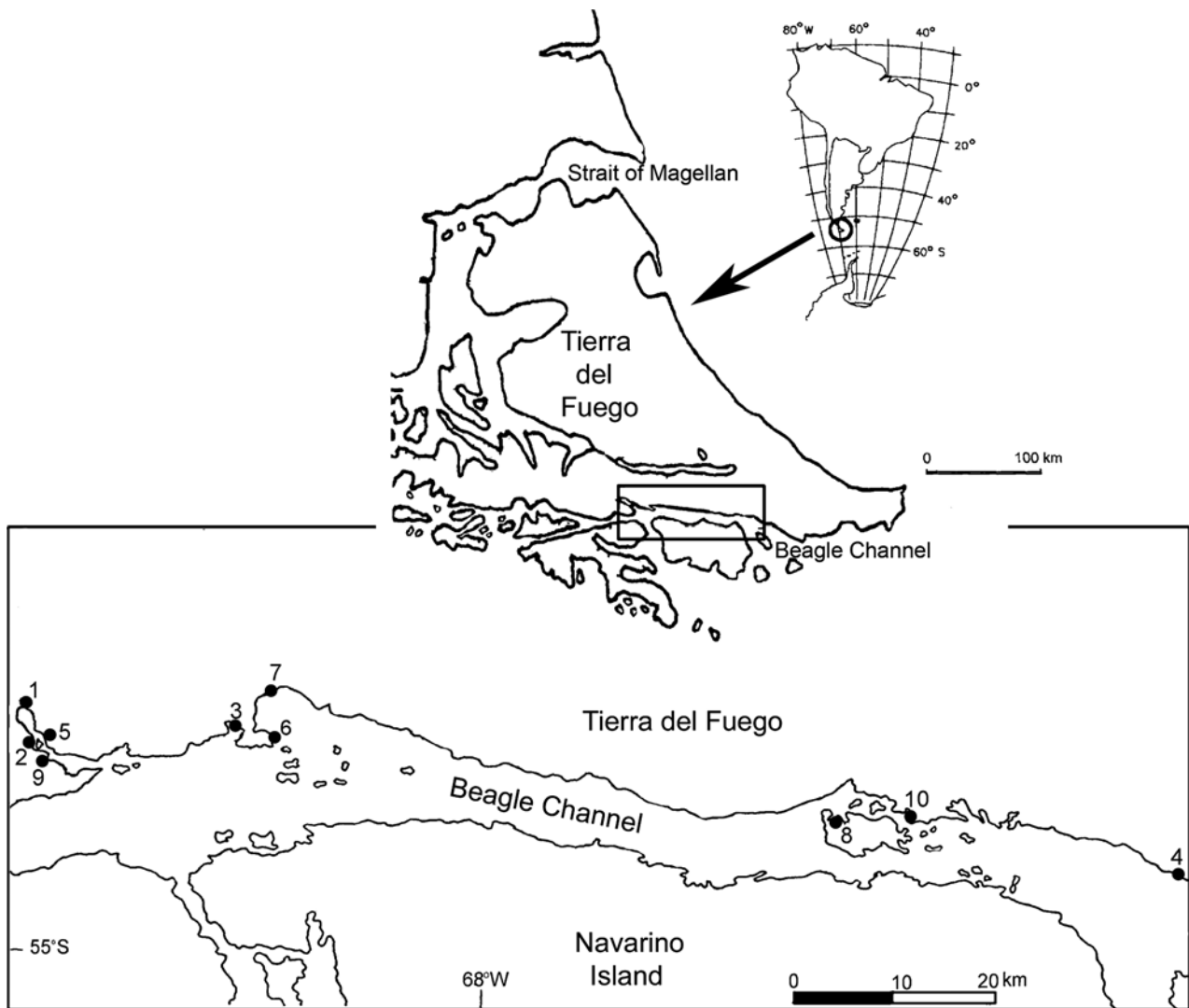


Fig. 1. Location map: 1, Lago Roca; 2, Río Lapataia; 3, Bahía Golondrina; 4, Río Varela; 5, Alakush; 6, Península Ushuaia; 7, Playa Larga; 8, Isla Gable; 9, Río Ovando; 10, Estancia Harberton.

## Studies on Holocene marine molluscs in Tierra del Fuego

The first report on Quaternary molluscs from the Beagle Channel was made by R. Hägg (in Halle, 1910), who listed 12 species from raised beaches collected by Thore G. Halle at Isla Gable. Porter *et al.* (1984) reported the presence of marine shells in a Holocene beach at the north-west end of Península Gusano, Navarino Island. Later, Rabassa *et al.* (1986) provided a preliminary report of the invertebrate fauna (including molluscs) collected at Tierra del Fuego National Park. Gordillo (1992) carried out a taphonomic analysis of the mollusc assemblages in 18 marine deposits from the Beagle Channel. Additional studies on the fossil molluscs from this area were performed by Gordillo (1993, 1999) and Gordillo *et al.* (2005). The last paper provides a preliminary list of the taxa collected from four raised beaches that are considered in detail in the present study. Holocene molluscs from the Atlantic coast of Tierra del Fuego were studied by Feruglio (1950), Richards & Craig (1963) and Gordillo (1992); and those of Magellan Strait by Porter *et al.* (1984), Di Geronimo & Rosso (1996), and Cárdenas & Gordillo (2009).

## MATERIALS AND METHODS

The species studied in this paper were collected from bulk sediment samples from four sites on the northern coast of the Beagle Channel (Figure 1):

- (1) Río Ovando ( $54^{\circ}51'S$   $68^{\circ}35'W$ ) is a stratigraphic sequence composed of coarse sand with pebbles of varied lithology, located at 2.5 m above present sea level (a.s.l.), and dated at  $4160 \pm 45$  years before present (Pta 7573; Coronato *et al.*, 1999).
- (2) Lago Roca ( $54^{\circ}49'S$   $68^{\circ}34'W$ ) is a massive, greyish silty bed (>1.0 m), located at 3.0 m a.s.l. The area was dated at  $7518 \pm 58$  years before present (NZ-7830; Gordillo *et al.*, 1993).
- (3) Bahía Golondrina ( $54^{\circ}50'S$   $68^{\circ}19'W$ ) is a massive bed of fine sandy clays, at 2.0 m a.s.l., and dated at  $6276 \pm 41$  years before present (AA 62801; Gordillo *et al.*, 2008).
- (4) Río Varela ( $54^{\circ}12'S$   $67^{\circ}11'W$ ) is a massive, greyish clay (>1.7 m), located 3 m a.s.l., dated at  $6240 \pm 70$  years before present (Pta 7581; Coronato *et al.*, 1999).

Other material from Alakush (54°50'S 68°34'W), Playa Larga (54°49'S 68°14'W), Península Ushuaia (54°51'S 68°18'W), Isla Gable (55°55'S 67°30'W), Río Lapataia (54°50'S 68°34'W), and Estancia Harberton (54°53'S 67°24'W), were included in this study (Figure 1).

Stratigraphic information on these sites is provided by Gordillo (1991, 1992) and Gordillo *et al.* (1992).

Larger specimens (>20 mm of maximum size) were separated from the sediment matrix in the field. The smaller ones were sorted in the laboratory under a stereoscopic microscope, from a bulk sediment sub-sample of 30–50 dm<sup>3</sup>.

Gastropods were identified at the lower taxonomic level possible, and figured using a scanning electron microscope and digital photography. The synonymy lists are not exhaustive, but only provide those references in which new combinations were provided. When listing the material examined for each locality, the number of specimens is given. The four classes used refer to the maximum size of a species: minute: <2 mm; small: 2–10 mm; medium: 10–20 mm; large: >20 mm.

The material studied was deposited at the Centro de Investigaciones Paleobiológicas, Universidad Nacional de Córdoba (CEGH-UNC).

The present distribution of each species is based on the information provided by Zelaya (2006), who performed a revision on the diversity of gastropods from the southern tip of South America.

## SYSTEMATICS

Family PATELLIDAE Rafinesque, 1815

*Nacella deaurata* (Gmelin, 1791)

Figure 2A

*Patella aenea* Martyn, 1784: figure 17 (non-binomial *vide* ICZN, 1957);

*Patella deaurata* Gmelin, 1791, p. 3719.

*Patella varicosa* Reeve, 1854, pl. 11, figure 21a–c.

*Nacella strigatella* Rochebrune & Mabilie, 1885, p. 110.

*Patinella deaurata* Gmelin-Chemnitz. Strebel, 1907, p. 137, pl. 5, figures 62–65, 68–70; pl. 6, figures 76, 81.

*Patinella delicatissima* Strebel, 1907, p. 145, pl. 5, figures 71, 72, 74, 75.

*Helcioniscus bennetti* Preston, 1913, p. 221.

*Patinigera deaurata* (Gmelin) 1790. Carcelles & Williamson, 1951, p. 256.

### TYPE LOCALITIES

Freto Magellanico [Strait of Magellan] (*Patella deaurata*). Ushuaia (*sic*) [Ushuaia, Beagle Channel]; Bahía Inutil; Tuesday Bay; Magellan-Str [Strait of Magellan] (*Patinella delicatissima*). Cap Horn [Cape Horn] (*Nacella strigatella*). Port Stanley [Malvinas (Falkland) Islands] (*Helcioniscus bennetti*). Tierra del Fuego (*Patella varicosa*).

### DIAGNOSIS

Shell large, moderately solid, ovate in outline, triangular in lateral view, with the apex forwardly directed. Anterior margin nearly straight; posterior margin convex. Shell surface sculptured with strong radial ribs to almost smooth.

### MATERIAL EXAMINED

One specimen, Playa Larga, Beagle Channel (CEGH-UNC 22725).

### OTHER FOSSIL REFERENCES

Atlantic Ocean: 'Argentine Patagonia' (Feruglio, 1950; Aguirre & Farinati, 2000; Pastorino, 2000: Quaternary); San Jorge Gulf (Aguirre, 2003: Holocene and Pleistocene); Bahía Bustamante (Aguirre *et al.*, 2005: Holocene and Pleistocene); Bahía Vera and Bahía Camarones (Aguirre *et al.*, 2006: Holocene and Pleistocene); Beagle Channel (Gordillo, 1992: Holocene).

### PRESENT DISTRIBUTION

Chiloé, Chile to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean up to Santa Cruz Province, Argentina. Intertidal to subtidal.

### REMARKS

*Patinigera aenea* Powell, 1951 (non-Martyn); and *Helcioniscus bennetti* were considered to be a synonyms of *N. deaurata* by Dell (1971) and Powell (1951), respectively; Powell (1973) added *Nacella strigatella* and *Patella varicosa* to the synonymy, and considered *Patinella delicatissima* to be a variety.

Family LEPETIDAE Gray, 1850

*Iothia coppingeri* (Smith, 1881)

Figure 2B

*Tectura (Pilidium) coppingeri* Smith, 1881, p. 35, pl. 4, figures 12, 12a.

*Lepeta coppingeri* Smith E.A. Pilsbry, 1891, p. 71, pl. 39, figures 20, 21.

*Pilidium coppingeri* Smith E.A. Strebel, 1907, p. 110, pl. 3, figure 38a,b.

*Lepeta (Pilidium) coppingeri* (Edg. Smith). Thiele, 1912, p. 185.

*Iothia coppingeri* Smith E.A. Moskalev, 1977, p. 63, figures 5, 6.

### TYPE LOCALITY

Sandy Point [Punta Arenas, Strait of Magellan], 9–10 fathoms [16–18 m].

### DIAGNOSIS

Shell small, patelliform in outline, delicate, whitish. Apex anteriorly displaced. Shell surface sculptured with rows of tubercles radiating from the apex, and concentric growth lines.

### MATERIAL EXAMINED

Fourteen specimens, Río Ovando (CEGH-UNC 22434, 22704).

### OTHER FOSSIL REFERENCES

Pickard (1985) reported the species as present in Holocene deposits of Vestfold Hills, East Antarctica, but this record requires confirmation (see Remarks).

### PRESENT DISTRIBUTION

Chiloé, Chile to Malvinas (Falkland) Islands. 5–96 m.

### REMARKS

Powell (1951) reported *Lepeta (Pilidium) antarctica* Smith, 1907 to be a synonym of *Iothia coppingeri*. Based on this synonymy, the species was subsequently reported as occurring in

the Antarctic waters (e.g. Dell, 1990; Hain, 1990). However, Zelaya (2006) pointed out some differences between Magellanic and Antarctic specimens, and concluded that a systematic revision of these taxa is needed for re-evaluating their conspecificity. In the meantime, the distribution of *Iothia coppingeri* is considered to be restricted to the Magellan Region.

Family FISSURELLIDAE Fleming, 1822

*Fissurella picta* (Gmelin, 1791)

Figure 2C

*Patella personata* Martyn, 1784: figure 64 (non-binomial *vide* ICZN, 1957).

*Patella picta* Gmelin, 1791, p. 3729.

*Fissurella picta* (Gmelin). Lamarck, 1822, p. 10.

*Fissurella atrata* Reeve, 1850, pl. 11, figure 73.

*Fissurella muricata* Reeve, 1850, pl. 14, figure 103.

*Fissurella* (*Balboaina*) *picta* Gmelin. Powell, 1951, p. 85.

*Fissurella* (*Fissurella*) *picta picta* (Gmelin, 1791). McLean, 1984a, p. 37, figures 123–146.

#### TYPE LOCALITIES

Falkland Isl. [Malvinas (Falkland) Islands] (*Patella personata*). Fretto Magellanico [Strait of Magellan] (*Patella picta*). ? (*Fissurella atrata*, *Fissurella muricata*).

#### DIAGNOSIS

Shell large, patelliform in outline, somewhat depressed, solid, with a small foramen in subcentral position. Shell surface whitish with wide purplish or blackish radial bands; sculptured with radial ribs and conspicuous growth lines.

#### MATERIAL EXAMINED

One specimen, Río Ovando (CEGH-UNC 22438); 2 specimens, Río Varela (CEGH-UNC 22736, 22737).

#### OTHER FOSSIL REFERENCES

Atlantic Ocean: 'Argentine Patagonia' (Aguirre & Farinati, 2000; Pastorino, 2000: Quaternary); Bahía Vera and Bahía Camarones (Aguirre *et al.*, 2006: Holocene and Pleistocene). Pacific Ocean: Cahuil, Chile (Philippi, 1887: Quaternary). Beagle Channel (Gordillo *et al.*, 2005 as *Fissurella* spp.: Holocene).

#### PRESENT DISTRIBUTION

*Fissurella picta picta* distributes from Chiloé, Chile to Puerto Deseado, Argentina. Intertidal to 92 m.

#### REMARKS

In a revision of the Magellanic species of *Fissurella*, McLean (1984a) considered *F. atrata* and *F. muricata* to be synonymys of *Fissurella picta*.

*Fissurellidea patagonica* (Strebel, 1907)

Figure 2D

*Megatebenus patagonicus* Strebel, 1907, p. 98, pl. 2, figure 23a–f.

*Fissurellidea patagonica* (Strebel, 1907). Mclean, 1984b, p. 26, figures 10–18.

#### TYPE LOCALITIES

Lennox Insel [Beagle Channel], 10–25 fathoms [18–46 m]; Port Louis [Malvinas (Falkland) Islands].

#### DIAGNOSIS

Shell large, ovate in outline, slightly elevated. Foramen large (1/4 to 1/3 shell length), subcentrally located. Shell surface whitish to light brownish, with greyish, brownish or pinkish radial bands; sculptured with flat radial ribs and growth lines, more evident toward the margin.

#### MATERIAL EXAMINED

One specimen, Río Ovando (CEGH-UNC 22698); 3 specimens, Río Varela (CEGH-UNC 22840); 1 specimen, Río Lapataia (CEGH-UNC 22511).

#### OTHER FOSSIL REFERENCES

Unknown.

#### PRESENT DISTRIBUTION

Chiloé, Chile to Malvinas (Falkland) Islands, and extending northwards, in the Atlantic Ocean, up to Uruguay. Intertidal to 46 m.

Family SCISSURELLIDAE Gray, 1847

*Scissurella clathrata* Strebel, 1908

Figure 2E

*Scissurella clathrata* Strebel, 1908, p. 77, pl. 6, figure 84a–d.

*Scissurella eucharista* Melvill & Standen, 1912, p. 344, pl., figures 1, 1a.

*Schizotrochus clathrata* (Strebel) 1908. Carcelles & Williamson, 1951, p. 251.

*Anatoma clathrata* (Strebel, 1908). Lozouet, 1986, p. 112.

#### TYPE LOCALITIES

54°43'S 64°08'W, Feuerland [Tierra del Fuego], 36 m (*Scissurella clathrata*). 54°25'S 57°32'W, Burdwood Bank, 56 ft [102 m] (*Scissurella eucharista*).

#### DIAGNOSIS

Shell minute, globose, whitish, with delicate cancellated sculpture. Spire low. Teleoconch of up to two whorls, the last with a groove on the periphery (selenizone), which gives rise to an open slip at the outer margin of the aperture. Umbilicus moderately narrow. Aperture rounded.

#### MATERIAL EXAMINED

One specimen, Río Ovando (CEGH-UNC 22447).

#### OTHER FOSSIL REFERENCES

Beagle Channel (Gordillo *et al.*, 2005 as *Scissurella timora*: Holocene).

#### PRESENT DISTRIBUTION

Chiloé, Chile to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean up to Comodoro Rivadavia, Argentina. Intertidal to 110 m.

#### REMARKS

Zelaya & Geiger (2007) redescribed *Scissurella clathrata* and discussed on its generic placement. According to the authors, *Scissurella eucharista* is a synonymy of *S. clathrata*.

Family CALLIOSTOMATIDAE Thiele, 1924

*Calliostoma dozei* Mabile & Rochebrune in Rochebrune &

Mabile, 1889

Figure 2F

*Calliostoma dozei* Mabilbe & Rochebrune in Rochebrune & Mabilbe, 1889, p. 77, pl. 4, figure 4.

TYPE LOCALITY

Au sud-est de l'île Scott [Nassau Bay].

DIAGNOSIS

Shell large, conical–pyramidal, higher than wide. Whorls rounded, separated by deep sutures. Last whorl angulated at base. Shell surface pinkish, almost smooth. Aperture rounded.

MATERIAL EXAMINED

One specimen, Río Ovando (CEGH-UNC 22522).

OTHER FOSSIL REFERENCES

Beagle Channel (Gordillo *et al.*, 2005 as *Calliostoma cf. nudum*: Holocene).

PRESENT DISTRIBUTION

Beagle Channel. 15–40 m.

Family TROCHIDAE Rafinesque, 1815

*Ganesa* sp.

Figure 2G

DIAGNOSIS

Shell small, globose, thin. Spire low, with rounded whorls. Shell surface sculptured only with low growth lines. Umbilicus narrow, elongated. Aperture nearly circular.

MATERIAL EXAMINED

3 specimens, Río Ovando (CEGH-UNC 22452, 22757).

OTHER FOSSIL REFERENCES

Unknown.

PRESENT DISTRIBUTION

Beagle Channel. 30–80 m.

*Margarella violacea* (King, 1832)

Figure 2H

*Margarita violacea* King, 1832, p. 346.

*Trochus (Photinula) violaceus* King, Smith, 1881, p. 33.

*Photinula violacea* (King). Pelseener, 1903, p. 6.

*Margarella violacea* (King). Powell, 1951, p. 96.

TYPE LOCALITY

Fretum Magellanicum [Strait of Magellan].

DIAGNOSIS

Shell medium in size, inflated, moderately solid, pinkish. Spire relatively low. Whorls rounded, the last one laterally expanded, many specimens angulated at the base. Juveniles with open umbilicus, which is covered by a wide, white columellar callus in the adults. Aperture rounded. Interior nacreous.

MATERIAL EXAMINED

Eight specimens, Río Ovando (CEGH-UNC 22683, 22706); 37 specimens, Lago roca (CEGH-UNC 22844); 2 specimens, Bahía Golondrina (CEGH-UNC 22721); 1 specimen, Río Varela (CEGH-UNC 22740).

OTHER FOSSIL REFERENCES

Beagle Channel (Gordillo, 1992; Gordillo *et al.*, 2005: Holocene; Gordillo *et al.*, 2010: Pleistocene).

PRESENT DISTRIBUTION

Chiloé, Chile to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean up to Puerto Deseado, Argentina. Intertidal to 155 m.

REMARKS

The generic placement of this species was reviewed by Zelaya (2004), who concluded that *Margarita*, *Trochus* and *Photinula* were previously wrongly employed.

Family CYCLOSTREMATIDAE Fischer, 1885

*Cyclostrema crassicostatum* Strebel, 1908

Figure 2I

*Cyclostrema crassicostatum* Strebel, 1908, p. 76, pl. 6, figure 83a–c.

*Brookula crassicostatum* (Strebel), 1907. Carcelles & Williamson, 1951, p. 267.

*Brookula crassicostata* (Strebel) 1908. Carcelles, 1953, p. 170.

TYPE LOCALITY

54°43'S 64°08'W [Isla de los Estados], 36 m.

DIAGNOSIS

Shell minute, rounded, somewhat depressed, solid, white. Last whorl inflated, sculptured with prominent axial cords. Umbilicus wide and deep. Aperture evenly rounded.

MATERIAL EXAMINED

Two specimens, Río Ovando (CEGH-UNC 22451, 22755).

OTHER FOSSIL REFERENCES

Unknown.

PRESENT DISTRIBUTION

Beagle Channel to Isla de los Estados. 12–63 m.

REMARKS

*Cyclostrema crassicostatum* was assigned to the genus *Brookula* by Carcelles & Williamson (1951) and Carcelles (1953), but Zelaya *et al.* (2006) concluded that this placement is wrong.

Family EATONIELLIDAE Ponder, 1965

*Eatoniella denticula* Ponder & Worsfold, 1994

Figure 2J

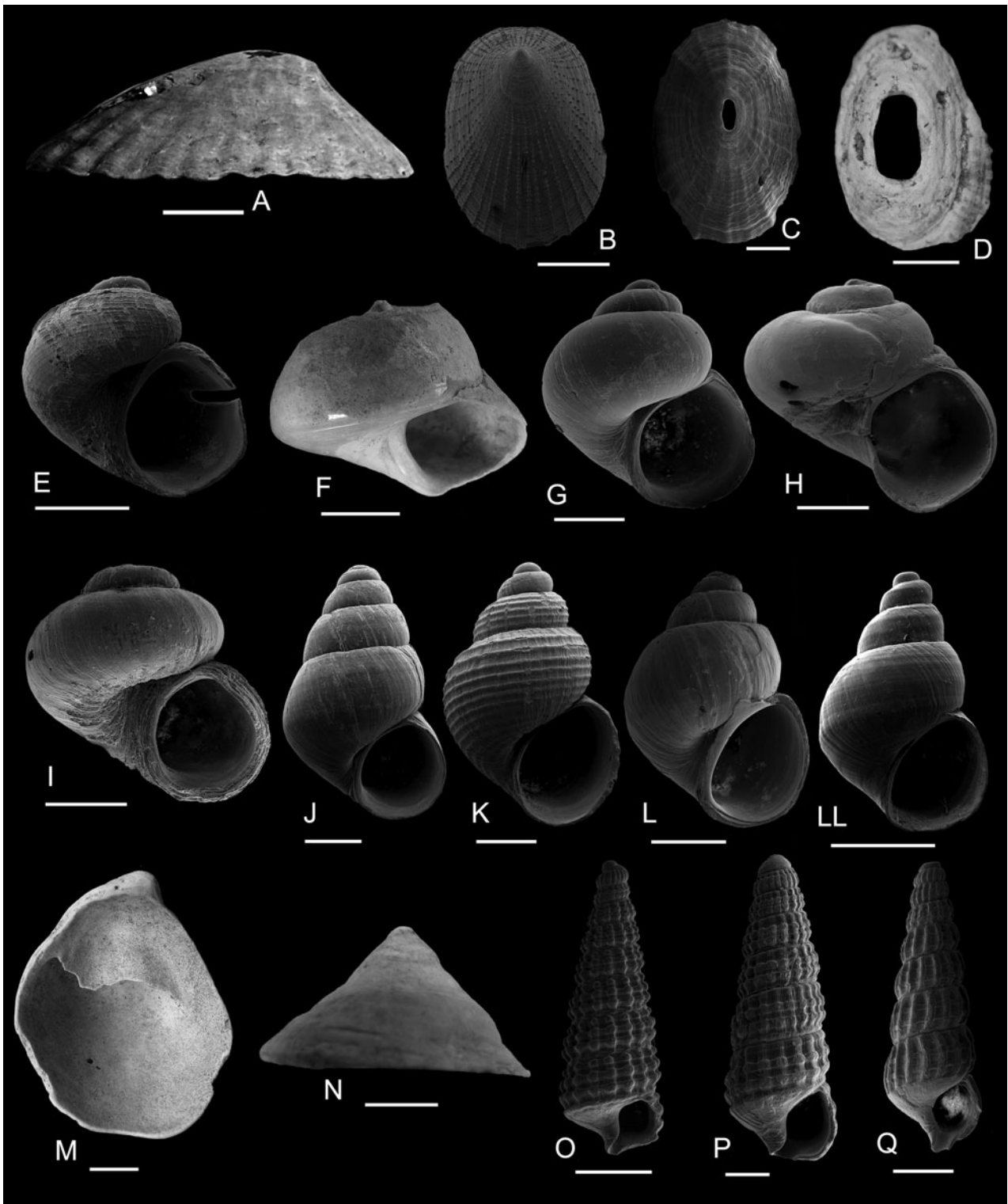
*Eatoniella (Eatoniella) denticula* Ponder & Worsfold, 1994, p. 7, figures 5b,c, 6c, 7b,c, 8b,f,g.

TYPE LOCALITY

54°45.25'S 64°02.3'W, Puerto Cook, Isla de los Estados.

DIAGNOSIS

Shell small, fusiform, solid, grey in colour. Spire moderately high, with rounded whorls. Last whorl somewhat globose, angulated at the base. Shell surface sculptured only with very low growth lines. Aperture circular. Umbilicus small, narrow.



**Fig. 2.** (A) *Nacella deaurata* (CEGH-UNC 22725); (B) *Iothia coppingeri* (CEGH-UNC 22434); (C) *Fissurella picta* (CEGH-UNC 22438); (D) *Fissurellidea patagonica* (CEGH-UNC 22511); (E) *Scissurella clathrata* (CEGH-UNC 22447); (F) *Calliostoma dozei* (CEGH-UNC 22522); (G) *Ganesa* sp. (CEGH-UNC 22452); (H) *Margarella violacea* (CEGH-UNC 22683); (I) *Cyclostrema crassicostatum* (CEGH-UNC 22451); (J) *Eatoniella denticula* (CEGH-UNC 22439); (K) *Onoba schythei* (CEGH-UNC 22441); (L) *Laevilitorina caliginosa* (CEGH-UNC 22450); (LL) *Laevilitorina* sp. (CEGH-UNC 22448); (M) *Crepidula* cf. *dilatata* (CEGH-UNC 22531); (N) *Trochita pileolus* (CEGH-UNC 22688); (O) *Cerithiopsilla* (?) *burd woodiona* (CEGH-UNC 22444); (P) *Cerithiella* sp. 2 (CEGH-UNC 22443); (Q) *Eumetula michaelseni* (CEGH-UNC 22445). Scale bars: A, 10 mm; B, C, L, LL, O, Q, 1 mm; D, 5 mm; E, G, H, J, K, P, 500  $\mu$ m; F, M, N, 5 mm; I, 250  $\mu$ m.

#### MATERIAL EXAMINED

Sixty-two specimens, Río Ovando (CEGH-UNC 22839); 5 specimens, Lago Roca (CEGH-UNC 22712); 7 specimens, Río Varela (CEGH-UNC 22416, 22439, 22440).

#### OTHER FOSSIL REFERENCES

Beagle Channel (Gordillo *et al.*, 2005 as *Eatoniella* sp.: Holocene; Gordillo *et al.*, 2010 as *Eatoniella* sp.: Pleistocene).

## PRESENT DISTRIBUTION

Chiloé, Chile to Isla de los Estados. Intertidal to 35 m.

Family RISSOIDAE Gray, 1847  
*Onoba schythei* (Philippi, 1868)  
Figure 2K

*Rissoa schythei* Philippi, 1868, p. 225.

*Onoba schythei* (Philippi, 1868). Ponder & Worsfold, 1994, p. 39, figures 23a,c, 24d,h, 28, 29.

## TYPE LOCALITY

Freto Magellanico [Strait of Magellan].

## DIAGNOSIS

Shell small, fusiform, solid, white. Spire moderately high. Protoconch with delicate spiral sculpture. Teleoconch with strong, regularly distributed spiral cords. Last whorl globose. Aperture ovate. Umbilicus narrow.

## MATERIAL EXAMINED

Two specimens, Río Ovando (CEGH-UNC 22441, 22703); 2 specimens, Río Varela (CEGH-UNC 22842).

## OTHER FOSSIL REFERENCES

Beagle Channel (Gordillo *et al.*, 2005 as *Onoba* spp.: Holocene).

## PRESENT DISTRIBUTION

Chiloe, Chile to Isla de los Estados. 5–36 m.

Family LITTORINIDAE Children, 1834  
*Laevilitorina caliginosa* (Gould, 1848)  
Figure 2L

*Littorina caliginosa* Gould, 1848, p. 83.

*Paludestrina caliginosa* Gould. Rochebrune & Mabilie, 1889, p. 42.

*Laevilitorina caliginosa* Gould. von Martens & Pfeffer, 1886, p. 81, pl. 1, figure 8a–d.

*Littorina* (*Laevilittorina*) *caliginosa* (Gould). Melvill & Standen, 1907, p. 100.

*Laevilittorina* (*sic*) *caliginosa* (Gould). Melvill & Standen, 1914, p. 118.

## TYPE LOCALITY

Terra (*sic*) del Fuego [Tierra del Fuego].

## DIAGNOSIS

Shell small, fusiform, thin, brownish. Spire relatively low, with rounded whorls. Last whorl globose, occupying most of shell length. Shell sculptured only with low growth lines. Umbilicus wide. Aperture ovate. Columellar callus solid, white.

## MATERIAL EXAMINED

1 specimen, Río Ovando (CEGH-UNC 22450); 6 specimens, Río Varela (CEGH-UNC22838).

## OTHER FOSSIL REFERENCES

Beagle Channel (Gordillo *et al.*, 2005: Holocene; Gordillo *et al.*, 2010: Pleistocene).

## PRESENT DISTRIBUTION

Strait of Magellan to Malvinas (Falkland) Islands. Intertidal to 65 m.

## REMARKS

*Laevilitorina caliginosa* was also reported as occurring in the Antarctic waters (e.g. Lamy, 1905, 1906, 1911; Hedley, 1916; Arnaud, 1972; Arnaud & Bandel, 1978), but these records need revision.

*Laevilitorina* sp.  
Figure 2LL

## DIAGNOSIS

Shell small, fusiform, thin, ochraceous. Spire acute, moderately high, with rounded to somewhat gradated whorls. Last whorl globose, angulated at base. Umbilicus narrow. Aperture ovate. Columellar callus delicate, white.

## MATERIAL EXAMINED

Five specimens, Río Ovando (CEGH-UNC 22448, 22700, 22841).

## OTHER FOSSIL REFERENCES

This material does not correspond to any fossil species currently known for the area. Beagle Channel (Gordillo *et al.*, 2010 as *Laevilitorina* sp.: Pleistocene).

## PRESENT DISTRIBUTION

Beagle Channel and Strait of Magellan. 15–40 m.

Family CALYPYTRAEIDAE Lamarck, 1809  
*Crepidula* cf. *dilatata* Lamarck, 1822  
Figure 2M

*Crepidula dilatata* Lamarck, 1822, p. 25.

*Calyptraea dilatata* Lam. Broderip, 1835, p. 203, pl. 27, figure 11.

? *Crepidula pallida* Broderip, 1835, p. 204, pl. 29, figure 3.

*Crepidatella dilatata* Lamarck. Smith, 1881, p. 32.

? *Crepidula subdilatata* Mabilie & Rochebrune *in* Rochebrune & Mabilie, 1889: p. 37, pl. 4, figure 11.

## TYPE LOCALITIES

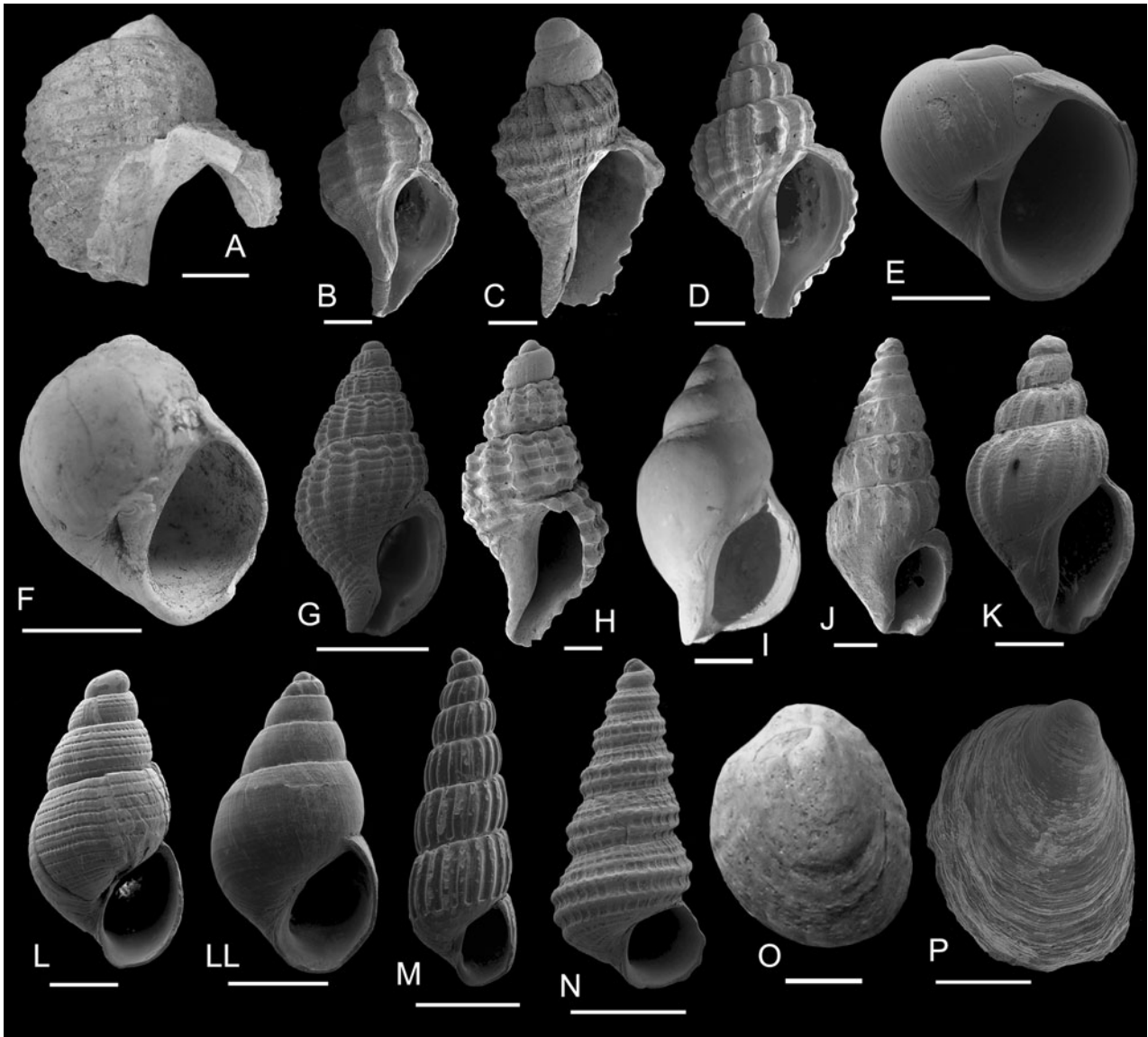
West coast of South America? (*Crepidula dilatata*) [fide Mermod (1950)]. Insulas Falkland [Malvinas (Falkland) Islands] (*Crepidula pallida*). Baie Orange [Cape Horn]; côte ouest de la Terre du Feu [West Tierra del Fuego] (*Crepidula subdilatata*).

## DIAGNOSIS

Shell large, variable in shape, usually ovate. Spire minute, at the right posterior end; last whorl occupying the total shell length. Shell surface with very low growth lines. Interior with a wide, white, sinuate septum.

## MATERIAL EXAMINED

Two specimens, Río Varela (CEGH-UNC22846); 1 specimen, Estancia Harberton (CEGH-UNC 22506); 1 specimen, Isla Gable (CEGH-UNC 22531).



**Fig. 3.** (A) *Achantina monodon* (CEGH-UNC 22480); (B) *Fuegotrophon pallidus* (CEGH-UNC 22725); (C) *Trophon geversianus* (CEGH-UNC 22671); (D) *Xymenopsis muriciformis* (CEGH-UNC 22699); (E) *Falsilunatia soluta* (CEGH-UNC 22697); (F) *Tectonatica impervia* (CEGH-UNC 22520); (G) *Glypteuethria meridionalis* (CEGH-UNC 22435); (H) *Lachesis? euthrioides* (CEGH-UNC 22753); (I) *Pareuthria plumbea* (CEGH-UNC 22525); (J) *Savatieria meridionalis* (CEGH-UNC 22436); (K) *Belalora thielei* (CEGH-UNC 22437); (L) *Odostomia* sp. 1 (CEGH-UNC 22442); (LL) *Odostomia* sp. 2 (CEGH-UNC 22449); (M) *Turbonilla smithi* (CEGH-UNC 22422); (N) *Mathilda magellanica* (CEGH-UNC 22446); (O) *Kerguelenella lateralis* (CEGH-UNC 22433); (P) *Siphonaria lessonii* (CEGH-UNC 22518). Scale bars: A, 10 mm; B, H, LL, P, 500  $\mu$ m; C–E, G, J–L, M–O, 1 mm; F, I, 5 mm.

#### OTHER FOSSIL REFERENCES

Atlantic Ocean: 'Argentine Patagonia' (Feruglio, 1950; Aguirre & Farinati, 2000; Pastorino, 2000: Quaternary); Cabo Buen Tiempo ('Araucaniano' [Miocene]), Puerto Belgrano ('Belgranense' [Pleistocene], Bahía Sanguineto ('Prequequense' [?]) (Carcelles, 1944); Bahía Bustamante (Aguirre *et al.*, 2005: Holocene and Pleistocene); Bahía Vera and Bahía Camarones (Aguirre *et al.*, 2006: Holocene and Pleistocene). Beagle Channel (Gordillo, 1992: Holocene; Gordillo *et al.*, 2010: Pleistocene). Pacific Ocean: Mejillones and Coquimbo, Chile (Philippi, 1887: Quaternary); 'northern Chile' (Herm, 1969: Plio-Pleistocene); Cahuil, Chile (Quaternary) (Carcelles, 1944); Caldera, Chile (Guzmán *et al.*, 2000: Holocene–Pleistocene); La Portada Formation, Mejillones, Chile (Marquardt *et al.*, 2003: Pliocene); Mejillones and Caldera, Chile (Ortlieb *et al.*, 2003: Pleistocene, Isotope Stage 11).

#### PRESENT DISTRIBUTION

Perú to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean up to Buenos Aires Province, Argentina. Intertidal to 55 m.

#### REMARKS

Parodiz (1939) and Powell (1951), based on the general shell similarities, placed *Crepidula pallida* Broderip, 1835 and *Crepidula subdilatata* Mabilie and Rochebrune *in* Rochebrune & Mabilie, 1889 in the synonymy of *C. dilatata*. However, shell morphology proved to fail in species distinction among *Crepidula* species. In fact, a cryptic species of *Crepidula dilatata* is known from central Chile: *Crepidula fecunda* Gallardo, 1979. To date, *C. fecunda* may be separated from *C. dilatata* only by reproductive characteristics. As this character is unknown for the material studied here, the identity of this species is tentative. Penchaszadeh *et al.* (2002)



concluded that *Crepidula dilatata* is the species currently living at the Beagle Channel; *C. fecunda* is not known south of 45° 43'S (Véliz *et al.*, 2003).

*Trochita pileolus* (d'Orbigny, 1841)  
Figure 2N

*Calyptraea (Trochatella) pileolus* d'Orbigny, 1841, p. 463.

*Calyptraea decipiens* Philippi, 1845, p. 61.

*Infundibulum pileolus* d'Orbigny, 1847, pl. 78, figures 5, 6.

*Galerus mamillaris* Ortmann, 1902, p. 182, pl. 32, figure 8a,b.

*Trochita clypeolum* Reeve, 1859, pl. 3, figures 14a,b.

*Trochita pileolus* (Lamarck, 1822). Linse, 2002: 90, pl. 10, figure 9.1.1-74.

#### TYPE LOCALITIES

Continent Américaine (*Calyptraea (Trochatella) pileolus*). Fretum Magellanicum [Strait of Magellan] (*Calyptraea decipiens*). Cape Fairweather [Argentina] (*Galerus mamillaris*). Strait of Magalhaens [Strait of Magellan] (*Trochita clypeolum*).

#### DIAGNOSIS

Shell large, circular in outline, conical-triangular in lateral view, moderately high. Whorls separated by deep sutures. Shell surface whitish, almost smooth, with very low growth lines. Internal septum present.

#### MATERIAL EXAMINED

Nine specimens, Río Ovando (CEGH-UNC 22534, 22688, 22759); 8 specimens, Lago Roca (CEGH-UNC 22845).

#### OTHER FOSSIL REFERENCES

Atlantic Ocean: 'Argentine Patagonia' (Feruglio, 1950: Quaternary); 40°53'S 57°10'W (Richards & Craig, 1963: Pleistocene); Santa Cruz ('Patagoniano' [Oligocene-Miocene]), Yegua Quemada ('Superpatagoniano' [Oligocene-Miocene]), Cabo Tres Puntas, Golfo San Jorge ('Patagoniano' [Oligocene-Miocene]), Pan de Azucar and Manantial Salado, San Julián ('Patagoniano' [Oligocene-Miocene]) (von Ihering, 1907). Pacific Ocean: Tubul, Chile (Valdovinos, 1996: Plio-Pleistocene). Beagle Channel (Gordillo, 1992; Gordillo *et al.*, 2005: Holocene).

#### PRESENT DISTRIBUTION

Strait of Magellan to Malvinas (Falkland) Islands, extending northwards, in the Atlantic Ocean, throughout the coast line up to Santa Cruz Province, and from deeper waters up to off Buenos Aires Province, Argentina. 5–111 m.

#### REMARKS

von Ihering (1907) included *Calyptraea decipiens* and *Galerus mamillaris* in the synonymy of *Trochita pileolus*. Judging from the original description, *Trochita clypeolum* also seems to be a synonym.

Family CERITHIOPSIDAE (s.l.) Adams H. & Adams A., 1853  
*Cerithiopsis* (?) *burd woodiana* (Melvill & Standen, 1912)  
*Bittium burd woodionum*: Melvill & Standen, 1912: p. 351,  
figure 12  
Figure 2O

#### TYPE LOCALITY

Burdwood Bank (Islas Malvinas), 56 fathoms (102 m).

#### DIAGNOSIS

Shell small, elongate, with a high spire of nearly straight whorls, solid, brownish. Protoconch of 1.5 whorls, sculptured with prominent axial ribs. Teleoconch sculptured with three prominent spiral cords per whorl and axial ribs, forming small nodules at intersections; an additional smooth cord present at the sutures. Base flat and smooth. Aperture ovate, projected into a short and narrow siphonal canal.

#### MATERIAL EXAMINED

One specimen, Río Ovando (CEGH-UNC 22444).

#### OTHER FOSSIL REFERENCES

Beagle Channel (Gordillo *et al.*, 2010 as *Cerithiella* sp.: Pleistocene).

#### PRESENT DISTRIBUTION

Canal Beagle and Malvinas (Falkland) Islas. 15–102 m.

*Cerithiella* sp. 2  
Figure 2P

#### DIAGNOSIS

Shell small, high-spined, with nearly straight whorls, separated by deep sutures, solid, whitish. Protoconch smooth, of one whorl. Teleoconch cancellated, with two strong and one less developed apical spiral cords per whorl, and axial ribs, which produce low nodules at intersections. Base inflated and smooth. Aperture ovate, projected into a short and wide siphonal canal.

#### MATERIAL EXAMINED

Three specimens, Lago Roca (CEGH-UNC 22443).

#### OTHER FOSSIL REFERENCES

This material does not correspond to any of the fossil species currently known for the area.

#### PRESENT DISTRIBUTION

Beagle Channel. 15–35 m.

*Eumetula michaelsoni* (Strebel, 1905)  
Figure 2Q

*Bittium michaelsoni* Strebel, 1905b, p. 655, pl. 23, figure 41a–c.

*Eumeta michaelsoni* (Strebel). Thiele, 1912, p. 262.

*Eumetula michaelsoni* (Strebel) 1905. Carcelles & Williamson, 1951, p. 275.

#### TYPE LOCALITIES

Punta Arenas [Strait of Magellan]; Uschuaia (*sic*) [Ushuaia, Beagle Channel].

#### DIAGNOSIS

Shell small, elongated, with a high spire of rounded whorls, separated by deep sutures. Teleoconch sculptured with two flat spiral cords per whorl, and strong axial ribs. Base narrow, smooth. Aperture ovate, with a short and relatively wide siphonal canal.

## MATERIAL EXAMINED

One specimen, Lago Roca (CEGH-UNC 22445).

## OTHER FOSSIL REFERENCES

Beagle Channel (Gordillo, 1992; Gordillo *et al.*, 2005; Holocene).

## PRESENT DISTRIBUTION

Beagle Channel and Strait of Magellan to Malvinas (Falkland) Islands. 96 m.

Family MURICIDAE Rafinesque, 1815

*Acanthina monodon* (Pallas, 1774)

Figure 3A

*Buccinum monodon* Pallas, 1774, p. 33, pl. 3, figures 3, 4.

*Calcar longum* Martyn, 1784, figure 50 (non-binomial *fide* ICZN, 1957).

*Buccinum calcar* Bruguière, 1789, p. 253, vol. 1, figure 10.

*Acanthina monodon* (Solander, 1786). Dell, 1971, p. 208.

## TYPE LOCALITIES

Americanae (sic) (*Buccinum monodon*). Cap Horn [Cape Horn] (*Calcar longum*; *Buccinum calcar*).

## DIAGNOSIS

Shell large, solid, fusiform, low-spired, with rounded whorls, the last one inflated, occupying most of shell length. Aperture ovate, with inner margin nearly straight; outer margin rounded, with a prominent tooth at base. Siphonal canal short and wide. Shell surface smooth or sculptured with weak or prominent, sometimes imbricate, spiral ribs.

## MATERIAL EXAMINED

One specimen, Isla Gable (CEGH-UNC 22480, 22485, 22486).

## OTHER FOSSIL REFERENCES

Atlantic Ocean: 'Argentine Patagonia' (Feruglio, 1950; Aguirre & Farinati, 2000; Pastorino, 2000: Quaternary); Bahía Bustamante (Aguirre *et al.*, 2005: Holocene); Bahía Vera and Bahía Camarones (Aguirre *et al.*, 2006: Pleistocene). Beagle Channel (Gordillo, 1992 as *Acanthina imbricata*: Holocene).

## PRESENT DISTRIBUTION

Chiloé, Chile to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean, up to Santa Cruz Province, Argentina. Intertidal to 17 m.

## REMARKS

In a revision of the genus *Acanthina*, de Vries (2003) confirmed the synonymy of *Buccinum calcar* and *Acanthina monodon*, and traced back the occurrence of this species up to the upper Pleistocene.

*Fuegotrophon pallidus* (Broderip in Broderip & Sowerby, 1833)

Figure 3B

*Murex pallidus* Broderip in Broderip & Sowerby, 1833, p. 194.

*Fusus fasciculatus* Hombron & Jacquinot in Rousseau, 1854, p. 110, pl. 25, figures 15, 16.

*Trophon fimbriatus* Hupé in Gay, 1854, p. 165, pl. 4, figures 7, 7a, 7b (non-Borson, 1821).

*Fusus crispus* Gould, 1849, p. 141.

*Trophon crispus burdwoodianus* Strebel, 1908, p. 38, pl. 1, figure 15a–c.

*Trophon pallidus* Sow. Adams H. & Adams A., 1853, p. 77.

*Trophon (Fuegotrophon) pallidus* (Broderip). Powell, 1951, p. 157.

## TYPE LOCALITIES

Insulas Falkland dictas [Malvinas (Falkland) Islands] (*Murex pallidus*). Strait of Magellan (*Trophon fimbriatus*, *Fusus fasciculatus*). Orange Harbour [Cape Horn] (*Fusus crispus*). Burdwood Bank (*Trophon crispus burdwoodianus*).

## DIAGNOSIS

Shell medium in size, fusiform, solid, white. Spire relatively high. Protoconch of one whorl, smooth. Teleoconch of rounded whorls, sculptured with prominent axial ribs and narrower spiral cords. Aperture ovate, projected into a long and narrow siphonal canal. Inner margin arcuate.

## MATERIAL EXAMINED

One specimen, Río Ovando (CEGH-UNC 22725); 1 specimen, Río Varela (CEGH-UNC 22727).

## OTHER FOSSIL REFERENCES

Atlantic Ocean: 'Argentine Patagonia' (Feruglio, 1950; Aguirre & Farinati, 2000; Pastorino, 2000: Quaternary). Beagle Channel (Gordillo *et al.*, 2005: Holocene; Gordillo *et al.*, 2010: Pleistocene).

## PRESENT DISTRIBUTION

Strait of Magellan to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean up to off Buenos Aires Province, Argentina. 10–150 m.

## REMARKS

Powell (1951) reported *Fusus fasciculatus*, *Fusus crispus*, *Trophon fimbriatus* and *Trophon crispus burdwoodianus* to be synonyms of *Fuegotrophon pallidus*. Canteras & Arnaud (1985) reported the species as occurring in Crozet Island; however, this record requires confirmation.

*Trophon geversianus* (Pallas, 1774)

Figure 3C

*Buccinum geversianus* Pallas, 1774, p. 33, pl. 3, figures 1, 2.

*Buccinum foliaceum multifariam frondosum* Chemnitz, 1780, p. 130, pl. 139, figure 1297 (non-binomial).

*Buccinum fimbriatum* Martyn, 1784, figure 6 (non-binomial *fide* ICZN, 1957).

*Murex magellanicus* Gmelin, 1791, p. 3548 (in part).

*Neptunea foliacea* Röding, 1798, p. 116 (pro *Murex magellanicus* Gmelin).

*Trophon geversianus* Pallas. Montfort, 1810, p. 483.

*Polyplex bulbosa* Perry, 1811, pl. 9, figure 5.

*Murex lamellosus* Dillwyn, 1817, p. 730.

*Murex foliatus* Schumacher, 1817, p. 215.

*Fusus geversianus* (Pallas). Gould, 1852, p. 227, pl. 6, figure 227.

*Fusus intermedius* Hupé in Gay, 1854, p. 166, pl. 4, figures 6, 6a, 6b.

*Trophon geversianus*. Hupé in Gay, 1854, p. 167.

*Trophon geversianus* var. *calva* Kobelt, 1878, p. 305, pl. 75, figure 1.

*Trophon geversianus* var. *lirata* Kobelt, 1878, p. 305, pl. 76, figures 1, 2.

*Trophon philippianus* Dunker in Kobelt, 1878, p. 277, pl. 75, figures 4, 5.

#### TYPE LOCALITIES

Americanae (*Buccinum geversianus*). Falkland Isl. [Malvinas (Falkland) Islands] (*Buccinum fimbriatum*). Freto Magellanico [Strait of Magellan] (*Buccinum foliaceus*). Freto Magellanico [Estrecho de Magallanes] (*Murex magellanicus*). Indian Seas (*sic*) (*Polyplex bulbosa*). Malouinas (*sic*) [Malvinas (Falkland) Islands]; Estrecho de Magallanes [Strait of Magellan] (*Fusus intermedius*). Straights of Magellan [Strait of Magellan]; Falkland Islands [Malvinas (Falkland) Islands] (*Murex lamellosus*). ? (*Trophon philippianus*; *Murex foliatus*; *Trophon geversianus* var. *calva*; *Trophon geversianus* var. *lirata*).

#### DIAGNOSIS

Shell large, fusiform, with a relatively low spire and subquadrate last whorl. Protoconch of two whorls, smooth. Teleoconch with variable sculpture: spiral ribs, axial lamellae, or cancellate; sometimes completely smooth. Aperture ovate, with arcuate inner margin, projected into a narrow and moderately long siphonal canal.

#### MATERIAL EXAMINED

Nine specimens, Río Ovando (CEGH-UNC 22671); 2 specimens, Lago Roca (CEGH-UNC 22532, 22533); 1 specimen, Río Varela (CEGH-UNC 22738).

#### OTHER FOSSIL REFERENCES

Atlantic Ocean: 'Argentine Patagonia' (Aguirre & Farinati, 2000; Pastorino, 2000: Quaternary); 52°33'S 65°50'W, 52°38.2'S 69°10.5'W (Richards & Craig, 1963: Pleistocene); Puerto Deseado (Bellosi, 1995: 'Patagoniano' [Oligocene–Miocene]); off Punta Alta (Farinati, 1985: Holocene); Punta Atlas ('Patagoniano' [Oligocene–Miocene], 'Pampeano' [?]), Sierra Laziar ('Arauciano' [Miocene]) (von Ihering, 1907); Golfo San Jorge (Aguirre, 2003: Holocene and Pleistocene); Bahía Bustamante (Aguirre *et al.*, 2005: Holocene and Pleistocene); Bahía Vera and Bahía Camarones (Aguirre *et al.*, 2006: Holocene and Pleistocene); San Pablo, Tierra del Fuego (Gordillo, 1992); Río Grande (Feruglio, 1950). Beagle Channel (Gordillo, 1992; Gordillo *et al.*, 2005: Holocene; Gordillo *et al.*, 2010: Pleistocene).

#### PRESENT DISTRIBUTION

Chiloé, Chile to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean up to Buenos Aires Province, Argentina. 1–84 m.

#### REMARKS

In a revision of the Magellanic *Trophon* species, Pastorino (2005b) considered *Buccinum fimbriatum*, *Murex magellanicus*, *Neptunea foliacea*, *Polyplex bulbosa*, *Murex lamellosus*, *Murex foliatus*, *Fusus intermedius*, *Trophon geversianus* var. *calva*, *Trophon geversianus* var. *lirata* and *Trophon philippianus* to be synonymy of *Trophon geversianus*. This species is characteristic from the southern tip of South America (Pastorino, 2005b); the records from South Orkney Islands are doubtful, and most probably correspond to *T. nucelliformis* Oliver & Picken, 1984.

*Xymenopsis muriciformis* (King, 1832)

Figure 3D

*Buccinum muriciforme* King, 1832, p. 348.

*Fusus buccineus*: Sowerby in Gray, 1839 (non-Lamarck, 1816), p. 155, pl. 36, figure 12.

*Fusus decolor* Philippi, 1845, p. 68.

*Buccinum cancellaroides* Reeve, 1847, pl. 14, figure 113.

*Fusus liratus* Gould, 1849, p. 141.

*Fusus muriciformis* King, Cunningham, 1871, p. 476.

*Trophon loebbeckei* Kobelt, 1878, p. 294.

*Trophon muriciformis* King, Smith, 1881, p. 28.

*Trophon lebruni* Mabille & Rochebrune in Rochebrune & Mabille, 1889, p. 55.

*Trophon violaceus* Mabille & Rochebrune in Rochebrune & Mabille, 1889, p. 56, pl. 2, figure 1.

*Trophon paessleri* Strebel, 1904, p. 213, pl. 7, figure 56a–f.

*Trophon elongatus* Strebel, 1904, p. 217, pl. 7, figure 58a–f.

*Trophon pseudoelongatus* Strebel, 1904, p. 220, pl. 7, figure 60a,b.

*Trophon albus* Strebel, 1904, p. 221, pl. 7, figure 61.

*Trophon acuminatus* Strebel, 1904, p. 222, pl. 7, figure 63.

*Trophon obesus* Strebel, 1904, p. 223, pl. 7, figure 62.

*Trophon fenestratus* Strebel, 1904, p. 225, pl. 7, figure 59a–d.

*Trophon couthouyi* Strebel, 1904, p. 236, pl. 7, figure 65a–e; pl. 8, figure 76.

*Trophon elegans* Strebel, 1904, p. 241, pl. 8, figure 71.

*Xymenopsis muriciformis* (King & Broderip, 1831). Dell, 1972, p. 38, figures 31, 32.

#### TYPE LOCALITIES

Strait of Magellan (*Buccinum muriciforme*). Port Grappler, Smyth Channel [Chile] (*Trophon couthouyi*). Fretum Magellanicum [Strait of Magellan]; insulae Chonos [Chile] (*Fusus decolor*). Puerto Angosto [Strait of Magellan] (*Trophon elongatus*). Punta Arenas [Strait of Magellan] (*Trophon acuminatus*; *Trophon obesus*). Gregory Bank [Estrecho de Magallanes] (*Trophon fenestratus*). Orange Harbour [Cape Horn] (*Fusus liratus*). Baie Orange [Cape Horn] (*Trophon violaceus*; *Trophon paessleri*). Santa Cruz [Argentina] (*Trophon lebruni*); Ushuaia [Beagle Channel] (*Trophon pseudoelongatus*; *Trophon albus*). Port Stanley [Malvinas (Falkland) Islands] (*Trophon elegans*). ? (*Buccinum cancellaroides*; *Trophon loebbeckei*).

#### DIAGNOSIS

Shell medium in size, fusiform, elongated, whitish. Spire relatively high. Protoconch of three whorls, smooth. Teleoconch sculptured with prominent axial ribs (16–20 on the last whorl), and spiral ribs, the latter wide and flat. Aperture ovate, projected into a short and wide siphonal canal. Inner margin arcuate.

#### MATERIAL EXAMINED

Three specimens, Río Ovando (CEGH-UNC 22699); 5 specimens, Lago Roca (CEGH-UNC 22709); 1 specimen, Río Varela (CEGH-UNC 22728).

#### OTHER FOSSIL REFERENCES

Atlantic Ocean: 'Argentine Patagonia' (Feruglio, 1950; Pastorino, 2000: Quaternary). Beagle Channel (Gordillo,

1992; Gordillo *et al.*, 2005: Holocene; Gordillo *et al.*, 2010: Pleistocene).

#### PRESENT DISTRIBUTION

50°S, in the south-eastern Pacific Ocean, to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean up to Puerto Deseado, Argentina. Intertidal to 170 m.

#### REMARKS

Pastorino & Harasewych (2000) concluded that *Fusus liratus*, *Trophon lebruni*, *Trophon violaceus*, *Trophon paessleri*, *Trophon elongatus*, *Trophon pseudoelongatus*, *Trophon albus*, *Trophon acuminatus*, *Trophon elegans*, *Trophon obesus*, *Trophon fenestratus*, *Buccinum cancellaroides*, *Trophon loebbeckei* and *Trophon couthouyi* correspond to synonyms of *Xymenopsis muriciformis*.

Family NATICIDAE Guilding, 1834  
*Falsilunatia soluta* (Gould, 1847)  
Figure 3E

*Natica soluta* Gould, 1847, p. 239.

*Polynices (sic) solutus* (Gould) 1847. Carcelles, 1950, p. 58, pl. 2, figure 26.

*Falsilunatia soluta* (Gould). Powell, 1951, p. 119.

#### TYPE LOCALITY

Off Eddystone Rock, East Falkland [Malvinas (Falkland) Islands] [*vide* Pastorino, 2005a].

#### DIAGNOSIS

Shell medium in size, globose, solid, whitish, sculptured with low growth lines. Spire low and rounded. Whorls separated by deep sutures. Umbilicus open, partially filled by a weak callus. Aperture ovate, thickened at the basal lip.

#### MATERIAL EXAMINED

One specimen, Río Ovando (CEGH-UNC 22697).

#### OTHER FOSSIL REFERENCES

Atlantic Ocean: 'Argentine Patagonia' (Feruglio, 1950: Quaternary). Beagle Channel (Gordillo, 1992 as *Falsilunatia limbata*: Holocene).

#### PRESENT DISTRIBUTION

Strait of Magellan and Beagle Channel to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean, to off Uruguay. 6–1886 m.

*Tectonatica impervia* (Philippi, 1845)  
Figure 3F

*Natica impervia* Philippi, 1845, p. 65.

*Natica acuta* Philippi, 1845, p. 65.

*Natica philippiana* Nyst, 1845, p. 153 (non-Reeve, 1855) (replacement name for *N. acuta* Philippi, 1845, non-Deshayes, 1838).

*Natica obturata* Philippi, 1855, p. 208.

*Natica payeni* Rochebrune & Mabile, 1885, p. 104.

*Tectonatica impervia* (Philippi). Powell, 1951, p. 122, pl. 10, figure 62, and J46.

*Tectonica (sic) impervia* (Philippi) 1845. Carcelles & Williamson, 1951, p. 283.

#### TYPE LOCALITIES

Fretum Magellanicum [Strait of Magellan] (*Natica impervia*). Cap Horn [Cape Horn] (*Natica payeni*). Estrecho de Magallanes [Strait of Magellan] (*Natica obturata*).

#### DIAGNOSIS

Shell medium in size, globose, with low and acute spire. Shell surface whitish, sculptured with irregular growth lines. Umbilicus narrow, partially covered by a thick callus. Aperture ovate.

#### MATERIAL EXAMINED

One specimen, Península Ushuaia (CEGH-UNC 22520).

#### OTHER FOSSIL REFERENCES

Atlantic Ocean: 'Argentine Patagonia' (Feruglio, 1950: Quaternary). Beagle Channel (Gordillo, 1992: Holocene).

#### PRESENT DISTRIBUTION

Strait of Magellan to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean, to off Buenos Aires Province, Argentina. 2–460 m.

#### REMARKS

Pastorino (2005a) considered *Natica acuta*, *Natica philippiana* Nyst, 1845 (non-Reeve, 1855), *Natica obturata*, and *Natica payeni* to be synonyms of *T. impervia*.

Family BUCCINULIDAE Finlay, 1928  
*Glypteuthria meridionalis* (Smith, 1881)  
Figure 3G

*Euthria meridionalis* Smith, 1881, p. 29, pl. 4, figure 6.

*Euthria (Glypteuthria) meridionalis* Smith E.A. Strebel, 1905b, p. 627, pl. 21, figures 11, 11a–d.

*Glypteuthria meridionalis* (E. Smith). Thiele, 1912, p. 263, pl. 13, figure 6 and pl. 16, figure 17.

#### TYPE LOCALITIES

Portland Bay, 10 ft [3 m]; Punta Arenas [Strait of Magellan], 9–10 ft [2.7–3 m].

#### DIAGNOSIS

Shell small, fusiform with nearly straight whorls, solid, brownish. Spire moderately high. Protoconch sculptured with narrow spiral threads; teleoconch with strong but relatively low axial cords, and narrower spiral ribs. Aperture ovate, with short siphonal canal.

#### MATERIAL EXAMINED

9 specimens, Lago Roca (CEGH-UNC 22711); 1 specimen, Río Ovando (CEGH-UNC 22435).

#### OTHER FOSSIL REFERENCES

Beagle Channel (Hägg *in* Halle, 1910: Isla Gable, Holocene; Gordillo *et al.*, 2010: Pleistocene).

#### PRESENT DISTRIBUTION

Chiloé, Chile to Beagle Channel. 10–46 m.

*Lachesis? euthrioides* Melvill & Standen, 1898  
Figure 3H

*Lachesis euthrioides* Melvill & Standen, 1898, p. 98, pl. 1, figure 9.

*Chauvetia euthrioides* (Melvill & Standen) 1898. Carcelles & Williamson, 1951, p. 297.

*Glypteuthria euthrioides* (Melvill & Standen, 1898). Powell, 1960, p. 148.

#### TYPE LOCALITY

Lively Island [Malvinas (Falkland) Islands].

#### DIAGNOSIS

Shell small, fusiform, moderately solid, brownish. Spire moderately high, with almost straight whorls, crenulated in outline by spiral sculpture. Protoconch of one whorl, sculptured with delicate axial lines; teleoconch strongly sculptured with prominent axial ribs and spiral keels, forming nodules at intersections. Aperture ovate, projected into a long and narrow siphonal canal.

#### MATERIAL EXAMINED

One specimen, Río Ovando (CEGH-UNC 22753); 17 specimens, Lago Roca (CEGH-UNC 22843).

#### OTHER FOSSIL RECORDS

Beagle Channel (Gordillo *et al.*, 2010: Pleistocene).

#### PRESENT DISTRIBUTION

Beagle Channel and Strait of Magellan to Malvinas (Falkland) Islands. 15–80 m.

#### REMARKS

Dell (1972) considered *Lachesis? euthrioides* to be a probable synonym of *Glypteuthria meridionalis*, but both species are regarded as distinct by Zelaya (2006). The generic placement of this species should be revised considering soft part anatomy and radula.

*Pareuthria plumbea* (Philippi, 1844)

Figure 3I

*Fussus plumbeus* Philippi, 1844, p. 108, pl. 1, figure 3.

*Trophon plumbeus* Phil. Adams H. & Adams A., 1853, p. 77.

*Euthria plumbea* (Philippi). Pelseneer, 1903, p. 8.

*Euthria (Pareuthria) plumbea* (Phil). Melvill & Standen, 1914, p. 122.

*Northia (Pareuthria) plumbea* (Philippi) 1845. Carcelles, 1950, p. 61, pl. 2, figure 34.

*Pareuthria plumbea* (Philippi). Powell, 1951, p. 133.

#### TYPE LOCALITY

Orae australes Republicae Chilensis [Chile].

#### DIAGNOSIS

Shell medium in size, fusiform, with relatively high spire of rounded whorls, solid, grey. Shell surface usually smooth; sometimes with axial ribs on the first whorls. Aperture ovate, projected into a short and wide siphonal canal.

#### MATERIAL EXAMINED

Two specimens, Lago Roca (CEGH-UNC 22708); 1 specimen, Alakush (CEGH-UNC 22525).

#### OTHER FOSSIL REFERENCES

Atlantic Ocean: 'Argentine Patagonia' (Feruglio, 1950; Aguirre & Farinati, 2000; Pastorino, 2000: Quaternary); Golfo San Jorge (Aguirre, 2003: Pleistocene); Bahía Bustamante (Aguirre *et al.*, 2005: Holocene); Bahía Vera and Bahía Camarones (Aguirre *et al.*, 2006: Holocene and Pleistocene); Río Grande (Feruglio, 1950: Quaternary); San Pablo (Gordillo, 1992: Holocene). Pacific Ocean: Tubul, Chile (Valdovinos, 1996: Plio-Pleistocene). Beagle Channel (Gordillo, 1992: Holocene; Gordillo *et al.*, 2010: Pleistocene).

#### PRESENT DISTRIBUTION

Chiloé, Chile to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean up to Península Valdés, Argentina. Intertidal to 80 m.

*Savatieria meridionalis* (Smith, 1881)

Figure 3J

*Lachesis meridionalis* Smith, 1881, p. 28, pl. 4, figure 3.

*Savatieria meridionalis* (Smith, 1881). Dell, 1972, p. 37, figure 16.

#### TYPE LOCALITY

Boija Bay [Strait of Magellan], 20 fathoms [37 m].

#### DIAGNOSIS

Shell small, elongate, with a high spire of straight whorls, separated by deep sutures. Teleoconch sculptured with strong axial ribs. Aperture ovate, with short and wide siphonal canal.

#### MATERIAL EXAMINED

Four specimens, Río Ovando (CEGH-UNC 22750, 22752); 1 specimen, Lago Roca (CEGH-UNC 22436).

#### OTHER FOSSIL REFERENCES

Beagle Channel (Gordillo *et al.*, 2005 as *Savatieria frigida*: Holocene).

#### PRESENT DISTRIBUTION

Beagle Channel to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean, up to Santa Cruz Province, Argentina. 27–96 m.

Family TURRIDAE Adams H. & Adams A., 1853

*Belalora thielei* Powell, 1951

Figure 3K

*Belalora thielei* Powell, 1951, p. 172, pl. 6, figure 20.

#### TYPE LOCALITY

48°26'15"S 61°28'W [off Argentina]. 165 m.

#### DIAGNOSIS

Shell small, solid, with a moderately high spire of rounded whorls, brownish. Last whorl globose. Shell surface sculptured with procline axial ribs, crossed by numerous spiral threads. Aperture ovate, projected into a short and wide siphonal canal.

#### MATERIAL EXAMINED

One specimen, Río Ovando (CEGH-UNC 22437).

## OTHER FOSSIL REFERENCES

Unknown.

## PRESENT DISTRIBUTION

Beagle Channel to 48°S, in the south-western Atlantic Ocean. 19–165 m.

Family PYRAMIDELLIDAE Gray, 1840

*Odostomia* sp. 1

Figure 3L

## DIAGNOSIS

Shell small, elongated, inflated, solid, white. Spire relatively high, with rounded whorls. Teleoconch sculptured with flat spiral cords, and delicate axial threads. Umbilicus small, narrow. Aperture ovate, with a prominent tooth at the inner margin.

## MATERIAL EXAMINED

Two specimens, Río Ovando (CEGH-UNC 22442, 22702); 7 specimens, Lago Roca (CEGH-UNC 22836); 6 specimens, Río Varela (CEGH-UNC 22837).

## OTHER FOSSIL REFERENCES

Beagle Channel (Gordillo *et al.*, 2010: Pleistocene).

## PRESENT DISTRIBUTION

Beagle Channel. 30–80 m.

*Odostomia* sp. 2

Figure 3LL

## DIAGNOSIS

Shell small, elongated, inflated, solid, brownish. Spire moderately high, with rounded whorls. Teleoconch sculptured with obscure spirals cords. Umbilicus covered by columellar callus. Aperture ovate, with a prominent tooth at the inner margin.

## MATERIAL EXAMINED

One specimen, Río Ovando (CEGH-UNC 22449).

## OTHER FOSSIL REFERENCES

Beagle Channel (Gordillo *et al.*, 2010: Pleistocene).

## PRESENT DISTRIBUTION

Beagle Channel. 5–20 m.

*Turbonilla smithi* Strebel (Pfeffer, MS), 1905

Figure 3M

*Turbonilla smithi* Strebel (Pfeffer, MS), 1905b, p. 659, pl. 23, figure 42a–d.

*Turbonilla* (*Chemnitzia*) *smithi* Pfeffer. Ageitos de Castellanos, 1982, p. 66, figures 2, 3.

## TYPE LOCALITY

Strait le Maire, 65 fathoms [119 m].

## DIAGNOSIS

Shell small, elongated, with a high spire of rounded whorls, delicate, white. Protoconch smooth, heterostrophic. Teleoconch with rectangular, nearly straight, axial furrows. Base convex, smooth. Aperture ovate.

## MATERIAL EXAMINED

One specimen, Río Ovando (CEGH-UNC 22422).

## OTHER FOSSIL REFERENCES

Atlantic Ocean: Ingeniero White (Farinati, 1985: Holocene). Beagle Channel (Gordillo *et al.*, 2005: Holocene; Gordillo *et al.*, 2010: Pleistocene).

## PRESENT DISTRIBUTION

Strait of Magellan and Beagle Channel to Malvinas (Falkland) Islands, and extending northwards, in the Atlantic Ocean, up to Santa Cruz Province, Argentina. 12–119 m.

## REMARKS

Ageitos de Castellanos (1982) reported the species as occurring in 37°56'S 57°28'W; according to the author this material was deposited in the collections of the Museo de La Plata, where it cannot now be found to confirm its identity (D.G. Zelaya, personal observation). No other records of the species outside the Magellan Region are known.

Family MATHILDIDAE Dall, 1889

*Mathilda magellanica* Fischer in De Folin & Périer, 1870

Figure 3N

*Mathilda magellanica* Fischer in De Folin & Périer, 1870, p. 188, pl. 8, figure 8.

## TYPE LOCALITY

Baie Fortescue [Strait of Magellan].

## DIAGNOSIS

Shell small, elongated, with a high spire of gradated whorls, solid, ochraceous. Protoconch with faint spiral threads. Teleoconch sculptured with two primary and one or two secondary spiral cords per whorl, and narrower axial ribs. Base convex, with flat spiral cords. Aperture subquadrate, reflecting the outer margin the spiral sculpture.

## MATERIAL EXAMINED

Two specimens, Lago Roca (CEGH-UNC 22446, 22701); 2 specimens, Río Varela (CEGH-UNC 22731).

## OTHER FOSSIL REFERENCES

Beagle Channel (Gordillo *et al.*, 2005 as *Mathilda* aff. *malvinarum*: Holocene).

## PRESENT DISTRIBUTION

Beagle Channel to Malvinas (Falkland) Islands. 1–40 m.

Family SIPHONARIIDAE Gray, 1827

*Kerguelenella lateralis* Gould (Couthoy, MS), 1846

Figure 3O

*Siphonaria lateralis* Gould (Couthoy, MS), 1846, p. 153.

*Siphonaria magellanica* Philippi, 1855: 208.

*Siphonaria rediculum* Reeve, 1856, pl. 5, figure 24a,b.

*Siphonaria* (*Liriola*) *lateralis* Gould. Thiele, 1912, p. 250.

*Siphonaria* (*Kerguelenia*) *lateralis* (Gould, 1846).

Hubendick, 1946, p. 26, pl. 1, figures 22–25.

*Kerguelenella lateralis* (Gould). Powell, 1951, p. 181.

## TYPE LOCALITIES

Burnt Island, Orange Harbor [Cape Horn] (*Siphonaria lateralis*). Magellanstrasse [Strait of Magellan] (*Siphonaria magellanica*). ? (*Siphonaria rediculum*).

## DIAGNOSIS

Shell small, patelliform in outline, with the right margin notoriously projected. Apex acute, directed towards the postero-left side. Shell surface with zigzag radial cords and irregular growth folds.

## MATERIAL EXAMINED

Two specimens, Río Ovando (CEGH-UNC 22433, 22705).

## OTHER FOSSIL REFERENCES

Unknown.

## PRESENT DISTRIBUTION

*Kerguelenella lateralis lateralis* distributes from the Beagle Channel to Malvinas (Falkland) Islands, extending northwards, in the Atlantic Ocean up to Puerto Deseado, Argentina. The species was also reported from South Georgia, although the identity of these specimens requires confirmation. Intertidal to 15 m.

## REMARKS

*Siphonaria magellanica* and *S. rediculum* were considered synonyms of *Kerguelenella lateralis* by Powell (1951). Figueiras & Sicardi (1974) identified specimens from Uruguay as *Siphonaria lateralis*, but according to Scarabino & Zaffaroni (2004) this material corresponds to *S. lessonii* Blainville, 1827.

*Siphonaria lessonii* Blainville, 1827  
Figure 3P

*Siphonaria lessonii* Blainville, 1827, p. 296, pl. 44, figures 2, 2a.  
*Siphonaria (Liriola) lessonii* (Blainville, 1824). Carcelles, 1944, p. 265.

*Siphonaria (Pachysiphonaria) lessonii* (Blainville, 1824). Hubendick, 1946, p. 21, pl. 1, figures 1–3.

*Pachysiphonaria lessonii* (Blainville). Powell, 1951, p. 181.

*Siphonaria (Talisiphon) lessonii* (Blainville, 1827). Morrison, 1964, p. 7.

## TYPE LOCALITY

Îles Malouines [Malvinas (Falkland) Islands].

## DIAGNOSIS

Shell medium in size, patelliform in outline, with the right margin slightly projected. Apex acute or rounded, centrally located, backwardly pointed. Sculpture variable: from thick and straight radial ribs to almost smooth.

## MATERIAL EXAMINED

One specimen, Isla Gable (CEGH-UNC 22518).

## OTHER FOSSIL REFERENCES

Atlantic Ocean: 'Argentine Patagonia' (Feruglio, 1950; Aguirre & Farinati, 2000; Pastorino, 2000: Quaternary); near Montevideo, Uruguay (d'Orbigny, 1842: Quaternary); Buenos Aires coast (Aguirre, 1990: Holocene); Punta Cigüeña and Villa del Mar (Farinati, 1985); Puerto Belgrano

and Quequén (Carcelles, 1944: Holocene); Golfo San Jorge (Aguirre, 2003: Holocene); Bahía Bustamante (Aguirre *et al.*, 2005: Holocene); Bahía Vera and Bahía Camarones (Aguirre *et al.*, 2006: Pleistocene). Pacific Ocean: Mejillones, Chile (Ortlieb *et al.*, 2003: Pleistocene, Isotope Stage 11). Beagle Channel (Gordillo, 1992: Holocene).

## PRESENT DISTRIBUTION

Callao, Perú to Malvinas (Falkland) Islands, and extending northwards in the Atlantic Ocean, up to Uruguay. Intertidal to 37 m.

## DISCUSSION

The Beagle Channel is a relatively young marine ecosystem, originated about 8000–7500 years ago. To date, the knowledge of the Holocene molluscan fauna from this area is limited to checklists such as those by Hägg (in Halle, 1910), Rabassa *et al.* (1986), Gordillo (1993, 1999), and Gordillo *et al.* (2005). This limitation in the quality of information is addressed in the present study. As a result, 31 species of gastropods collected at four sampling localities are described and illustrated; the first Holocene fossil record for 18 gastropod species is provided: *Iothia coppingeri*, *Fissurellidea patagonica*, *Scissurella clathrata*, *Calliostoma dozei*, *Ganesa* sp., *Cyclostrema crassicostatum*, *Eatoniella denticula*, *Onoba schythei*, *Laevitorina* sp., *Cerith: opsilla: burd woodiana*, *Cerithiella* sp. 2, *Lachesis? euthrioides*, *Savatieria meridionalis*, *Belalora thielei*, *Odostomia* sp. 1, *Odostomia* sp. 2, *Mathilda magellanica*, *Kerguelenella lateralis*; and the identity of nine species previously reported for the area by Gordillo *et al.* (2005) is updated, providing a more reliable source of information for a subsequent biogeographical study. The high number of new records clearly makes evident the little attention given to small molluscs in previous palaeontological studies.

In general, the material studied exhibited a good state of preservation, evidenced by well-preserved shell sculpture, and periostracum persistency. However, a small amount of transport must have taken place as some shells were broken. In addition, some shells have signs of dissolution by the current environmental conditions in a freshwater environment. These facts plead for an autochthonous or para-autochthonous nature of these sediments, rather than to the transport of an allochthonous dead fauna.

In addition to the 31 species of gastropods found in the four sites examined in detail during this study, four other species of gastropods (*Nacella deaurata*, *Acanthina monodon*, *Tectonatica impervia* and *Siphonaria lessonii*) were found in other fossil sites of the Beagle Channel, and included in the present study in an attempt to improve the information on the Quaternary molluscs from the area; all these species are large taxa, and two of them (*Nacella deaurata* and *Siphonaria lessonii*) typically intertidal. Thus, a total of 35 gastropod species was identified from Holocene deposits of the Beagle Channel. Eight other species were listed by Hägg (in Halle, 1910) from 'Holocene deposits' (without precision of age) from Isla Gable: *Savatieria dubia* Strebel, 1905a, *Euthria rosea* (Hombron & Jacquinot in Rousseau, 1854) (= *Pareuthria powelli* Cernohorsky, 1977), *Pareuthria cerealis* (Rochebrune & Mabilie, 1889) (under *Euthria*), *Meteuthria martensi* (Strebel, 1905a) (= under *Euthria*), *Antistreptus magellanicus* Dall, 1902, *Buccinum laciniatum* Martyn, 1784

(= *Trophon plicatus* (Lightfoot, 1786) ?), *Trophon dispar* Mabilie & Rochebrune in Rochebrune & Mabilie, 1889, and *Cerithium pullum* Philippi, 1845; and a ninth species was added by Gordillo (1992): *Nacella magellanica*.

All the species reported in this study are currently found as living taxa in the area (Zelaya, 2006). This fact strongly suggests that during the Holocene the mollusc fauna from the Beagle Channel has not suffered a faunistic replacement since its establishment as a marine environment. Taking into account the geological youthfulness of this area and its intermediate position between the Pacific and the Atlantic Oceans, it is inferred that the mollusc fauna for this area originated by migration from the adjacent Atlantic or Pacific waters. In this regard, the Beagle Channel probably represented a favourable way (a 'corridor') that facilitated dispersal between the Atlantic and Pacific Oceans, contributing to the establishment of a relatively homogeneous molluscan fauna in the southern tip of South America, as part of a single biogeographical unit: the Magellan Region. Certainly the Beagle Channel should not be regarded as the sole possible way for molluscs' dispersion between the Pacific and Atlantic Oceans; there are, in fact, two other potential 'faunistic corridors': the Strait of Magellan and the Drake Passage. The Strait of Magellan, at the northern side of the Isla Grande de Tierra del Fuego, is contemporary with the Beagle Channel and originated by similar processes (Clapperton, 1992).

It is to be noted that there are several molluscs that appear in fossil deposits of both sides, Atlantic and Pacific, of the Magellan Region, with ages older than those corresponding to the opening of the Beagle Channel and the Magellan Strait; e.g. *Tegula atra* (Lesson, 1831) and *Acanthina unicornis* (Brugière, 1789) (Carcelles, 1945; Pastorino, 2000; de Vries, 2003). These species most probably dispersed through the Drake Passage which originated 50–30 million years ago, when the southern tip of South America separated from the Antarctic Peninsula (Livermore *et al.*, 2005). Unfortunately nothing is known of the Quaternary and pre-Quaternary molluscs from these areas to evaluate their significance in the dispersive process of the Magellanic mollusc species.

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