

Research Article

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Thorny-headed worms (Acanthocephala) of the Patagonian blennie *Eleginops maclovinus* (Cuvier) from northern Patagonia, Argentina

Maité Aneley Barrena^{1,2}  and Jesús Servando Hernández-Orts^{3,4} 

¹Laboratorio de Biodiversidad y Servicios Ecosistémicos, Facultad de Ciencias Marinas, Universidad Nacional del Comahue, San Antonio Oeste, Río Negro, Argentina;

²Centro de Investigación Aplicada y Transferencia Tecnológica en Recursos Marinos Almirante Storni (CIMAS – CCT CONICET – CENPAT), San Antonio Oeste, Río Negro, Argentina;

³Institute of Parasitology, Biology Centre, Czech Academy of Sciences, České Budějovice, Czech Republic;

⁴Natural History Museum, London, United Kingdom

Abstract: We report the fauna of the Acanthocephala of 120 Patagonian blennies *Eleginops maclovinus* (Cuvier) from northern Patagonia, Argentina. A total of 535 acanthocephalans belonging to five species were collected and identified using light microscopy. Juvenile and adult forms were only observed for *Hypoechinorhynchus magellanicus* Szidat, 1950 (Arhythmacanthidae). Juvenile forms of *Corynosoma australe* Johnston, 1937, *Corynosoma cetaceum* Johnston et Best, 1942 and *Corynosoma shackletoni* Zdzitowiecki, 1978 (Polymorphidae) were found encapsulated in the mesenteries. Juveniles of *Profilicollis chasmagnathi* (Holcman-Spector, Mañé-Garzón et Dei-Cas, 1977) (Polymorphidae) were found free in the intestines of the fish. *Hypoechinorhynchus magellanicus* was the most abundant acanthocephalan in our study, accounting for 48.4% of all specimens collected, followed by *C. australe* (33.5%). The Patagonian blennie represents a new host record for four species (*C. australe*, *C. cetaceum*, *C. shackletoni* and *P. chasmagnathi*). The northern Patagonia in Argentina is a novel locality record for *C. shackletoni*. This survey improves our knowledge of life cycles and geographical distribution of zoonotic marine acanthocephalans with potential risk to humans and companion animals.

Keywords: Spiny-headed worms, coastal fish, *Hypoechinorhynchus magellanicus*, *Corynosoma* spp., *Profilicollis chasmagnathi*, juveniles, life cycles, zoonoses

The Patagonian blennie *Eleginops maclovinus* (Cuvier) (Eleginopidae), commonly known as “róbalo”, is a benthopelagic marine fish endemic to coastal South American temperate and sub-Antarctic waters (Gosztonyi 1979). This species inhabits coastal areas, river mouths and estuaries ranging from Valparaíso, Chile (33°S) in the Pacific Ocean to Uruguay (35°S) in the Atlantic Ocean (Licandeo et al. 2006, Bravo et al. 2021). The Patagonian blennie is harvested both commercially and recreationally throughout its range and holds great potential for marine aquaculture (Sa et al. 2014, Oyarzún-Salazara et al. 2021). *Eleginops maclovinus* is a sequential protandrous hermaphrodite fish (Calvo et al. 1992), undergoing sexual reversion from male to female based on body size and age (Gastaldi et al. 2009).

Several studies have reported the Patagonian blennie as a significant prey for fish-eating birds and marine mammals (Goodall and Galeazzi 1985, Frere et al. 1996, Ferrari et al. 2004, Frere et al. 2005, Schiavini et al. 2005, Pérez-Álvarez et al. 2007, Ciancio et al. 2008, Bustos et al.

2012, Baylis et al. 2014, Morgenthaler et al. 2021, Rau et al. 2021), serving as a key link in the food webs of coastal and estuarine waters in the southeastern Pacific and southwestern Atlantic.

In the Argentine Sea, *E. maclovinus* has been documented as a prey item for the Magellanic penguin *Spheniscus magellanicus* (Forster) (Spheniscidae), the imperial shag *Leucocarbo atriceps* (King) (Phalacrocoracidae), the Neotropical cormorant *Nannopterum brasilianum* (Gmelin) (Phalacrocoracidae), the South American sea lion *Otaria flavescens* Shaw (Otariidae), and the common bottlenose dolphin *Tursiops truncatus* (Montagu) (Delphinidae) (Frere et al. 2005, Schiavini et al. 2005, Ciancio et al. 2008, Bustos et al. 2012, Vermeulen 2014).

Acanthocephalans of two named and seven unidentified species have been reported from Patagonian blennies along its distribution range. *Hypoechinorhynchus magellanicus* Szidat, 1950 (Arhythmacanthidae) was described by Szidat (1950) from specimens collected in the intestine

Address for correspondence: Jesús Servando Hernández-Orts, Institute of Parasitology, Biology Centre, Czech Academy of Sciences, Branišovská 31, 370 05 České Budějovice, Czech Republic. E-mail: jesus.hernandez.orts@gmail.com; ORCID-ID: [0000-0002-8177-7959](https://orcid.org/0000-0002-8177-7959)

Table 1. Composition of samples of Patagonian blennies (*Eleginops maclovinus* [Cuvier]) from six sampling sites along the northern Patagonian coast of Argentina.

Year / month	Locality	n	Total length (cm)
2017			
May	La Rinconada (40.801°S, 65.065°W)	3	29–36
June	Las Conchillas (40.823°S, 64.816°W)	25	32–49
May	Punta Verde (40.728°S, 64.916°W)	2	27–30
August	Las Conchillas	1	30
July	Punta Verde	4	33–42
August	La Cuadra (40.784°S, 64.795°W)	7	27–52
	Punta Villarino (40.803°S, 64.899°W)	18	28–46
September	La Cuadra	24	27–52
November	Punta Verde	6	38–42
2018			
February	La Cuadra	18	29–33
March	Canal Principal (40.726°S, 64.94°W)	12	30–33
Total		120	27–52

of *E. maclovinus* near Bahía Aguirre, Tierra del Fuego, Argentina. This acanthocephalan was later reported in Patagonian blennies from several localities in Argentina, Chile and the Malvinas Islands (Falkland Islands) (Gosztanyi 1979, Sepúlveda et al. 2004, Brickle and MacKenzie 2007, George-Nascimento et al. 2009, Henriquez et al. 2011). George-Nascimento et al. (2009) also reported adults of an unidentified rhadinorhynchid species (Rhadinorhynchidae) from the intestine of *E. maclovinus* in Talcahuano, Chile. Henriquez et al. (2011) collected adult specimens of an un-

determined acanthocephalan species in this host from San Ignacio and Bahía Codihue, Chile.

Additionally, Brickle and MacKenzie (2007) reported juvenile individuals of *Corynosoma hanna* Zdzitowiecki, 1984 (Polymorphidae) in the mesenteries of the Patagonian blennie from the Malvinas Islands. Records of an unidentified species of *Corynosoma* infecting the mesenteries of *E. maclovinus* were provided from Argentina and Chile by Gosztanyi (1979), George-Nascimento et al. (2009) and Henriquez et al. (2011). Juvenile forms of three undetermined acanthocephalan species were also reported by Henriquez et al. (2011) in Patagonian blennies from San Ignacio, southern Chile.

In this study, we explore the acanthocephalan fauna in *E. maclovinus* from northern Patagonia, Argentina using morphological analyses (light microscopy). This work represents the first comprehensive study of acanthocephalan diversity in this fish species along the southwestern Atlantic. We aim to provide information on the life cycles and zoonotic potential of thorny-headed worms of this marine fish based on a critical review of the literature.

MATERIAL AND METHODS

A total of 120 Patagonian blennies (total body length 27–52 cm) were collected by angling or using beach seine from six sites along the San Antonio Bay coast, San Matías Gulf, Northern Patagonia, Argentina (Fig. 1), between May 2017 and March 2018 (Table 1). Fish were kept fresh on ice or frozen at -20°C for sub-

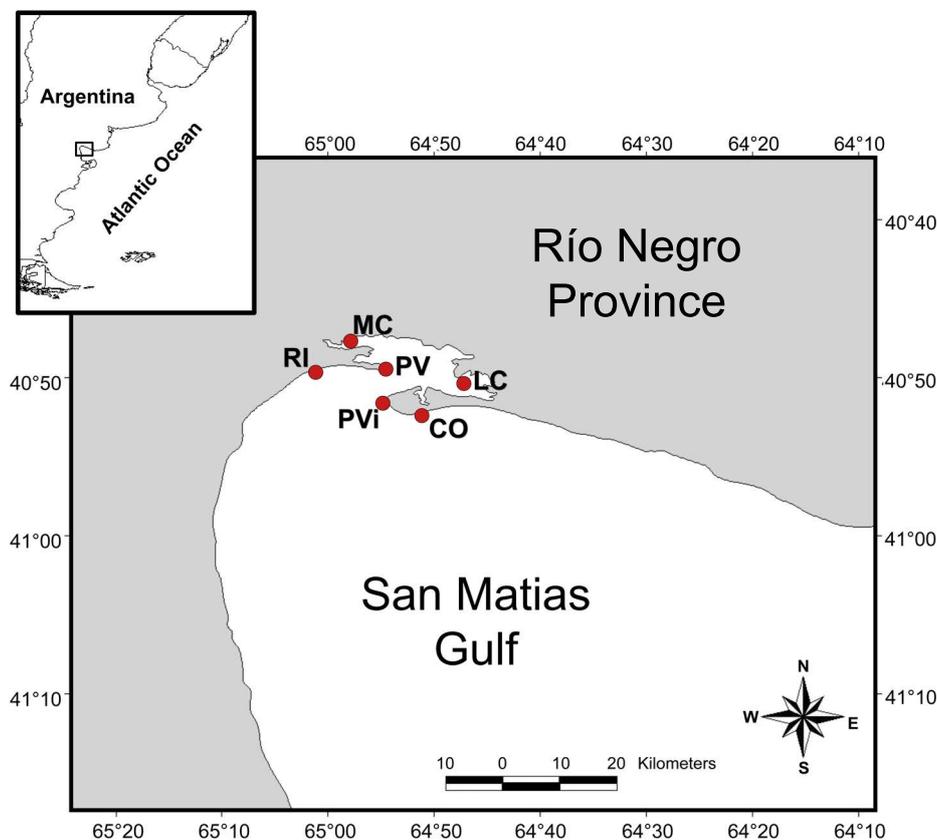


Fig. 1. Map of the northern Patagonian coast of Argentina showing the study area and the sampling sites (red circles). *Abbreviations:* CO – Las Conchillas, LC – La Cuadra, MC – Main channel, PV – Punta Verde, PVi – Punta Villarino, RI – Rinconada.

Table 2. Infection parameters of acanthocephalans found in 120 Patagonian blennies (*Eleginops maclovinus* [Cuvier]) from the northern Patagonian coast of Argentina. *Abbreviations:* CI, confidence interval.

Family/Species	Infection site	Life cycle stage	Prevalence (%) (95% CI)	Mean abundance (95% CI)	Mean intensity (95% CI)	Range
Arhythmacanthidae						
<i>Hypoechinorhynchus magellanicus</i>	intestine	juvenile, adult	26 (19–35)	2.2 (1.0–4.8)	8.3 (4.4–17.3)	1–82
Polymorphidae						
<i>Corynosoma australe</i>	mesenteries	juvenile	44 (35–53)	1.5 (1.1–2.1)	3.4 (2.6–4.6)	1–20
<i>Corynosoma cetaceum</i>	mesenteries	juvenile	27 (20–35)	0.7 (0.5–1.1)	2.7 (2.1–3.5)	1–9
<i>Corynosoma shackletoni</i>	mesenteries	juvenile	6 (3–12)	0.07 (0.3–0.13)	1.1 (1.0–1.4)	1–2
<i>Proflicollis chasmagnathi</i>	intestine	juvenile	2 (0.5–6)	0.02 (0.0–0.5)	1	1

sequent examination in the laboratory. Each host specimen was dissected, and internal organs and mesenteries were examined for acanthocephalans using a dissecting microscope. Encapsulated juveniles were removed from the mesenteries, placed in Petri dishes, and examined under a dissecting microscope. Acanthocephalans were rinsed in 0.9% saline, left in a refrigerator in tap water for 12 hours, and then fixed in 70% denatured ethanol.

For identification based on morphology, acanthocephalans were punctured with a fine needle, stained with Mayer's carmine, dehydrated through an ethanol series, cleared in methyl salicylate and mounted as permanent slides in Canada balsam. Mounted worms were examined with a Nikon ECLIPSE E200 compound microscope. Bright-field imaging was done using a Leica DM5000 microscope and a DFC450C digital camera linked to Leica Application Suite ver. 4.

Thorny-headed worms were identified following Holcman-Spector et al. (1977), Sardella et al. (2005) and Laskowski and Zdzitowiecki (2008, 2017). Voucher specimens are deposited in the Parasitic Worms collection of the Natural History Museum (NHMUK), London, UK (accession number NHMUK 2025.4.9.1–55), the Helminthological Collection of the Museo de La Plata (MLP-He), Buenos Aires, Argentina (MLP-He 8198–8201) and the Institute of Parasitology (IPCAS), Academy of Sciences, České Budějovice, Czech Republic (IPCAS A-151).

Infection parameters, i.e., prevalence, mean abundance and mean intensity (minimum–maximum) were estimated following Bush et al. (1997) and Rózsa et al. (2000). The 95% confidence interval (CI) for prevalence was calculated using the Sterne's exact method (Reiczigel 2003), while the 95% CIs for mean abundance and mean intensity were estimated using the bias-corrected

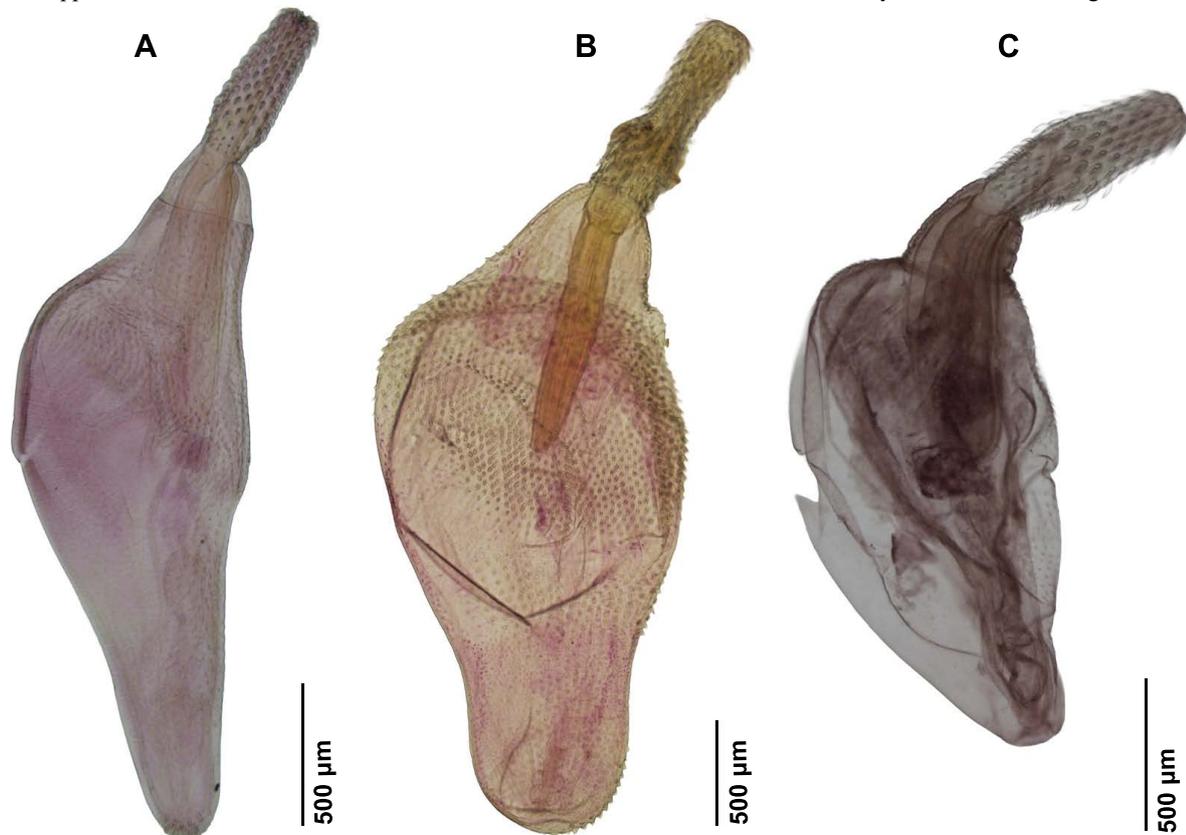


Fig. 2. Photomicrographs of acanthocephalans found in *Eleginops maclovinus* (Cuvier) in the present study. **A** – juvenile male of *Corynosoma australe* Johnston, 1937; **B** – juvenile female of *Corynosoma cetaceum* Johnston et Best, 1942; **C** – juvenile male of *Corynosoma shackletoni* Zdzitowiecki, 1978.



Fig. 3. Photomicrographs of acanthocephalans found in *Eleginops maclovinus* (Cuvier) in the present study. **A** – juvenile male of *Proflicollis chasmagnathi* (Holman-Spector, Mañé-Garzón et Dei-Cas, 1977); **B** – adult male of *Hypoechinorhynchus magellanicus* Szidat, 1950; **C** – adult female of *Hypoechinorhynchus magellanicus*.

and accelerated bootstrap with 20,000 replications (Reiczigel and Rózsa 2005).

RESULTS

Seventy-seven of the 120 Patagonian blennies from northern Patagonia were infected with acanthocephalans (overall prevalence 64%). A total of 535 acanthocephalans belonging to five species were collected, of which 276 were juvenile individuals from four polymorphid species, namely *Corynosoma australe* Johnston, 1937 ($n = 179$) (Fig. 2A), *Corynosoma cetaceum* Johnston et Best, 1942 ($n = 87$) (Fig. 2B), *Corynosoma shackletoni* Zdzitowiecki, 1978 ($n = 8$) (Fig. 2C), and *Proflicollis chasmagnathi* Holman-Spector, Mañé-Garzón et Dei-Cas, 1977 ($n = 2$) (Fig. 3A).

Two hundred fifty-nine worms were juveniles and adult forms (i.e., gravid females) of *H. magellanicus* ($n = 40$ and $n = 219$, respectively) (Fig. 3B,C). Specimens of *H. magellanicus* were collected from the intestine, while juvenile forms of *Corynosoma* spp. were collected encapsulated in mesentery tissues. Specimens of *P. chasmagnathi* were found free in the intestine of the fish.

Corynosoma australe, *C. cetaceum* and *H. magellanicus* were the most prevalent, with juveniles of *C. australe*

showing the highest prevalence (Table 2). Juvenile and adult forms of *H. magellanicus* were the most abundant thorny headed worms, comprising 48% of all acanthocephalans collected (Table 2).

Species richness in individual fish ranged from 1 to 4 acanthocephalan species (mean species richness of 1.6). A single fish (0.8%) was infected with one acanthocephalan species, 39 (32.5%) with two species; 32 (26.7%) with three species, and five (4.2%) with four species. Acanthocephalans were not collected in 43 (35.8%) Patagonian blennies. Altogether, we report four acanthocephalan species found for the first time in the Patagonian blennie (i.e., *C. australe*, *C. cetaceum*, *C. shackletoni* and *P. chasmagnathi*). The southwestern Atlantic (northern Patagonia in Argentina) represents a new geographical record for *C. shackletoni*.

DISCUSSION

The acanthocephalan species richness reported in our study (five species) is comparable to that reported by Henriquez et al. (2011). These authors examined 268 Patagonian blennies from southern Chile and reported six acanthocephalan species, including *Hypoechinorhynchus magellanicus*, *Corynosoma* sp. and four unidentified spe-

cies. Our study revealed a much higher representation of acanthocephalan species compared to previous studies on metazoan parasites of Patagonian blennies from the south-eastern Pacific and southwestern Atlantic. Sepúlveda et al. (2004) and George-Nascimento et al. (2009) documented the helminth fauna of *Eleginops maclovinus* collected off central and southern Chile. In their respective datasets, which included 15 and 126 Patagonian blennies, one and three acanthocephalan species were recorded. In the southwestern Atlantic, Gosztanyi (1979) and Brickle and MacKenzie (2007) reported only two acanthocephalan species, based on the examinations of 252 and 70 host specimens from southern Argentina and the Malvinas Islands, respectively.

Patagonian blennies from different locations along the southeastern Pacific and southwestern Atlantic have two taxa in common. This fish seems to be suitable definitive host for two acanthocephalans (*H. magellanicus* and an unidentified rhadinorhynchid; see George-Nascimento et al. 2009) and paratenic host for several *Corynosoma* species. Henriquez et al. (2011) reported four unidentified acanthocephalan species, three of these being juvenile forms. However, these authors did not provide enough information on the degree of sexual maturity or the site of infection of these acanthocephalans. The acanthocephalan fauna of *E. maclovinus* in northern Patagonia is characterised by a high representation of juvenile forms (4 species). This might be explained by the specific trophic position, as this fish is prey for several fishes, seabirds and marine mammals in our study region (see below).

Hypoechinorhynchus magellanicus appears to mature and reproduce exclusively in nototheniid fishes, particularly the Patagonian blennie (Szidat 1950, Gosztanyi 1979, Sepúlveda et al. 2004, Brickle and MacKenzie 2007, George-Nascimento et al. 2009, Henriquez et al. 2011). A second definitive host for *H. magellanicus*, the pike icefish *Champscephalus esox* (Günther) (Channichthyidae), was reported by Laskowski and Zdzitowiecki (2008) from the Beagle Channel. Adults of an undetermined species of *Hypoechinorhynchus* were reported from the intestine of *Notocheirus hubbsi* Clark (Notocheiridae) from Puerto Deseado (Santa Cruz, Argentina) by Gosztanyi (1972). This author did not provide metrical data or illustrations for this acanthocephalan but suggested that these specimens might be conspecific with *H. magellanicus*. The fact that *H. magellanicus* can mature in *N. hubbsi* is rather exceptional and deserves further attention.

Sepúlveda et al. (2004) reported low infection levels of *H. magellanicus* in the gut of *Hypsoblennius sordidus* (Bennett) (Blenniidae) from southern Chile. These authors did not provide data on the sexual maturity of this acanthocephalan. However, the low infection levels of *H. magellanicus* in *H. sordidus* suggest that this fish may serve as an accidental host for this acanthocephalan. An unidentified species of *Hypoechinorhynchus* was reported from the intestine of two silversides, *Odontesthes smitti* (Lahille) and *Odontesthes nigricans* (Richardson) (Atherinopsidae), from northern Patagonia by Carballo et al. (2011). These authors did not provide morphological data or illustrations

of these specimens. Further morphological evidence is required to solve the species-level identification of these worms.

The complete life cycle of *H. magellanicus* is not fully known, but it involves Patagonian blennie as the final host. *Eleginops maclovinus* is an omnivorous fish with an opportunistic and broad-spectrum diet that varies depending on its habitat, preying on annelids, crustaceans, gastropods, fish, bryozoans and algae (e.g. Pavés et al. 2005, Licandeo et al. 2006, Martin and Bastida 2008, Gastaldi and González 2009, Pequeño et al. 2010). In central and southern coastal waters of Chile, the most important preys are gammarid and corophiid amphipods and the hairy-handed crab *Hemigrapsus crenulatus* (Milne-Edwards) (Varunidae) (Pavés et al. 2005, Licandeo et al. 2006). The diet of *E. maclovinus* in southern Patagonia (Santa Cruz Province) is dominated by small benthic crustaceans, particularly gammarid amphipods (Martin and Bastida 2008). In northern Patagonia, this fish has an opportunistic benthophagous diet (Gastaldi and González 2009), primarily feeding on isopods, such as *Sphaeroma serratum* (Fabricius) (Sphaeromatidae), mud crabs *Neohelice granulata* (Dana) (Varunidae) and other small benthic crustaceans, which likely serve as intermediate hosts for *H. magellanicus*.

The definitive hosts of *Corynosoma* are typically aquatic mammals or birds (Aznar et al. 2006), while their first intermediate hosts are gammarid amphipods (Zdzitowiecki and Presler 2001). Several marine fish species have been identified as paratenic hosts for many *Corynosoma* species (Sasaki et al. 2019). In these paratenic hosts, juvenile forms of *Corynosoma* are found encapsulated in the mesenteries (Skorobrechova and Nikishin 2011) and do not exhibit any significant growth or development (Schmidt 1985). Fish become infected by feeding on infected amphipods or through fish-to-fish transmission, and may serve as paratenic hosts, bridging the trophic gap between intermediate and definitive hosts (Hernández-Orts et al. 2019c).

Our study revealed that the Patagonian blennie serves as paratenic hosts for *Corynosoma australe*, *C. cetaceum* and *C. shackletoni*. The intermediate host for these three *Corynosoma* species remains unknown. However, gammarid amphipods have been identified as intermediate hosts for several species of *Corynosoma* in the Southern Hemisphere (e.g., Hoberg 1986, Zdzitowiecki and Presler 2001). Along the northern Patagonian coast, several species of amphipods have been reported as prey of Patagonian blennies (Gastaldi and González 2009). Consequently, *E. maclovinus* may become infected by preying on amphipods infected with cystacanths of *Corynosoma* spp. in the study area.

Corynosoma australe is the most frequently reported marine acanthocephalan in marine fish and pinnipeds in the southwestern Atlantic (Hernández-Orts et al. 2019b). The final hosts for *C. australe* are South American sea lions and South American fur seals *Arctocephalus australis* (Zimmermann) (Otariidae) (Hernández-Orts et al. 2013). Gravid females of this acanthocephalan have also been reported in Magellanic penguins, Southern elephant seals *Mirounga leonina* (Linnaeus) (Phocidae), Andean fox *Lycalopex culpaeus* (Molina) (Canidae) and domestic dogs

(Sardella et al. 2005, Hernández-Orts et al. 2017). Around 40 teleost species have been reported as paratenic hosts for *C. australe* in the southwestern Atlantic (Canel et al. 2019, Hernández-Orts et al. 2019b). In Patagonia waters, *E. maclovinus* have been reported as a prey item of sea lions and penguins (Schiavini et al. 2005, Bustos et al. 2012), suggesting that this fish play an important role in the transmission of this parasite in coastal waters.

Corynosoma cetaceum parasitises the stomach of dolphins in South Australian and South America (Aznar et al. 1999). In northern Patagonia, this species has been reported in bottlenose dolphins and common dolphins *Delphinus delphis* Linnaeus (Delphinidae) (Berón-Vera et al. 2007, Romero et al. 2014). Several fish species have been reported as paratenic hosts for *C. cetaceum* in the southwestern Atlantic (Hernández-Orts et al. 2019b, Canel et al. 2019). Hernández-Orts et al. (2019a) suggested that the life cycle of *C. cetaceum* is likely confined to coastal waters of Patagonia, as low infection levels for juveniles of this species were reported only in a few fish species from the Patagonian shelf. Our results suggest that the life cycle of *C. cetaceum* is likely completed in the coastal waters of the San Matias Gulf, where bottlenose dolphins are known to prey on Patagonian blennies (Vermeulen 2014).

Corynosoma shackletoni has been previously reported in the intestines of the kelp gull *Larus dominicanus* (Lichtenstein) (Laridae) and the gentoo penguin *Pygoscelis papua* (Forster) (Spheniscidae) from sub-Antarctic islands (Zdzitowiecki 1978, 1985). Adults of *C. shackletoni* were briefly described by Striukov (2004) from worms collected from the small intestine of the leopard seal *Hydrurga leptonyx* (Blainville) (Phocidae), from the Balleny Islands in the Antarctic Ocean. Juveniles of this acanthocephalan species can parasitise fishes from the families Bathyracidae, Channichthyidae and Nototheniidae in Antarctic waters (Zdzitowiecki and White 1992, Kuzmina et al. 2021).

Levy et al. (2019) reported low infection levels of juvenile forms of an unidentified polymorphid acanthocephalan from the body cavity of the Argentine silverside *Odontesthes argentinensis* (Valenciennes) (Atherinopsidae) from Buenos Aires Province and northern Patagonia. These undetermined acanthocephalans were morphologically examined by the senior author of the present study (J.S.H.-O.) and are most likely conspecific with *C. shackletoni*. The final hosts for this acanthocephalan in coastal waters of Patagonia is the Magellanic penguin (Hernández-Orts, unpublished data), which is commonly observed feeding on Patagonian blennies and silversides (Frere et al. 1996, Schiavini et al. 2005).

The final hosts of *Profilicollis chasmagnathi* in the southwestern Atlantic are gulls, with crabs from intertidal habitats serving as intermediate hosts (Levy et al. 2020). This acanthocephalan species has been reported free in the gut of several coastal fish species, likely representing accidental infections that occur when fish prey on infected crabs (Alarcos and Etchegoin 2010, Levy et al. 2020). However, encapsulated juveniles of *P. chasmagnathi* were reported from the body cavity of *Oligosarcus jenynsii*

(Günther) (Acestrorhamphidae), indicating that some fish species may serve as paratenic hosts in this parasite's life cycle (Levy et al. 2020). In our study, two juvenile individuals of *P. chasmagnathi* were collected free in the intestine of two Patagonian blennies, suggesting that this fish species likely acts as euparatenic transit host in the life cycle of this acanthocephalan. Remnants of mud crabs *N. granulata* were observed in the intestinal contents of the blennies infected with *P. chasmagnathi* in the present study. Mud crabs are known as intermediate hosts of this acanthocephalan in coastal waters of Uruguay and the Buenos Aires Province in Argentina (Levy et al. 2020, Rodríguez et al. 2017). Therefore, the mud crab may also be the intermediate host for *P. chasmagnathi* in northern Patagonia.

Many acanthocephalan species have zoonotic potential, infecting humans and companion animals, particularly dogs and cats (Pearce et al. 2001, Scholz et al. 2003, Mathison et al. 2021). Marine acanthocephalans belonging to *Corynosoma* Lühe, 1904, *Bolbosoma* Porta, 1908 and *Profilicollis* Meyer, 1931 have been reported infecting humans (Ibañez and Machado 1991, Buchmann and Karami 2024), dogs (Cabrera et al. 1999, Tantaleán et al. 2002) and cats (Sohn and Chai 2005). Humans and companion animals can become infected with these parasites by eating raw crustaceans and fish harbouring larval or juvenile forms. Although infections caused by these acanthocephalans are not considered a major public health issue, a few cases have been documented in Japan (Mathison et al. 2021) and Peru (Ibañez and Machado 1991).

However, the increasing global popularity of raw fish dishes such as carpaccio, ceviche or sushi could increase the risk of these parasitic infections worldwide. Sheltered, stray and feral dogs or cats are exposed to these acanthocephalans by feeding on the intermediate host (Rodríguez et al. 2020) or raw viscera of marine fish (Cabrera et al. 1999). The pathogenic effects of thorny-headed worms in companion animals are not well understood; they may cause inflammation, ulceration, and haemorrhage. In heavy infections, they may lead to intestinal perforation and peritonitis in marine mammals (Geraci and Aubin 1987, Shanebeck et al. 2020). It is therefore important to raise awareness not only to the owners but also to veterinarians and public health authorities about the zoonotic potential of marine acanthocephalans in dogs and cats. The new records of acanthocephalan infections in Patagonian blennies are highly relevant for raising public awareness of the risks of feeding raw fish in ceviche for humans, and raw viscera of this fish by companion animals.

To conclude, this study described the acanthocephalan fauna in Patagonian blennies, a commercially and economically important marine fish in South America. The identification of acanthocephalans parasitising this fish is essential for understanding their host-parasite relationships and their potential risks to human and animal health. However, future studies exploring the acanthocephalan diversity of this fish species from different areas are needed to fully assess the diversity of these parasites in *E. maclovinus* across its distribution range.

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Author contribution. M. A. Barrena dissected the fish and collected the acanthocephalans. M.A. Barrena and J.S. Hernández-Orts performed morphological identification, edited figures, wrote and reviewed the manuscript.

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