

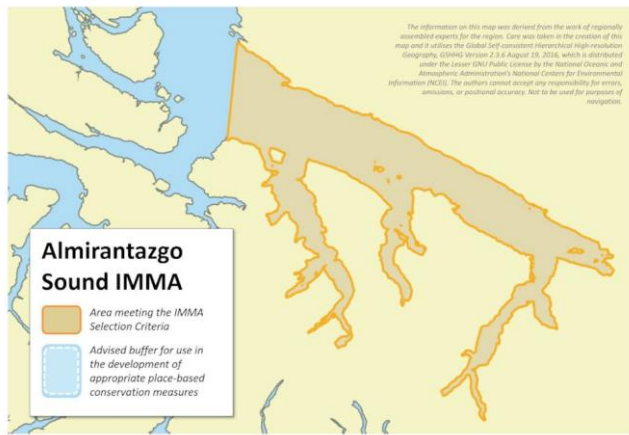
Almirantazgo Sound IMMA

Summary, continued.

Jackson Creek. These fjord systems provide suitable habitat for the southern elephant seal colonies to breed and nurse their pups. The Parry Fjord supports a leopard seal colony, where pupping has been documented. This fjord is within the pack ice zone, and thus includes habitat similar to the Antarctic waters. Commerson's dolphins (*Cephalorhynchus commersonii*) have also established a small resident population in the Almirantazgo Sound, which appears to be isolated from the principal stock of the species on the Atlantic coast.

Description:

The Almirantazgo Sound is a fjord located between high mountains on the western coast of the Isla Grande de Tierra del Fuego. Glacial melt introduces cold waters to the fjords and the area is also characterised by strong winds from the west. The sound connects Lake Fagnano (shared between Chile and Argentina) with the Strait of Magellan, facing the Whiteside Channel and Dawson Island. A 76,400 ha portion of the area has been a Protected Coastal Marine Area since 2018. Almirantazgo Sound has a northwest-southeast orientation, with a linear extension of around 90 n.m. The depths range between 50 m in the shallowest sectors to greater than 500 m in the deepest. The surface temperature is 5.5°C at the southern end of the Almirantazgo Sound and 6.5°C in Bahía Inutil, while salinity varies between 28.0 to 30.5 psu between in the same locations. In the northeast portion of the sound, the salinity increases to values between 31.0 psu and 32.0 psu at 100 m depth (Valdenegro & Silva 2003). This habitat is suitable for the aggregation of two phociid



Area Size

1 143 km²

Qualifying Species and Criteria

Southern elephant seal – *Mirounga leonina*

Criterion C (1)

Leopard seal – *Hydrurga leptonyx*

Criterion C (1)

Commerson's dolphin –
Cephalorhynchus commersonii

Criterion B (1)

Marine Mammal Diversity

Lagenorhynchus australis, *Orcinus orca*,

Cephalorhynchus eutropia

Summary

The Almirantazgo Sound is located between high mountains on the western coast of the Isla Grande de Tierra del Fuego. Glacial melt introduces cold waters to the adjacent fjords and the area is also characterised by strong winds from the west. The area hosts two species of seals, the southern elephant seal (*Mirounga leonina*) and the leopard seal (*Hydrurga leptonyx*). The southern elephant seal has a circum-Antarctic distribution, and in the last 50 years two breeding colonies have been registered in the Sound, one in Ainsworth Bay and another in

species; Southern Elephant seals (*Mirounga leonina*) (SES) and leopard seals (LS) (*Hydrurga leptonyx*) and the occurrence of Commerson's dolphin (*Cephalorhynchus commersonii*).

Criterion B: Distribution and Abundance

Sub-criterion B1: Small and Resident Populations

Commerson's dolphins (*Cephalorhynchus commersonii*) are found in shallow waters mostly along the Atlantic coast of South America, from the Gulf of San José to the tip of Tierra del Fuego of Argentina (Goodall et al., 1988; Goodall, 1994). In Chilean waters, Commerson's dolphins occur frequently in the eastern area of the Magellan Strait, although small groups have also been observed occasionally inside the Patagonia system. The paucity of records of Commerson's dolphins inside the fjords and channels to south of 40° S in the Pacific suggests that its occurrence is unusual (Aguayo et al., 2006, Acevedo et al., 2016a). Nevertheless, in Almirantazgo Sound a resident population has been recorded since 1995 (Gibbons et al., 2000, Lescrauwaet et al., 2000). According to genetic studies (mitochondrial DNA) the population of Tierra del Fuego in Chile showed significant genetic differentiation with the Atlantic population. The gene flow and also the dispersal rates in both sexes between local areas is low (Pimper et al., 2010).

Criterion C: Key Life Cycle Activities

Sub-Criterion C1: Reproductive Areas

Southern elephant seals (*Mirounga leonina*) are listed as VU(C1) in Chile under the Chilean Regulation for the Classification of Wild Species. This reflects that there are currently few breeding or regular haul-out locations along the Chilean Pacific coast as the species was nearly extirpated in this area due to hunting (Cárcamo et al., 2018). Southern elephant

seals in Chile inhabit three main haul-out sites in the Magallanes Region: Ainsworth Bay (54°24'S) and Jackson Creek (54°26'S) (Figure 1 and 2), both located in Almirantazgo Sound in Tierra del Fuego Island, and the Poca Esperanza Estuary (52°14'S) (Acevedo et al., 2016a, Capella et al., 2017). The presence of southern elephant seals in Almirantazgo Sound has been reported since the 1970s and the population is growing (Acevedo et al., 2016a, Acevedo et al., 2016b). Ainsworth Bay (54°24'S) and Jackson Creek (54°26'S) in Almirantazgo Sound are two of the three northernmost breeding colonies of southern elephant seals in Chile. The population is estimated at around 160 animals, with pupping observed at Ainsworth in 2003 and at Jackson Creek in 2012 (Acevedo et al., 2016b). The southern elephant seal populations in Ainsworth Bay and Jackson Creek within this IMMA are probably connected with those colonies in the nearby Atlantic (Hindell et al., 2016, Rodríguez et al., 2016), which have an estimated population estimation of 67,000 animals in Península Valdés and 1,700 in the South Shetland Islands (Carcano et al., 2018). In Almirantazgo Sound the maximum number of observed animals is 162 with 19 pups (Acevedo et al., 2016b).

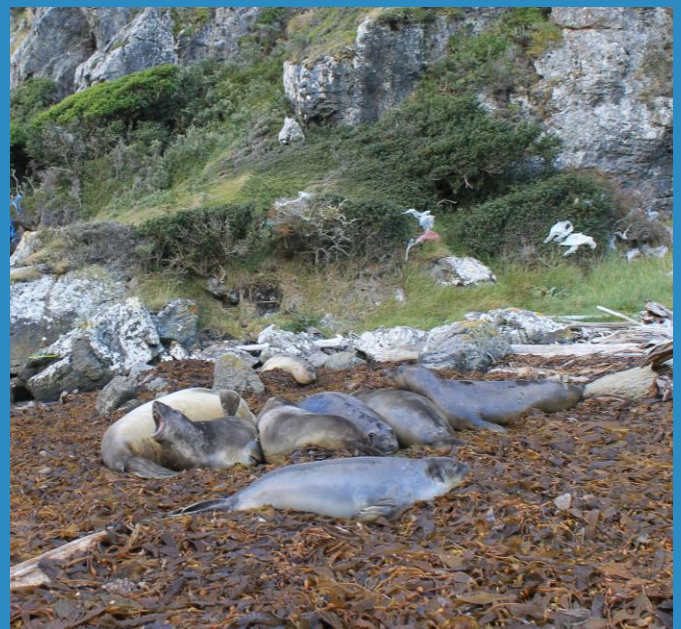


Figure 1: Southern elephant seal (*Mirounga leonina*) colony in Jackson Creek, Almirantazgo Sound. Photo credit: Alicia Guerrero.



Figure 2: Southern elephant seal (*Mirounga leonina*) resting in Jackson Creek colony in Almirantazgo Sound. Photo credit: Alicia Guerrero.

Leopard seals (*Hydrurga leptonyx*) are widely distributed within the Antarctic pack ice. Recently they have been reported further north, in the fjords of southern Chile, where individuals remain year-round including on Tierra del Fuego Island. Little was known of the leopard seals reproductive biology or breeding distribution, and more specifically, whether they use southern Chilean waters to breed. However, two recent opportunistic sightings of leopard seal adult-pup pairs were observed in Parry Fjord, Almirantazgo Sound, on 2 December 2012 and 6 October 2015 (Acevedo et al., 2017). Although the pups reported here were dead, these records provide further information of rare pupping in South American waters. The habitat in Parry Fjord is similar to the Antarctic waters and pack ice of Antarctica, and thus could provide important breeding habitat for those limited few numbers of the species which reside in the fjords of southern Chile.

Supporting Information

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