

MARINE BIO-SECURITY IN THE SOUTHERN OCEAN

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Introduced marine species have been recorded from all continents including Antarctica and are recognised as one of the primary threats to marine biodiversity. This study examines the transport pathways that could deliver non-indigenous marine species to Antarctica and the subantarctic islands. Marine assemblages associated with Southern Ocean vessels and cargo are documented, and their ability to survive voyages and subsequently establish in high latitude environments is assessed through direct observations, and through aquarium experiments examining the ability of temperate communities to survive in Southern Ocean conditions. Although the level of traffic in this region is far lower than elsewhere, humans clearly create a viable mechanism for marine species transport. In the absence of typical coastal stresses such as pollution and habitat modification, introduced species represent one of the most profound threats to high latitude coastal ecosystems.