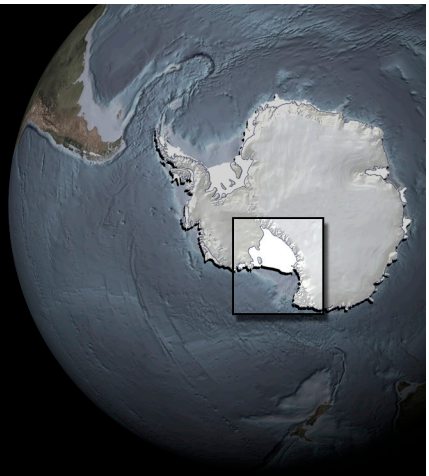
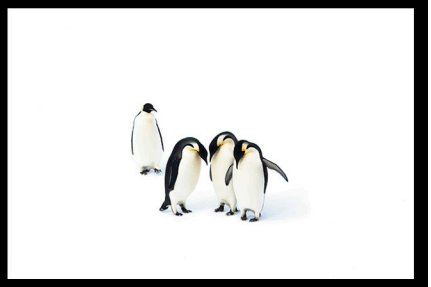
ROSS SEA





Toothfish and Wedell Seal © Jessica Meir
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The Ross Sea, Antarctica: A Sylvia Earle Alliance Hope Spot Initiative

Protecting Our Ocean – Introducing Hope Spots

Currently about 1.2% of the world ocean is set aside for wildlife and their habitat, as compared to around 14% of Earth's terrestrial surface. We must take action to increase substantially the level of ocean protection that experts consider necessary for healthier oceans and a more sustainable fisheries future. Hope Spots are ocean areas that are especially important for their wildlife and habitats, and merit urgent and effective protection.

One of the most important Hope Spots is the Ross Sea in Antarctica. The Antarctic and Southern Ocean Coalition (ASOC) and the Last Ocean Project have been working to protect the Ross Sea for the past four years. They are now joining forces with Mission Blue partners including the Sylvia Earle Alliance, International Union for Conservation of Nature (IUCN) and its World Commission on Protected Areas (WCPA), and the National Geographic Society to secure Marine Protected Area status for the entire Ross Sea shelf and slope ecosystem and superadjacent waters – 647,194 km^2, or about 2% of the Southern Ocean.

I wish you would use all means at your disposal to ignite public support for a global network of marine protected areas, Hope Spots large enough to save and restore the ocean, the blue heart of the planet.
— TED Wish of Dr. Sylvia A. Earle

The Importance of the Ross Sea

The Ross Sea is called "the last ocean" because it is widely recognized as the only remaining large ocean region on Earth in which the ecosystem is structured by natural rather than human forces. With its rich biodiversity - home to disproportionate numbers of Adélie and emperor penguins, Weddell seals, orcas and minke whales and large, predatory fish, and a rich benthic community - the Ross Sea is ecologically unique as a place to learn about ocean processes in a relatively undisturbed state. Moreover, the Ross Sea, because it will be the last polar ocean to lose its sea ice, will be a refuge for at-risk species; elsewhere, in both the Arctic and Antarctic, sea ice is rapidly disappearing.

Since its discovery in 1841 the Ross Sea has been the focus of extensive scientific research, with some data sets going back over 150 years. A scientific record of this length is unusual and highly valuable for researchers. More than 400 species and their habitat associations were first described from Ross Sea specimens, an important record as immense numbers of species change their distribution in the face of climate change. Despite its remote location, over 100 scientists visit the Ross Sea annually to study everything from benthic communities to ocean biogeochemistry.

The unique physical characteristics of the Ross Sea create a highly productive ocean with biodiversity that is of great evolutionary significance. Over 40 species are found nowhere else, and one family of fishes, the plunder fishes, appears to have evolved there. Extensive scientific analysis has demonstrated that the entire continental shelf and slope of the Ross Sea functions as an integral ecological unit. In recognition of the value of the Ross Sea for research, hundreds of scientists around the world have signed a statement calling for its full protection as a Marine Protected Area (MPA).

Issues

- Antarctic fisheries are managed under the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR), which also has the leading role in establishing MPAs. CCAMLR works on the basis of consensus decisions. Therefore, agreements have often been hard to achieve due to differing opinions among governments about the appropriate balance between conservation and exploitation.
- Commercial harvesting of a top predator, the Antarctic toothfish (sold as "Chilean sea bass") by fishers from New Zealand, UK and several other countries, began in 1996 as an exploratory CCAMLR fishery. Toothfish are highly vulnerable to overfishing because of their long life (to at least 50 years), slow growth rate, and low reproductive rate - sexual maturity is achieved only at 14-17 years on average.
- The Ross Sea is now on a priority list for action by CCAMLR in November 2012 as the crown jewel of a new Representative Network of MPAs in the Southern Ocean, which will support the WSSD global 2012 target for MPAs. Convincing the countries fishing there to phase out fishing will require a major public campaign.

Key Species

Although the Ross Sea shelf and slope and superadjacent waters comprise just 2% of the Southern Ocean, they are home to an estimated:

- 38% of the world population of Adélie penguins
- 26% of the world population of emperor penguins
- 30% of the world population of Antarctic petrels
- 6% of the world population of Antarctic minke whales
- 50% of Ross Sea killer whales, a distinct species
- 45% of the South Pacific Weddell seal population

Further Research Needed

- Lifecycle of Antarctic toothfish including critical information related to reproduction and natural mortality (i.e. role in foodweb).
- Investigation of ecosystem responses and adaptation to climate change in the absence of anthropogenic factors.
- Impacts of ocean acidification.

Support Ross Sea Protection

Phase I $750,000 Needed

This funding is needed to assemble a Ross Sea working group and advocacy team in key countries, which will support stakeholder engagement and public outreach by ASOC, the Last Ocean Project, IUCN and their Mission Blue partners in 2011-12, and to begin planning for Antarctic and Ross Sea expeditions.

Phase II $3,750,000 Needed

These funds will be used to provide continuing support for the Ross Sea campaign team's public advocacy work in 2011 and 2012, and to mount an expedition to Antarctica in 2012 or 2013. November 2012 is the initial target date set by CCAMLR to decide on the initial 11 sites of the representative network, including the Ross Sea.

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IUCN WCPA WORLD COMMISSION ON PROTECTED AREAS Antarctic and Southern Ocean Coalition LAST OCEAN sea SYLVIA EARLE ALLIANCE MISSION BLUE