



GLOBAL OCEAN LEGACY

MARINE CONSERVATION FOR A NEW CENTURY

THE OPPORTUNITY

It has been 140 years since Yellowstone National Park, the world's first great terrestrial park, was established in the western United States. Since that time, virtually every country on Earth has protected important sites for biological, cultural, geological, historic, and scenic reasons. Unfortunately, conservation in the sea has taken a profoundly different course, with a remarkably small area of the world's oceans currently protected.

Our propensities to dredge, dump, fill, pollute, and overfish our oceans without much regard to long-term consequences has accelerated as coastal populations have grown and technology has advanced. In spite of humanity's long history of setting aside important ecosystems on land, this idea has only recently been applied to the sea. Indeed, only since the beginning of this millennium have the world's governments begun to preserve and protect the ocean's special places.

Depending upon how one measures it, 6 to 12 percent of the world's land area has been protected in parks and other conservation areas. Yet highly protected, no-take marine areas, where extraction is entirely prohibited, constitute less than 0.5 percent of the world's oceans. Also, unlike the world's great national parks—think Yosemite in California or Kruger in South Africa—most highly protected marine reserves tend to be small and relatively near shore.

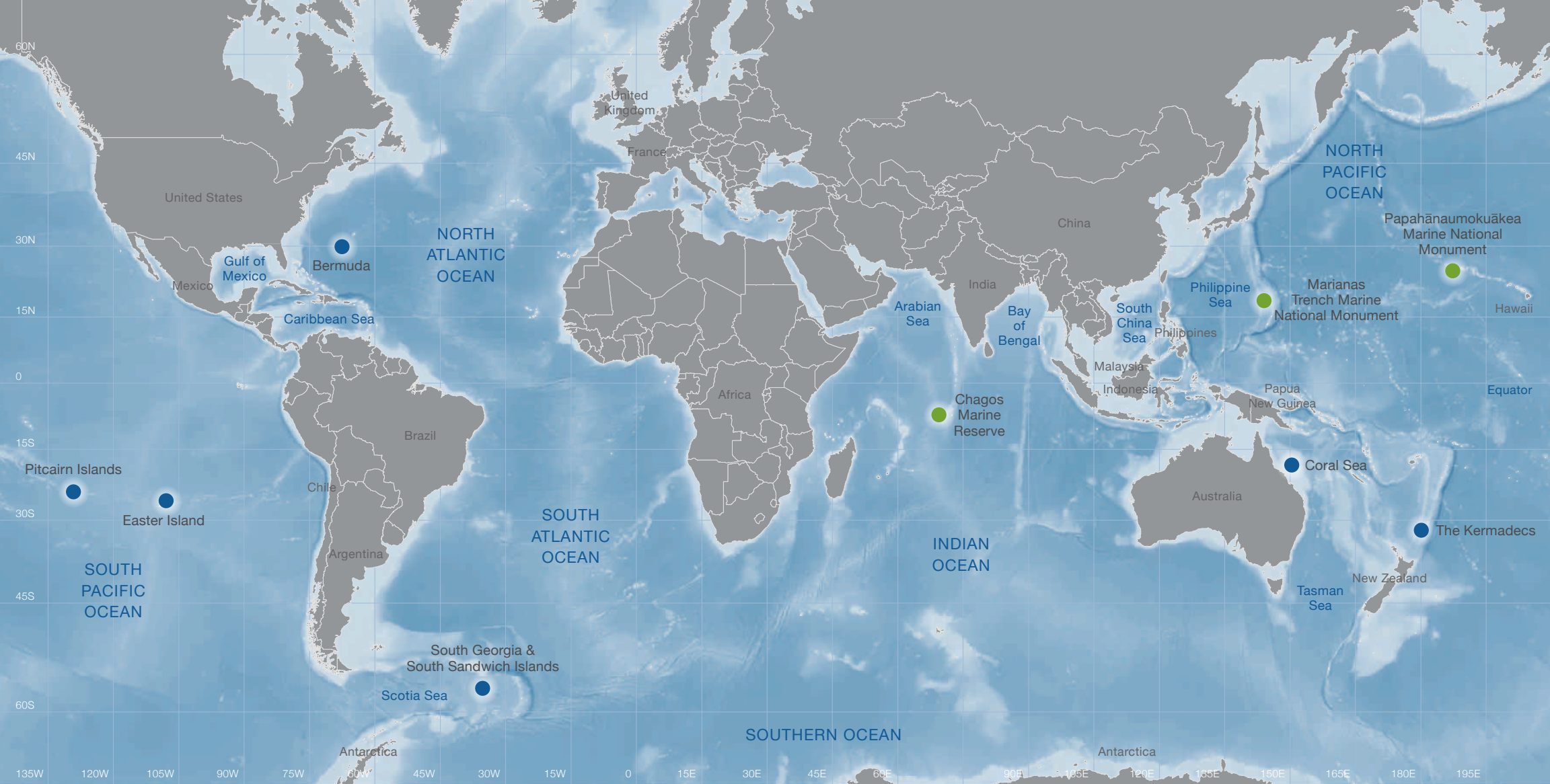
The Pew Environment Group, the conservation arm of The Pew Charitable Trusts, created the Global Ocean Legacy project to protect and conserve some of the Earth's most important and unspoiled marine ecosystems through the establishment of very large, highly protected marine reserves, where extractive activity is not allowed.

Our Global Ocean Legacy staff consists of dedicated and experienced conservation professionals who work from offices in seven countries. Through our efforts, we hope to secure the designation of up to 15 oceanic-scale no-take marine reserves by 2020, thereby creating the first generation of the world's great marine parks.

As industrial society expands into every remote corner of the world, now is the time to protect these last remaining healthy ecosystems. Tomorrow may be too late.

—Jay Nelson, Director, Global Ocean Legacy

Cover Photo: Clown anemonefish (*Amphiprion percula*), © 2012 Dan Exton.



 Active Global Ocean Legacy Site

 Completed Global Ocean Legacy Reserve

STATUS OF GLOBAL OCEAN LEGACY MARINE RESERVE PROJECTS

Since 2005 Global Ocean Legacy has been instrumental in securing the full protection of almost 1 million square kilometers (386,000 square miles) of the world's most unique and spectacular seascapes, particularly more than half of the highly protected, no-take marine reserves that have been established.

GLOBAL OCEAN LEGACY

MARINE CONSERVATION FOR A NEW CENTURY

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PAPAHĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT

Papahānaumokuākea Marine National Monument is located in the remote Northwestern Hawaiian Islands. Within its pristine waters are some of the healthiest coral reefs in the world, home to more than 7,000 marine species, one-quarter found only in the Hawaiian Archipelago. The islands and shallow-water environments are important habitats for rare species such as the threatened green sea turtle, the world's rarest species of duck, and the endangered Hawaiian monk seal. In addition, 14 million seabirds representing 18 species breed and nest on an area of land less than 15 square kilometers (six square miles) in size.

In recognition of the ecological importance of this special place, the Pew Environment Group helped build local public support and backing within the administration of President George W. Bush for a no-take marine reserve. In 2006 that effort resulted in the designation of Papahānaumokuākea Marine National Monument. At the time it was the largest no-take marine reserve in the world—encompassing 363,000 square kilometers (140,000 square miles) of unspoiled reefs, atolls, shoals, islands, and banks. Establishment of this marine monument set a new benchmark globally for the potential scale of marine

reserves and kindled a heightened interest in the creation of other large no-take reserves in the world's oceans.

Left Photo: Oceanic whitetip shark (*Carcharhinus longimanus*) © 2011 Terry Goss, Terry Goss Photography USA/Marine Photobank. **Right Photo:** Squid (*Teuthida*) © Inga Ivanova/Shutterstock.



MARIANAS TRENCH MARINE NATIONAL MONUMENT

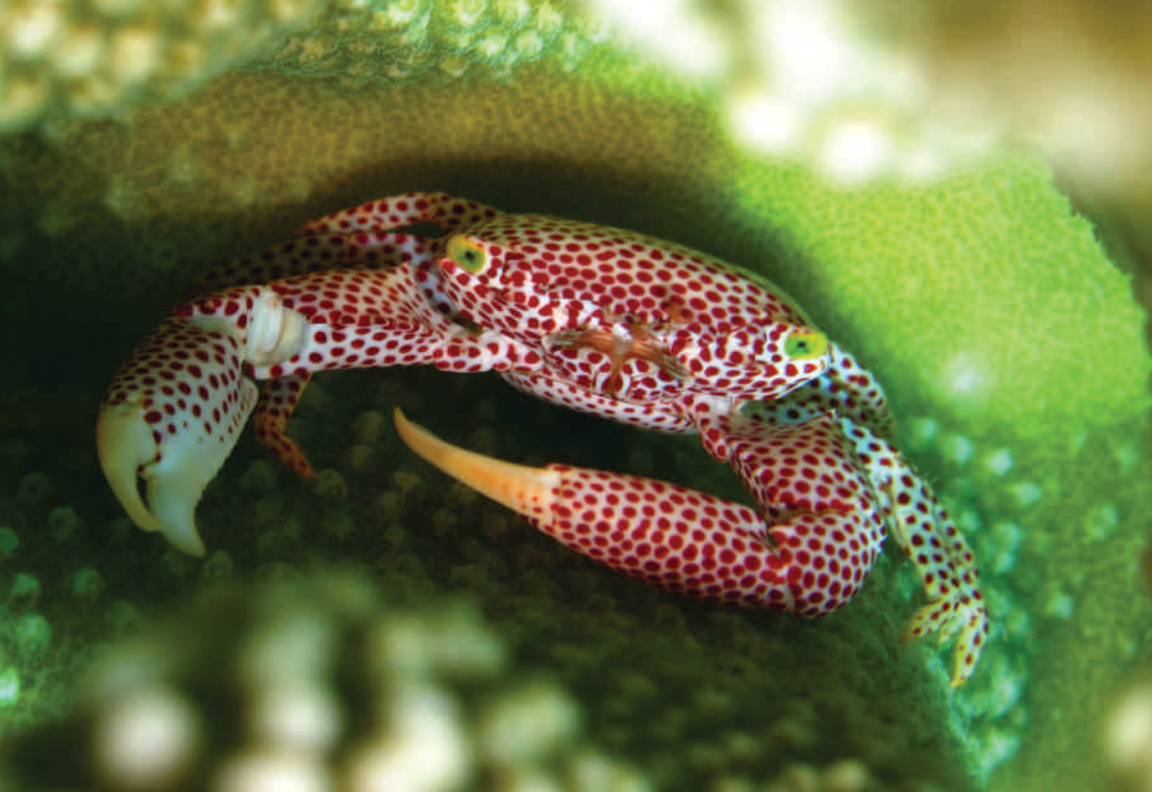
The Mariana Trench is the deepest point on Earth—five times longer than the Grand Canyon and so deep it could swallow Mount Everest with more than a mile of water to spare. Despite being within the U.S. exclusive economic zone (EEZ), the area remains a mystery to most Americans, only occasionally appearing in news stories such as during filmmaker James Cameron’s 2012 voyage to its depths.

Lying within the waters of the Northern Mariana Islands and Guam, the monument contains undersea mud volcanoes and thermal vents that support

unusual life-forms in some of the harshest conditions imaginable. Amazingly, the Marianas are one of the few places in the world where shallow-water communities that thrive on sunlight coexist with hydrothermal vent communities, which have adapted to live in highly toxic “chemosynthetic” environments. Additionally, the Marianas contain unique reef habitats that are among the most biologically diverse in the western Pacific.

To win protection for this special place, Global Ocean Legacy and Friends of the Monument sponsored

more than 100 public meetings, secured more than 6,000 signatures by islanders favoring a monument, and won virtually unanimous support from the business community. This clear expression of local sentiment ultimately persuaded President Bush in 2009 to establish the Marianas Trench Marine National Monument, spanning 246,000 square kilometers (95,000 square miles) of the western Pacific and putting this unique place off-limits to destructive or extractive activities.



THE CHAGOS

Situated in the central Indian Ocean, the remote Chagos Archipelago, a U.K. Overseas Territory, lies approximately 1,600 kilometers (1,000 miles) southwest of India, midway between Africa and Indonesia. An isolated group of more than 50 individual islands and coral atolls, the archipelago covers an area about the size of France and contains a rich, spectacular diversity of marine life.

The Chagos Archipelago is arguably the most important marine wilderness area in the Indian Ocean,



Left Photo: Crown-of-thorns starfish (*Acanthaster planci*) © Octavio Aburto/iLCP/Marine Photobank. **Middle Photo:** Red spotted coral crab (*Trapezia rufopunctata*) © Stacy Jupiter. **Right Photo:** Juvenile lionfish (*Pterois*) © Richard Wylie/Marine Photobank.

MARINE RESERVE

containing almost 50 percent of its healthy reefs, among them the Great Chagos Bank—the largest coral atoll in the world. The area is home to more than 220 species of corals and 800 species of fish, several of which are unique to the region. The archipelago's reefs and nearshore waters also provide an important nursery for marine species that are found throughout the Indian Ocean system.

In 2007 Global Ocean Legacy, in collaboration with eight U.K. conservation organizations, proposed that

the entire Chagos Archipelago be designated a no-take marine reserve. This was followed by three years of work with the British government and strengthened by our efforts that helped generate more than 250,000 public comments in support of protecting this biological gem.

On April 1, 2010, the government announced the creation of the Chagos Marine Reserve. This designation created the largest fully no-take marine reserve in the world, at 640,000 square kilometers

(247,000 square miles). A conservation legacy almost unrivaled in scale and significance, the reserve will contribute greatly to a number of globally agreed targets, such as the Convention on Biological Diversity target to protect 10 percent of the oceans by 2020. This decision undoubtedly establishes the U.K. as a world leader in marine conservation for the benefit of all nations.



AUSTRALIA'S

Lying just east of Australia's Great Barrier Reef, the Coral Sea is an enormous, biologically rich region of roughly 1 million square kilometers (386,000 square miles). The area contains more than 25 reefs, in addition to seamounts, deep-sea canyons, plateaus, and a large abyssal plain. Unusually large numbers of pelagic fish, including sharks, tuna and billfish, combined with undamaged expanses of corals and abundant tropical reef fish populations, make this one of the healthiest large oceanic ecosystems anywhere.



Left Photo: Rainbow fish (*Melanotaeniidae*) © Lucy Trippet. **Middle Photo:** Pink anemonefish (*Amphiprion perideraion*) © Lucy Trippet. **Right Photo:** Grey reef shark (*Carcharhinus amblyrhynchos*) © Juergen Freund.

CORAL SEA

The Coral Sea provides vital habitats for many important species, including endangered green sea turtles, 52 species of deepwater sharks, rays, and chimaeras—18 of which are unique to the Coral Sea—at least 28 species of whales and dolphins, the only known spawning aggregation of black marlin in the world, and 36 species of seabirds. Collectively, the Coral Sea is home to more than 340 bird and animal species listed on the International Union for Conservation of Nature's Red List of Threatened Species.

In 2008, Global Ocean Legacy initiated a Coral Sea campaign in partnership with three Australian conservation partners asking the Australian government to establish a Coral Sea Heritage Park. Four years later the campaign has 15 partner organizations and is in the later stages of its work. At the end of 2011 the government released its draft plan and launched a 90-day public comment period. The proposal identified an area of roughly 490,000 square kilometers (189,000 square miles) of the Coral Sea as no-take marine

waters (the Coral Sea Marine National Park). Combined with the 17,000 square kilometers (6,564 square miles) of existing no-take reserves, the draft proposed the full protection of just over half of the Coral Sea. By the end of the public comment period our Coral Sea campaign helped secure 487,435 submissions, with 99.9% calling for a higher level of protection than the government's draft plan. We believe this is one of the most highly supported environmental issues in Australian history.



Photo: Humpback whale (*Megaptera novaeangliae*) © Silke Stuckenbrock/Silke Photo 2008/Marine Photobank.



NEW ZEALAND'S KERMADECS

Located north of New Zealand's North Island, the Kermadec Trench lies east of the Kermadec island chain and extends more than 2,000 kilometers (1,243 miles) northeast toward Tonga. This area encompasses more than 620,000 square kilometers (239,000 square miles) and includes some of the most geologically active and biologically unusual features on Earth.

Extending to a depth of more than 10 kilometers (6.2 miles) in places, the Kermadec Trench is the deepest in the Southern Hemisphere and five times deeper than the Grand Canyon. It is the product of a violent

collision between two continental plates and is globally significant for its geology.

The waters of the Kermadec region are a cradle of life at the junction of the temperate and tropical zone: a place isolated by deep water and teeming with birds, whales, dolphins, fish, turtles and other unique sea creatures, many of which exist only there. The Kermadecs provide important habitat for deep-diving mammals such as sperm whales and serve as a migratory corridor for humpback whales. Moreover, half of known beaked whales—at least 10 species—

are thought to inhabit the area, maybe the world's richest habitat for these rare and elusive creatures.

In 2008, Global Ocean Legacy, with the help of three New Zealand conservation organizations, began an intensive effort to protect this special place. Our proposal for a large, highly protected marine reserve is supported by iwi (the Māori peoples of Ngāti Kuri), along with New Zealanders from all walks of life—including scientists, artists, government ministers, conservationists, and business leaders.



Photo: Loggerhead sea turtle (*Caretta caretta*) © Masa Ushioda/SeaPics.com.



BERMUDA

Bermuda, a U.K. Overseas Territory, is located in the North Atlantic 1,000 kilometers (620 miles) from the East Coast of the United States. This small island with 60,000 residents sits within the Sargasso Sea, an amazingly diverse marine area that has confounded mariners for centuries and offers secret hiding places to a vast array of ocean creatures making their way across the massive Atlantic Ocean. It encompasses roughly 5 million square kilometers (1.9 million square miles).

The Sargasso Sea is an ocean within an ocean, not bordered by land but by a vortex of swirling ocean currents—where enormous mats of seaweed protect a unique community of life. From above, these mats resemble the outer canopy of an ocean forest, home to several bird species that roost on the seaweed. From below, more than 100 species of fish and 145 kinds of invertebrates rely on this seaweed for protection, a brown algae called *Sargassum*. Most impressively, millions of eels travel thousands of miles from rivers in Europe and North America just to reproduce within the Sargasso Sea's depths before they die.

In 2010, at the request of the Bermudan government, Global Ocean Legacy staff began working with local conservation and community groups to explore the idea of a large marine reserve in Bermuda's waters. The reserve would surround the island like a doughnut; the inner zone would include the area fished commercially and for sport. The outer area, or "Blue Halo," would become the largest marine reserve in the Atlantic, demonstrating Bermuda's leading role in global marine conservation.





EASTER ISLAND

Easter Island is a special territory of Chile located in the southeast Pacific about 4,000 kilometers (2,500 miles) west of the Chilean mainland. Recognized as a UNESCO World Heritage site, the island covers an area of about 163 square kilometers (63 square miles) with a population of about 5,000, of which roughly half are Rapa Nui of Polynesian heritage.

The province of Easter Island includes the waters around Easter Island and the small islet of Salas y Gómez, located 400 kilometers (250 miles) to the east and of spiritual importance to the Rapa Nui. Ancient





Left Photo: Coral crab (*Trapezia sp.*) © Frontera Azul. **Middle Photo:** Easter Island “moai” or stone statue © JAMES P. BLAIR /National Geographic Stock. **Right Photo:** Yellowfin tuna (*Thunnus albacares*) © Masa Ushioda/SeaPics.com.

AND SALA Y GÓMEZ ISLAND

Polynesians expertly navigated these waters by the stars and other signs that came from the ocean and sky. From one generation to the next, they passed along their seafaring skills.

World famous for its remarkable monolithic human figures, or moai, Easter Island is also recognized for its incredible marine life. Its waters are critical pathways for open-ocean fish species such as tuna and swordfish. And Salas y Gómez is home to the Motu Motiro Hiva Marine Park, declared by the Chilean government in 2010.

Though still largely unexplored, the waters of Easter Island are known to contain geological hot spots and areas of rare biodiversity. Highly migratory fish species as well as seamounts ranging from 8.4 million to 13.1 million years old are found here. Additionally, research expeditions to neighboring seamounts indicate that many local fish communities have more similarities to populations off the coasts of Japan and Hawaii than the Pacific coast of South America.

In 2011, Pew’s Global Ocean Legacy program began exploring the concept of a large marine park within Easter Island Province’s Exclusive Economic Zone, in consultation with the Chilean central government and Rapa Nui representatives. A marine park would not restrict current Rapa Nui fishing around Easter Island, because it would include only the area outside the current fishing zone and encompass Motu Motiro Hiva Marine Park. This would create a very large conservation area that could cover a significant portion of the province while protecting local fishing around Easter Island.



PITCAIRN ISLANDS

The Pitcairn archipelago is a U.K. Overseas Territory located in the remote central South Pacific. It consists of four small islands: Pitcairn, Henderson (a UNESCO World Heritage site), Oeno and Ducie. Only Pitcairn is inhabited, with a population of 56, the majority of whom are descendants of the mutineers of the British Royal Navy ship HMS Bounty, who fled with their Tahitian companions to Pitcairn in 1790.



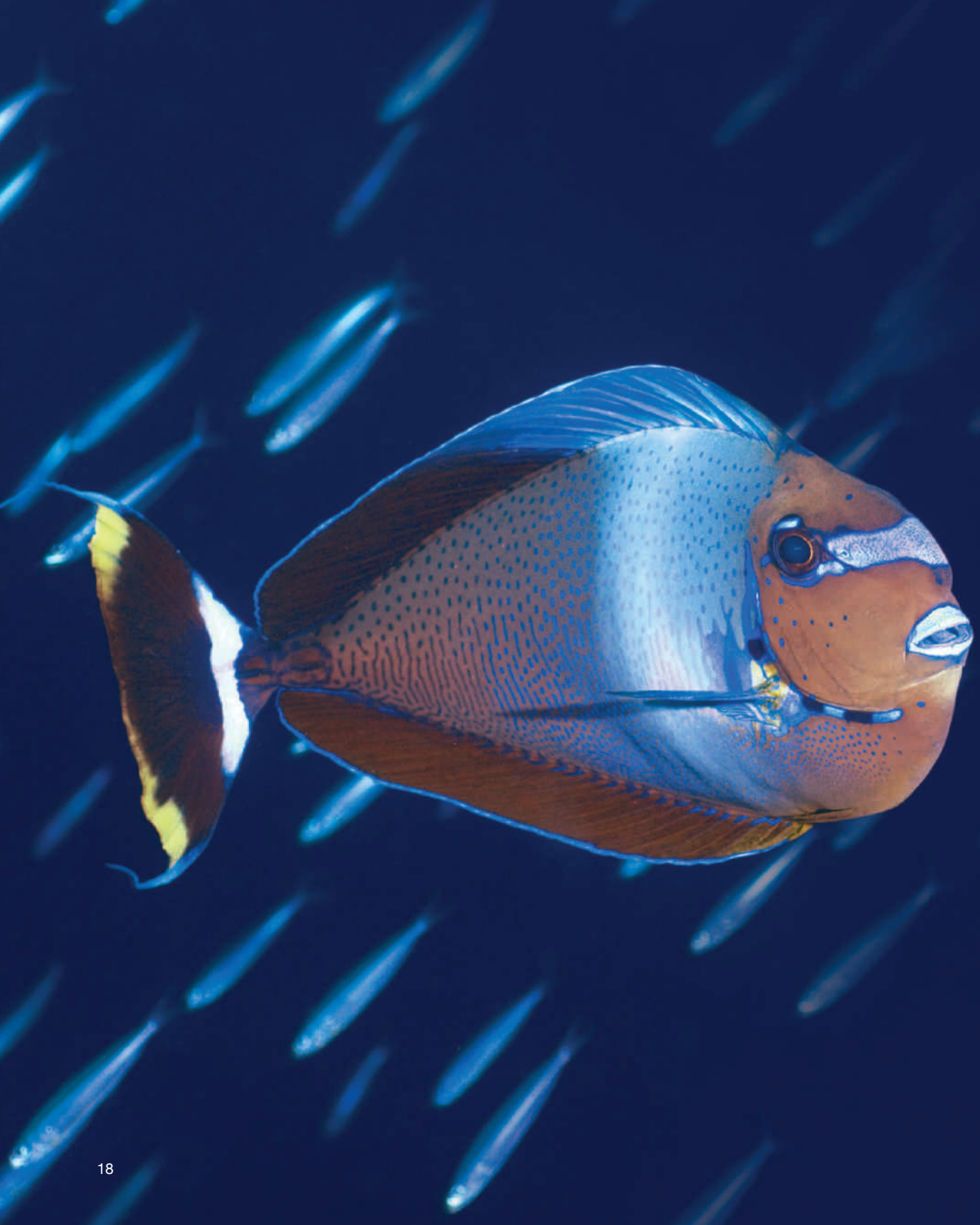
Left Photo: Filefish (*Monacanthidae*) © Chuck Savall/Marine Photobank. **Middle Photo:** Oeno Island © 2011 Andrew Randall Christian. **Right Photo:** Green sea turtle (*Chelonia mydas*) © 2011 Andrew Randall Christian.

Though the Pitcairn Islands may be small, their surrounding waters are massive: more than 836,000 square kilometers (323,000 square miles), almost four times the size of Britain. The seas around the islands are rich in marine life, with complex communities of hard and soft corals that are home to hundreds of species of fish, including two found nowhere else on Earth, the squirrelfish and the many-spined butterfly fish. This unspoiled and remote environment also

attracts important migrating animals such as the graceful green sea turtle and the elusive sei whale.

Following a trip to Pitcairn in March 2011, Global Ocean Legacy began working with the Island Council—the islands' governing body—on the idea of a large marine reserve within its waters. In 2012 our project partnered with the National Geographic Society to undertake the first comprehensive marine expedition to all four

islands to determine the health of the marine ecosystem. This scientific study is critical to learning more about Pitcairn's environment as well as how the ocean functions under light human pressure so that local communities and government leaders everywhere can implement measures to help degraded marine ecosystems recover—and help restore the health and productivity of the ocean.



FRENCH OVERSEAS TERRITORIES

With the second-biggest EEZ in the world (after the United States), France, along with its Overseas Territories, administers more than 11 million square kilometers (4.25 million square miles) of ocean, containing biologically diverse areas with natural environments that range from the subarctic to Antarctica and through the tropics of three great oceans.

In 2011 Global Ocean Legacy began exploring the concept of large marine reserves within the French Overseas Territories. The goal is to help advance the French government's marine environmental policy, "Livre Bleu," which commits France to the designation of 20 percent of its EEZ as marine protected areas—half as no-take marine reserves—by 2020.



SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS

The island of South Georgia sits approximately 1,700 kilometers (1,056 miles) from the southern tip of South America in the vast South Atlantic Ocean. The South Sandwich Islands are an additional 640 kilometers (398 miles) southeast of there. The islands are uninhabited; some are volcanic, icebound in winter, and difficult to approach.

Remarkably, this area may host the single largest concentration of marine wildlife in the world, with a biodiversity greater than the Galapagos Islands. South Georgia is the breeding ground for some 95 percent of the world's Antarctic fur seal population as well as globally significant populations of penguins and elephant seals. The islands are also home to more than 100 million other seabirds, including albatrosses, prions, and petrels.

In the past, the wildlife of these islands has been seriously depleted by overexploitation, but better management in recent decades has resulted in a partial recovery. In 2011 Global Ocean Legacy began exploring the idea of a large marine reserve around South Georgia and the South Sandwich Islands to restore this marine environment to an entirely natural state and help conserve its remarkable wildlife.





Photo: Green sea turtles (*Chelonia mydas*) © Pete Leary.

PARTNERS

Global Ocean Legacy aims to establish a worldwide system of very large, highly protected marine reserves where fishing and other extractive activities are prohibited. Our staff greatly benefits from the advice and information provided by regional, national, and international partners, scientists, and other experts in the selection of potential project sites and in the work that we undertake.

Each project is managed by experienced conservation professionals skilled in conservation biology, commu-

nications, and advancing sound public policy in the country or region in which they are working. These individuals collaborate with a broad number of local and national groups, indigenous leaders, scientists, and others to accomplish the project's goals.

Global Ocean Legacy is a philanthropic partnership. Acting as a de facto board of directors, the Global Ocean Legacy partners approve projects to be undertaken and recommend broad policy direction. In addition to the Pew Environment Group, which acts as

the managing partner, current Global Ocean Legacy partners include Lyda Hill, the Oak Foundation, the Robertson Foundation, the Sandler Foundation, the Waitt Foundation, and the Tiffany & Co. Foundation, with additional support from the Tubney Charitable Trust.



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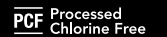
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The Pew Environment Group is the conservation arm of The Pew Charitable Trusts, a nongovernmental organization that works globally to establish pragmatic, science-based policies that protect our oceans, preserve our wildlands, and promote clean energy.

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