

# **World Oceans Day – The Importance of a Healthy Ocean**

This exhibition presents the ecologic and economic importance of a healthy ocean on both a local and global scale. It takes place during the 11<sup>th</sup> World Oceans Day, the planet's biggest celebration of the ocean.

The ocean covers 71 percent of the Earth's surface, and 50-80 percent of all life is found under its surface. Millions of people rely on the ocean for their livelihood. Without question, as UN Secretary-General Mr. Ban Ki-moon puts it, "The world's oceans are key to sustaining life on the planet." Yet, the oceans are under unsustainable pressures, and 60% of the world's marine ecosystems that support livelihoods have been degraded,

This exhibition, through photographs, conveys the importance of a flourishing ocean, one where these threats are addressed quickly and efficiently.

In the last century, human pressures have created nearly irreversible damage on the ocean. The ripples of consequences seen in the ecology of the ocean threaten the economic and personal health of millions around the world. From the tiniest coral polyp to the mighty whale, each species is vitally important to maintaining a healthy ocean.

The images and videos in this exhibition highlight the importance of the ocean for local economies, its fragile ecology and the necessary role of exploration and science to learn about to protect this vital habitat. The images depict different ecosystems and animals in different areas of the world, but are purposefully displayed in a circle to that represent the interconnectedness of the ocean. As with World Ocean Day, the exhibition celebrates and honors the body of water that links us all.

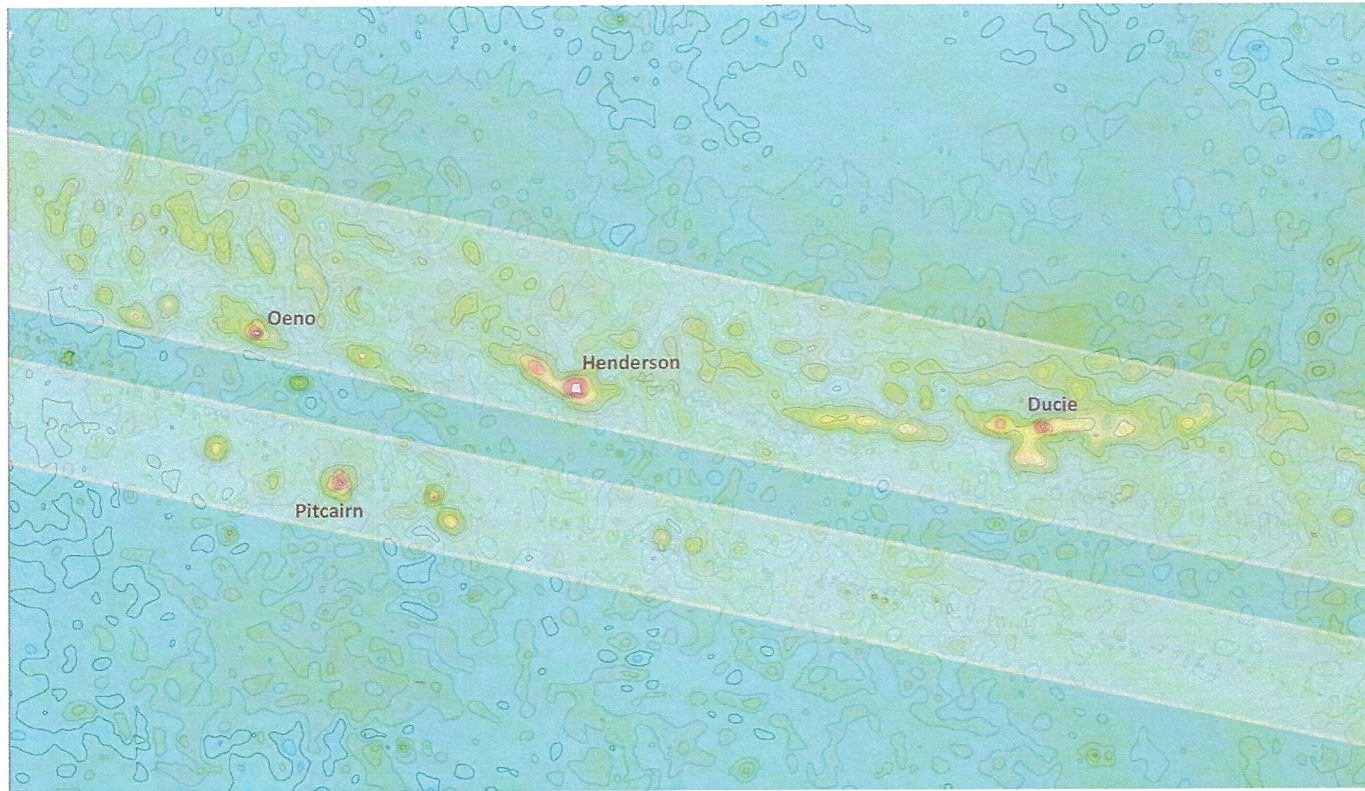
It is organized by the Division for Ocean Affairs and the Law of the Sea, in association with Blancpain, Editions Fifty Fathom and DivePhotoGuide.



Hundreds of millions of pounds of fish are eaten yearly throughout the world. Fish and seafood provide nearly one-third of the world's population with a large percentage of their protein intake.



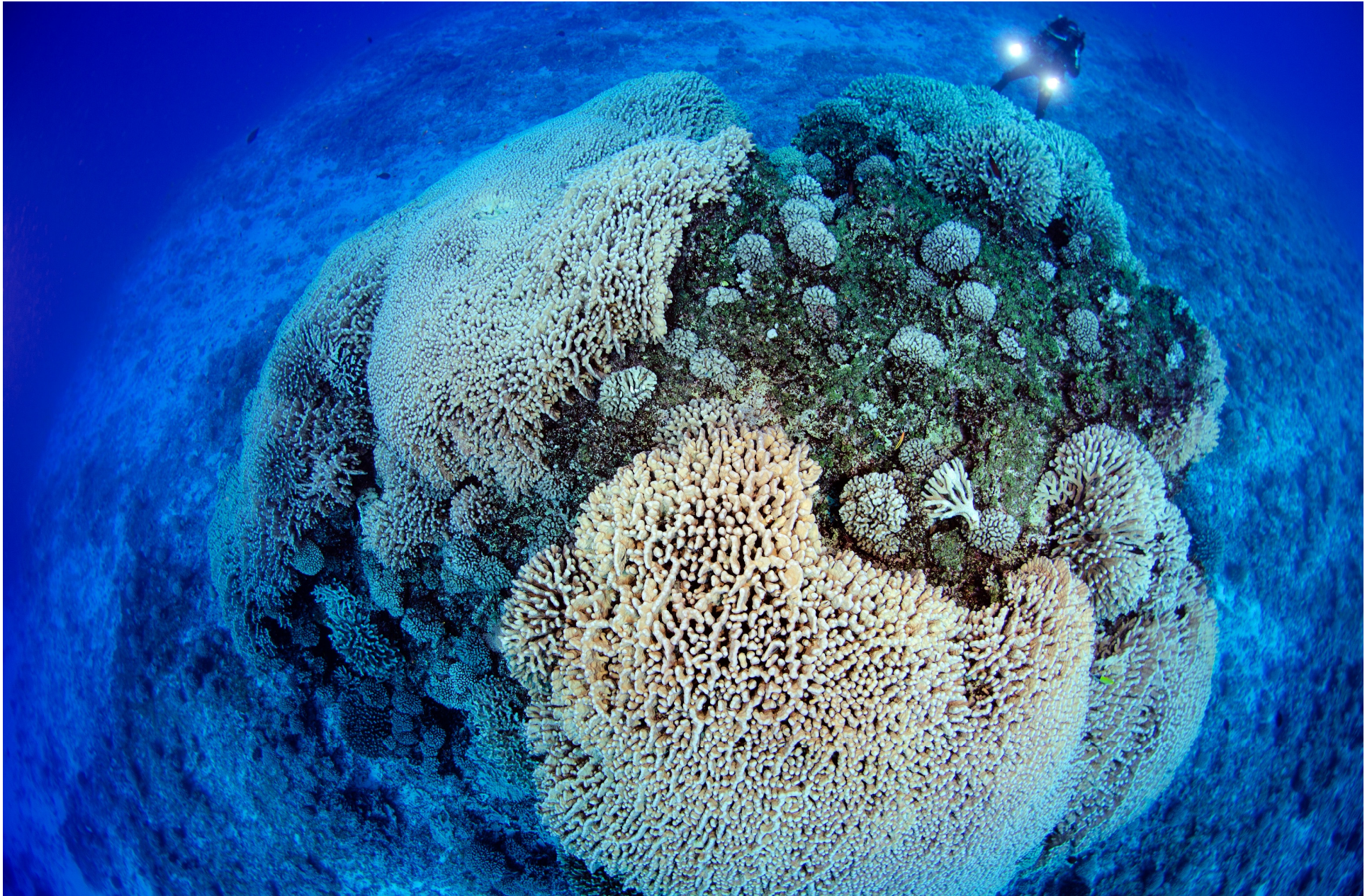
Human pressures, such as unsustainable fishing practices, threaten many of ocean's habitats and inhabitants



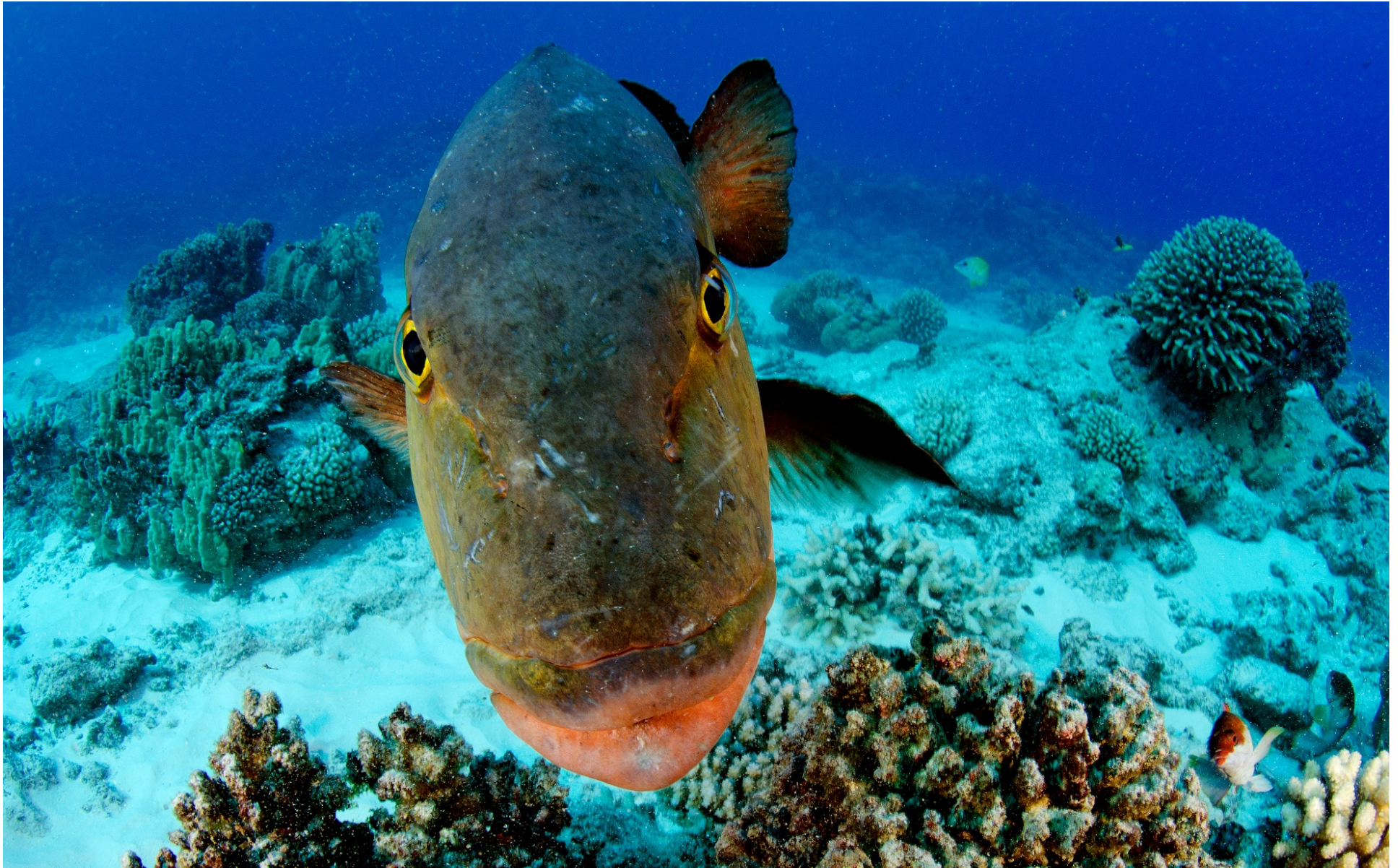
The Pitcairn Islands, located 1300 miles east of Tahiti, are one of the ocean's final frontiers. Their remote reef chain is a marine sanctuary, helping protect the world's few remaining pristine coral reef environments. By virtue of its unspoiled reefs, the species populations of an untouched reef are still intact.

A thriving shark population discovered by scientists on a recent National Geographic expedition indicates a well-functioning reef system.

# The Importance of a Healthy Ocean



Corals are declining worldwide, and some studies predict complete extinction by 2047, but the Pitcairn Islands still harbor some of the oldest living coral colonies, including this one that may be a thousand years old.



The twinstot snapper is one of the most voracious reef predators of the Pitcairn Islands. Top predators, like the twinstot snapper often play the role of a “keystone species,” which is responsible for regulating population sizes of species. Without these predators, the community makeup of the reef ecosystem would be drastically different.





A small cleaner wrasse removes parasites from a Titan Triggerfish, a common occurrence in healthy reefs. Pitcairn might be the last place on earth where a reef works like it did millions of years ago.



Ducie Atoll featured the healthiest coral reefs of the Pitcairn Islands, with sharks so prevalent that they make up 65 percent of the fish biomass.

**Healthy Reefs are Important  
to Human Welfare**

Sharks are not only indicators of healthy reef, but often play the role of a “keystone species,” which maintains the delicate balance of the ocean’s ecology. In 2006, the UN estimated the harvest of 10 million sharks annually for consumption. Only six years later, the numbers of slaughtered sharks per year has skyrocketed to 100 million, according NGOs like the German Shark Project.



Sharks are the top predators of a reef, but they being fished at an alarming rate. In fact, by the time it takes you to read this sentence, 30 more sharks will have been killed.



Predatory sharks often feed on weak or sick individuals. This helps strengthen the gene pool of the prey species, as the healthier individuals reproduce more.



Sharks are indicators of healthy reefs, such as Pitcairn Islands' Ducie Atoll. An ocean with sharks is a healthy ocean.



Dolphins, like sharks, are also top predators. Unlike sharks, however, dolphins aren't fished for their fins, and therefore not as crucially endangered.



In Indonesia's Raja Ampat, one of the global epicenters of tropical marine biodiversity, eco tourism has replaced overfishing. With more than 1,600 recorded species of coral reef fish and more than 600 species of hard coral, this area of Indonesia has the highest coral reef diversity for an area of its size anywhere in the world. Here, the local communities have partnered with NGOs to create a network of Marine Protected Areas. Eco tourism provides an alternative to fishing, promoting economic growth and sustainable long-term model for overfishing. Today, Raja Ampat stands as a shining example of how alternative sources of income can be used to preserve the local marine habitat.



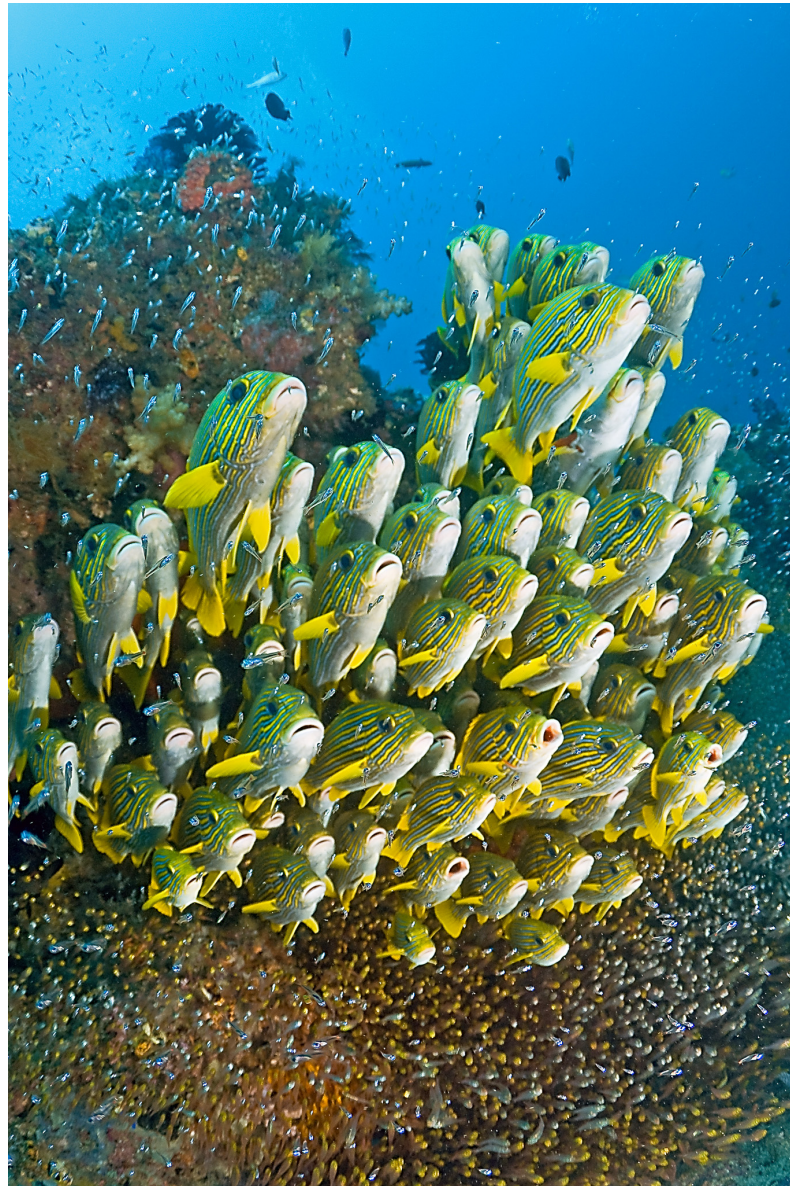
Unsurpassed habitat diversity is key to the health of Raja Ampat's reef systems. Often ecosystems are intertwined, corals and mangroves equally providing a substrate upon which all other reef life flourishes.



Funds generated from tourism fees help educate Raja Ampat's population about their marine environment, instilling a sense of stewardship to help ensure the long term viability of the area's marine environment.



To promote ecotourism in all areas of Raja Ampat and to relieve pressure on the most visited areas, tourists are encouraged to stray beyond the beaten path and discover what lies beyond Raja Ampat's better-known regions.



A healthy fish population is paramount to a healthy marine ecosystem. In Raja Ampat, where there are more tropical fish species than any other place on earth, the unrivaled gatherings of large schools of colorful, approachable fish attract tourists who stimulate the region's economy.

In 2006, Mark Meegan of the Australian Science Institute published a study that one living shark can be worth as much as \$179,000 dollars per year to a coastal community, while a dead shark only sells for about \$100. Countries like Palau (in 2009) and the Republic of Maldives (in 2010) recognized this, and were the first to declare their waters as shark sanctuaries. Protecting sharks keeps the local reefs and surrounding waters healthy, which in turn provides a sustainable source of protein and income.



In 2010, the Maldives declared their Exclusive Economic Zone waters to be shark sanctuaries to protect the predators from finning and by-catch threats.



The Maldives' shark sanctuary protects dozens of species, like this lemon shark, helping to maintain the ecosystem and boosting the economy—shark diving is a multimillion-dollar industry for the Republic of Maldives.





Mantas are the biggest rays and close relatives of sharks. They are considered gentle giants and a major attraction for divers and snorkelers throughout the world.



The Baa Atoll, designated an UNESCO World Biosphere Reserve, is one of the Maldives' 26 geographical atolls, featuring some of the most diverse coral reef systems in the world. Mantas come to this area to feed in numbers, which has led to a thriving tourism industry.

Sharks are not only one of the most important species—they are also one of the most endangered and least understood. In order to help better protect them, we must better understand them. Oceanic sharks are tagged by scientists to learn more about their behavior—a procedure nearly impossible for the big ocean roaming species like white and tiger sharks. However, new methods are constantly evolving: Some scientists use free divers to plunge into the deep with sharks.



Despite their fearsome reputation, sharks are actually quite timid—often swimming away when divers approach. Because breath-hold diving is essentially silent, it is often the most effective way to approach sharks, whether it is for research or documenting their prowess through imagery.



In order to better protect sharks, scientists must understand their migration patterns. Tagging sharks with tracking devices gives detailed reports of their movements to provide invaluable information to marine scientists.



Scientists believe there is a lot to learn from sharks. It's believed they are one of the first animals on earth to develop an immune system and are able to resist diseases and cancer far better than humans.



Manta rays are listed as “Vulnerable” by the IUCN due to increased threats of accidental capture by fishing nets. A better understanding of their habits would help scientists resolve this issue.

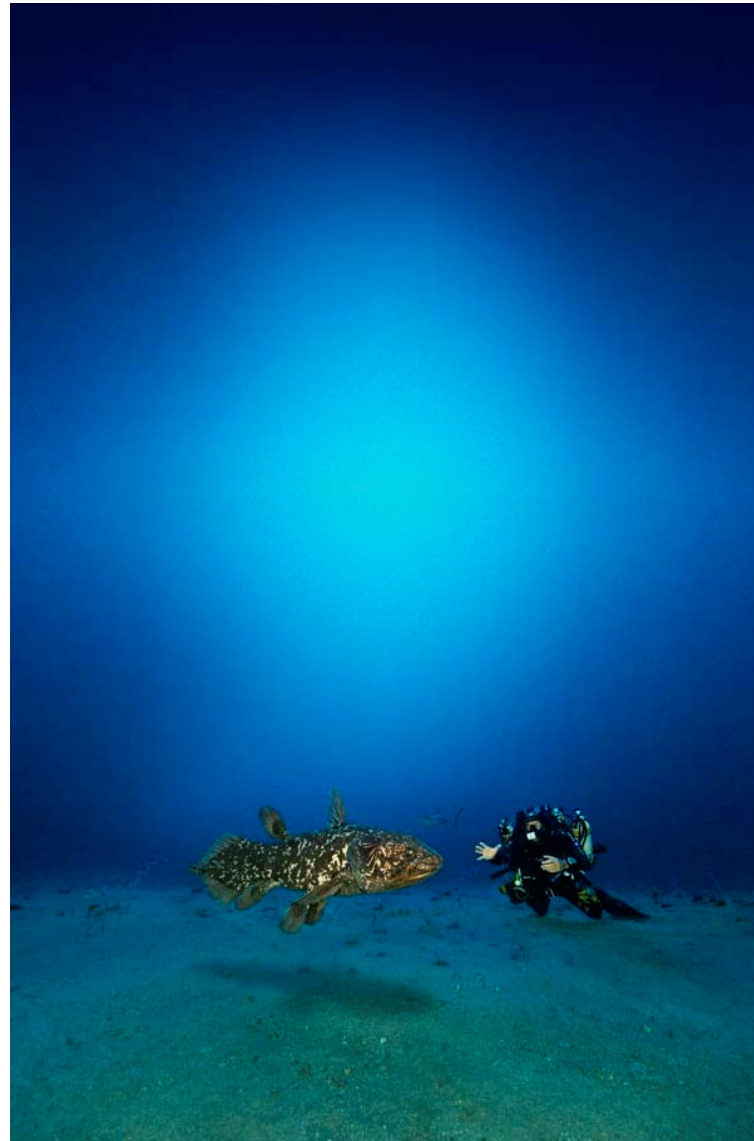
To better understand the oceans, scientists travel to some of the most remote and extreme places on earth—including the seafloor. While 90 percent of marine biodiversity is concentrated in the first 60 feet below the surface, the ocean's deep abyss still holds many secrets.

Still held to be the greatest zoological find of the 20th century, the coelacanth was thought to have gone extinct 65 million years ago until one turned up in a fisherman's net in 1938. Known as the oldest fish in the ocean, the coelacanth is a living witness to the common past of all four-limbed land animals. In 2010, a group of scientists, led by Laurent Ballesta, travelled to 350 feet below the ocean's surface to learn more about this rare animal.





At 350 feet into the abyss, Laurent Ballesta found his first coelacanth, tucked into a wall of rock punctured with cave openings. But a dive at these depths lasts only a matter of minutes, so there is still much more to be discovered about these mysterious creatures.



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The coelacanth can measure up to six feet and weigh over 200 lbs. Discovered in South Africa by a young museum keeper when it was caught in the nets of a trawler, this fascinating creature aroused the passions of paleontologists and evolutionary biologists all over the world over. The coelacanth and the shark, both pictured here, represent the oldest the oldest vertebras evolving nearly 400 million years ago.



The coelacanth is the only link in the chain from fish to terrestrial animals. It belongs to a group that evolved 380 million years ago into the first land vertebrates. The coelacanth still bears the marks of these amazing mutations.