

My Blue Wilderness

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Dr. Sylvia Earle is a marine biologist, explorer, author and lecturer who has led more than 100 ocean expeditions and logged more than 7,000 hours underwater, including setting a record for solo diving at a depth of 1,000 meters. Former chief scientist of the National Oceanic and Atmospheric Administration, Dr. Earle is currently Explorer-in-Residence at the National Geographic Society. She has written an essay about her lifelong relationship with the once-vibrant waters of the Gulf of Mexico as part of special coverage of the oil spill in the October 2010 issue of National Geographic magazine. It is reprinted by permission below.

When I first ventured into the Gulf of Mexico in the 1950s, the sea appeared to be a blue infinity too large, too wild to be harmed by anything that people could do. I explored powder white beaches, dense marshes, mangrove forests, and miles of sea grass meadows alive with pink sea urchins, tiny shrimps, and seahorses half the size of my little finger. I learned to dive in unexplored areas offshore from the many rivers that flow into the Gulf, where jungles of crimson, green, and brown seaweed sprouted from rocky limestone reefs. Under the canopy of golden forests of drifting sargassum, I swam with a floating zoo of small creatures: lacy brown sea slugs, juvenile jacks, and flying fish no larger than dragonflies.

Diving into the cool water of Ichetucknee, Weeki Wachee, Wakulla, and other inland springs, I glimpsed the honeycomb plumbing of underground tunnels, sinkholes, shafts, caves, and disappearing rivers that are common along the Gulf, all shaped from rock formed from the bodies of ancient sea creatures with calcium carbonate shells, skeletons, or cell walls. Bones of extinct mammals are there too—creatures that lived long before the arrival of humans. Ice ages have come and gone, with sea level high enough at times to drown most of the Yucatán and Florida, alternating with long stretches when both had more than double the dry land present today—changes that took place over millions of years.

Then, in mere decades, not millennia, the blue wilderness of my childhood disappeared: biologic change in the space of a lifetime.

By the mid-1950s manatees were already scarce, and monk seals, once common as far north as Galveston, were gone. By the end of the 20th century, up to 90 percent of the sharks, tuna, swordfish, marlins, groupers, turtles, whales, and many other large creatures that prospered in the Gulf for millions of years had been depleted by overfishing. The coral reefs had declined by half, and hundreds of miles of marshes, mangroves, and sea grass meadows were replaced by houses and hotels, malls and marinas. Rivers that once nourished the Gulf with vital nutrients now carried toxic loads of pollutants, forming massive “dead zones.”

In 2003, I found reasons for hope in clear, deep water far offshore from the mouth of the Mississippi River. Through the transparent dome of a one-person sub, I watched pale blue deepen to shades of indigo as I descended into ebony darkness sparked with bioluminescence—living light generated by a glowing minestrone of thousands of small creatures startled by the sub’s passage. Nearing the bottom at 1,800 feet, I turned on the sub’s lights, illuminating a sofa-size tangle of pencil-thick tube worms, each creature a century or so old and crowned with a rosy fringe of tentacles. Their bodies were laced together with spaces large enough to shelter hundreds of translucent shrimps, dozens of pale crabs, several scorpionfish, and numerous red sea stars. Gas bubbled in a steady stream from the middle of the mass, a reminder that this thriving cold-water community was powered by chemosynthetic bacteria using methane, the organic remains of creatures that had lived in the sea 200 million years ago—not sunlight—as a source of energy. Clearly, life in this part of the Gulf was prospering.

Large areas of the Gulf have escaped being scraped by trawls, crushed by more than 40,000 miles of pipelines, or displaced by one of 50,000 oil and gas wells drilled since the middle of the 20th century. Some places have been deliberately protected. Waters around the Florida Keys and the northern Gulf’s Flower Garden Banks are sanctuaries. A network of protected reefs thrives off the coast of Veracruz, Mexico. Cuba also safeguards portions of its northern coast.

As a child, I did not know that people could consciously protect something as vast as the ocean nor that they could cause harm. But now we know: The ocean is in trouble, and therefore so are we. As biologist Edward O. Wilson has observed, “We are letting nature slip through our fingers, and taking ourselves along.” Smothered in an avalanche of oil and poisoned by toxic dispersants, the Gulf has become a sea of despair. Protecting vital sources of renewal—unscathed marshes, healthy reefs, and deep-sea gardens—will provide hope for the future of the Gulf, and for all of us.*

* *Author’s Note:* In the face of urgent threats to the oceans, the National Geographic Society, Waitt Family Foundation, Deep Search Foundation, and National Geographic Explorer-in-Residence Sylvia Earle and National Geographic Fellow Enric Sala have joined ranks to establish Mission Blue, a new global initiative that seeks to restore the health and productivity of the seas. One of its signal goals will be to promote the creation of marine protected areas in critical ecosystems from the Poles to the tropics. Another aim will be to support solution-based research to reduce overfishing while considering the loss of marine-based livelihoods worldwide. “This effort is not only to inspire people to care about the oceans, but also to inspire people to act,” says Sala, who is a marine ecologist. “If we do something today, we know we’ll have an impact tomorrow.” To learn how to support this new campaign, go to ocean.nationalgeographic.com.