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An underwater photograph of a kelp forest. In the foreground, a large, vibrant sea anemone with yellow and white tentacles is attached to a rock. The background shows a dense forest of kelp with long, dark blades reaching towards the surface. The water is a clear, bright blue-green color.

Parks

With a Purpose

America's Ocean Parks

Ocean parks, such as Monterey Bay National Marine Sanctuary, help preserve underwater habitats like this kelp forest, for all our children and grandchildren.

NOAA PHOTO BY CHAD KING



What do you think of when you hear park?

A playground? A city garden or town square? A favorite national seashore like Fire Island or Padre Island? An iconic national park like Yellowstone or Grand Canyon? They're all parks, in the generic definition of an area we protect for an important social purpose such as recreation, preservation or wildlife and habitat protection. Sometimes all of those at once. It's a very old idea. Certainly one of our most ancient and one of our best. Parks have arrived in our contemporary American society from all corners of the globe. From hunting reservations in Mesopotamia to classes held in Greek civic squares. From Polynesians setting aside taboo areas of land and water to the Chinese designing gardens after the Buddhist universe. It's an idea that Americans took to, even took over in some sense, with zeal and inventiveness.

America is graced with parks, our oldest ones being open spaces in cities, some with familiar names including: the Boston Common created in 1634, New York's Battery Park (1686) and Washington, D.C.'s National Mall (1790). The first formally established parks in the New World to protect wildlife and habitat may date from the 1830s. Our first national park was Yellowstone, established in 1872, and our first formally protected areas of water date back to a few years earlier, in 1869. Now we have well over 30,000 parks, including the 417 units of the national park system, 562 units of the wildlife refuge system, 155 National Forests, more than 6,600 state parks and 20,000 city parks in our hundred largest urban areas.

America's Underwater Parks

What most Americans, even many recreational scuba divers, don't realize is that more than 1,200 underwater parks exist in our oceans and Great Lakes, including the National Marine Sanctuary System. From the diminutive (American Samoa's picturesque Vatia Village Marine Protected Area at about a quarter square mile [0.65 km²]) to beyond-imagining large (the vast sweeping waters of Papahānaumokuākea Marine National Monument at 139,797 square miles [362,073 km²]), they protect everything from red algae to blue whales, shearwaters to shipwrecks and nudibranchs to native cultures. They're managed by local communities, states, territories, tribes and the federal government, sometimes in partnership with each other.

By Elizabeth Moore

There are ocean parks that function as marine reserves to protect fish and shellfish, but many manage multiple uses within their boundaries. Nearly all of them allow recreational use, including diving.

Many Americans have heard of these places without knowing they're coastal or ocean parks. Those famous towering cliffs of Pictured Rocks in Lake Superior? They're protected by the Pictured Rocks National Lakeshore. Cape Hatteras National Seashore safeguards a stretch of 70 miles (113 km) of wild North Carolina beaches that harken back to simpler pleasures. Together, Everglades and Biscayne national parks, Florida Keys National Marine Sanctuary and four national wildlife refuges, plus numerous state parks, conserve the amazing complex of southern Florida habitats. The outer Washington coast, home of magnificent seascapes and incredible wildlife, benefits from the presence of Olympic Coast National Marine Sanctuary, a complex of coastal national wildlife refuges and numerous state parks. Hawaii's ocean parks protect the treasures of the islands, the terrible and magnificent history of our last world war in the World War II Valor in the Pacific National Monument, the living legacy of humpback whales in Hawaiian Islands Humpback Whale National Marine Sanctuary, the ancient traditions of Native Hawaiians in Papahānaumokuākea Marine National Monument.

Our Parks at Work


Just as terrestrial parks provide a variety of services to our communities and nation, so do ocean parks. Like to cast a line for a fish or go clamming? Some ocean parks, while most of the park is open to fishing, use no-take areas (such as sanctuary preservation areas in Florida Keys National Marine Sanctuary) to increase fishery yields. By restricting where, when and/or how fish may be taken, ocean parks have increased the size and number of fish both in and outside their boundaries. A recent review of a network of no-take marine reserves in Channel Island National Marine Sanctuary proved that commercially valuable fisheries improved not only within the reserves but outside of them as well. That's a fish story to tell to future generations!

Care about small businesses and sustainable communities? Ocean parks support a variety of businesses, from seafood restaurants to sea-view hotels, from commercial fishing to recreational tours, from marine scientists to wildlife photographers to marina and dive charter operators. The success of many businesses, billions of dollars in sales and millions of jobs depend directly on healthy coastal and marine resources and beautiful seascapes.

Hoping to visit, enjoy, explore and photograph beautiful wildlife and land- and seascapes? Ocean parks maintain and, where needed, help restore beaches, coral reefs, seagrass

beds, kelp forests and other beautiful habitats for residents and visitors to enjoy and animals to thrive in. Those same habitats also provide natural protection against some of our biggest coastal threats such as flooding. The roots of mangroves prevent erosion of coastlines. Shellfish beds and coral reefs can intercept and slow down waves and flood surges, and sand dunes and coastal wetlands can protect our beachfront towns and buildings.

Fascinated by the wonders of the seas? Ocean parks build our scientific knowledge. As long-term institutions, they're a secure investment for governments and universities to place their funding and efforts in research and monitoring programs. They also function as a place to collect and store information, making it available to current and future researchers, officials and citizens. For example, although numerous research institutions had been studying the Monterey Bay area for years before Monterey Bay National Marine Sanctuary was designated in 1992, it wasn't until 2002, with a permanently established ocean park in place, that research and funding institutions were comfortable enough to invest their time and money into establishing a coordinated effort, the Sanctuary Integrated Monitoring Network (SIMoN). SIMoN now includes all four national marine sanctuaries in California. Increased knowledge about our ocean, such as that



A team of divers checks on a mooring buoy in Florida Keys National Marine Sanctuary. These buoys have been used since 1981 as an alternative to anchoring, which can break and damage the coral reef.

NOAA PHOTO BY MATT MCINTOSH

MPA Q&A

Why are Marine Protected Areas (MPAs) important?

Everyone loves the ocean and marine protected areas are those especially treasured ocean places that society has decided are valuable enough that they should be protected — for our own enjoyment and for the future. These include places that are key wildlife habitats such as coral reefs, kelp forests and upwelling areas that create zones of exceptional productivity. Marine protected areas provide places for people to learn about and appreciate the ocean, and to use it in ways that also sustain healthy ecosystems and wildlife.

Why should the public be interested in or care about MPAs?

The ocean has been transformed by human uses, from oil exploration to shipping to fishing. These activities have helped build vital coastal communities and provide a huge contribution to our economy. But we also need places in the ocean where nature is still in charge and where we can limit human impacts so ocean wildlife can thrive. MPAs also help fish and wildlife outside their boundaries recover.

How can the ocean be managed to balance and accommodate various activities including commercial and recreational fishing, deep sea mining, energy development?

The key is involving the public in decisions about where ocean uses should occur and having solid, science-based information about the requirements and impacts of those uses. That way, we can take a more proactive and rational approach to how we use our oceans. MPAs are a key part of this equation because they provide the “blue infrastructure” that protects the ocean’s most sensitive and important places, helping ensure that industrial activities occur in areas where they will have less impact.

What’s the thinking behind the idea that ocean parks can accomplish more when they are part of a network than when they stand alone?

Scientists now realize that MPAs work best when they work as part of a planned ecological network. This is because a well-designed MPA network is more than just the sum of its parts. Fish start life as larvae that are then spread to other

areas by ocean currents. Networks allow MPAs to serve as hubs for generating and dispersing larvae and juvenile fish over much larger geographic areas — spreading their conservation benefits both to other downstream MPAs and to the surrounding ocean waters. They also provide opportunities for species to move to similar protected habitats if their range shifts. Networks can also act as an “insurance policy” by providing additional protected areas with similar habitats in case of a catastrophic impact like an oil spill.

What is the importance of cultural heritage resources within MPAs?

So much of our history — from the earliest settlement of North America to the industrial revolution and the modern era — has taken place along our coasts. And artifacts and remnants of those activities remain and tell their stories. Some MPAs, like the civil war Ironclad, USS *Monitor*, were created specifically to protect valued cultural resources. Other cultural resources are part of the wide natural landscape in MPAs, like places of importance to indigenous people. Papahānaumokuākea Marine National Monument is the first protected area in the United States to be recognized for both its natural and cultural values by the World Heritage Convention.

What role can MPAs play in a changing climate?

The ocean has absorbed most of the world’s excess heat generated by rising carbon dioxide and warming temperatures over the past century. We are now seeing impacts of this warming, including melting ice caps, rising seas, warmer ocean waters and more severe coastal storms. Rising carbon dioxide levels are also acidifying our oceans, threatening marine food webs. These global impacts can’t be fixed solely at the local scale. But just as MPAs can be protected from many local and regional impacts, they can also play an important role in protecting resources from climate impacts. For starters, healthy marine resources that are protected from overuse or degradation are more likely to withstand and bounce back from the negative impacts of climate change. And MPA networks provide opportunities to maintain protection for species that are shifting into northern or deeper waters for cooler temperatures. MPAs can also help protect key coastal habitats like seagrasses, salt marshes and mangroves that can absorb and store carbon for decades, even more effectively than tropical rainforests.

MPAs By the Numbers

- The United States has more than **1,200** MPAs.
- Approximately **3.2 million** square kilometers (26 percent) of U.S. marine waters are protected in some kind of MPA.
- U.S. marine waters cover over **12 million** square kilometers. This includes federal and state waters, tidal bays, estuaries and the Great Lakes.
- **85** percent of U.S. MPA area is multiple use.
- No-take MPAs only cover 3 percent or **400,000** square kilometers of U.S. marine waters.
- **97** percent of MPA area is in federal waters.
- **3** percent of MPA area is in state and coastal waters.

SOURCE: NATIONAL MARINE PROTECTED AREAS CENTER

gained, stored and analyzed in SIMoN and other sanctuary science programs, lets managers make more informed research choices and policy decisions.

Wonder why the ocean matters to all of us? Ocean parks increase our awareness of the importance of the ocean to the real, everyday lives of Americans. Ocean parks are an integral part of their communities with staff who shop at the same grocery stores, share PTA duties and coach Little League baseball with their neighbors. Visitor facilities and educational programs invite fellow citizens to see what lies just off their shores. Advisory groups ask local residents for their input and advice. Ocean parks can even help us be happier and healthier, through safe, attractive places to recreate and volunteer programs that get and keep residents, from teenagers to retirees, outside and active.

Want to indulge your inner history buff? Ocean parks preserve our maritime traditions and historical treasures to ensure we remember our nation's stories and the lessons we've learned in our short history. Our seagoing cultures have roots thousands of years in the past and our seafaring traditions helped build our maritime nation. Ocean parks help both thrive today. For example, Channel Islands National Marine Sanctuary helped support the first modern crossing of a traditional Chumash tomol from the mainland to the islands in 2001 and ongoing efforts supported by Papahānaumokuākea Marine National Monument help native Hawaiian practices thrive. The National Marine Sanctuary System's strong maritime heritage program continues to document and preserve shipwrecks and develop and study cultural maritime landscapes. Historic shipwrecks and naval battlefields, maritime landscapes and inspiring seascapes: you can find all of them, protected, studied and shared in ocean parks.

Enjoying Our Parks

You don't have to search too hard to find great diving in parks all over the country. There's guidance online for

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national marine sanctuaries (sanctuaries.noaa.gov/diving/welcome.html) and for units in the national park system (nps.gov/submerged/homepage/npsmap2.html). Here are a few national marine sanctuaries with experiences for novice to the most advanced divers.

Thunder Bay National Marine Sanctuary, Michigan: Divers are rewarded with spectacularly preserved shipwrecks from hundreds of years of maritime history in the Great Lakes. The sanctuary and its environs offer opportunities for snorkelers, recreational divers and technical divers. Many popular dive sites are marked by seasonal mooring buoys.

Stellwagen Bank National Marine Sanctuary, Massachusetts: The sanctuary is best known for its world-class whalewatching but advanced divers can add this seldom-visited underwater world to their diving life lists. Expect deep depths, good visibility, strong currents and cold water.

Monitor National Marine Sanctuary, North Carolina: The USS *Monitor* is one of the most famous shipwrecks in American history, lost in 1862, found again in 1973 and declared the nation's first marine sanctuary in 1975. Technical divers up for a unique challenge can see what's left of our Civil War's iron-clad on the seabed.

Gray's Reef National Marine Sanctuary, Georgia: Drift divers, have we got a destination for you! One of the country's largest nearshore live-bottom habitats lies about 20 miles (32 km) off Savannah. Part of this sanctuary has been set aside as a study area to help understand our impacts on the ocean, so drift dive in the northern two-thirds of the site and expect to

find colorful reef fish, benthic animals and perhaps a sea turtle or two.

Florida Keys National Marine Sanctuary, Florida: The sanctuary offers excellent opportunities for snorkelers and beginner divers to enjoy the clear warm waters of America's only living barrier reef that includes an abundance of marine life and historic shipwrecks along the Florida Keys Shipwreck Trail. Human impacts have taken their toll and as sanctuary managers and their partners work to restore and recover the reefs and other habitats, divers can help by choosing Blue Star-recognized operators, using mooring buoys and being cautious of their impacts.

Flower Garden Banks National Marine Sanctuary, Texas/Louisiana: The Gulf of Mexico's only national marine sanctuary welcomes advanced and hardy divers with colorful coral, manta rays and whale sharks. The 115 mile [185 km] distance offshore dictates live-aboards.

Channel Islands National Marine Sanctuary, California: The Channel Islands, protected by both a national park and the sanctuary, offer a wide variety of diving experiences, from lush kelp forests to sea caves to island coves. Cold water won't deter hardy divers any more than it does the seals, sea lions, colorful benthic life and many species of fish.

Monterey Bay National Marine Sanctuary, California: This sanctuary offers over 270 miles [434 km] of shoreline to explore, including many excellent shore diving locations. Also a cold-water dive, the sanctuary features rocky intertidal habitat, extensive kelp forests, iconic sea otters and lots of other marine life to observe and enjoy.

Olympic Coast National Marine Sanctuary, Washington: It takes a bit of effort to get to the remote outer coast of Washington but advanced divers will find undeveloped shorelines, beautiful offshore habitats and hundreds of species of marine mammals, seabirds, fish and invertebrates.

Hawaiian Islands Humpback Whale National Marine Sanctuary, Hawaii: Every year, humpback whales migrate to winter in the warm waters of the sanctuary. Divers, novice to advanced, can do the same and enjoy the same clear tropical waters from shore and boat-based diving.

National Marine Sanctuary of American Samoa, American Samoa: This sanctuary consists of a cluster of islands in the remote Pacific that few mainland Americans have visited. The water is clear and warm. Dive sites like the Valley of the Giants are known for huge coral heads measuring dozens of feet (meters) in circumference.

How You Can Help

Divers are in a unique position to appreciate and help protect our ocean parks in ways most of us aren't. Want to help? Here's how.

Dive wisely. Divers understand how fragile our underwater habitats and wildlife can be. Before you arrive, read up a little (and when you arrive, talk to the locals) to understand how to dive the local habitats and leave them better than you found them. Choose an operator who's been certified by an independent authority like Blue Star, Blue Certified or Green Fins. Don't get too close to wildlife and don't try to attract wildlife to come to you. Human disturbance can upset vital feeding or

Birds-eye view of the remains of the wooden schooner *American Union* in Lake Huron, Thunder Bay National Marine Sanctuary.

NOAA PHOTO



Members of the Chumash community paddle a traditional redwood plank canoe, called a tomol. The Channel Islands are a sacred place in Chumash culture and each year members of the community cross from the California mainland to the islands.

ROBERT SCHWEMMER PHOTO




reproduction behaviors. Avoid standing on or otherwise damaging reefs, seagrass beds or other habitat. If you see litter about, take it with you and make sure it gets properly disposed of onshore. Don't take any souvenirs. The underwater animals need the coral, shells, rocks and plants far more than any of us. Gently share your wisdom

and experience with other divers who may not know what you've learned.

Lend a helping hand. Ocean parks of all types and sizes have a big job to do in protecting, studying and interpreting their resources and can use your help. Volunteers help with many aspects of an ocean park: engaging with visitors along coastal walkways

and out kayaking; serving as naturalists on wildlife viewing cruises; counting whales and seabirds; collecting water quality samples; conducting reef surveys or leading tours as docents. For national parks, go to nps.gov/findapark/index.htm to find a park near you and click the "Get Involved" button on the top menu. National marine sanctuaries lists all its ways to get involved at sanctuaries.noaa.gov/involved/. See fws.gov/volunteers/volOpps.html for opportunities at national wildlife refuges. Volunteer.gov provides a comprehensive listing across many state and federal agencies.

Share the love. Fewer than one percent of Americans are divers, so the closest many will get to these gorgeous underwater havens is the awesome pictures and videos you upload onto your social media platform. So post away — regularly and frequently. Regale your cousins at the family reunion and your co-workers at happy hour with the stories of your daring diving adventures. Most Americans don't know about these things called ocean parks so show off your knowledge a little.

In the late 19th century, poet Emily Dickinson wrote: "Exultation is the going of an inland soul to sea." For those of us who love the sea — the divers, sailors, swimmers and surfers — there is no finer joy than being beside, in, on or under the water. Our ocean parks help make sure we have bright, thriving ocean places to do so long into the future. 

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