National Marine Sanctuaries at 50!

by John Galluzzo, introduction by Elizabeth Moore, NOAA Office of National Marine Sanctuaries

For the first centuries of human existence on North America, the ocean was not viewed as anything more than a source of seafood, a vector for shipping and transportation, a buffer to foreign enemies, and, for some, a venue for spiritual awakening. As the nation developed and grew, maritime resources became even more vital. Ports were established and then enlarged as ship traffic increased and the vessels themselves grew bigger; inland waterways were straightened and dredged, and a network of canals extended the reach of shipping traffic even further inland. The fortunes of the ocean-based sector of the national economy would wax and wane over the decades, but fishing, shipping, vessel construction, and port activities were always important components.

Shortly after the American Revolution, the new United States government created the Revenue Cutter Service (forerunner of the US Coast Guard) and US Navy in large part to protect American sea commerce. Other government agencies and programs were founded along the way to manage, protect, and regulate trade, fisheries, navigation, safety at sea, and the environment—all recognizing the value of our maritime activity and its effect on the oceans and freshwater systems within and surrounding the nation.

In the 21st century, we have seen the rise of a new term, "blue economy," which the World Bank defines as "the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health." The blue economy touches all of our lives whether we know it or not, and the ocean's role as an economic powerhouse will only increase in importance in coming years. Emerging industries based on the ocean's resources include biopharmaceuticals, seabed mining, renewable energy, desalination, eco-tourism, aquaculture and fisheries, and technology. As our lands and waters were fundamentally transformed by the Industrial Revolution, the ocean now faces a similar threat of rampant overdevelopment and unsustainable harvest if we do not keep the blue ecology in mind along with the blue economy.

In 1956, in perhaps the earliest modern call to create protected underwater parks, G. Carleton Ray and Elgin Ciampi, in their book, *The Underwater Guide to Marine Life,* wrote: "Some of the richest areas should be set aside and protected as are 'wilderness' areas on land." Since that time, the United States has become an international leader in the creation and management of marine protected areas. As of 2022, more than a quarter of our waters (including the Great Lakes) are in some type of underwater park, and three percent are in the most highly protected category that prohibits all extractive uses. That said, most of these waters are located in two large marine protected areas in the remote Pacific Ocean: Papahānaumokuākea and Pacific Remote Islands Marine National Monuments, which means the vast majority of our coastal waters in the continental US—the areas of the most intensive human activity—are under pressure.

In 1969 the Commission on Marine Science, Engineering and Resources (the "Stratton Commission") released a report on the marine environment, "Our Nation and the Sea: A Plan for National Action," which emphasized three issues: the ocean as a frontier for resource development, emerging threats to the coastal environment, and the need to restructure federal ocean and coastal programs. It led directly to a reorganization of federal ocean conservation efforts and the creation of the National Oceanic and Atmospheric Administration (NOAA) the following year. Then in 1972, Congress passed a series of relevant statutes: the Marine Protection, Research and Sanctuaries Act that, among other things, established the National Marine Sanctuary Program; the Marine Mammal Protection Act; and the Coastal Zone Management Act. A year later, scientists and maritime archaeologists discovered the wreck site of the Civil War ironclad USS *Monitor* off the coast of North Carolina, which would later become the first National Marine Sanctuary (in January 1975). Ten years later, there were six NOAA National Marine Sanctuaries, with more being proposed. Congress has amended and reauthorized the Marine National Sanctuaries Act numerous times. An important amendment in 1980 granted Congress authority to review a sanctuary designation before it becomes final. Today, the National Marine Sanctuary Program comprises sites located in the Atlantic and Pacific Oceans, the Gulf of Mexico, and inland waterways.

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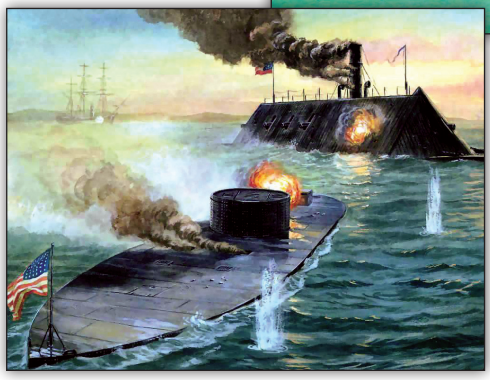

The discovery of the remains of USS Monitor *off the North Carolina coast in 1973 (and its positive identification in 1974) prompted the governor of North Carolina to nominate the site as the nation's first National Marine Sanctuary. The ironclad warship was found lying upside-down on the seafloor with the rotating gun turret dislodged but wedged in place by the aft deck. The turret was recovered in 2002 and is being conserved at the USS Monitor Center at the Mariners' Museum in Newport News, Virginia.*

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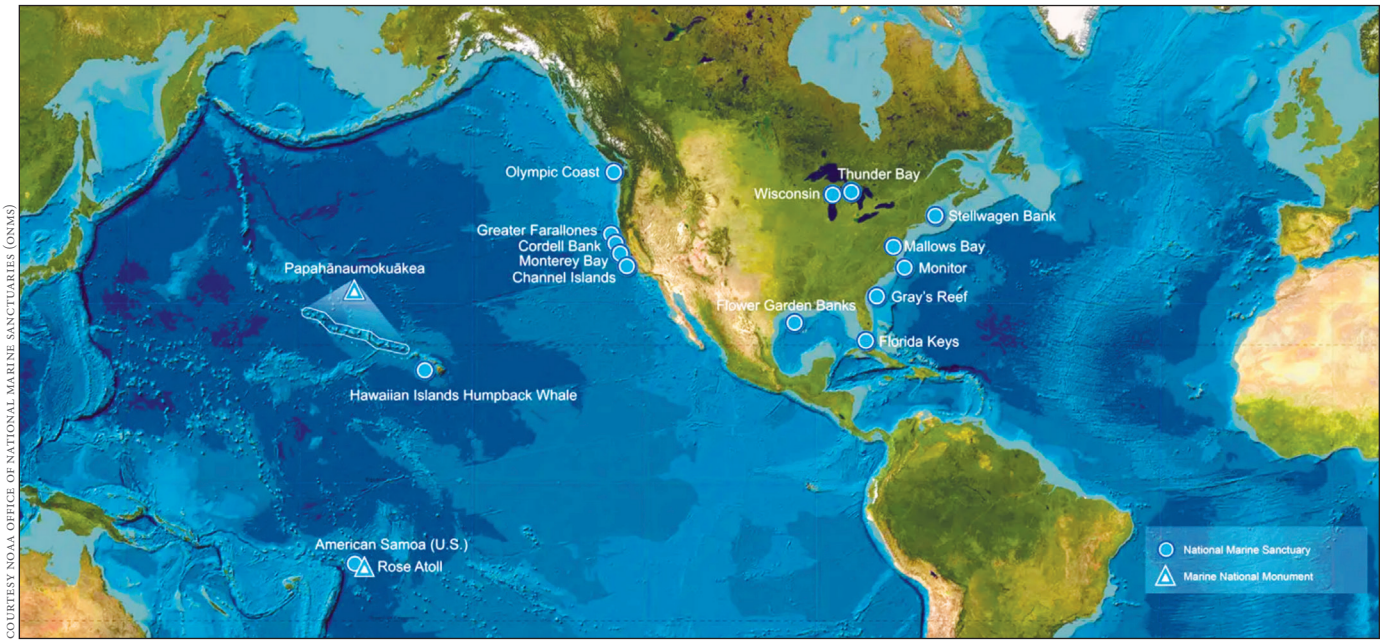


COURTESY NOAA OFFICE OF NATIONAL MARINE SANCTUARIES (ONMS)

The National Marine Sanctuary system comprises fifteen sanctuaries and two Marine National Monuments. The two most recent designees are the sanctuaries in Mallows Bay-Potomac River in Maryland and the Wisconsin Shipwreck Coast in Lake Michigan.

The National Marine Sanctuary system is celebrating fifty years of conservation and stewardship in 2022. Due to the variety of missions carried out at individual sanctuaries, which differ remarkably in scope, size, and focus, there are numerous ways to immerse oneself in the ongoing anniversary commemorations around the United States throughout the year.

If you've ever gone on a whale watch out of Boston or Provincetown, you've already visited one sanctuary, the Stellwagen Bank National Marine Sanctuary at the mouth of Massachusetts Bay. Ever hooked onto a mahi-mahi or snorkeled on the reef in the Florida Keys? Chances are you did so in the Florida Keys National Marine Sanctuary. Perhaps you've been birdwatching along Washington's Olympic Peninsula, gone diving on shipwrecks in Thunder Bay in Lake Huron, or kayaked among the remains of the ghost fleet of Mallows Bay in the Potomac River. It's hard to know, without the use of navigational charts, whether you've entered or are leaving one of the National Marine Sanctuaries. Unlike land-based National Parks, there are no "welcome" or "thank you for visiting" signs. But National Marine Sanctuaries are as real as any park and hold stories to fascinate us all, from shipwrecks to marine life large and small, above the water and below.

PHOTO BY BRYAN DORT, COURTESY NOAA ONMS

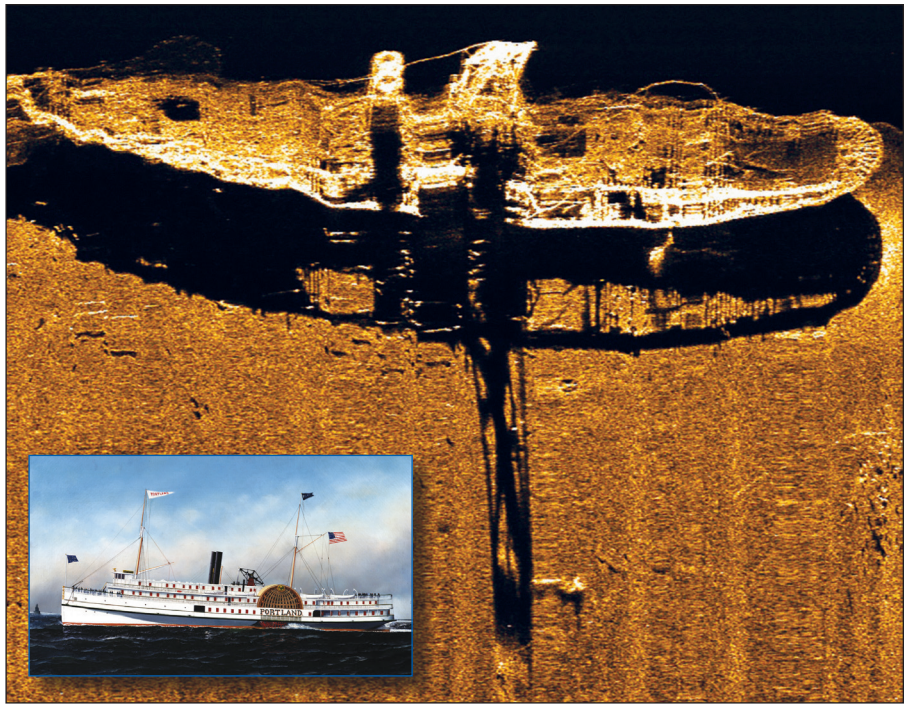
The Office of National Marine Sanctuaries falls under the National Oceanic and Atmospheric Administration and serves as the trustee for more than 620,000 square miles of marine and fresh waters, ranging from Washington State to New England, from Florida to American Samoa. As of 2022, the network includes fifteen National Marine Sanctuaries and two Marine National Monuments. As federally managed entities, the sanctuaries are designed and mandated to be accessible to the public for use in myriad ways, from research to recreation to commercial opportunities. Mostly, the primary message is one of immersion in the ocean sciences through wildlife observation, diving, fishing, sailing, and more. One day in a National Marine Sanctuary can kickstart a young person's lifelong love of the water.

For those interested in maritime history and archaeology, there could be no better arrangement to facilitate diving into shipwrecks, even if it is a virtual visit vs. donning wetsuits and scuba gear. Many National Marine Sanctuaries feature—or were even designed around—shipwreck

Shipwrecks in National Marine Sanctuaries are protected, but also meant to be accessible and shared with the public. In the Thunder Bay National Marine Sanctuary in Lake Huron, some of the shallow-water shipwrecks can easily be seen from glass-bottom boat tours or on your own as snorkelers and paddlers.

sites within their boundaries. Each wreck has its own story to tell. Collectively, they spell out the history of the New World and the development of the country, from wreck sites in offshore locations, to the coast, to inland waters.

Let's look back to 23 October 1972, when Congress passed legislation that would become the National Marine Sanctuaries Act and created the pathway to today's sanctuary system. The discovery of USS *Monitor*'s remains off the North Carolina coast the following year prompted the creation of the first sanctuary. While the original act did not have historic preservation in mind, it became the perfect protective entity for the wreck site. And it has done so for many others that followed. For *Sea History* readers with a particular interest in ships and seafaring, several of the National Marine Sanctuaries include some dramatic and intact shipwrecks within their waters.



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Sidescan sonar image of SS Portland: *Locating specific wrecks like the* Portland *in the Stellwagen Bank National Marine Sanctuary takes a combination of historical research on shore, access and training to use cutting-edge technology, and sometimes plain old good luck.*

The Stellwagen Bank National Marine Sanctuary is home to more than 200 shipwrecks, including the "*Titanic* of New England," the remains of SS *Portland*, which sank with all hands in 1898. Stellwagen is also celebrating an anniversary this year—30 years. It was established in 1992 as one of the nation's renowned wildlife-watching destinations in the United States, a place where upwelling drives nutrients to the surface, where they feed everything from Wilson's Storm-petrel—small, pattering birds gleaning bits of food from the water's surface—to the athletic and acrobatic humpback whale. As the humpbacks are putting on a show for summer whale watchers on top of the water, it's far below the surface that the drama of human history has played out and is now being shared with the rest of the non-diving public. SS *Portland* was a sidewheel steamship that was en route to Portland, Maine, from Boston, when it got caught in a violent storm that is still referred to as the Portland Gale. After 124 years on the bottom of the ocean, SS *Portland* is still recognizable by the remains of its walking beam engine and twin smokestacks on the seafloor. The staff at the sanctuary has held live virtual visits to the wreck site, and in 2023 will recognize the 125th anniversary of its sinking.

On Lake Huron, the Thunder Bay National Marine Sanctuary offers a completely different visitor experience. While Stellwagen Bank's waters can be dark and murky, the clarity of the lake allows for glass-bottom boat tours of what's known as "Shipwreck Alley." Diving, snorkeling, and even kayaking can bring maritime heritage tourists within view of many wrecks. The team at Thunder Bay worked with local partners to create a Great Lakes Maritime Heritage Trail that captures the stories of wrecks like the *New Orleans*, *Pewabic,* and *E. B. Allen*, all sharing in the greater narrative of economic development

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The Stellwagen Bank National Marine Sanctuary in Massachusetts attracts thousands of tourists each year to witness the abundance of whales that come to feed there in the summer. The humpbacks put on a show for whale watch boats consistently all season long.

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During a late spring snowstorm in 1880, the schooner Walter B. Allen *sank in Lake Michigan and settled in 165 feet of water. The wreck sits upright with its two masts still standing, coming within 90 feet of the surface. This site is one of 36 shipwrecks within the Wisconsin Shipwreck Coast Sanctuary's boundaries that represent vessels that played a central role in building the region between the 1830s and 1930s. Twenty-seven of these wrecks are listed on the National Register of Historic Places.*

through shipping on the Great Lakes. Thunder Bay operates a visitor center in Alpena, Michigan, which acts as an information primer for people heading out on glass-bottom boat tours that depart from right behind the building.

California's Greater Farallones National Marine Sanctuary may hold as many as 400 shipwrecks within its waters, starting with *San Agustin*, a Spanish galleon that was destroyed in a gale in 1595. From early explorers to participants in the Gold Rush to troop transports moving soldiers in and out of San Francisco in World War II, the variety of vessels and, unfortunately, tragedies, are boundless. Each story ties to the greater maritime history timeline: the development, through time, of accurate

Shipwrecks in the Great Lakes are generally in a remarkable state of preservation, due in large part to the cold fresh water and scarcity of marine life that quickly degrades wooden ship remains in a saltwater environment. The 1862 Lucinda Van Valkenburg *(below) lies on the bottom of Lake Huron in approximately 60 feet of water. The wreck site is a popular destination for recreational divers.*

PHOTO BY TANE CASSERLEY, COURTESY NOAA ONMS

charts; the recognition of the need for lighted aids to navigation; the development of the nation's shore-based lifeboat system; weather tracking and forecasting; and more.

The Monitor National Marine Sanctuary protects this most precious bit of Civil War history and has been a model for exploration, conservation, and collaboration with shore-based partners—namely the USS Monitor Center at the Mariners' Museum in Newport News, Virginia. The most recently established sanctuary puts the word "shipwreck" right in its name: the Wisconsin Shipwreck Coast National Marine Sanctuary on Lake Michigan is home to 36 known shipwrecks. Fifteen of these vessels are preserved almost completely intact due to the Great Lakes' cold freshwater. Three have standing masts, a rarity among sunken wrecks. More than 100 vessels were reported lost in those waters, indicating that more wrecks lie waiting to be discovered, explored, and protected.

In warmer waters, along with the spectacular coral reefs it protects, the Florida Keys National Marine Sanctuary has its own shipwreck trail. Hawaii's Papahānaumokuākea Marine National Monument holds remains of Hawaiian fishing sampans, Pacific colliers, American and British whaling ships, Japanese junks, and military ships and planes. These maritime submerged cultural artifacts are preserved in pristine waters, but they are also remote,

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(top) The Monitor National Marine Sanctuary isn't just about USS Monitor. *Other wreck sites, often teeming with marine life, are within the sanctuary's boundaries and protection. In this photo, sand tiger sharks and other fish swarm over the wreck of the WWII-era oil tanker* Dixie Arrow *in the same waters as the Civil War iconic ironclad.*

(2nd from top) A kayaker paddles among the remains of 200 ships within the Mallows Bay-Potomac River National Marine Sanctuary, designated in 2019.

(left) In the clear waters of the Papahānaumokuākea Marine National Monument, Dr. Kelly Gleason Keogh hovers over a ginger jar, one of many artifacts strewn across the reef at French Frigate Shoals from the 1823 wreck of the whaler Two Brothers.

and the Monument staff has worked hard to make these sites available to the public through livestreaming field work on site and producing museum exhibits, documentaries, and publications to share with people across the country and around the world.

These examples just hint at the history and marine environments being studied, protected, and shared by the National Marine Sanctuary system, and barely begin to tell of the work being done to preserve and interpret these resources for future generations. During this 50th anniversary year and beyond, explore the National Marine Sanctuary system firsthand to see how it is perpetuating, one story at a time, our country's maritime history. Start with a virtual visit to https://oceanservice.noaa.gov/navigation/heritage/ and plan your journey from there. ⚓

John Galluzzo is the author of 52 books on the history and nature of the northeastern United States and is the Maritime Heritage Chair of the Stellwagen Bank National Marine Sanctuary Advisory Council. With NOAA maritime archaeologists Matthew Lawrence and Dede Marx, he co-authored Shipwrecks of Stellwagen Bank: Disaster in New England's National Marine Sanctuary *for The History Press. John frequently reviews books for* Sea History.

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The primary objective of a National Marine Sanctuary is to protect its natural and cultural features while allowing people to use and enjoy the ocean or waterway in a sustainable way. Sanctuaries serve as natural classrooms and laboratories for students and researchers alike to promote understanding and stewardship of our waters.

(top) This youngster is learning to be a good steward by participating in a beach clean-up day in the Channel Islands National Marine Sanctuary in California.

(2nd from top) Marine scientists, engineers, and ROV pilots test equipment in the control room aboard the NOAA research vessel Okeanos Explorer.

(left) A marine debris team removes a large net from the shallows of Midway Atoll in the Papahānaumokuākea Marine National Monument.