

Managers of Cultural MPAs Face Unique Challenges

Editor's note: The following two articles use the word *cultural* -- as in, cultural resources or cultural heritage -- as an umbrella term. It is intended to describe all underwater heritage of human existence, including archeological and historic character.

In global discussions on the practice of MPAs, the focus is usually on how to manage marine natural resources most effectively -- namely fish stocks and habitats. But several MPAs around the world exist for the protection of cultural, rather than natural, resources. These MPAs, often designated around historic shipwrecks, present some unique challenges for their managers.

This month, MPA News examines these challenges and, in a feature immediately following this article, assesses what a pending United Nations agreement on protecting "underwater cultural heritage" could spell for cultural MPAs.

Role of archeology in management

The USS *Monitor* is among the most famous vessels in US maritime history. The first of a class of low-slung, ironclad warships, she engaged in close cannon-fire with the Confederate States' ironclad Virginia in 1862 -- a Civil War battle that spurred the end of the age of wooden warships. Just a few months later, the *Monitor* was lost in a storm off Cape Hatteras, North Carolina (on the US East Coast), sinking in 72 meters of water, 16 nautical miles from shore.

More than 100 years afterward, in 1975, the US government designated the resting place of the *Monitor* as the nation's first national marine sanctuary. Measuring approximately one mile in diameter and stretching from seabed to sea surface, the sanctuary now features a range of regulations to protect the wreck -- among them, prohibitions on anchoring, salvage, drilling, and trawling.

Bruce Terrell, maritime historian for the US National Marine Sanctuary Program, says appreciation for history and archeology is essential for the effective management of cultural MPAs like the *Monitor* site. "A lot of the information you get from a shipwreck site is available only through archeological examination," he said. The reason is because the spatial relationship of artifacts on a wreck, as well as the kinds of artifacts present, can tell much about the life of sailors aboard -- what different classes ate, how they passed the time, etc. Archeologists, if allowed to maintain control over a site, may examine the relationships of its artifacts carefully.

The natural rivals of the maritime archeologist are the salvor and looter, searching for artifacts of financial value and sometimes compromising the stability of a wreck in the process. Such activities, in fact, are the main drivers in the designation of cultural MPAs. The main intent of Congress in designating the *Monitor* sanctuary was to protect it from looting and unwanted salvage (see box at end of article).

Providing fair protection for a wreck is not always as simple as drawing a line around it, however. Some salvors have accused archeologists and site managers of unfairly trying to keep artifacts for themselves, in spite of the long maritime tradition of salvage. Terrell says he doesn't mind seeing salvors take some items, particularly duplicative ones like gold coins or gold bars that he says do not hold as much archeological interest. "These kinds of items can be allowed back into the stream of commerce," he said. "Personally, I don't have a problem with salvors who obey the law. I am more concerned with illegal looting."

Fostering respect for a site

Education of local stakeholders is a critical part of managing most any MPA. For cultural MPAs, it involves encouraging an ethic of respect for protected shipwreck areas. "A lot of people don't understand the importance of underwater historic preservation," said Terrell. "They might not consider picking up an artifact at a terrestrial site, but would snatch one from an underwater site without thinking about it -- it's a gold-digger mentality."

When the Florida Keys National Marine Sanctuary (US) set out to create a "Shipwreck Trail" for divers in the sanctuary, planners had two goals in mind: to educate divers about maritime heritage and its protection, and to redirect diving pressure from the sanctuary's major natural reefs. Officials consulted with local dive operators to decide which nine shipwrecks -- of the many lining Florida's southern coast -- should compose the trail. The finalists were selected, in part, for their ability to educate not only about history but also about the need for protection. One site was chosen for, among other reasons, its ability to show the after-effect of salvage and looting.

The Florida Division of Historical Resources operates a separate collection of seven shipwreck-based "underwater archeological preserves". Della Scott, an underwater archeologist for the division, says the purpose of the program is to educate the public -- both tourists and locals -- about the state's maritime past. People from out-of-state can come to enjoy the sites, she says, but even more important is the goal of encouraging local Floridians' appreciation of their common heritage.

"The idea behind the preserves is to get the community involved," said Scott. "Community members are in charge of nominating sites, then our office will check to see if those sites meet certain criteria." The criteria, she said, include whether it is a safe diving site; whether it has enough structure to attract marine life; and whether it has an established vessel identity. Once the state designates a preserve, it is basically up to the local community to keep it clean of debris and encourage compliance with no-looting regulations - hence the importance of community support for the idea of the preserves.

Time is a factor

In deciding to designate a preserve, Scott's office also looks at the stability of a nominated site. If a site is unstable and in danger of disintegration, the state won't designate it. Her program is small and on a tight budget -- with three staffers at most -- and can't afford financially to be in charge of site upkeep. The costs of restoration are too high.

"Most of our sites are in pretty good shape," she said. "One of them is a 350-foot-long chrome-nickel-steel battleship, and not much is going to hurt that." One currently nominated site -- the remains of an old wooden steamboat in shallow water, covered in thin sand -- could be degraded by divers' brushing away the sand, she says. As a result, she questions whether that site will be designated.

The gradual deterioration of shipwrecks can be the most significant challenge to managers. "The biggest enemy of the *Monitor* is time," said Jeff Johnston, research assistant for the *Monitor* sanctuary. "She's falling apart." Consisting of a wood/metal frame, and located in a fairly dynamic environment with relatively high-temperature saltwater, the *Monitor* is in danger of corroding away.

In the past three years, *Monitor* sanctuary personnel, in conjunction with the US Navy, have sent divers down to recover features of the vessel, most recently her engine. Artifacts from the ship are now on display in the more hospitable climate of a museum, and more recovery expeditions -- including for other major features of the wreck -- are on the way.

As such recovery continues, will there come a time when the *Monitor* sanctuary will no longer contain the *Monitor*? "That is a key issue that we've had to address," said Johnston. "But there are still a lot of artifacts there. Once the major recovery operations are over, we will continue to sweep forward, examining the wreck square foot by square foot. I see the *Monitor* as remaining a viable sanctuary for many, many, many years to come."

What might buy time for the sanctuary, and for other cultural MPAs, will be technological solutions to slow the sites' degradation. Cathodic protection -- or the use of metal anodes to divert corrosion away from ships -- is one option, at least for metallic wrecks, says Johnston. Widely used by the offshore oil industry to slow corrosion of pipelines, these cylindrical anodes can change the electric field of a wreck, causing the anodes to corrode rather than the ship. The sacrificial anodes are made of more electrochemically active metal than the wreck. Once a set of anodes is fully corroded, another must be attached in its place.

The *Monitor* sanctuary has already done some limited experiments with cathodic protection, says Johnston. "You can't reverse the deterioration, but you can arrest it," he said.

For more information

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Box: Designation of the Monitor sanctuary

When the US Congress designated the *Monitor* National Marine Sanctuary in 1975, its main intent was to protect the site from looting and unwanted salvage. At the time, however, the US Marine Protection, Research, and Sanctuaries Act (MPRSA) of 1972 -- under which the sanctuary was designated -- did not provide for the protection of historic heritage. Rather, it focused on the protection of an area's "natural resource and ecological qualities." It was not until an amendment of the MPRSA in 1984 that Congress expressly included historic resources under the scope of the law.

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