Volume 1: Presentation Papers

Proceedings
of the
Maritime Cultural Landscape Symposium

October 14-15, 2015
University of Wisconsin-Madison

Front cover: *Split Rock Light Station, Town of Beaver Bay, Lake County, Minnesota*. Built in 1909-1910 as part of a concerted effort to upgrade the Great Lakes navigation system, the Split Rock Light Station served the ports of Two Harbors and Duluth-Superior. From these ports, tons of iron ore were shipped to eastern industrial states and grain was shipped throughout the Great Lakes.The light station and associated buildings were designated a National Historic Landmark in 2011. Photo by John N. Vogel, October 2007; courtesy of the National Historic Landmarks Program.

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Barbara Wyatt, Editor

National Park Service, U.S. Department of the Interior
Washington, DC
2018

The contents and opinions expressed in this publication do not necessarily reflect the policies, guidance, or procedures of the National Register of Historic Places, the National Historic Landmarks Program, the National Park Service, the Department of the Interior, or any other Federal program or agency.

Acknowledgments

The Maritime Cultural Landscape Symposium resulted from conversations held by participants in the National Register Landscape Initiative webinar series. The National Park Service thanks those whose energy and vision inspired the gathering on the University of Wisconsin campus to share ideas and findings about maritime cultural landscapes and their inclusion in historic preservation initiatives. The symposium was planned and carried out by the following committee:

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This publication has been made possible by funding from the Bureau of Ocean Energy Management. The committee also appreciates funding provided by the National Oceanic and Atmospheric Administration, the National Park Service, and the Wisconsin Historical Society. The National Conference of State Historic Preservation Officers is thanked for its efficiency in carrying out symposium registration and reimbursement. The National Center for Preservation Technology and Training is thanked for its contributions to this publication.

The committee appreciates the service and hospitality provided by The Pyle Center and the Lowell Center Conference and Lodging Facility, both operated by University of Wisconsin-Extension on the University of Wisconsin-Madison campus.

The services of Matthew Payne, publications designer, are greatly appreciated.

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Introduction to the Proceedings

Barbara Wyatt
National Park Service

This publication reflects the essence of the information and ideas that were shared at the Maritime Cultural Landscape Symposium, held on the campus of the University of Wisconsin-Madison in the fall of 2015. Much of the conversation about these remarkable landscapes took place after the sessions—over drinks, meals, coffee—but the basis of such conversations was the research, fieldwork, and government and tribal initiatives that were the subject of the presentations given during the two-day symposium.

The gathering was the result of nearly two years of planning by three federal agencies and one state agency: the National Park Service, the National Oceanic and Atmospheric Administration, the Bureau of Ocean Energy Management, and the Wisconsin State Historic Preservation Office. It provided a venue and an opportunity for scholars, representatives of government and tribal programs, and consultants to discuss their common interests in maritime cultural landscapes—MCLs. It may have been the first such gathering of Americans who have a scholarly interest in MCLs and their recognition and protection under federal regulations related to the National Historic Preservation Act.

Questions remain about how MCLs are and will be evaluated for eligibility for the National Register of Historic Places. Their eligibility is a critical consideration in the environmental review process, with great repercussions for their protection. To that end, it is essential that we continue to explore the range of properties that may be recognized as MCLs and how they should be evaluated.

Maritime cultural landscapes are found across the nation—on the mainland and islands; in coastal areas, waterways, and inland waterbodies; and aboveground, subsurface, and underwater— in any imaginable combination. Many speakers gave a nod to Christer Westerdahl, the Norwegian scholar generally attributed with first using the term "maritime cultural landscape." The presentations given at the symposium revealed the breadth of the definitions of MCLs and the recognition that one shipwreck, one coastal historic district, and one collection of ceremonial stones are best understood in the context of a broader setting. This physical context will embody essential historical significance and constitute the "landscape" part of the MCL concept. The research, concepts, and motivations expressed in these papers provide both inspiration and fodder for moving forward. What does that mean?

To explore that question, the day after the symposium, a group of participants met in a workshop format to discuss what we had learned, essential questions that linger, and how those interested in the recognition and protection of MCLs can promote better inclusion in the National Register. The last chapter of this publication presents a summary of workshop findings. While it does not provide an actual roadmap forward, it indicates the necessity of involving many in the discussions that lead to a fuller understanding of the role of MCLs in the National Register program, including representatives of various state and federal agencies, tribes, scholars, and interest groups.

The publication compiles the papers presented at the MCL gathering in Madison. When the symposium was planned, there was no intent to publish the presentations as papers, but it became clear that the collection of presentations provided a sweeping glimpse of research and policy considerations across federal agencies, states, tribes, and universities. After the symposium, presenters were given an opportunity to contribute a paper version of their presentation for this publication. Those who did not have a written record of their presentation allowed the transcription of their talk to be edited for inclusion. The contributions of all participants is greatly appreciated.

Volume 2 of this publication includes links to the videos of the presentations. Those are particularly useful for seeing the images that accompanied the presentations. Together, the two volumes present valuable documentation of the symposium and a tool for moving forward with other initiatives, particularly in regard to the National Register.

Note on spelling: The editor acknowledges that both "archeology" and "archaeology" are correct spellings and has respected each contributing author's preferred spelling.

Keynote Presentation

Sink or Swim: Addressing Maritime Cultural Landscapes in the National Register Program

J. Paul Loether
Chief, National Register/National Historic Landmarks Program
National Park Service

Summary of Paul Loether's Presentation

Before I started my job with the National Park Service about seven years ago, I was the Director of Culture for the Connecticut Commission on Culture and Tourism. That was an amalgam that was put together from the old historical commission, the arts commission, and the office of tourism. My portfolio included the State Historic Preservation Office, which is what I had come up through. Prior to that, I worked with both local and regional non-profit preservation organizations.

I am going to spend most of my presentation discussing some maritime cultural landscapes. What I would like to try to do is give a sense of those kinds the National Register Program considers maritime cultural landscapes—provide a little bit of the philosophy behind our perspective as to what maritime landscapes are and are not. I want to be clear upfront that, at least currently, maritime cultural landscapes are not a National Register property type. They are an area of specific significance usually contextual in framework.

I have very much considered the philosophy of what we are trying to do at the Register with maritime landscapes in particular, and cultural landscapes in general. This definition is specific to cultural landscapes:

> **Cultural properties represent the combined works of nature and of humans.**

It actually mostly came from, oddly enough, Wikipedia. I like the philosophy behind this definition (even though I question the syntax of the English) just because it identifies what we are trying to get to as we work with cultural landscapes and especially maritime cultural landscapes.

So, in essence, what is the difference between a cultural landscape and a maritime landscape? I was putting together a care package for my daughter at the College of Wooster, doing shopping at a Giant supermarket, and came across a box of Swiss Miss cocoa mix—the difference between a cultural landscape and a maritime cultural landscape? Just add water. That is a simplistic approach, but essentially that is what we are talking about here.

In my talk, I review the following maritime cultural landscapes, which are listed below with links to their National Register or National Historic Landmark nomination, if listed or designated and if available.

- Stony Creek/Thimble Islands Historic District, CT
  https://npgallery.nps.gov/nrhp/GetAsset?assetID=cf-62b50e-87a1-4858-a41c-50b6f3e070ba
- Edgartown Village Historic District, Martha's Vineyard, MA
  https://www.ncptt.nps.gov/download/43685/
- Kennedy Compound, Hyannisport, MA (National Historic Landmark) Menemsha, MA
  https://npgallery.nps.gov/pdfhost/docs/nrhp/text/72001302.pdf
- Nantucket Historic District (National Historic Landmark), MA
  https://npgallery.nps.gov/GetAsset/165b0948-ca3e-452d-b39e-32af922435a4
- Dune Shacks of the Peak Hills Historic District, Provincetown, Cape Cod, MA
- Smith Island Historic District, MD
- Fishtown Historic District, Leland, MI
- Turtle and Shark, American Samoa
  https://www.nps.gov/nr/feature/places/pdfs/14000925.pdf
- Bikini Atoll, Marshall Islands

Cape Wind

One of the most important Maritime Cultural Landscape determinations in the Section 106 process involved Cape Wind in Nantucket Sound in Massachusetts. I want to emphasize this case, because it became an important precedent in the recognition of maritime cultural landscapes.

A number of years ago, the National Register Program became involved in a Section 106 compliance case that is known as "Cape Wind." Cape Wind primarily involved a determination of eligibility request for Nantucket Sound, though we also looked at the project's impact on the Kennedy compound and the island of Nantucket (both NHLs). One of the things that really came to the fore in Cape Wind was the Wampanoag Tribes' claim that this area, particularly Nantucket Sound in its entirety, was a traditional cultural property (TCP). We had the good fortune to engage in what was essentially a government-to-government consultation with both tribes involved—the Wampanoags of Gay Head and the Mashpee Wampanoags—which are the surviving branches of two federally recognized area tribes. We had an opportunity to work with them and learn "first hand" about the historic significance they ascribe to this area.

Just to give you a sense of what we learned from our consultation: the pink area to the right on Figure 1 is where their cultural hero Moshup and his wife Squannit supposedly came from in the very dim past. When Moshup moved, the path is roughly a red line. Tradition holds that the body of water between the Cape Elizabeth Islands, which is the small string above Martha's Vineyard, and Martha's Vineyard itself, is a channel created by Moshup dragging his toe through the water. Nantucket, in their tradition, was also created by Moshup. For those of you who do not know the area, it gets very foggy, gets very misty, and the tradition is that the fog was caused by Moshup smoking his pipe, and then one day his pipe burned out, so he turned it over and then created Nantucket.

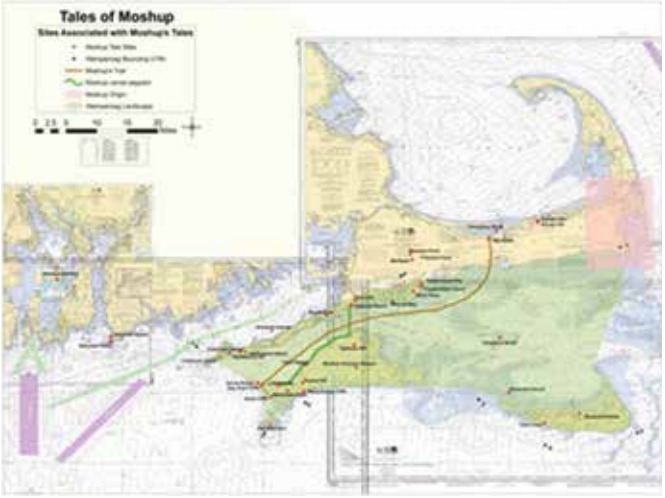

Figure 1: Map of area inhabited by Moshup and Squannit; courtesy of NPS CRGIS.

All of the little sites that are plotted as small red dots on this map relate to the traditional cultural property aspects of this area with the tribes. What we saw when we mapped them—and again, this map does not include any archeological sites per se, and there are many in this area as a whole—these are just some of the sites significant as TCPs that we talked about when we were there. This map helps one to understand the nature of the resources they are talking about; it becomes very clear that what the tribe recognizes is an indigenous cultural landscape with many resources that relate to their traditions. Many of these resources are "not built." They are belief-driven. And as we plotted this, the visual representation resulted in an epiphany that that's what we were looking at—a large cultural landscape.

The image in Figure 2 provides a view of Gay Head, which is a National Natural Landmark. It is on the southwestern end of Martha's Vineyard. It is the point central for the Wampanoag tribe of Gay Head. Gay Head, traditionally, is where Moshup settled when he finally made that movement off of Cape Cod and down into Martha's

Figure 2: Sunset over Nantucket; courtesy of NPS.

Vineyard. If you look at the landscape, you'll see streaks of red and streaks of black. The red is where Moshup, after he fished and caught his whales, killed them. The black traditionally is where he cooked them. There's a strong relationship with the tribe in terms of belief, significance, symbolism, and ceremonial intent.

Figure 3: The Seal of the Wampanoag Tribe of Gay Head Aquinnah; accessed at http://www.wampanoagtribe.net/pages/wampanoag_way/other.

The center of the seal of the Wampanoag Tribe of Gay Head Aquinnah depicts Moshup standing in front of Gay Head with his whale. It gives you a sense that for indigenous landscapes, significance often does not require built things. It is very often mostly belief driven. Significance that is ascribed to places is often important to recognizing a cultural landscape. And in the case of Nantucket Sound and Cape Cod and the Islands… it is very much a maritime landscape.

One of the most significant aspects of this is reflected in Nantucket Sound itself, which the Keeper of the National Register determined in 2010 to be significant as a traditional cultural property within the context of the larger Cape Cod and the Islands Historic District. This is because of the Sound's importance ceremonially to the tribe at the junction of the sky, the sun, and the water at dawn.

Wampanoag, roughly translated, means, "people of the dawn," and that's a responsibility that both tribes take on, not only for their own people, but also as representatives of tribes across the nation. While you may see a channel marker, beyond that, really what you see is entirely natural. It is the belief-based association with the very natural maritime landscape that makes Nantucket significant for the tribes. People may ask, how is it a "landscape? It's really all water?" For the purposes of eligibility for the Register, districts that are significant landscapes often include bodies of water, large or small—some call them (informally) "riverscapes," "lakescapes," or "seascapes"—and a cultural landscape district can include anything that has to do with a broad natural expanse with natural features that may relate historically to a group or groups of people, including water.

Figure 4: Channel Marker in Nantucket Sound; courtesy of NPS.

Concluding Comments

We in the National Register Program do not think we necessarily have all the answers; therefore, the purpose of the presentations at the MCL symposium are to record the work, suggestions, and challenges of many who work in the field. That said, the Register program has some strong feelings about the importance of cultural landscapes and maritime landscapes in particular, so the following discussions and presentations are of great interest to the future of this work.

Paul Loether is now the Keeper of the National Register of Historic Places.

(A link to the full transcript of Mr. Loether's presentation can be found in Volume 2.)

1. Perspectives on Maritime Cultural Landscapes

Introduction

The Maritime Cultural Landscape Symposium sessions began with comments from representatives of the agencies who organized the symposium. Staff who represented their agency in the nearly two years of discussions leading up to the symposium were invited to comment on why they consider MCLs important, why preservation programs need to address them, and how they are incorporating them into their program planning.

Proceeding alphabetically, James Delgado of the NOAA Office of National Marine Sanctuaries spoke on behalf of the agency that may have the most expansive involvement with the nation's maritime history. NOAA's Maritime Heritage Program has deepened its engagement with coastal communities and Tribes, recognizing that the management and protection of both individual maritime resources, such as a shipwreck, and more extensive maritime cultural landscapes require significant community engagement. Ultimately, achieving a better understanding of MCLs as an agency and sharing that understanding with the public will help win people over to a more holistic vision of maritime history resources and their relationship to the present.

James Moore was the spokesman for the Bureau of Ocean Energy Management (BOEM), the newest federal agency of the group, but one with a profound interest in understanding and recognizing MCLs. BOEM's jurisdiction spans the Outer Continental Shelf—some 1.7 billion acres—of distant and deep waters. Although the relatively small agency's resources are somewhat limited for carrying out extensive studies, they have accomplished important work with Tribal partners and other agencies. BOEM is especially interested in contributing to a better understanding of underwater cultural landscapes.

Daina Penkiunas, Deputy Historic Preservation Officer for Wisconsin, had no trouble demonstrating Upper Midwestern interests in MCLs. Between the Great Lakes and the Mississippi River—and myriad smaller waterways—Wisconsin's maritime history and its interest in MCLs (although perhaps not by that term) is not new. She recounted the various historical manifestations of maritime culture, from steamboat traffic to logging the north woods to industry, agriculture, and tourism. The state has acknowledged this history through National Register nominations and innovative programs like the maritime trails program.

Barbara Wyatt, a historian and landscape specialist with the National Register and the NHL Program, developed her presentation around the words "concept, collaboration, and results." She explained that the concept of a landscape approach to resource evaluation was introduced with the rural historic landscapes bulletin in 1989. It has not been widely embraced for other landscapes, but the National Register is interested in collaborating with other agencies to explore the potential for broadening the landscape paradigm, including as a means for evaluating maritime cultural landscapes. With other participants in the symposium, she hopes that an increased understanding of MCLs will achieve results, notably the listing of MCLs in the National Register as historic districts and the development of guidance tools for nomination preparers.

The agency representatives for the Perspectives session set the stage for the presentations that followed. Many of the subsequent speakers were from BOEM, NOAA, NPS, or the Wisconsin SHPO, and it was useful to have a fundamental understanding of how these agencies support, encourage, inspire, and use the research described throughout the symposium.

Barbara Wyatt
National Register of Historic Places
National Historic Landmarks Program
National Park Service

NOAA Perspectives on Maritime Cultural Landscapes

James Delgado
Office of National Marine Sanctuaries, Maritime Heritage Program
National Oceanic and Atmospheric Administration

I would like to start by being the first of a group to talk a bit about perspectives from the various agencies: why we care, what we are doing, why we're doing what we do, and a bit about where we go as the next few days evolve.

NOAA, as the nation's ocean science agency, is more than just the NASA of the seas, more than a weather bureau, and more than even a collection of unique sites out there in the marine sanctuary system. NOAA is an agency with a specific task of dealing with the environment. In that, you get at the heart of why NOAA, as an agency, and why the Office of National Marine Sanctuaries, like the idea of the maritime cultural landscape. At its simplest, and as we have now adopted as policy, we see maritime cultural landscapes as a means by which we can start to deal with this very basic concept of human beings responding to the maritime environment, and increasingly, and particularly for us, how human beings now have shifted as a species to being an organism that not only responds to the maritime environment, but influences and is in fact changing the maritime environment. I think we saw that powerfully with the demonstration of an island disappearing in Paul Loether's presentation.

With apologies to anybody who wants to get into that argument, climate change is real. Sea level rise is going to happen. Indeed, we also see other issues, such as ocean acidification and things that concern us particularly in sanctuaries, which are special places in the sea to preserve not only the unique natural resources, but also those cultural resources, those heritage resources. What I like particularly, and what we have also adapted as our own policy, is that in large measure, particularly for us in the ocean, we are not splitting the two, that is, in terms of natural resources versus cultural resources. In many ways, they do overlap. They interconnect powerfully in indigenous culture where what some might perceive as a natural resource is a cultural resource. Talk to the Makah Nation about whales, for example.

The Maritime Heritage Program, which is now little better than a couple of decades old, was established by our then director, Dan Basta, to look at and to engage the sanctuaries in maritime heritage as well as cultural resources. Initially, I think, as one might see, particularly looking at our own past, that was then very powerfully focused on shipwrecks. I have to say, being a shipwreck type of person, I like that. I like it a lot, but it didn't really fire on all cylinders, in particular as we went out and we began to engage with communities. When you take a certain community and you go to talk to them about their shipwrecks, you find rather quickly that, in some cases, people may respond to them. They may like them. In other cases, they simply do not like them. At Stellwagen Bank National Marine Sanctuary, the traditional fishing community sees the wrecks of the fishing boats out there as something not to be celebrated or even recognized. Those are the losers. It is the ones that are out there that are actively fishing and working that are the winners. They are the culture that needs to be celebrated, not those who went down.

I think, as well, what we also found was that we were not really engaging with our communities if we only focused on shipwrecks out there, and did not somehow relate them back to the communities ashore. Now, we do try to engage in a variety of ways. Out at USS *Monitor* National Marine Sanctuary, the engagement with the Battle of the Atlantic does link people specifically to shipwrecks because they have families who served on those vessels and who in some cases died on those vessels. In that way, we have seen people suddenly get it, or care about something that hitherto they may not have, even if they are in the heartland of the country, because Uncle Joe or their grandfather was on one of those tankers or one of those freighters and even in one of those U-boats.

With that, I think we began to look at this as part of a critical question for us, which was how do we not only manage and protect, but how do we

engage? How do we share? How do we connect? How do we become more relevant? In that, how do we deal with a variety of audiences, in particular people who don't have a connection or, perhaps, that is what they think? How do we engage with the indigenous communities? I think we needed to do more, and we certainly knew we needed to do more than simply address something as seemingly simple as different indigenous peoples or different ethnic groups who happened to serve on ships in historic times. We needed to look at water and uses of water throughout a wider spread of time and in multiple contexts. We needed to look at the submerged prehistoric landscapes. We also needed to look at ongoing, persisting, indigenous traditional uses.

In that vein, yes, I think Paul Loether is absolutely right. I think the drowned Celilo Falls on the Columbia River, a powerful landmark in the maritime cultural landscape of peoples on that river, even though drowned by dam construction, for the tribes there it remains something that tugs at their hearts and is part of their ongoing landscape as well as their belief system. When that dam finally comes down or that water is lowered and that dam once again roars and the fish move along it and the people can use their traditional dip nets, then I think something will come back out of this landscape and be back in that landscape.

From our perspective in sanctuaries, we have adopted maritime cultural landscapes in their broadest sense as our policy in terms of how we deal with cultural resources. We are increasingly focusing more resources on that, not only by conducting studies, but by actively going out and doing, listening, taking things like a white paper developed by the Marine Protected Areas Center with Val Grussing and so many others here, and using it as part of our management plan, and as part of our consultations. Ultimately, what we would like to see is how we can actually sit down and not just do, say, National Register nominations for ships or collections of ships, but address the landscape itself. Even if we do not end up doing a nomination, using that criteria, adapting, blending it into our own decision making I think is going to be key for us.

One of the most difficult aspects for us is that, indeed, the maritime cultural landscape is not always tangible. It is as simple and as powerful as an ocean current which has been used as a highway, either by prehistoric Polynesian navigators or by people who followed that route, some of whom ended up shipwrecking, but others just consistently and persistently using it. It can be as powerful as a means by which through this area of the water souls passed to the next plane of existence. It can be as powerful as a sacred place, as I saw when I was out at Bikini. In that maritime cultural landscape, when we were diving when I was in the National Park Service back in 1989 to 1990 on the fleet, it became very clear that the maritime cultural landscape, even though irradiated, still was powerful and resonated with the people. When one of the Bikinians came back and, with us, went out and took us to the sacred reef and was again able to gather the grasses that grew on that reef .... How could you not get it? How could you not connect with these people in this sense?

Indeed, in that vein, as well, I think moving forward for us, a couple of other things are essential as we grapple with some of our responsibilities. For better or for worse, probably for worse, NOAA, thanks to Congress and the courts, has a fair amount of the ball when it comes to dealing with *Titanic*. For us, in looking at that, and particular answering hard questions at times from different places, why should Americans care about a British ship sitting out there in international waters? Well, we care for more than just the simple fact that it is an iconic shipwreck, that, in the treatment of that shipwreck, perhaps certain messages are sent to the broader public. We care for that reason. We also care because *Titanic* is a powerful element in the broader American maritime cultural landscape. There are the homes of the lost and the survivors, memorials and graves. It cuts across all sorts of lines.

I am not sure we could ever do something perhaps with a National Register nomination for *Titanic*'s cultural landscape, but just imagine if, as an ocean agency such as us or BOEM or the National Park Service, with its own submerged lands, we were able to link up and say, "*Titanic* is more than

this site. It is the Wagner Library, built to honor a dead son. It is Molly Brown's house in Denver. It is the monument put up in Washington, D.C., to the men who stepped aside and let the women into the life boats. It is this chapel. It is this group of graves. Indeed, it is also those graves up there in Halifax, and it is that place that it was built out there. It is part not only of an American maritime cultural landscape, but a Western, European, perhaps, maritime cultural landscape."

If we are to deal with whaling, it is more than just shipwrecks. It is more than just Charles W. Morgan as a National Landmark floating out there. It is shore whaling stations. It is indigenous and persistent whaling traditions, like those of the Makah. It is the Basque whaler wreck *San Juan* in Canada. It is whalers' churches. It is whaling grounds, known and charted on the oceans but, otherwise, for most people, just a big old patch of blue until you understand that these places have ongoing cultural significance because of what happened there. In that, I think moving forward for us in NOAA we see there is not only an ability to better understand and deal with resources, but also to then take something that hitherto has been out of sight and out of mind for most people, not merely under the water, but on the water and part of the water, and get them to care about it.

To get people to care about it, to get them to support what we do as the government, what we do as practicing professionals who care about heritage and culture and tradition, to get them to care about it as people who are actually paying the bills is key. What's also key is then taking that and using those oceans, using those messages, to encourage the type of things that need to be happening today in society—discussion and dialogue, not merely drawing lines. Talking about how these themes unite us, talking about how these themes speak not just to the past but to the present and to the future. Coming back to the start of where I was with this, for our mission, using it as well to get people to care about the oceans themselves because they are in trouble. That, ultimately, is why my bosses believe in a Maritime Heritage Program in an ocean science agency.

BOEM Perspectives on Maritime Cultural Landscapes

James Moore
Office of Environmental Programs
Bureau of Ocean Energy Management

I am a Marine Archaeologist in BOEM's Office of Environmental Programs. At just over four years in existence, we are the youngest of the agencies and partners that are being involved with this event. Before, BOEM was known as MMS, the Minerals Management Service.

In 2010, you may have heard of an incident called the *Deepwater Horizon* oil spill. After that, MMS was designated as BOEMRE, the Bureau of Ocean Energy Management, Regulation and Enforcement. In 2011, that was split again into two separate agencies. BOEM and also BSEE, the Bureau of Safety and Environmental Enforcement. For its size, BOEM is actually on the smaller size compared to the jurisdiction that it has. Our jurisdiction is about 1.7 billion acres, which is the Outer Continental Shelf of the United States and its own territories. Also, given its size, we have eleven archaeologists, which is on the low-side as well. We are here to explain some of the challenges we face within our regulatory framework.

We have our headquarter offices in Sterling, Virginia, which also houses our Office of Offshore Renewable Energy Programs and also our Minerals Management Program. We also have our Gulf of Mexico office in New Orleans, Louisiana. Then we have an office in Camarillo, California, which is our regional base for our Pacific studies. Then we have an office in Anchorage, Alaska, which is the homebase of our Alaska studies.

Overall, BOEM is charged with the responsibility of overseeing the responsible development of our country's offshore energy industry and also with the extraction of sand and gravel, our mineral resources. We also have to balance our natural resource studies with our cultural heritage and historic preservation responsibilities.

I think for the most part given the younger age of BOEM, we have all sorts of studies going on, which cover an entire array of our responsibilities for historic and archaeology studies. We are doing Paleocultural studies off of Rhode Island, trying to better define what constitutes an underwater landscape where Paleocultural sediments may have been, where they may have been located. Given the challenge of working in such extreme environments so far offshore and in deep water, we are balancing the Native American tradition and perspective with the environmental data we are getting out there with remote sensing surveys and our coring surveys. We are also going to kick-off another study off the Pacific Coast, which our archaeologist Dave Ball explains in his presentation about the Paleocultural study we will be doing off of California.

We are also doing studies in the Gulf of Mexico, trying to define environmental effects from the *Deepwater Horizon* oil spill on shipwrecks and cultural resources, to better understand how oil-spills and disasters of its kind are affecting the degradation of shipwrecks, and how they are actually impacting the natural environment and organisms that inhabit shipwrecks. Also, by studying biological communities and microbes, we have determined that over time they actually have a strong impact on how fast wood and steel shipwrecks degrade, and how they can override the system of how shipwrecks can corrode over time, and their site formation processes.

We are also doing surveys on nineteenth century historic shipwrecks to get a better sense of the trade routes that were going on at that time, and to get a better sense of that type of landscape and the culture. We have also sponsored studies of the Battle of the Atlantic to give a sense of maritime battlefields and those landscapes. We do appreciate the opportunity to come here and help us better find what can be constituted as a landscape.

BOEM itself is unfortunately very restricted with the type of funding that it can give out to studies that it can be participants with. Because

we are very mission focused, we do not have grant authority, unfortunately. The studies that we engage with have to be done by either competitive contracts or we have to do it as cooperative agreements with state-owned institutions in affected states. That limits us to coastal states and those state-owned institutions.

Our third avenue for study involvement is interagency agreements with other Federal agencies. We do seek any and all opportunities to reach out with those partners to get the data we need, so that we can build upon our multidisciplinary studies. As I mentioned, one of the challenges we face is further identifying what can constitute an underwater cultural landscape, especially off the Outer Continental Shelf where we are talking about features that can be hundreds of miles, hundreds of square miles in area, and the scientific data that we have are comparatively limited.

We do appreciate all opportunities to reach out to our Tribal and cooperative partners to try to get more data, so that we can help corroborate the oral history of those Tribal entities and get further data from the sea floor, so we can better define these areas, and we can actually pinpoint them better. We will also work with the Park Service with expanding the definition of what constitutes a landscape under the National Register assessment program.

SHPO Perspectives on Maritime Cultural Landscapes

Daina Penkiunas
Wisconsin Historical Society

Monday night it is the Green Bay Packers, right? Cheese, beer, Packers, cows. That is the stereotype of what people think of when they think of Wisconsin. However, our state seal and our state flag reveal a great deal of Wisconsin's history. It includes a miner and a mariner. It also has an anchor and a caulking mallet, further demonstrating a strong maritime influence on our state's history.

Wisconsin has somewhere between 800 and 820 miles of Great Lakes coastline and 200 miles of Mississippi shoreline. Over 1,000 miles of our boundaries are defined by waterways. That puts us in the top 20 for the country for the amount of coastline that we have.

We have many of the traditional maritime resources. Many of our lighthouses are listed in the National Register of Historic Places, and we will be listing others as the Coast Guard transitions lighthouses out of federal ownership. Our historic property inventory has about 50 lighthouses, so it is a pretty substantial body of resources in the state.

We also have shipwrecks, lots and lots of shipwrecks. We know that there are over 750 ships that were lost in Wisconsin waters. Of those, 178 have been identified and we have listed 59 in the National Register.

But there are challenges in dealing with the broader maritime landscape, both in how we interpret that landscape and the issues of National Register evaluation. For example, in the late nineteenth century the city of Ashland, located on Lake Superior in northern Wisconsin, considered itself "the metropolis of the new Wisconsin." The Great Woods had not yet been harvested, and the emerging city was based on maritime commerce. The scale of this commerce was huge, reflected by extensive ore dock and railroad development. Entire train cars would come to the docks and dump the ore into the waiting vessels.

What has happened to the docks? Today, they are being dismantled, replaced by a lakefront park.

This change in the physical environment is not limited to the Great Lakes; it is also true on our rivers. The city of La Crosse on the Mississippi River, for example, was also a huge rail and shipping location. River boats brought both passenger and trade traffic. Today, there is a scenic walkway along the river that expresses the changing mentality of how people now think of waterways and the focus on tourism.

The transformation of the maritime landscape is not limited to larger communities. There is also change in rural locations. Historically, Jacksonport in Door County was a huge lumber center with a water based transportation system. There were very few roads, and the railroad did not arrive until the 1920s. However, by the early to mid-twentieth century, the docks and lumber yards were disappearing because of the changing commercial aspects of that community. Submerged portions of the piers and shipwrecks are listed in the National Register as a historic district, and today there is a park where there was once a thriving maritime based community. People now come to these areas for vacations, for tourism.

We do still have major shipping ports in Wisconsin, such as Milwaukee, Superior, and Green Bay. But, even in those communities, there is a change in the focus of the waterways and how people think about water these days. In Milwaukee, for example, historic warehouses and industrial buildings have been converted to condos and offices, and residents want a balcony overlooking the river. This is a very different perspective than what existed there 100 years ago.

In conclusion, I can say that in our office, we are comfortable with the evaluation of resources such as shipwrecks, lighthouses, buildings, and the like, and this has been our focus. We investigate them, evaluate them, and list them on a regular basis. One of our responses to the changing landscape is a maritime trails program, where we tell the story of the historic maritime landscape.

NPS Perspectives on Maritime Cultural Landscapes

Barbara Wyatt
National Register of Historic Places
National Historic Landmarks Program
National Park Service

Good morning, everyone. In this brief talk, I'll explain my reasons for helping to plan this symposium. I'm going to touch on three aspects of the symposium that I consider of great importance to preservation in general and the National Register program in particular. These aspects are represented by the words concept, collaboration, and results. Let me explain.

First the concept: My interest in MCLs springs from a landscape perspective. I'm not a maritime historian nor an archeologist, but I am a landscape architect doing what I can to promote the incorporation of landscapes into the development of contexts and evaluations of significance for all properties. By these efforts, we can better understand resources within their evolving environmental context and their many-layered cultural context.

Current research on maritime cultural landscapes, as a category of archeological and historic districts, came to my attention within the framework of the National Register Landscape Initiative (NRLI). The concept of using a landscape approach to understanding areas that encompass terrestrial and marine components—and studying them as a landscape continuum within an evolving natural environment and layers of cultural development—struck me as eminently reasonable. Although broadly based on the work of Christer Westerdahl and others—including people in this room—the MCL concept seems to descend from a broader cultural landscape approach put forth by cultural geographers, beginning with Carl Sauer, whose perspectives on landscapes, although not intended for historic preservation purposes, are influencing an analysis of the significance and integrity of what we might consider "historic" landscapes. Studies involving MCLs are contributing to the development of a methodology that has enormous scholarly implications but also practical implications for cultural resource management in the United States. Could this be a harbinger for more widespread acceptance of a landscape approach in general? This is what I hope is possible, and why I wanted to learn more about the MCL approach from you who are working in the field and how the work you do might apply more broadly to non-maritime landscapes.

The landscape approach to understanding cultural resources is not new, but it is becoming better understood by the preservation community and has been used for a number of years by the National Park Service to inventory, interpret, and manage cultural landscapes in national parks.

The National Register may soft-pedal the concept in its landscape bulletins, but the rural historic landscape bulletin, essentially, presents a landscape approach to evaluation as do the battlefield and designed landscape bulletins and others to a certain extent. Simply put, the landscape approach is a holistic means of considering the unique cultural traditions and distinctive physical resources of a place; it can be key to achieving an understanding of the development and significance of a place and its individual components.

Several federal and state preservation programs are on board with this more holistic approach to the study of cultural resources. The U.S. Army, for example, states this in a guidance document titled *Guidelines for Documenting and Evaluating Historic Military Landscapes: An Integrated Landscape Approach*. I quote:

> Recently, the Army has emphasized the need for integrated cultural resources management—this is a "cultural landscape" approach to planning and management, whereby the military installation is viewed as an integrated landscape of natural and cultural resources and processes including military operations. Rather than a strictly compliance-driven approach to cultural resource management, the Army is moving towards a comprehensive integrated planning concept.

Wow. This sounds reasonable. Through the National Register Landscape Initiative webinars, (you can find the 50+ presentations on the National Register website), I learned about the work of NOAA, BOEM, and several tribes and their application of the maritime cultural landscape approach broached by Westerdahl and further explained by others, including Ben Ford and the many contributors to his book *The Archaeology of Maritime Landscapes*. The participating agencies and tribes, though, were not simply interested in leading the National Register into new realms of conversation, but in beginning a dialogue that could lead to the development of guidance that could address tricky questions about the compatibility of the concept with National Register conventions, including boundaries, integrity, and areas of evaluation.

This leads to the next aspect of this symposium that attracted me: collaboration. Through the NRLI webinars, participants achieved an understanding of the remarkable range of landscape research, context development, and registration concepts being developed by various federal and state agencies, tribes, and the academic community. The National Register staff receives summaries of some of this new research through National Register nominations; however, we need more in-depth engagement to achieve a comprehensive understanding of research methodologies and conclusions, so that the guidance we provide is based on current research and practice. This symposium presented an opportunity for such engagement among federal and state agencies, with each contributing ideas and resources. It would have been difficult for any one of us to pull this off alone.

Times have changed since passage of the National Historic Preservation Act. Everyone was desperate for guidance in the early years, and NPS was in a position to develop and dispense guidance based on its understanding of best practices. All programs have matured, and today we need to tap the contributions of other agencies and other programs within NPS to develop new guidance and update the old. Such collaboration is a means of broadening perspectives, sharing the cost load, and developing a more widely understood and accepted product. As we move forward in updating and possibly expanding our guidance documents— the National Register Bulletins—I envision a collaborative approach that, perhaps, can be based on the model we've developed for this symposium.

That leads to the last word, results. Exchanging information and listening to each other's perspectives is a stimulating experience. But, we need more than a good conversation. The exchange can be more fruitful if we have plans to take those conversations to another level of understanding. And that is exactly our plan for the information exchanged here. On Friday, some of us will meet to assess what we've learned, what it means to our programs—particularly the National Register—and how we can move forward to develop these ideas into constructive and acceptable guidance.

From my personal perspective, I am watching this process carefully to see how the process we're engaged in here, from concept to collaboration to results, may be a new model for getting the work done that has been elusive. In these lean times, NPS needs to "do more with less" and that leaves little room for the task of updating bulletins. It is my hope that the process we're all engaged in here will foster a better understanding of the place of MCLs in the National Register program and lend a broader understanding to the landscape approach in general. Understanding conceptually and practically how to consider resources within these constructs has the potential to benefit resource evaluation and protection and help define a new definition of "best practice." This may be something we all want to consider moving into the next 50 years of the National Historic Preservation Act.

2. Characterizing Maritime Cultural Landscapes

Introduction

Maritime Cultural Landscapes (MCLs) are the product of collective human use of marine and coastal environments across time. Areas of geographic space become "places" only when people give them meaning and value for the resources and qualities they possess. They are places where we work and recreate, and many are deeply connected physically and spiritually. MCLs provide a record of human use of these places throughout history, demonstrating how humans have shaped and been shaped by these places. Understanding the character of the MCL provides insights into the evolution of that environment over time, how the humans who lived there found and used important resources there that sustained them physically and spiritually, and what lessons this place-based history can provide to help insure that the value people continue to attribute to these places is not diminished by contemporary human uses.

Following the seminal work of Christer Westerdahl, MCLs can be characterized as the sum of "human utilization of maritime space by boat, settlement, fishing, hunting, shipping and its attendant subcultures" comprising the "whole network of sailing routes, old as well as new, with ports and harbors along the coast, and its related constructions and remains of human activities, underwater as well as terrestrial." It includes not only this cultural history of the physical environment but also how this place is perceived, at a deeper level, by humans who have lived and worked there over time. MCLs offer a lens through which the totality of this human/ environment relationship can be viewed. As the history of a place is a tapestry woven over time, the study and characterization of MCLs provides an opportunity to recognize, understand, and appreciate the threads each culture who called this place "home" contributed to what we observe today. Characterizing MCLs and pursuing a deeper understanding of these important places may be a useful tool to inform contemporary marine and coastal preservation and management. It also provides a way to answer these fundamental questions "what makes this place special?" and "what we can do to keep it that way?"

The presentations in this session offer approaches to characterizing MCLs and examples of how those approaches have been implemented. The active inclusion of indigenous voices is particularly emphasized. This perspective is sometimes not given as significant an emphasis as it deserves in places where long histories of these cultures' habitation and use have shaped, and in many cases continue to influence, the MCL we observe today.

James Delgado
Office of National Marine Sanctuaries
Maritime Heritage Program
National Oceanic and Atmospheric Administration

Characterizing MCLs from First Principles: Cultural Landscape Approaches and MCLs

Valerie Grussing
Office of National Marine Sanctuaries, Maritime Heritage Program
National Oceanic and Atmospheric Administration

Although landscape-level studies can be said to date to the 1960s or 1970s, it was in his 1992 article in the *International Journal of Nautical Archaeology* that Christer Westerdahl coined the term (in English). He defined it as "human utilization of maritime space by boat, settlement, fishing, hunting, shipping and its attendant subcultures and features." As his own work on this evolved over the years, he has clarified that maritime culture indeed "covers all possible angles of man's relationship to the sea and the coasts." He emphasizes the importance of the cognitive landscape: "the 'remembered' landscape of nature," and "the landscape at the back of your mind." Getting at this naturally requires multiple ways of knowing.

The concept grew into a dull roar by the mid-2000s, when a critical mass of folks realized that implementation was lacking. Ben Ford organized a maritime cultural landscape (MCL) session during the 2008 Annual Conference on Historical and Underwater Archaeology which grew into his 2011 compilation of 18 articles that represents a crucial transitional phase for the concept. To paraphrase Dave Stewart's preface of the volume, it was time to put the wheels on the bandwagon: to graduate from theory to method, and then importantly, even further into cultural interpretation – which, again, requires an interdisciplinary approach. Ford states succinctly and powerfully that "landscape exists at the intersection of culture and space," and that it therefore "falls neatly within and between the disciplines of history, geography, and archaeology." As the various chapters in his volume illustrate, representing a fraction of recent scholarship on cultural landscapes, this has to mean archaeology as a branch of holistic anthropology – "taking into account all aspects of humanness." Multiple sources of data and ways of knowing are required: geology, biology, ethnography, oral history, folklore, and many more.

Around this time, there was a perfect storm of brain power being devoted to this topic. In addition to all the work described in Ben's book, folks on several other fronts were also trying to, as a colleague said to me, "figure out how to do this, or stop talking about it." Tapping into this capacity, a number of federal initiatives began grappling with the question of implementation. I started in my current position in 2009.

Here is a bit of background on my office; The Marine Protected Areas Center was established by Executive Order in 2000 to help protect and conserve the nation's natural heritage, cultural heritage, and sustainable production (or fisheries) resources. By developing a national system of Marine Protected Areas (MPAs), existing MPAs can build partnerships and networks to better accomplish these common goals and areas can be identified where new MPAs would be beneficial. The MPA Center serves as the Nation's Hub for Building Innovative Partnerships and Tools to Protect Special Ocean Places, and last year we merged with the Office of National Marine Sanctuaries (ONMS). Existing MPAs include federal programs and sites such as National Marine Sanctuaries (NMS), national wildlife refuges, and national parks with a marine component. They also include federal/state partnerships such as National Estuarine Research Reserves and Papahanaumokuakea Marine National Monument, as well as state and territorial programs and sites such as state marine or shipwreck reserves, state parks with a marine component, and sites under tribal authority.

I had the privilege of assembling a cultural heritage working group under the MPA Federal Advisory Committee, which was a really formidable brain trust including some of the folks in this room. In fact, John Jensen was the one who said to me, with that conspiratorial gleam in his eye, "what we really need to do is cultural landscapes." The group's work culminated with a white paper in 2011, *Recommendations for Integrated Management Using a Cultural Landscape Approach in the National MPA System* (http://marineprotectedareas.

noaa.gov/pdf/helpful-resources/mpafac_rec_cultural_landscape_12_11.pdf). Although MCL was not our abbreviation du jour, the recommendations focused on a landscape level approach to managing marine protected areas, beginning with more inclusive definitions and criteria for cultural heritage — encompassing not just sunken vessels eligible for the National Register, but other archaeological sites, paleoshorelines, sites than span the land/sea boundary, and sites and resources important to indigenous communities, including biological resources and intangible attributes and values.

A cultural landscape approach takes into account the fact that cultural heritage and resources are part of the ecosystem and part of the broader landscape, and it examines the relationships among all resources of the place and their environment over time. This is in order to integrate management of cultural and natural resources at the ecosystem and landscape level– similar and analogous to ecosystem-based management, adding the element of the past. This comparison helps non-cultural resource folks (at NOAA I call them the "fish people") understand why it's important.

At its most basic, this approach is based on the understanding that humans are an integral part of the landscape, both shaping and being shaped by it. Because of this, people in a community have an intimate knowledge of place, often over a deep time scale. As Brad Duncan states in his chapter in the book *The Archaeology of Maritime Landscapes* (2011), "the local knowledge held by community members is the product of many generations of collective knowledge." Recognizing this, we then try to use that knowledge to inform planning and future management. Doing so, particularly with regard to indigenous communities, can not only lead to more effective and appropriate management of a landscape's cultural resources, but also better management of its natural resources. One of the key points from the white paper is the artificial administrative divide between cultural and natural resources. They are considered and managed under separate policy and mandates, even though on the ground, they are interrelated, interconnected, and frequently one in the same, as with biological resources possessing cultural value.

One logistical question that has been raised is: does a holistic approach mean that everything is important? If so, that would make the task of preservation overwhelming and impractical. Not everything in the lens is worthy of preservation. An example from the white paper is "scour marks from draggers, ballast dumps, sunken logging timber, or old navigation markers, may not need preservation, but they can provide important evidence about the way humans interacted with the marine environment."

Following the white paper, and around the time that the MPA Center got assimilated into the Sanctuaries Office, the Maritime Heritage Program convened an internal workshop involving expertise from the good doctors Ford and Jensen. This led to the MCL Initiative, intended to implement this approach in existing sanctuaries, but also taking into account broader regional perspectives, since landscapes don't have the decency to stop at Sanctuary boundaries.

Beyond cultural interpretation and resource preservation, we're also charged with management. In Brad Barr's 2013 article on MCLs, he outlines some of the "wicked problems" confronting coastal communities. Some are "more traditional resource management issues, such as maintaining water quality and the status of living marine resources, but also extend to issues such as jobs and economy, the impacts of large seasonal changes in population, insufficient transportation and infrastructure, and even more fundamental social problems such as crime and poverty." Typical approaches to addressing these problems, "from local coastal zoning to formulation of national ocean policies," tend to focus on individual sectors, or on the snapshot of current conditions, or on large geographic areas, of a scale people do not feel a connection to. An MCL approach considers multiple sectors and perspectives, incorporates local historical knowledge as context for managing today's problems, and is grounded in people's "back yards," places they know and value.

Speaking of artificial divides and boundaries, another important one worth mentioning is the shoreline as bridge, not boundary. It's the title of Ford's own article in his edited volume, and it's a phrase that really resonates. Whether we're talking

about the wreckage of errant ships, lost during their passage from one shoreline to another, the remains of ancient communities now submerged as the shoreline itself has risen, or modern indigenous communities that conduct subsistence harvest from the sea using traditional knowledge, the unifying element is their connection to the marine and coastal environment. As government managers, we are required to use lines to mark land from sea, but these too are administrative. MCL has the power to break down this divide.

A number of other federal initiatives and projects have begun in response to—and hoping to take advantage of—the collective brain power and capacity being devoted to cultural landscapes. In 2011, the Advisory Council on Historic Preservation (ACHP) and the National Park Service (NPS) held a forum to discuss Native American traditional cultural landscapes in Seattle. This led to ACHP's Traditional Cultural Landscape Action Plan later that year. Around 2012, project ideas regarding tribal cultural landscapes and paleoshorelines converged from multiple directions to be funded by BOEM. Not only do they involve indigenous communities in the characterization of their own important places and resources, but they are pioneering methods for pre-consultation, so that coastal tribes and agencies can build relationships in advance of any proposed undertakings and tribes can have a stronger voice in planning and management. The Captain John Smith Chesapeake National Historic Trail has an Indigenous Cultural Landscape Team, which you'll hear about in this session. In 2013, the National Register Landscape Initiative began as a forum for discussion of the way cultural landscapes are considered in the Register, and it led to the Maritime Cultural Landscape Symposium in 2015. In 2014, the MPA Center received a small grant to create an online cultural resources toolkit for MPA managers, in which we outline a 7-step process for implementing a cultural landscape approach. I'm sure there are other initiatives that I'm not mentioning, but you get the idea. The MCL movement is big (Arlo Guthrie says we can call it a movement if we have 50 people a day, which you can see that we do), and it is happening now.

I would be remiss if I didn't take this opportunity to share my excitement over the announcement last week that two new sites have started the designation process (and I emphasize *process*) to become new National Marine Sanctuaries: Mallows Bay in the tidal Potomac River in Maryland, and an 875-square-mile area of Lake Michigan right here in Wisconsin—both based on the areas' collections of shipwrecks and maritime heritage. A third site, based on Chumash Heritage in southern California, has had its nomination accepted by NOAA and has been added to the inventory of areas under consideration for potential designation. These nominations were among the first to come in when a new grass roots process was created last year for sanctuary designation, following a long hiatus. In an era when we're constantly challenged, as historic preservationists, to demonstrate relevance and justify funding, I'm gratified and excited that when people are given a chance to convey what's important to *them* to preserve and celebrate, it turns out that it is heritage.

It is truly an exciting time to be in historic preservation, with many opportunities to influence the future direction of our collective field. Researchers, practitioners, managers, and officials seem to be in agreement that the time has come to work more appropriately—using a cultural landscape approach, including its indigenous and maritime components—which will help us all better accomplish our common goals of preserving what's important from our past, learning from it, and using it to be better equipped for the future. Δ

Valerie Grussing is the Cultural Resources Coordinator for the National Marine Protected Areas Center. She works with federal, state, academic and NGO underwater archaeologists, coastal tribes, and other marine resource managers to foster partnerships and create information and tools to help protect and preserve the nation's coastal and marine cultural resources. Her current projects are coordinating the creation of a Cultural Resources Toolkit for MPA Managers and coordinating the Characterizing Tribal Cultural Landscapes project, funded by the Bureau of Ocean Energy Management. She has a BA in History from North Carolina State University, an MA in Anthropology from the University of Iowa, and a PhD in Coastal Resources Management (in the Maritime Studies track) from East Carolina University.

Characterizing MCLs in the Great Lakes: Western Lake Michigan

John Jensen
University of West Florida

The overall goal of the Maritime Cultural Landscape symposium held in Madison, Wisconsin, in 2015, was "to suggest standard definitions and best practices through the preparation of preliminary guidance materials for incorporating Maritime Cultural Landscapes into National Register evaluations." Determining clear standards for including marine cultural landscapes with the National Register program represents a vital step toward bringing order, and I hope more quality and consistency, to the management of cultural heritage in the coastal zone and continental shelf.

The symposium objective was "to provide a platform for an exploration of the Maritime Cultural Landscape (MCL) concept and its role in the investigation, evaluation, and management of terrestrial and submerged maritime cultural resources." This objective is, I believe, even more important than the goal. For the objective, with a little imagination, emphasizes increasing our understanding of complex historical and contemporary human relationships and policy issues. This is critical, given the intensity of human uses on coasts, the impacts of climate change, and rapid expansion of human economic activities offshore.

Thanks in large part to the visionary work of David Cooper, the first state underwater archaeologist, Wisconsin has long been at the forefront of submerged cultural heritage preservation in the U.S. With Cooper and Paul Kriesa's 1991 Multiple Property Nomination *Great Lakes Shipwrecks of Wisconsin* as a foundation, generations of Wisconsin Historical Society affiliated archaeologists, historians, partners and volunteers have added more than fifty shipwrecks to National Register.

The late 1980s and 1990s represented the pioneering days of public underwater archaeology in Wisconsin and across the nation. Perhaps we came across as brash and maybe a little righteous, but we also had a zeal that extended beyond just technical preservation of shipwrecks; we wanted to make them accessible and meaningful to the public. We were trying to preserve and recover—not just things—but ideas and those forgotten relationships between the people of Wisconsin and the Great Lakes and Rivers that formed her borders. In order to preserve shipwrecks, we needed to find their broader meanings—not just their official historical significance.

Although we began documenting individual shipwrecks, we organized our field work and inventories regionally—Door County, the Apostle Islands, Mid-Lake Michigan, and the Mississippi. This spread into outreach and the influential Wisconsin Maritime Trails Program. Looking back more than two decades, I see that we were thinking in Cultural Landscape well before we began to use the term. We naturally began using cultural landscape approaches to look critically at the coastal and maritime world and embracing outreach.

The first attempt to explicitly use cultural landscape in underwater archaeological preservation in Wisconsin began in the wake of a closely watched a legal dispute over the wreck of the *Rosinco*, a yacht found, looted, and claimed in Admiralty Court by well-known wreck hunter and salvage diver Paul Ehorn. The United States Court of Appeals, Seventh Circuit, decision in *Ehorn v. Sunken Vessel Known as the Rosinco* reaffirmed the Abandoned Shipwreck Act of 1987 proviso that wrecks in state waters determined eligible for or listed in the National Register belonged to the state. The decision elevated the importance of the National Register as a maritime preservation tool and added some teeth to the National Register, at least in the states within the Seventh Circuit district.

At the time, the logical conclusion was that securing National Register eligibility or better yet listing, now offered tangible legal protection to historic shipwrecks. Getting DOEs or listings for more wrecks in a cost and time efficient manner seemed the logical next step. Working first with then Wisconsin State Underwater Archaeologist Russ

Green and his successor Keith Meverden, I took on an ultimately unfinished effort to nominate a large section of Wisconsin's Mid-Lake Michigan Waters as an archaeological district. I chose to develop this nomination around the idea of cultural landscape.

Ultimately I synthesized my research and developed an unpublished technical report *Pieces, Patterns and Pasts: Toward a Cultural Landscape Approach to Maritime Cultural Resource Management and Study in Western Lake Michigan*. The report evaluated western Lake Michigan and its shipwreck-related cultural resources as defining features in a rural historic landscape I called the "Western Lake Michigan Transportation Corridor."

After laying out the theoretical foundations for a cultural landscape and Atlantic cultural context for the corridor, the report described in some detail how each of the four processes and seven component categories in *National Register Bulletin 30, Guidelines for Evaluating and Documenting Rural Historic Landscapes*, applied or may apply to the region and its submerged resources. The report recommended integrating emergent cultural landscape-based archaeological and preservation theory with the new analytical and mapping capacities of GIS through a cultural landscape framework. Embracing the results I argued, would improve the analytical content of Wisconsin's maritime historic preservation documentation work, while expanding National Register coverage over a much larger number of Wisconsin shipwrecks in a fast and efficient manner.

I pushed things too far and too fast for the time. Technical issues associated with defining boundaries stopped the draft nomination in its tracks. However, the intellectual content was solid and the technical report became one of the foundations for a more developed applied cultural landscape approach framework we called CLA. The discussion of Mid-Lake Michigan as an MCL that follows is adapted from the report and the draft nomination.

The Wisconsin flag contains powerful examples of the maritime imprint on the state's culture. The emblazoned anchor, caulking-mallet in grasp of a powerful hand and arm, and blue-jacketed mariner can be read as cultural and historical symbols that represent the introduction of Atlantic World technology and culture to the freshwater frontier during the nineteenth century. Sharing iconic space with images of a miner, bars of lead, a cornucopia, pick, shovel, and plow, the flag depicts in graphic terms the implicit and explicit interplay between the natural environment and Wisconsin's pioneers. To move "Forward" as instructed by the text at the top of the seal on the flag, one had to break up the soil to unleash its fertility, delve into earthen depths to release trapped mineral resources, and tame the tempestuous Great Lakes by converting stands of virgin forest into good ships manned by strong and able mariners.[1]

The complex interplay between culture and nature, whose signature is written boldly across the Wisconsin flag, is a hallmark of the cultural landscape; an important way of organizing our understanding of the historically evolving and continuing relationships between society and the environment. The cultural landscape is increasingly recognized by historic preservation and cultural heritage professionals and agencies worldwide as both heritage resources and as an important concept for preserving and interpreting the material remains of the past.

Cultural landscapes recognize cultural pluralism, incorporate complex cultural, environmental and historical processes, and value the participation and competing interests of a heterogeneous public. Put differently, cultural landscapes reveal much about the interplay between places and process, which leaves ample room for multiple cultural groups to derive or to impose meaning upon a geographic space.[2]

With roots extending to Europe in the nineteenth century, American ideas of the cultural

1 On the history of the flag's images see John O. Holzhueter, "Wisconsin's Flag," in *Wisconsin Magazine of History*, 63 (1980).
2 V. Coleman, *Cultural Landscapes Charrette Background Paper*, New South Wales Heritage Office, 2003. R.W. Stoffle, D.B. Halmo, D.E. Austin, "Cultural Landscapes and Traditional Cultural Properties: A Southern Paiute View of the Grand Canyon and Colorado River," *American Indian Quarterly* 21 (1997); K.F. Anschuetz, R.H. Wilshusen, C.L. Scheick, "An Archaeology of Landscapes: Perspectives and Directions," *Journal of Archaeological Research* 9 (2001).

landscape first blossomed in the 1920s with the work of Carl Sauer. Sauer's seminal idea, that "the cultural landscape is fashioned from the natural landscape by a cultural group. Culture is the agent, the natural area is the medium, the cultural landscape is the result," remains central to more recent conceptions espoused by a variety of disciplines.[3] In the 90 years that have followed Sauer's formulation, scholars have developed a variety of schema for defining and evaluating cultural landscapes. The interplay between nature and culture, however, remains essential. For anthropologically-focused archaeologists, the cultural landscape contains both material and symbolic elements, but key for archaeologists, historians, and preservationists is that cultural landscapes reflect patterned human behavior.

In the Great Lakes region (among other places), the shipwrecks and other cultural materials deposited on the bottomlands and along the shore can be evaluated as single resources or as a series of nested cultural landscapes that reflect distinct (though often related) historical contexts and cultural orientations.[4]

The study of maritime cultural landscapes has great potential for yielding archaeological, historical, and cultural information about Wisconsin's past. This potential is especially great for the nineteenth and early decades of the twentieth centuries. Depending upon the question being visited, applying the landscape framework to western Lake Michigan's submerged cultural resources has the capacity to shed light on historical and anthropological questions that both encompass and transcend state and local boundaries and will allow Wisconsin's maritime past to be read in the light of national and international processes.[5]

Although tied to quantifiable material culture such as shipwrecks, marine-related objects, and patterns of geographical dispersion, the cultural landscape framework encourages asking broader theoretical questions. For example, how did the early mariners of the pioneer period "see" these lakes, and how did their perceptions influence the design of the vessels they built and the ways in which they operated them? Did the nineteenth century American spirit of frontier enterprise affect the relationship between commercial mariners and the natural environment? In what ways did the confluence of agricultural, lumbering, and urban frontiers on the Great Lakes encourage innovations in transportation technologies? Did specific ethnic-oriented maritime strategies practiced by mariners on the Atlantic Ocean transfer to the Great Lakes? Carefully designed archaeological projects examining Wisconsin's shipwrecks and associated cultural materials can help to answer these and other broad questions, when isolated events and individual sites are approached through an integrating paradigm such as the cultural landscape approach.[6]

Wisconsin's maritime cultural resources are especially rich for the years between about 1830 and 1930. During this period, the western Great Lakes evolved from a distant frontier served by a few small sailing vessels associated with the fur trade into a segment of the world's busiest and most efficient industrial waterway.[7] Adopting the cultural landscape approach means recognizing that this system and its evolution are historically important, as are the economic, technological, geographical, and cultural objects and structures that helped to define it. It suggests that the whole of Wisconsin's collection of maritime heritage resources is more valuable than the sum of its individual sites and objects.

The West Central Lake Michigan Maritime Heritage Archaeological District is a long, linear, rural historic cultural landscape that qualifies for listing on the National Register of Historic Places under criterion A and D. A watery highway of national importance, the Transportation Corridor is intimately asso-

3 C. Wilson and P. Groth, eds., *Everyday America: Cultural Landscape Studies after J.B. Jackson*, Berkeley: University of California Press (2003), p. 5.

4 (Anschuetz et. al., citing Binford, 1983, 380).

5 C. Cameron and M. Rossler, "Global Strategy: Canals and Cultural Routes," *World Heritage Newsletter* 8 (1995).

6 G. Fry, "From Objects to Landscapes In Natural and Cultural Heritage Management: A Role for Landscape Interfaces," in H. Palang and G. Fry, eds., *Landscape Interfaces: Cultural Heritage in Changing Landscapes* (Boston: Kluwer Academic Publishers, 2001), 240.

7 "The Great Lakes" *The Oxford Encyclopedia of Maritime History*, (London: Oxford University Press, in press).

ciated with transportation, settlement, and industry in Wisconsin. The natural environment and related collection and spatial organization of objects, sites, and structures associated with historic maritime transportation on Lake Michigan offer a rich tapestry for exploring human responses to the problems and opportunities associated with frontier shipbuilding, settlement, commerce, and the advent of large scale agricultural and industrial development.

The West Central Lake Michigan Maritime Heritage Archaeological District consists of a section of the navigation corridor that constituted the principle route down the western side of Lake Michigan during the nineteenth and early twentieth centuries. A regional highway, the corridor also provided critical points of access, connection and exchange between maritime communities, both large and small. During the mid-nineteenth century hundreds of thousands of Americans and immigrants followed this maritime pathway to new lives and lands in Wisconsin and other Midwestern states. As these settlers developed the landscape, the corridor provided a critical avenue for carrying surplus products to market and for bringing in goods from other regions and other nations. In the later nineteenth and twentieth centuries, the corridor became an essential component in the circulation networks for the rapidly industrializing Midwest. Included in district are the lake's surface waters, weather patterns, and subsurface natural and cultural features. When analyzed using current archaeological theories and methods, these elements come together to form an important and coherent segment of Wisconsin's Lake Michigan maritime cultural landscape. This landscape has documented associations with three of the historic contexts identified and well developed in the multiple property documentation *Great Lakes Shipwrecks of Wisconsin*: The Early Industries: Fishing, Lumber, Mining, and Agriculture,1800-1930; Settlement, 1800-1930; and Package Freight, 1830-1940 (Cooper and Kriesa 1991). Further research could well identify additional historic contexts.

In 2013-2014, working with ECU graduate student Phil Hartmeyer, I developed what we called a cultural landscape source book for Wisconsin's Mid-Lake Region. The intent was to provide cultural landscape approach-based interpretive and management insights and data to assist with the possible establishment of a new National Marine Sanctuary. Embracing interdisciplinary perspectives and combining historic and contemporary coastal data in a Cultural Landscape Approach analysis, the source book included general observations to help the future managers and interpreters of cultural resources in the proposed Sanctuary.

General Observations on Shipwrecks and Environment in the Mid-Lake Region

1. The Mid-Lake Michigan Region's coastal and marine cultural landscapes embody the intertwined histories of harbor engineering, shoreline change, regional maritime commerce, and local economics

2. "Wisconsin's Lake Michigan shoreline is generally vulnerable to shore erosion from the Illinois state line to the Sturgeon Bay Canal, a distance of 185 miles. From the Sturgeon Bay Canal around the northern tip of Door County to Green Bay, shore erosion is largely limited to bays and clay banks. Erosion rates are particularly high along sand plains and high bluffs composed of till. Short-term erosion rates of 3 to 15 feet per year have been recorded along sand plains and 2 to 6 feet per year along high bluff lines" (Wisconsin Coastal Management Program 2008).

3. From a maritime perspective, the physical coast lacks natural harbors or sheltered waters, has unstable sediments including sandy patches that make poor holding ground for anchoring, and offers few distinctive visual or submerged landmarks.

4. The location, shape, and composition of the contemporary shoreline and near coastal area are the product of long-term geological and geographical factors and the intensive human modifications that began with the early U.S. settlement of western Wisconsin.

5. The Mid-Lake Michigan Maritime Heritage

Trail follows a long linear 92.4-mile shoreline dominated by sand dunes and bluffs. The U.S. Army Corps of Engineers (USACE) has classified 30% of the present shoreline as artificial and 20.5% as industrial. The dominant shoreline vegetation (51%) is classified as manicured lawn.

6. The large pier and breakwater structures detailed in USACE Table 7 and the artificial shoreline in Table 5 are a product of nearly 180 years of planned human engineering of the Mid-Lake Michigan Region's shoreline.

7. The Mid-Lake Michigan region's coastal geomorphology has affected the composition and likely the condition of the historic shipwreck population.

8. Nineteenth century coastal engineers viewed the natural Great Lakes as a static environment and attributed changes observed after 1836 to human agency: e.g. harbor structures. Harbor locations and engineering characteristics contributed significantly to the patterns of shipwrecks occurring in the Mid-Lake Michigan Region.

9. Engineers designed Mid-Lake Michigan piers to create protected transportation lanes from harbor fronts along the rivers out to safe deep water navigation.

10. From 1836 into the early twentieth century, federal engineers and local leaders engaged in a leapfrogging war with coastal sedimentation. While an extensive pier expansion and dredge usually brought temporary improvements to harbor access—the engineering brought unintended consequences, including the shoaling of the waters approaching the harbors, the creation of sand bars dangerous to navigation, and damaging wave conditions inside harbor areas.

11. The standard development of East – West parallel piers created narrow and sometimes dangerous or even deadly entrances to harbors.

12. Highly detailed records exist of harbor surveys, construction projects, and waterfront areas that can allow for a comprehensive historical reconstruction of shorelines and the build environment of harbors in Manitowoc, Sheboygan, Two Rivers, and Port Washington.

Observations on Coastal Geomorphology and Shipwrecks

In the Mid-Lake Michigan Region, a combination of softer, geologically-unstable shorelines and unconsolidated, near-coastal sediments—principally sand—have resulted in a lack of natural harbors or good anchorages. This explains several things about historic shipwreck resources of the region including:

1. Temporal patterns and a physical concentration of wrecks near the principal harbors;

2. The high number of "wrecked" vessels returned to service;

3. The presence of well-preserved but undiscovered shipwrecks in shallow water.

Early work recommending the establishment of a National Marine Sanctuary in Mid-Lake Michigan/Wisconsin focused almost exclusively on well-preserved deeper shipwrecks. What has been largely overlooked is the potential presence of dozens of shallow water wrecks that have received natural protection from the coast's shifting sands. A stronger understanding of historical and contemporary coastal geology and development provided through a CLA study will provide knowledge critical in protecting and interpreting the full range of underwater and coastal historic resources located within the boundaries and along the shores of the proposed Sanctuary, and has clear implications in applying sections 106 and 110 of the National Historic Preservation Act of 1966.

The designation process for the Mid-Lake Michigan Sanctuary seems to be going forward quite rapidly now, and I'd like to think that when the area does become a Sanctuary it will benefit from a holistic Cultural Landscape Approach that had

its early roots in the Wisconsin State Underwater Archaeology and Maritime Preservation Program.

One thing that my colleagues and I have learned through studies in marine areas across North America is that applying a cultural landscape approach as a way of looking at the world and structuring your research genuinely expands and can substantially alter how we understand the history of a maritime region and, by extension, the significance and meaning of its cultural heritage resources.

Circling back to the symposium's goal of considering potential National Register standards for Maritime Cultural Landscapes, based on two projects in the Mid-Lake Region, several others in the Mid-Atlantic, New England, and Alaska regions, and through committee work in Marine Protected Areas, I suggest that in most instances the most effective approach would be to develop specific maritime additions and adaptations for existing National Register cultural landscape categories. While maritime space, time, and integrity can be quite different than what historic preservation professionals typically encounter on land, the human elements that underpin the history and landscape are largely the same.

Ten years ago I tried to convince Wisconsin's Historic Preservation staff that adopting a cultural landscape paradigm would help the state remain at the forefront of maritime cultural heritage management in the United States. Lacking an accepted professional language to merge the technical requirements of the National Register with the environmental, historical, and policy realities of maritime heritage, I could not make the case for the radical change a maritime cultural landscape approach represented. Since that time, many people, including several attending the symposium, have done tremendous work over the past decade to expand our understanding and refine the use of cultural landscape concepts in coastal and maritime contexts. It is time to develop the language needed to bring the National Register into alignment with these efforts. **Δ**

John Jensen began working to understand and preserve Wisconsin's maritime heritage resources in 1990. Before beginning a career in academia, he served as underwater archaeologist, historian, and a cultural resource manager for the Wisconsin Historical Society. More recently, he has collaborated with the NOAA Office of National Marine Sanctuaries to study the potential for a Lake Michigan shipwreck-based Sanctuary. John has participated in projects relating to North American maritime frontiers and westward expansion from the Grand Banks of Newfoundland to the shores of the Bering Sea. For more 10 years, John and colleague Dr. Roderick Mather have collaborated on efforts to develop an applied cultural landscape approach to maritime heritage and its management. He holds an M.A. (Maritime History and Underwater Archaeology) from East Carolina University, as well as M.S. (History and Policy) and Ph.D. (Social History) degrees from Carnegie Mellon University. He is currently assistant professor of History and Historic Preservation at the University of West Florida.

Identifying Indigenous Cultural Landscapes in the Chesapeake Bay Watershed

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Summary of Presentation

Indigenous cultural landscapes (ICLs) in the Chesapeake Bay watershed demonstrate aspects of the natural and cultural resources that supported American Indian lifeways and settlements in the early seventeenth century. Considered trail-related resources to the Captain John Smith Chesapeake National Historic Trail, these evocative places may be important to descendant communities today, as well as to conservation strategies in the Chesapeake watershed. Ongoing research is helping to define and identify these large landscapes.

The concept of indigenous cultural landscapes originated during conversations organized in response to the Chesapeake Bay Executive Order of 2009, during attempts to explain an indigenous perspective of large landscapes. This indigenous perspective reveals that American Indian places in the Chesapeake Bay watershed were not confined to the sites of houses, towns, or settlements. It also demonstrates how the American Indian view of one's homeland is holistic rather than compartmentalized into the discrete site elements typically utilized in popular accounts today, such as "hunting grounds," "villages," or "sacred sites."

The original paper that was referenced in the 2010 comprehensive management plan for the Captain John Smith Chesapeake National Historic Trail, "The Indigenous Cultural Landscape of the Eastern Woodlands: A Model for Conservation, Interpretation, and Tourism" (Deanna Beacham) includes the criteria posited by the initial advisory team (see https://www.nps.gov/chba/learn/news/upload/ICL-Banner-Update-April2015.pdf). The concept was introduced in a video recorded in 2013, "Chesapeake Landscapes through Indigenous Eyes" and a rack card was developed for distribution at conferences (see https://www.nps.gov/chba/learn/news/upload/ICL-Rack-Card.pdf).

The paper "Examples of ICLs in Virginia" (Deanna Beacham, published in the George Wright Society, 2011 Conference Papers) describes examples of indigenous cultural landscapes along proposed segments of the Captain John Smith Chesapeake National Historic Trail in Virginia. This paper was updated in 2015 (see https://www.nps.gov/chba/learn/news/upload/Examples-of-ICLs-in-Virginia-8-2015-final-update.pdf). Each ICL example includes lists of which National Register criteria apply and information on how the sites can be interpreted as indigenous cultural landscapes.

ICL research began in 2012, and by 2013 a team from the University of Maryland had completed a prototype methodology summary titled "Indigenous Cultural Landscapes Study for the Captain John Smith Chesapeake National Historic Trail."[1] It includes recommendations for further research, and a pilot study of the Nanticoke River watershed titled "Indigenous Cultural Landscapes Study for the Captain John Smith Chesapeake National Historic Trail: Nanticoke River Watershed."[2] During that same time period, a team working on the implementation of the Captain John Smith Chesapeake NHT Lower Susquehanna segment also produced a report on their ICL findings, but lacking an extant descendent community, there was no tribal input to include.

Building on the prototype methodology for documenting ICLs and earlier studies, researchers from St. Mary's College of Maryland completed a thorough study of the Nanjemoy and Mattawoman Creek watersheds in November 2015. This study, titled "Indigenous Cultural Landscapes Study for the

1 Kristin M. Sullivan, Erve Chambers, and Ennis Barbery. "Indigenous Cultural Landscapes Study for the Captain John Smith Chesapeake National Historic Trail." (Annapolis: University of Maryland College Park and National Park Service Chesapeake Bay, December 2013). See https://www.nps.gov/chba/learn/news/upload/FINAL_CAJO-ICL-Study-Report-2.pdf.
2 Kristin M. Sullivan, Erve Chambers, and Ennis Barbery. (Annapolis: University of Maryland College Park and National Park Service Chesapeake Bay, December 2013). See https://www.nps.gov/chba/learn/news/upload/Nanticoke-ICL-Report_PUBLIC.pdf.

Nanjemoy and Mattawoman Creek Watersheds," added the dimension of predictive modeling, which was field tested with excellent results.[3]

Using similar predictive modeling on a much larger scale, the same team of researchers also completed an ICL priorities report for the entire tidal Chesapeake Bay watershed in February 2016. Titled "Developing Watershed Priorities for Mapping Indigenous Cultural Landscapes of the Chesapeake Bay," this report was commissioned to help the National Park Service prioritize ICL research areas over the coming years.[4]

Currently, researchers are working on identifying the indigenous cultural landscapes on a segment of the Rappahannock River in Virginia. Information from the priorities report indicates that the York River (including the Mattaponi and Pamunkey rivers) and the James River (including the Nansemond and Chickahominy rivers) are likely candidates for future research. All research reports will be published by the National Park Service when they are final.

The NPS envisions indigenous cultural landscape research being informative and useful for future National Register of Historic Places eligibility determinations of historic districts that are part of the Captain John Smith Chesapeake National Historic Trail. **Δ**

Deanna Beacham, Weapemeoc, is the American Indian Program Manager for the National Park Service Chesapeake Bay. She previously worked as American Indian Program Specialist for the Commonwealth of Virginia and served on the Advisory Council for the Captain John Smith Chesapeake National Historic Trail. As an Advisory Council member, she participated in the National Park Service response to the 2009 Chesapeake Bay Executive Order and authored an essay on the Indigenous Cultural Landscape as a way to explain an indigenous perspective of the unspoiled large landscapes in the Chesapeake Bay region. The concept is now being utilized and further explored by NPS and other organizations. Deanna received her undergraduate degree from Duke University and a Master's degree from the University of Colorado.

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3 Scott M. Strickland, Virginia R. Busby, Julia A. King, et al. Indigenous Cultural Landscapes Study for the Nanjemoy and Mattawoman Creek Watersheds (St. Mary's City, MD: St. Mary's College of Maryland, Nov 2015). See https://www.nps.gov/chba/learn/news/upload/NanjemoyMattawoman-ICL-FINAL-red.pdf.

4 Scott M. Strickland and Julia A. King. Developing Watershed Priorities for Mapping Indigenous Cultural Landscapes of the Chesapeake Bay (St. Mary's City, MD: The Chesapeake Conservancy, St. Mary's College of Maryland, 2016). See https://www.nps.gov/chba/learn/news/upload/NPS-ICLPriority-FinalReport.pdf.

3. The MCL Approach: Pros and Cons

Introduction

Jim Delgado and Daria Merwin present examples of the wide range of maritime types with the potential to contribute partially or wholly to maritime cultural landscapes. While Merwin classifies the differences and difficulties inherent in identifying and describing maritime sites as MCLs, Delgado stresses the need to involve modern communities in the nomination process. He argues that living folks are part of the MCL, not only for the traditional memories they may hold of a site or landscape, but because through their oblique or purposefully memorial practices, their actions often become part of the MCL's cultural story.

Mike Russo concurs that maritime archeological sites are ever-changing, due to cultural and natural activities that do not similarly affect the typical static archeological and structural land-based sites. He suggests that, as such, if the National Register criteria require sites and landscapes to remain largely undisturbed and unmodified, it would preclude MCLs from being eligible for listing in the National Register. However, varying degrees of integrity are acceptable with certain categories of properties, including landscapes, and National Register nominators and reviewers alike are mindful that maritime cultural landscapes are dynamic phenomena.

Brandi Carrier notes that because the guidelines for Traditional Cultural Properties (TCPs) require continuous use of a site to be classified as a TCP, MCLs seem to be a better alternative for nominating maritime landscapes to the National Register. Although Delgado notes that no maritime site or sites have been listed as landscapes in the National Register yet, he, Merwin, and Carrier are generally optimistic that the MCL concept will aid in recognizing the significance of maritime landscapes as eligible for National Register listing. On the other hand, while recognizing the utility of the MCL concept, Russo is more cynical about the National Register guidelines, suggesting that major rewrites and flexibility need be added to accommodate the unique characteristics of MCLs.

Michael Russo
Southeast Archeological Center
National Park Service

Using the MCL Approach in National Marine Sanctuaries: The North Carolina Coast

James Delgado
Office of National Marine Sanctuaries, Maritime Heritage Program
National Oceanic and Atmospheric Administration

Edited Transcript of Presentation

For us in the Office of National Marine Sanctuaries, we are one of those places where we hope to be the pointy end of the spear or where the rubber meets the road when it comes to managing with the concept of maritime cultural landscapes. This has meant an interesting journey as we transition from conceptual papers to management plans – a goal not yet reached. Particularly, we are a system which is largely defined by a sense that it is natural resource-based with only a few maritime heritage sites.

Indeed, one of the biggest concepts of all that we've had to grapple with was that if site does not have shipwrecks, therefore, there is no maritime heritage in that sanctuary.

I think we've evolved through that perception. We've started to apply a landscape perspective in our sites in a couple of ways. We've yet to actually do a National Register nomination for a maritime cultural landscape. We continue to do sites or districts. But, we've started to line things up so that when and if the time comes, we can start looking at it though that maritime cultural landscape lens. Applying criteria and if not actually writing nominations, than at least preparing documentation, pulling it together in a way that can serve as the basic source that we will then extract from for section 106 or 110 consultations. We also draw from our initial maritime cultural landscape assessments for developing historic resource studies or archaeological resource studies.

Also, I think, in a large part as well, we also use the concept and the reality of maritime cultural landscapes as a key part of the ongoing message that we present to the public.

Rather than talk generally about how Maritime Heritage Program (MHP) and NOAA use MCL, I'm going to run really quickly through an exercise we did recently to support the expansion, knock on wood, of USS *Monitor* National Marine Sanctuary, out there off the North Carolina coast in an area known as the "graveyard of the Atlantic."

This is a rather important area of ocean and coastline when you look at the history, not only of the United States, but global maritime culture and history. The world converged on this place in large part, not just because there is a group of barrier islands, but because it's a key spot on an ocean highway. The Gulf Stream has been and remains a very powerful presence there. But as well, this is a place on and near the water that people have gathered, encountered, and used for millennia.

In looking at this place, being with NOAA, we started way up in space with satellites, but then began to zoom down, looking at it in the microscale, in particular, how these barrier islands surrounded by water are a maritime landscape in every way, shape, and form.

This is apparent not only from space, but down to the perspective that you have from a small craft or standing on the beach. What's also key is that it's also an evolving, changing landscape, not only in terms of sea level rise from the last post glacial maximum when that plain now offshore most definitely was inhabited by people. It is also a landscape that has continued to change dramatically in our own time.

This is true whether you map that in terms of changes in inlets and the effects of the environment or in terms of changes over time in local and regional maritime culture. You can look at it in terms of the ongoing ways by which humanity has responded to those changes: constructing bridges, adding ferry systems, building settlements in and around key inlets, and then abandoning them as those inlets closed and a new inlet opened.

All of that experience of the ongoing human interaction in this landscape is important, especial-

ly as we measure, based on the past and its lessons, what may be the consequences of not heeding what happens with changes in that landscape. With that, the Outer Banks will to a certain extent "disappear," if you will, out of the landscape, from most people's perspective, or perhaps from people's minds—as certainly houses and roads have washed away due to storms that will increase what they take as a result of sea level rise.

But, for each and every person who has an ancestral tie to those Outer Banks, they will never disappear. This is as true as it is that the islands of Kiribati and every other nation in the Pacific will not disappear from the collective cultural memory or the maritime cultural landscape of the people out there as sea level rise and atolls are submerged.

That awareness and deep-rooted connection starts with ancestors. It starts with traditional uses. But, indeed, as we began to assess the Outer Banks and developed our first document in the system that looked at the MCL, the key thing was not to relegate ancestral indigenous people to merely having been there in the past. We recognize, of course, that these are people who had been there for a long time. People that still persist to this day and are actively involved. We find that there are similar connections throughout our system.

I certainly got that years ago while working and living in the Pacific Northwest where the large portion of the fishing community remained to be the people who had been fishing there for thousands of years. They never left, and they retain their ancestral ties to the sea and its resources.

The other aspect we investigated was how the Outer Banks had been ground zero for a number of folks with that cultural context that came as a result of that maritime highway. How that earlier world encountered by Europeans was not only depicted, charted, and mapped, but then became a center of their activities in the Colonial era, driven by ships and trade. Ultimately, that led to the establishment of non-indigenous settlements and communities.

In looking at maritime cultural landscapes out there, what we have ended up doing is incorporating a sense of each and every maritime community such as it is. Be it a Smith Island on Chesapeake Bay, or communities like Bath or Beaufort. There, we focus on how the people in these communities have interacted with and used that landscape. That may be the construction of piling-supported boardwalks across the shallows of the sounds, or the construction of large hotels, or windmills that take advantage of the natural ocean environment. Over time, that landscape, as settled and occupied, became a center point for tourism, for development, to establish a national seashore, and ultimately designate a National Marine Sanctuary off those shores, albeit a very small one centered on an iconic Civil War shipwreck.

But, also, and this is key, this landscape is one in which large numbers of people who came and continue to come, do so in the true meaning of recreation, to "recreate" themselves in that unique ocean environment. To this day, then, people still use it and interact with the ocean environment, even from shore.

This to me is a fascinating concept: that value comes from qualities of multiple uses and perceptions that can be described and discussed in terms of interactions, and to do so without placing a value judgment on them, but simply describing them and why they have meaning or value to some, even if not to all.

It's a very fascinating thing for me, therefore, to be addressing this issue with some of our superintendents, not here but elsewhere, when we talk about ocean energy and environment. This includes topics and resources such as offshore oil drilling and platforms. They are, no matter how you chose to characterize them, as good, bad or otherwise, important elements in the maritime cultural landscape going way back in terms of how we as humans have harvested energy from the sea.

As we have looked at the maritime cultural landscape in and around North Carolina, it's also been key for us to engage with those communities that might see us as a threat that will close off and build a fence around a vast area of the ocean. Having a document that speaks to their ongoing uses of

the landscape is important, including the cultural traditions of beach driving, beach campfires, fishing, recreational fishing, and commercial fishing.

We have worked at developing a document that speaks to these ongoing cultural traditions that is non- judgmental. We would be remiss, however, if we did not point out things like the diminishing size of fish since historic (i.e. the 1950s) times and then talk about the size of fish being caught today.

We talk about elements that are iconic, that speak to people, that if inputted to a maritime cultural landscape document for a sanctuary does not mean that we are trying to stake a claim or say, "Hey! We own a piece of that!" Rather, the point is that they are interconnected. Whether they are the iconic lighthouses, some of which are in the national seashores or elements that no longer exist, or, they're simply on the landscape or in the memory, such as the light ships. Or, in the case of Diamond Shoal Lightship, the actual wreck itself, or the now abandoned Texas Towers.

We talk about fortifications and how the ocean highway met at this key area to be defended. We talk about seacoast fortifications throughout all periods of history, from prehistoric times and palisades all the way up to the modern era. We do talk about shipwrecks as well. Not only offshore, but where they crashed ashore on the beaches and indeed where that was responded to by the United States Life Saving Service, later the Coast Guard.

These are all key interrelated elements on this section of highway of the sea and reflect centuries, if not millennia or more, of ongoing human activity.

Hopefully, what these documents show is that we get it to a certain extent and are interested in more dialogue.

That of course also includes shipwreck remains on beaches that are still there in the boundaries of the national seashore and shipwrecks that are no longer there.

Anna Holloway of the NPS and I were just talking on the flight in to these meetings about shipwrecks on the landscape that "got away." As an archeologist, it took me a long time to realize in the maritime cultural landscape it's not just the wrecks that are there that have left their tangible bones, it's the ones that crashed ashore and were later pulled off. They maybe left nothing but a powerful memory or an iconic photograph. But they remain part of the story and of the landscape.

Battles fought, and perhaps not so tangible as physical remains on the seabed, are also key and important. This includes things like a chart of the placement of ships in the bombardment of Fort Fisher. So too are wrecks that have left tangible traces, such as the iconic wreck that lead to the creation of the first National Marine Sanctuary, USS *Monitor*.

Monitor is not alone. There are other Civil War wrecks out there that speak to this. Of course, there is the ongoing battlefield that Joe Hoyt will talk about later. That battlefield has its own elements ashore as well as out in the water. It also reflects ongoing interaction and use, as the wrecks there are an active focus of ongoing recreational diving.

Underwater archeology, in and by itself, is also a key part of that landscape. This is seen not only now but also in terms of what has happened in the past with iconic projects. They include *Monitor* or *Queen Anne's Revenge* or others. Whether the archaeology is past, present or future in terms of projects, they are important elements as archaeological resources that help inform and inspire. In that, those who do the work and curate the finds and recoveries are also part of the landscape. That includes places like East Carolina University, known to several in the room, and its ongoing role in shipwreck archaeology. There is also The Mariner's Museum, the home of the USS *Monitor* Center.

I want to close with one other aspect that has helped us, that is NOAA's ties to our ancestral agency, the Coast Survey. Thanks to the work of centuries, we have access to a wide range of documentation that includes original Coast Survey charts—not only those published, and there are a wide range of them that document the landscape,

but also manuscript charts that also speak to other elements. Whether they are documenting the presence of a Civil War shipwreck, or several, or, manuscript charts such as these that grapple with every aspect that you will only find archivally, such as changing shorelines, shoals, and inlets, or the presence and position of early oyster beds.

In particular, the T-sheets (manuscript charts) have been a powerful resource for us and we intend to use these and share these with any and all partners. One example is in North Carolina where the manuscript chart depicts not just Cape Fear, but also the actual blockade running port to which all of these vessels would wait once they cleared through and got past the blockading fleet. That little landscape, that portion of the landscape, was all documented along with obstructions and temporary fortifications during the Civil War.

In this way and in this fashion, we're helping use these documents to drive our own maritime cultural landscape look at the banks and at the industries and at the people who have been molded by and have in time molded their ocean environment. For us, the most critical element has been and will remain engagement with the public.

The only way I think we are going to move forward in all of this is not only to help define and categorize maritime cultural landscapes, or to figure out how to use what we can in the existing tool kit, but to continue to be collaborative and work together. No one agency, no one group, no one CRM firm, no one practitioner is going to get us through this. Together, I think we can come up with something that, sounds to me, will probably be the next best great idea in cultural resources and management. **Δ**

James Delgado recently retired as Director of Maritime Heritage in NOAA's Office of National Marine Sanctuaries. His four-decade long career has included a 13-year tenure with the NPS, including serving as the Service's maritime historian. He currently serves as the Senior Vice President of SEARCH, a leading nationwide and global provider of cultural resources services. His interest in maritime history and archaeology has remained a constant passion and focus, and his favorite maritime sites and subjects remain the next ones he will encounter.

Challenges of Using the MCL Approach on the Outer Continental Shelf

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Bureau of Ocean Energy Management

Edited Transcript of Presentation

I am a marine archeologist, and a scientific diver, and I work for the Bureau of Ocean Energy Management. I spent most of my career working on terrestrial sites, and I transitioned to working in a marine archeology realm about four years ago when I joined the federal government. It's been a really unique opportunity to move from terrestrial archeology, where we have a pretty solid understanding of how to apply Section 106, what good faith identification efforts mean, how we go about identifying areas of potential effect, and so forth.

Moving offshore has not been necessarily as clear and easy as I expected when I took the position; it's an ongoing education for me. As many of you know, the Bureau of Ocean Energy Management is an Interior Department agency, and its mission is environmentally responsible development of energy on the Outer Continental Shelf. This includes oil and gas exploration, marine minerals extraction, and renewable energy development. And I work for BOEM's Office of Renewable Energy Program. This is the office within BOEM that regulates offshore wind and marine hydrokinetic generation.

Today, I'm going to discuss the challenges and opportunities as I have experienced them of applying the MCL approach on the outer continental shelf, which is where BOEM holds its regulatory authority to regulate developments like these. But just what is this Outer Continental Shelf? As Jimmy Moore introduced this morning, we are talking about a legal term that refers to a vast submerged landscape of some six-and-a-half billion square kilometers.

BOEM's operations and its regulatory responsibilities extend throughout this ocean frontier. My office's primary area of operation is the Atlantic, from Maine down to the tip of Florida, and this ranges from about five to 370 kilometers from shore. So it's a pretty large area.

When we refer to the OCS, or the Outer Continental Shelf, we are really talking about a legal description of a piece of land, that is now submerged, from an archeological and a geological perspective, though this is a much more interesting place than that legal description may infer. As you probably know, sea level on earth operates on a geological cycle. Much of the continental shelf is exposed dry land during glacial periods, but during interglacial periods, the shelf is submerged under relatively shallow waters, at least on the Atlantic side.

So, from a geological standpoint, we are just in another interglacial period, during which sea level has risen to cover a relatively shallow continental shelf. This is an important point to consider because we expect to find evidence of human habitations that date to the last glacial period in areas that are very far offshore now. Although these areas are now submerged under several hundred feet of water, they were actually terrestrial during their times of occupation.

So we have to give some consideration to figuring out during what time span coinciding with human history these areas were exposed dry land and therefore habitable. As the sea level rose, this terrestrial and marine interface transgressed across the surface and sometimes it protected those archeological sites, and sometimes it totally demolished them.

The challenges of working out here in this vast landscape are quite innumerable, but I'll share just a few of the more pertinent ones to this discussion. First, the OCS is a large area and, outside of the National Marine Sanctuaries and other protected areas, BOEM is pretty much the exclusive federal agency that's protecting these submerged federal lands, and we are doing so with very few staff compared to our sister agencies. Jimmy mentioned this morning; we have eleven staff for just over 7,000 square kilometers of submerged federal lands. I'll just add at this point that we do not have

a single ethnographer on staff: not a single expert in recording oral history; not a single expert in acknowledging the existence and recording properly those different ethnographies.

Second, in this extensive remote area, there is a complex jurisdictional environment. These issues are complicated, and so are the legal protections that are afforded to the submerged cultural resources. This is the norm of what we are dealing with here. One very quick and short example is that the Archaeological Resources Protection Act of 1979 (ARPA) does not apply. It's specifically exempted from application on the Outer Continental Shelf.

These challenges greatly reduce the efficacy of any underwater cultural heritage work that our eleven staff can hope to perform. Also, accessing this remote area is expensive; it requires specialized equipment and expertise. Not every Section 106 consulting party that has an interest in these areas and these resources has the training or the expertise to understand the data being collected and the resulting meaning behind the findings.

So, even basic responsibilities under Section 106, like consulting with interested parties and agreeing on good faith identification efforts, are incredibly complex endeavors on the OCS. Perhaps the biggest problem that we are facing is what to do about submerged relic landforms. Submerged relic landforms are not archeological sites. They are landforms that may or may not contain archeological sites, and, as I mentioned earlier and we've heard several other presenters discuss today, as sea levels rose, the terrestrial and marine interface transgressed across the surface of the shelf. And sometimes the geological activity accompanying this transgression protected archeological sites, and sometimes it demolished them.

So, we can find these landforms pretty easily; our technology and our expertise can do this, but identifying an archeological site or other historic property type within this landform on the Outer Continental Shelf—this remains an elusive goal. We haven't given up on it and there are other mechanisms that we are using to try to access it. One mechanism is the two primary paleo-landscape studies that we are engaging in, but the current status in finding these archeological sites is still not something that we have a great deal of confidence in.

So what we do with these is default to avoiding possible sites as an administrative shortcut to our Section 106 reviews. This fulfills the agency's responsibility under 106, but frankly it fails to help us learn anything about these sites and it does not meet the stewardship and management responsibilities for submerged federal lands.

On top of this, the application of maritime cultural landscape theory to the Outer Continental Shelf introduces some difficulties of its own for BOEM from the very start. Amanda Evenson and Matthew Keith wrote extensively about the complications inherent in applying the MCL approach to submerged precontact sites and I'll add a few issues that further complicate our Section 106 reviews.

Using Traditional Cultural Property (TCP) designations for the protection of landforms is problematic, because integrity, as defined in the National Register bulletin, does not neatly apply here. Continued usage in a traditional manner does not exist. Native American communities were separated physically from these lands as a result of sea level rise since the last ice age, and they were separated culturally and socially as a result of the federal government's assimilation policies. So, they no longer have, at least as far as they have been sharing with us, place names for these submerged landscape features.

We are not talking about something that happened a few generations ago, we are talking about 19,000 years ago. No one interacts with these landforms in the same way that they traditionally did. We hear regularly that once we find an archeological site, then of course there will be cultural reconnection with that, and the various constellations of values surrounding these places will be rewoven into the rich tapestry of Native American history. In other words, once we find an archeological site, it will, *ipso facto*, become a TCP, but until then these submerged relic landscapes lack the richness of cultural cohesion that's inherent in the MCL

theoretical approach, and it would warrant a very easy TCP integrity designation under the National Register.

Similarly problematic, we can't know whether or not there is a solid archeological research potential in the area that we are considering for development. This isn't a case where we know we have a site and we are saving it for a future time when we may have better equipment or methods for exploring it. No, instead we don't even know if we have a site. On land, this would be very cut and dry: the development would be approved because no historic property had been identified. But beneath hundreds of meters of water, it's far more complicated than that.

If we don't have the confidence that a site is or is not there, how can we move forward with development? If we don't have confidence that a site is or is not there, how can we stop development? I'm asked this question almost every day, so we continue to struggle with this question: Is a landform alone, without any integrity of cultural connection, without any evidence of an archeological site present, is this landform a historic property? And we are still struggling with these questions, but with these questions or these challenges, I think comes some great opportunities.

When we talk about submerged terrestrial archeological sites out on the Outer Continental Shelf, we are really talking about habitation and working sites that are now submerged, and I think this is a really nice little shift. So, our first opportunity is here, in having this discussion. I think this is great. I think it indicates that there is an opportunity to acknowledge this complexity that I've outlined, and to address it directly.

Also, we are shoring up and extending our network of partnerships through the federal sphere and into the private sector. Our work with Monitor National Marine Sanctuary on the Battle of the Atlantic project and our work with various universities and tribes on our paleo-landscapes projects—these are good examples that illustrate that we're taking this issue seriously. We are continuing to work on it; we're not giving up. We are asking the difficult questions, and we are stretching our theoretical paradigms to accommodate the reality of working on the OCS.

Second, I think we need to request updates to our National Register Bulletins from our colleagues at NPS, and guidance from the Advisory Council that can help address this complexity. Otherwise, the landscapes will disappear under the developments because the need for them is very high. I always get such great refreshment to my commitment to historic preservation by coming to these meetings, because everyone in the room is committed to preservation. But then I go back to my day job, and I'm constantly asked the question, "how can you propose to stop this very important renewable energy development from moving forward?"

So we have to keep in mind that there has to be a balance, and frankly, I have to have it in writing, because the question I'm asked always is where is that in writing? Where is the National Register Bulletin that says that this is how we can apply it? So I guess my short answer is the development will not wait, so please let's come together and rewrite some of this guidance to address it.

And finally, I really think that responsible Federal agencies have to abandon the project-driven paradigm. They have to instead embrace a resource stewardship model. This is, I think, very essential for long term management of Maritime Cultural Landscapes and using MCL as the significance factor for identifying other historic properties. The OCS remains the largest area of federal lands, and it lacks the protected stewardship of management activities provided by every other land managing agency like the BLM, the Forest Service, Reclamation, and Park Service.

Our Federal Preservation Officer and my fellow regional preservation officers are making headway in this arena, but it is slow-going and fraught with resistance. But from my perspective, this transition is really essential to raising the bar for all underwater cultural heritage on the OCS. It's an important step toward resolving the challenges of applying the MCL approach here, and the primary reason is

that many of the landforms that we are discussing, they lay within the horizontal areas of potential effect that we are permitting under Section 106 activities, but they do not lay within their vertical area of potential effect. What I mean is that we may have a cable going across the top of an area and the landform that we are interested in is far below that. So our Section 106 activities are never going to investigate those landforms. They are going to be left there because they are not being impacted by the outcome. If BOEM were to accept Section 110 responsibilities, it would have an obligation to identify those landforms and to work on understanding them.

I think that if we can do that, we will be embracing this important opportunity to learn more. As we learn more about what these landforms hold, and where they are, we will be able to better improve our identification efforts. They will become more accurate, and this positive feedback loop will create a more effective underwater cultural heritage construct.

In conclusion, I think there are many challenges and many opportunities as well, when conducting traditional section 106 review activities for developments on the OCS. Δ

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The Many and Varied MCLs of New York State

Daria Merwin
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New York State has roughly 1850 miles of shoreline along the Atlantic Ocean, Lake Erie, and Lake Ontario, as well as two major rivers (the Hudson, actually a tidal estuary for a substantial length, and the Mohawk River), the historic Erie and other canals, the Finger Lakes, and countless smaller streams and lakes — all of which should add up to many opportunities to apply the maritime cultural landscape concept to a wide variety of submerged and terrestrial cultural resources, including archaeological sites and historic structures and buildings. Many of these resources are already listed on the National Register of Historic Places, though rarely with an explicit focus on the maritime setting, and the New York State Historic Preservation Office (NY SHPO) has only started to assess the challenges of identifying, evaluating, and perhaps listing new Maritime Cultural Landscapes (MCLs) here.

Native peoples have lived in New York for more than 10,000 years, but ancient coastal archaeological sites are under-represented here in terms of National Register listings. One exception is Fort Corchaug, located on a stream that empties into Peconic Bay in eastern Long Island, listed in 1974 (NR number 74001308). Much of the documentation for the site is focused on the archaeological evidence of a small fort occupied between roughly 1640 and 1660. The nomination does not go into detail regarding the maritime context and instead deals mainly with the military aspects of the site: the fortified palisade walls, and artifacts related to weaponry, such as European gun flints, lead shot, and an iron sword, as well as Native-made brass and iron arrowheads, though there is no documentary evidence that the Corchaug people ever fought with the European colonists.

The site may have been a temporary refuge used in times of trouble, but something else was going on at Fort Corchaug, and it takes on more prominence if we consider the maritime landscape: the site was also a protected place for making wampum, the traditional shell beads that by this time had become the currency of choice in coastal New York (Solecki 1993). Finds include tools and debris from the manufacturing of wampum. The shells were procured from Peconic Bay—shellfishing here by Native American groups has been going on for thousands of years—but following Contact with Europeans, shellfishing morphed from being an important part of the diet to something resembling a maritime industry. Adding an MCL context to the nomination might expand our public interpretation of the site.

A more recent Register listing dealing with Native American fishing, added in 2012 (NR number 12000578), implicitly addresses the maritime cultural landscape. The Lower Niagara River Spear Fishing Docks Historic District is significant for its association with Iroquoian spear fishing from around 1831 to 1958, when access to the site was cut off by construction. Spear fishing is a deeply rooted tradition among Iroquoian peoples; the Tuscarora brought this tradition with them when they migrated to New York from North Carolina in the early 18th century and adapted it to the unique environment of the Niagara River (Wallace 2012). Fish not only provided an essential source of food but were also sold to supplement incomes.

Features include a path at the foot of the steep embankment and the remains of stone docks built parallel to the shoreline from readily available shale, now marked by boulder piles. The rock floor of each dock was filled to make a smooth surface, and a small pool of calm water was created on the downstream side of the dock to attract fish. While their locations remained constant, the dock structures were rebuilt each year after being damaged by harsh winter weather. Few remnants of these structures survive today, but their locations are recognizable by the shoreline topography and river currents, and are known through oral history. The district documents the strong connection between the people and the natural environment, as well as the importance of fish and fishing in Iroquoian culture.

New York State has innumerable maritime sites, ranging from a diverse array of important ship-

wrecks and historic floating vessels which could perhaps fit into an MCL context, to many waterfront communities with National Register-listed historic districts. For example, just beyond the bustle of Manhattan were several shorefront communities, like the National Register listed Far Rockaway Beach Bungalow Historic District (NR number 13000499). In the early 1900s, several bungalow communities were developed in the Rockaways, generally segregated by ethnicity. In Far Rockaway, most of the owners were Jewish families (Kaplan and Kaplan 2003). Although each was a separate enclave, the bungalows themselves were nearly identical in appearance: three bedrooms, a small kitchen, bathroom and porch, typically on a twenty-five by fifty-foot lot. Just steps from these summer homes lay the boardwalk and the beach where residents could swim in the Atlantic Ocean. This nomination hints at the relationship between people and the sea—and could certainly be expanded. The maritime setting is the reason such summer resorts were built, and bungalow communities once spanned nearly the entire length of the Rockaway Peninsula. Over the years, demolition and remodeling took their toll, and most recently the area was hit by Superstorm Sandy. Amazingly, the Far Rockaway historic district survived relatively unscathed.

Storms and climate change will present some major challenges to historic preservation in maritime environments, but there are others, especially in terms of the National Register nomination process. First, we often face a challenge of integrity, as many maritime sites have witnessed substantial alterations as needs and functions change over time. Also, in many places, there have been intrusions so that the maritime landscape is no longer a contiguous one. For example, in New York City there are still many elements of the harbor rail freight system visible along the shore, but we have never evaluated the system as a whole. Instead, our determination of disparate elements mostly has been done as part of Section 106 compliance review, one parcel at a time, where individual sites need to have retained a high level of integrity to be considered National Register eligible. If we used an MCL lens to look at the port-rail system as a whole, would we make the same determination?

Another potential challenge we have in New York involves threats posed by waterfront development. There are parts of the state where waterfront property has always been in demand, like New York City, where one of the most iconic maritime sites, South Street Seaport, is currently threatened by redevelopment (Bagley 2015). In other places, the waterfront was at the fringes of landward-based society, a place where sometimes smelly and dirty activities such as fish processing and industrial manufacturing took place. But with development pressure and a fairly new interest in cleaning up our waterways, the price for these marginal waterfront properties has increased, leading some communities to question what is the best use for such land. And sometimes, communities decide that historic preservation is not part of the answer.

One such case of a maritime resource in a historically marginal environment recently came to our office for review, and after some debate the NY SHPO determined that the property is eligible for listing in the National Register. This is the story of a fishing community known as "The Shacks" on the outskirts of the City of Hudson at North Bay, on the shore of the Hudson River. The community is currently comprised of 17 fishing cabins or shacks. In recent decades the site—also called the Furgary Boat Club—was largely recreational in nature, but maps provide evidence that the existing buildings evolved from fish market buildings on the site at the river's edge dating from at least as early as the late nineteenth century.

The modern community of Hudson is split regarding what should happen to the shacks: demolish or save them (Gilson 2016). The shacks were basically tolerated until recently, even though it was discovered some years ago that the grounds belong to the city. In the summer of 2012, the shacks' owners were evicted, and the site secured. Demolition has been pending now for four years. Proponents of demolition and rebuilding the site as a park are skeptical of the historic nature of the shacks, frequently citing the ramshackle architecture as evidence that the buildings are an eyesore in need of removal.

On the face of it, the demolition proponents do have a point—the buildings that exist today show

evidence of having been patched and repaired—some with salvaged local materials, others with vinyl siding and various new building materials. The shacks facing the water are on piers and feature exterior wooden decks, walkways, and docks; there is also a boat ramp. The buildings are of frame construction, generally one-story in height with side or front gable roofs, wood or vinyl windows, and contain one or two multi-purpose rooms.

If we were to rely solely on the built environment, assessing only the property's architectural significance and integrity, we would fall short in telling the full story here. But if we bring in the maritime context, we can say that the property is a rare surviving collection of vernacular buildings, which represent a time when sturgeon and shad were abundant in the Hudson River, and when people made their livelihoods fishing the river and selling their catch on the shore. These people, commonly called "Furgarians" today, formed a community where the buildings were handed down generation-to-generation.

Fishing and hunting along the Hudson River for small scale commercial operations and personal subsistence or recreation are largely undocumented activities in terms of history and the material record of archaeology and architecture. Buildings, such as fishing shacks and storage for small watercraft, and structures like duck blinds and net drying racks were often located on isolated river banks, accessible only by boat. Sites that survived into the twenty-first century tend to be located in what might be perceived as marginal environments. The shacks are adjacent to a wastewater treatment plant, with railroad tracks on a causeway to the west. A similar fishing shanty existed adjacent to a wastewater treatment plant and industrial ruins in Poughkeepsie until increasing riverfront real estate values led to the redevelopment of the site with upscale restaurants and a marina.

The buildings, structures, boats, and other fishing equipment are part of the maritime cultural landscape of the Hudson River. They are also the tangible remains of a traditional way of life that is rapidly disappearing as habitat loss, pollution, over-harvesting, and other causes have nearly ended commercial and recreational fishing here. For example, today all non-migratory fish and crabs in the estuarine portion of the Hudson River (New York Harbor to Troy) are off-limits for women of childbearing age and children under fifteen due to pollution (New York State Department of Health 2016).

Shad is among the most important fish species of the Hudson River, valued for both its meat and roe. Adult shad live in salt water, but return to the freshwater streams from which they hatched in order to spawn. Shad return each year to the Hudson River, typically starting in early April for roughly two months, to spawn in the sandbars north of Kingston. In the past, shad could be taken by the hundreds during this spring run, so that by the mid-nineteenth century the shad's arrival had become a major annual event (Lossing 1868:144-145).

By the early twentieth century, however, shad fishing on the Hudson River was in decline. Dredging for ship channels on the approach to Albany impacted spawning grounds and in other areas, riverfront development projects, such as the Palisades Interstate Park (opened 1909), resulted in the removal of fishing shanties. This decline in fishing was reversed during the Great Depression, when economic necessity led to the rebirth of shad fishing for subsistence, which in turn led to rebuilding shanties along the river's banks. The commercial shad fishery regained importance during World War II, peaked in the late 1940s, and experienced major declines after the 1950s (Hattala 1997). Shad fishing in New York waters has been banned since 2010 due to stock depletion. It is likely that shad fishing was the major economic activity at the earliest incarnation of the Furgary Boat Club, though other seasonal and year-round fishing (sturgeon, bass, eel, crab) and hunting (muskrat, deer) were also carried out. The chronology for "The Shacks," starting in the late nineteenth century and peaking during the mid-twentieth century, coincides with the boom and bust cycles in shad fishing on the Hudson River. By looking beyond architecture to consider the natural history of the maritime landscape, we were able to build a case for the significance of the shacks. Δ

References

Bagley, Charles V. (2015). South Street Seaport on List of Imperiled Historic Sites. The New York Times, June 25, A22.

Gilson, Roger Hannigan. (2016). Furgary Boat Club Site to be Opened to the Public, Former Residents of Fishing Shacks Take Issue with Future Plans. Columbia Register-Star, May 23, 1.

Hattala, Kathryn A. (1997.) Managing Hudson River American Shad: A Biologist's Perspectives on the Shad's Ups and Downs. Shad Journal 2, 3.

Kaplan, Lawrence and Carol P. Kaplan. (2003). Between Ocean and City: The Transformation of Rockaway, New York. Columbia University Press, New York.

Lossing, Benjamin. (1868). The Hudson, from the Wilderness to the Sea. Virtue and Yorston, New York.

New York State Department of Health (2016) Hudson River: Health Advice on Eating Fish You Catch. Pamphlet available at https://www.health.ny.gov/publications/2794.pdf.

Solecki, Ralph S. (1993). Indian Forts of the Mid-17th Century in the Southern New England-New York Coastal Area. Northeast Historical Archaeology 22: 64-78.

Wallace, Anthony F.C. (2012). Tuscarora: A History. SUNY Press, Albany, New York.

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Submerged Archeological Sites and National Register Guidance on Landscapes: Do We Need Maritime Cultural Landscapes?

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What is a Maritime Cultural Landscape (MCL) and can an archeological MCL exist? Though the term was coined by Westerdahl (1979) originally as a tool to get archeologists working separately on underwater and terrestrial features to view their apparently disparate sites as materially and historically related, today "Maritime Cultural Landscape" is being used by federal land managers to classify and protect submerged shipwrecks and other near-shore or submerged water-related cultural and natural features found in marine sanctuaries and parks. Under the National Register Landscape Initiative (NRLI), MCLs are one of several types of landscapes being considered for increased attention in National Register nominations. In particular, the NRLI asks of landscapes "if additional guidance is needed, where do inconsistencies need to be resolved, and what types of landscapes need to be better addressed by the program?"

As the case currently stands, virtually no National Register (NR) guidelines specific to Maritime Cultural Landscapes exist and certainly none specific to archeological MCLs exist. Given that the National Register, by design and law, recognizes only five property types: building, structure, object, site, and district; and given that landscape is not considered one of these types (although any specific landscape may contain one or more of the property types among a panorama otherwise dominated by natural features), the general absence of NR guidance on MCLs is understandable. It wasn't until the NR was well up and rolling that the greater urban, rural, and natural contexts of property types became increasingly and fully viewed, if not officially sanctified, as property types themselves.

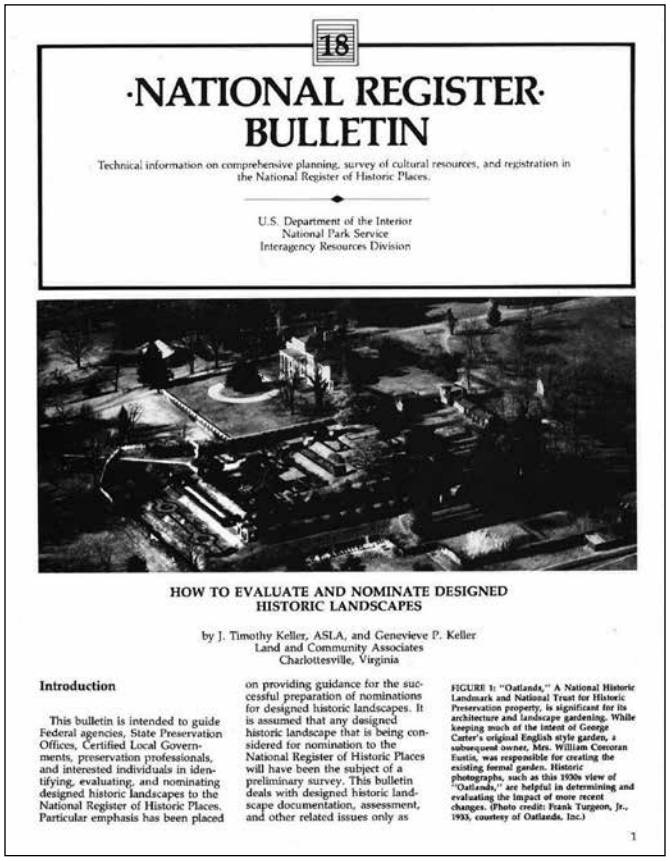
That there are no descriptions for maritime landscapes in NR bulletins is not surprising. There are also no specific National Register bulletins on mountain landscapes, subterranean landscapes, aerial landscapes or specific site types like subway tracks, turpentine camps, rollercoasters, migration trails and the thousands of other kinds of places that constitute geophysical/historical aspects of U.S. history. NR guidance is purposely general in character to accommodate the nearly infinite historically significant places that make up the country. Specific places are perforce fit into one or more of the five types allowed by law, often with some difficulty.

Only a few specific place types sufficiently distinct in character from modal historic property types have warranted their own guidance documents. For example, ships, cemeteries, mines, and, pertinent to this discussion, urban and rural landscapes have their own NR bulletins. The first National Register landscape bulletin (18, *How to Evaluate and Nominate Designed Historic Landscapes*) was published in 1987, some 20 years after the establishment of the National Register. It dealt with designed urban landscapes, whose contributing elements primarily included buildings and structures, but also open lands such as parks and gardens.[1] (Figure 1) This bulletin still serves well the National Register nomination of historic urban landscapes.[2]

The second landscape bulletin, on rural historic landscapes, was released in 1990 (Figure 2), *Guidelines for Evaluating and Documenting Rural Historic Landscapes*. It provides guidance on nominating all non-urban landscapes, distinguishing urban from rural landscape primarily by differences in the ratio of the built environment consisting of, for example, ranch houses, fences and roads, to the natural environment consisting of landforms such as mountains, fields, and streams and vegetation cover, including forests, brush and crops on natural

1 But the word "archeology" is mentioned only twice in the 14-page document, and those mentions do not discuss at all how to integrate archeological resources into nominations for standing historic properties usually nominated under Criterion C for period, master-work, or artistic distinction.

2 Editor's note: This bulletin was not intended solely for urban designed landscapes.



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·NATIONAL REGISTER·
BULLETIN

Technical information on comprehensive planning, survey of cultural resources, and registration in the National Register of Historic Places.

U.S. Department of the Interior
National Park Service
Interagency Resources Division

HOW TO EVALUATE AND NOMINATE DESIGNED HISTORIC LANDSCAPES

by J. Timothy Keller, ASLA, and Genevieve P. Keller
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Introduction

This bulletin is intended to guide Federal agencies, State Preservation Offices, Certified Local Governments, preservation professionals, and interested individuals in identifying, evaluating, and nominating designed historic landscapes to the National Register of Historic Places. Particular emphasis has been placed on providing guidance for the successful preparation of nominations for designed historic landscapes. It is assumed that any designed historic landscape that is being considered for nomination to the National Register of Historic Places will have been the subject of a preliminary survey. This bulletin deals with designed historic landscape documentation, assessment, and other related issues only as

FIGURE 1: "Oatlands," A National Historic Landmark and National Trust for Historic Preservation property, is significant for its architecture and landscape gardening. While keeping much of the intent of George Carter's original English style garden, a subsequent owner, Mrs. William Corcoran Eustis, was responsible for creating the existing formal garden. Historic photographs, such as this 1930s view of "Oatlands," are helpful in determining and evaluating the impact of more recent changes. (Photo credit: Frank Turgeon, Jr., 1933, courtesy of Oatlands, Inc.)

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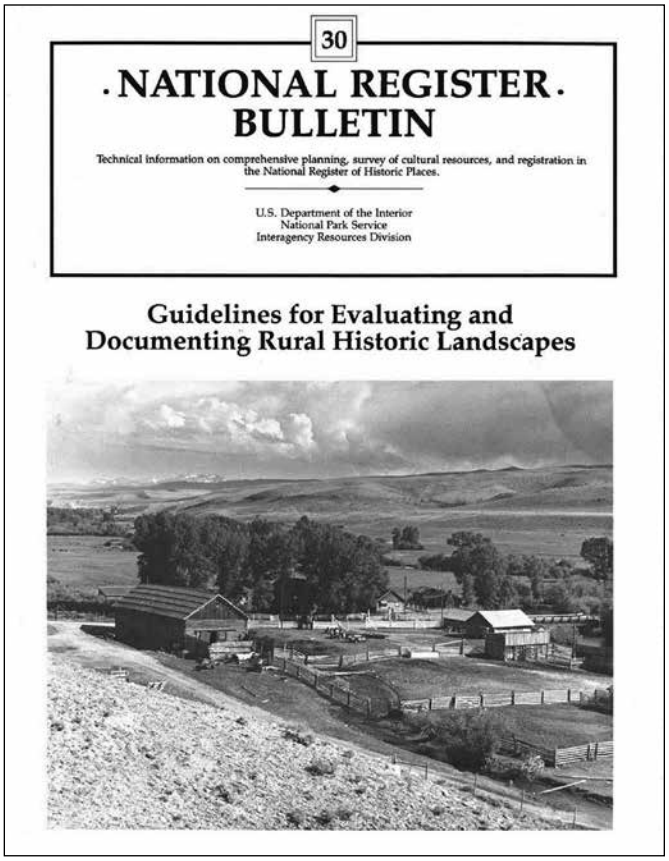
Figure 1. National Register Bulletin 18, *How to Evaluate and Nominate Designed Historic Landscapes*.

or modified lands such as farm fields. As long as people had worked in, manipulated, or otherwise affected the natural environmental features in some historically significant way, and as long as there were far greater amounts of natural or modified lands than buildings or structures, rural landscapes were seen as potentially eligible for the National Register, usually as a district or site. Under NR Bulletin 30, natural features could not be seen as part of the rural landscapes unless they "reflected the day-to-day occupational activities of people engaged in traditional work" who "have developed and evolved (the natural features) in response to both the forces of nature and the pragmatic need to make a living."[3] That is, the historic significance of a rural historic landscape in the view of the NR under Bulletin 30 was that it reflects people's adaptations to the natural environment.

For archeology, Bulletin 30 was far more substantial than Bulletin 18 had been. It mentioned archeological sites 19 times, stressing their potential as landscape features akin to buildings and structures when observable in such things as relic house foundations, stone fences, or old dirt roads. Calling such a view of archeology sites "landscape archeology," is probably not appropriate.[4] Archeological deposits, in fact, were not defined as holding the potential to constitute a landscape in their own right, except in the case where man-made structures, or human modified vegetation or natural features remained observable and sustained integrity under Criterion C.[5] That is, no clear definition as to what may or may not constitute a Criterion D "archeological landscape" or its features was presented. In fact, the term "archeological landscape" never was and has never been used in NR 30 or any other NR guidance.



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· NATIONAL REGISTER ·
BULLETIN

Technical information on comprehensive planning, survey of cultural resources, and registration in the National Register of Historic Places.

U.S. Department of the Interior
National Park Service
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Guidelines for Evaluating and Documenting Rural Historic Landscapes

Figure 2. National Register Bulletin 30, *Guidelines for Evaluating and Documenting Rural Historic Landscapes*.

3 Editor's note: Many rural historic landscapes include large portions of land that have not been manipulated "to make a living." The full sentence in the bulletin reads, "Rural landscapes commonly reflect the day-to-day occupational activities of people engaged in traditional work such as mining, fishing, and various types of agriculture" (page 2).

4 Editor's note: This term is not used in Bulletin 30.

5 Editor's note: Criterion A is more widely used to nominate rural historic landscapes.

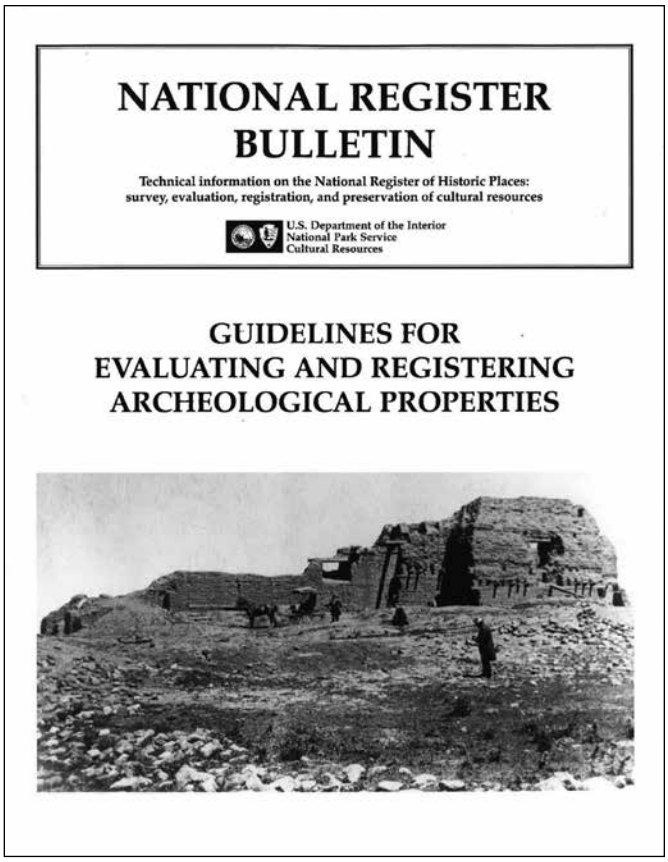


Figure 3. National Register Bulletin 36, *Guidelines for Evaluating and Registering Archeological Properties*.

Why the omission? One part of the answer can be found in Bulletin 36, *Guidelines for Evaluating and Registering Archeological Properties* (Figure 3). It states that "Under Criteria A, B, and C, the National Register places a heavy emphasis on a property looking like it did during its period of significance."[6] That is, landscapes from the typical NR perspective were viewable entities preserved in time. None were constituted solely of unobservable soil stains or artifacts buried underground that needed technical interpretations to reckon their historical significance. Unlike almost all other Register property types, archeology sites, under Criterion D, were seen as significant for the information or potential information they held, not for their appearance and high degree of preservation that evoked their original setting. Like previous bulletins, 36 presented no clean definition of, or guidelines for dealing with, strictly archeological landscapes that lacked above-ground features.[7]

If not in outline, Bulletin 36 did present by example what at least one potential archeological landscape might look like.

> . . . natural features of oak groves and grasslands, demonstrates the management of hunted and gathered resources through burning to promote particular environments (2000: 23).

In this example, the recurrent processual theme and requirement of Bulletin 30 for rural historic landscapes is stressed—rural landscapes could be identified through material evidence that people worked or adapted to the natural environment, and

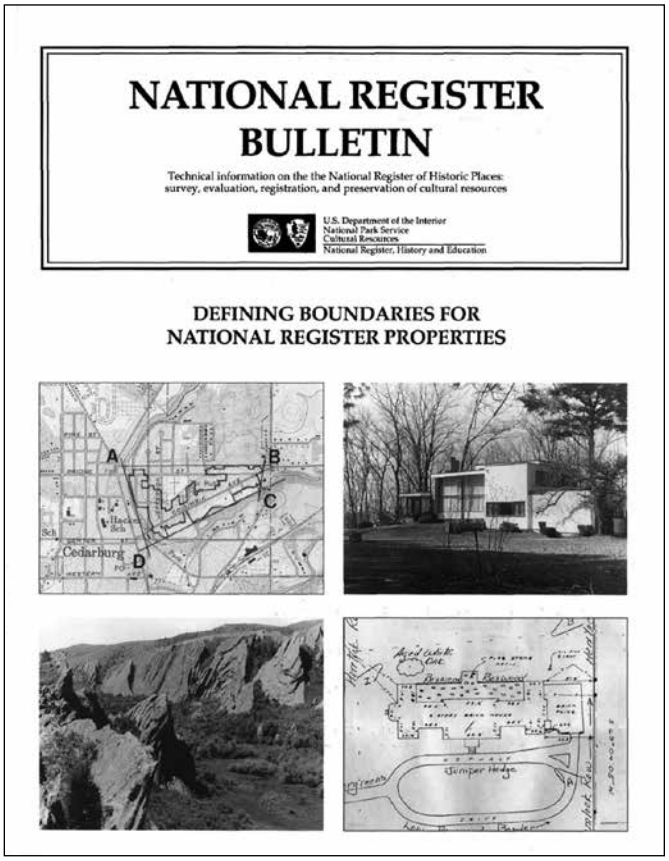


Figure 4. Bulletin 21, *Defining Boundaries for National Register Properties*.

6 Editor's note: In the Bulletin this sentence is preceded by, "All properties must be able to convey their significance. Under Criterion D properties do this through the information that they contain" (page 38).

7 But the Bulletin did present a potential example of an archeological landscape in which the only above ground visible landscape feature was vegetation reflecting the historic period of interest. The potential archeological components were unobserved possible features lying underground.

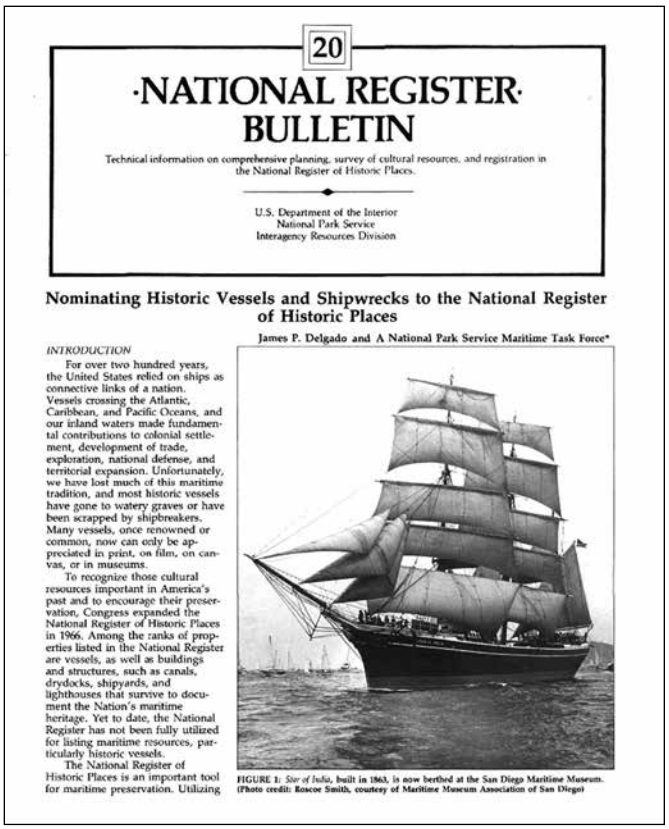
the major historical significance of the archeological landscape was the information it provided

> . . .to understand the effects of environmental change and population pressure and the impact of human actions on the landscape (2000: 7).

In Bulletin 21, *Defining Boundaries for National Register Properties*, (Figure 4) no definition of landscapes is presented, but it does offer examples of landscapes as bounded sites and districts, some of which might contain archeological deposits. Again in these descriptions, however, all landscapes are evaluated only under Criterion C, that is, for their standing structures and/or visible natural features.[8] Archeological features are seen as cultural lagniappe. It was the visible structures, not the hidden deposits that made the landscape. The bulletin cautions the reader to:

> Remember that many buildings have associated contributing landscape and archeological features. Consider these resources as well as the architectural resources when selecting boundaries and evaluating the significance of buildings (1997: 7).

Under the examples from Bulletin 21 as to how to bound NR sites in general and not landscapes in particular, 6 out of 17 are described as landscapes or as containing landscape features, including archeological sites with no surface expressions. But when the reader turns to the section entitled "Boundaries for Archeological Sites and Districts," wherein Criterion D is the primary criterion of significance, none of the sites or districts mentions landscapes or landscape features at all. That is, none of the buried or sealed archeological sites are viewed as landscapes. In one example, archeological components are explicitly excluded from landscape feature recognition because, I suspect, the archeology is not apparent on the surface. Again, as shown in the quotation above, examples of landscape features are seen as being



20

·NATIONAL REGISTER·
BULLETIN

Technical information on comprehensive planning, survey of cultural resources, and registration in the National Register of Historic Places.

U.S. Department of the Interior
National Park Service
Interagency Resources Division

Nominating Historic Vessels and Shipwrecks to the National Register of Historic Places

James P. Delgado and A National Park Service Maritime Task Force*

INTRODUCTION

For over two hundred years, the United States relied on ships as connective links of a nation. Vessels crossing the Atlantic, Caribbean, and Pacific Oceans, and our inland waters made fundamental contributions to colonial settlement, development of trade, exploration, national defense, and territorial expansion. Unfortunately, we have lost much of this maritime tradition, and most historic vessels have gone to watery graves or have been scrapped by shipbreakers. Many vessels, once renowned or common, now can only be appreciated in print, on film, on canvas, or in museums.

To recognize those cultural resources important in America's past and to encourage their preservation, Congress expanded the National Register of Historic Places in 1966. Among the ranks of properties listed in the National Register are vessels, as well as buildings and structures, such as canals, drydocks, shipyards, and lighthouses that survive to document the Nation's maritime heritage. Yet to date, the National Register has not been fully utilized for listing maritime resources, particularly historic vessels.

The National Register of Historic Places is an important tool for maritime preservation. Utilizing

FIGURE 1: *Star of India*, built in 1863, is now berthed at the San Diego Maritime Museum. (Photo credit: Roscoe Smith, courtesy of Maritime Museum Association of San Diego)

Figure 5. National Register Bulletin 20, *Nominating Historic Vessels and Shipwrecks to the National Register of Historic Places.*

restricted to the observable natural features:

> Archeological components include a village midden area with a depth of about 2 feet, while the landscape features include rocks, a grove of trees, and a waterfall. Within this site there is significant linkage between the archeological record and traditional cultural features (1997: 58).

The only conclusion to draw from Bulletin 21 is that there may be historically significant archeological components and there may be a historically significant landscape, but the two are not the same thing when bounding NR sites.[9] Archeological components are not landscape features.[10]

As stated, I suspect the fact that no buried archeological sites or districts have ever been identified as NR landscapes is due in large part to their appar-

8 Editor's note: Criterion C is most commonly applied to designed landscapes or collections of architecturally distinguished buildings. The examples in this bulletin applied a range of criteria, although the emphasis is on how the boundaries were drawn.
9 Editor's note: Unless the author of a nomination makes the linkage from the perspective of the period of significance, the criteria applied, or the areas of significance.
10 Editor's note: This is not the case in the rural historic landscapes bulletin, #30.

ent invisibility. When cultural components are not observable, as is the case for most subsurface archeology, then they are simply not considered as part of a landscape. The common definition of landscape of course, stresses the visibility of features,[11] and archeology most often lacks the requisite visibility.[12]

If observable features are a necessary prerequisite for archeology to be included in an NR definition of landscape, we might ask how such restrictions might affect the nomination of an archeological maritime landscape if all contributing elements are buried underground or in deep or murky waters. Are these features observable at all or enough to qualify the landscapes for listing as described by NR bulletins?

Although it does not talk specifically of landscapes, the 1986 Bulletin 20 *Nominating Historic Vessels and Shipwrecks to the National Register* provides a good overview of the unique problems inherent in locating and describing shipwrecks, one potential type of an archeological maritime cultural landscape (Figure 5). It notes that for National Register review purposes, wrecks and wreck elements are always seen as archeological sites. As discussed above, if the Register indeed holds to this stance, then shipwrecks' classification under Criterion D, for information potential rather than their aesthetic, period, or master-work aspects, would almost always preclude their identification as landscape features.[13]

On the other hand, as Bulletin 20 notes, "the application of the National Register criteria to shipwrecks has not been well defined or understood." As such, I think, clarifying when and how shipwrecks should be classified as structures and not archeological sites, or at least as observable features would be critical to any attempt at involving them as contributing elements in historic landscape districts, at least under present NR guidelines.

Current Register guidance describes the process of nominating shipwrecks as archeological sites. But to get theses site as being seen as whole or parts of landscapes, Register guidance needs updating. If the Rural Historic Landscape criteria are applied to shipwrecks, and it is perhaps the closest fit the NR currently has, some major issues will need to be addressed.

One is the requirement for people or cultures to have worked or shaped or modified the land in order for archeology to be considered a cultural landscape. In the case of shipwrecks, with few exceptions, most historic and prehistoric sailors or passengers did not work the ocean bottom. Rather, the working life of the vessel was typically restricted to its time as a floating entity, not its brief tenure as a sinking or sunken one. We may have to reconsider the land in landscape to include water (and air?), or redefine the landscape concept to include seascapes, lakescapes, airscapes, etc.

We may also need to clarify if the water column is essentially a proxy for a soil column on land. That is, is the water simply the archeological equivalent of soil overburden atop a buried terrestrial site? Is the ship that now sits on the ocean bottom still considered *in situ* for being in the "geographical area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention"? That is, if the water is the "scape" of concern that defines a submerged maritime "landscape," should it matter if the ship is on top or below the surface water?

Can a submerged maritime "landscape" not include the water under which the cultural features now lie? Academically, probably not. But on a managerial level, different agencies and interested parties may hold separate rights and concerns to water and benthic resources, while governments and agencies and insurance entities different than

11 "Landscape," typical dictionary definitions: 1. an expanse of scenery that can be seen in a single view, 2. the aspect of the land that is characteristic of a particular region, 3. grounds arranged aesthetically.

12 Editor's note: Many archeological sites exhibit surface evidence; ruins are the obvious example, but subsurface sites can have surface evidence as well.

13 Editor's note: Shipwrecks, individually or as a collection, may be a nominated resource that is united by the land they occupy. The setting and other land that contributes to the information potential should be a contributing part of a nominated site or district.

those holding benthic and water authority may hold rights to the wrecks. For the Register, this is a concern in that agreement of all property owners is needed for listing.[14] But more to the point of nominating the wreck as a landscape feature, unless current NR understandings of landscapes are modified, the Register requires the nominator to know how much and exactly what land was "modified" or "intervened" upon in the culture's pursuit of placing that structure on the ocean bottom—a nonsensical requirement in the case of most wrecks.[15]

Finally, what land, if any, becomes part of the natural landscape aspect of a shipwreck landscape? Bulletin 20 does a nice job outlining boundary determinations for nearly complete hulls and isolated remains, noting that the location of each must be demarcated by measurements. That is, the guidance suggests that the ocean, lake or river bottom is not part of the archeological site unless physical remains of the ship or its wrecking event can be found. If this idea is extended to a shipwreck landscape, this could be problematic. Think of a large naval battle with scores of ships scattered across the bottom, but great expanses of unmodified and un-littered ocean bottom between them, or a so-called ship's graveyard, where notorious weather, tides or topography have worked to send hundreds of ships to the bottom over the course of centuries. How do we tie the ocean bottom thematically or historically to the wrecks? Current NR guidelines do not allow boundaries to include "buffer" zones. As such, boundaries designed to include a measured amount of land within the NR to protect the wreck from looters or to account for possible scatters of unseen objects become problematic. Of course, the National Register is remarkably flexible in allowing theories and theoretical approaches to be applied to boundary justifications. Often "reasonable, predicted, estimated, or partial boundaries" are accepted, but they must include historic, archeological, or practical justifications. With shipwreck's enormous costs related to archeological survey to get these boundaries defined, and with the inability to predict how long those boundaries can stay defined under the landscape altering effects of tides, currents and storms, the definition of submerged landscape boundaries may require special dispensations. Because of these, and many more characteristics unique to underwater and near-shore archeological sites, I would suggest rather than working, and tweaking current NR guidelines, new guidelines and bulletins may be required to bring maritime cultural landscapes into the NR fold.

As for interpreting drowned terrestrial sites as whole or part of maritime cultural landscapes, similar considerations may need to be taken. In many cases of drowned prehistoric sites, linking the cultural items to a maritime setting may be difficult due to logistical problems and costs. For example, in Florida Paleoindian and Archaic lithic points are often found offshore, in the Gulf and Atlantic along drowned river valleys. But whether these are associated with terrestrial, coastal or maritime landscapes is often difficult to figure out due to the limited capacity for subsurface testing. As with shipwrecks, the question arises—should the NR adhere to stringent archeological contextual demands that the rare cultural artifacts must be proven to have direct associations with a dateable, submerged, terrestrial environment, or should different standards be allowed for these drowned potential historic and cultural landscapes? Are drowned terrestrially oriented sites a kind of subclass of a maritime cultural landscape even if there is no evidence of the culture having been linked to the water under which the site now lies? For an historic landscape of any kind under current NR guidance, not only do temporal associations between cultural and natural landscape features need be made, but also direct material and physical linkages. In the case of drowned landscapes, one might ask how essential is the linkage? After all, Criterion D demands of an archeological site or district only that it have yielded or may be likely to yield, information important in history or prehistory. For terrestrial landscapes submitted to the NR, adherence to this criterion has resulted in sites with both megafauna remains and paleo points

14 Editor's note: Actually, the regulations are not this stringent they specify that "the property will not be listed if a majority of the owners object the listing" (36 CFR 60.6(g))

15 Editor's note: This simply is not true.

being turned down because the archeologist could not connect the resources to a common context. Should drowned landscapes be held to the same standards?

My reading of the current NR process suggests that virtually any landscape associated with maritime resources would encounter few problems in being nominated as an historic district if criteria are met and minor guidance issues are handled. Barring any problems with owner consent, combining on- and offshore landscape features into one Westerdahlian maritime cultural landscape could certainly be facilitated in the NR process, if minor questions about the underwater landscape features are resolved. The operative question for the National Register program becomes, I think, whether such manipulations of current underwritten and ambiguous NR guidance best serves the many historically significant archeological maritime cultural landscapes awaiting nomination, or if new clearly stated formal guidance for MCLs would more effectively serve those resources. Δ

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4. Case Studies

Introduction

What is a Maritime Cultural Landscape? Where are they found? Do they have common characteristics? The Case Study session explored these questions by examining the breadth of maritime resources found across the country. From an overview of the variety of cultural landscapes found in Lake Superior's Apostle Islands to the concentration of shipwrecks in the Gulf of Mexico's Dry Tortugas National Park, the session's presenters examined both terrestrial and submerged resources, both relatively recent and precontact sites, the relationship of both natural and man-made features, and both coastal and mid-continent examples.

The case studies, with their broad geographical distribution and varied resources, provide a broad understanding of the types of maritime cultural landscapes that exist, their richness, and the challenges faced by each. For example, what can we learn from the distribution of dugout canoes in Florida? And, how were environmental concerns addressed at Michigan's Quincy Smelter site where slag piles are part of the historic landscape?

Together with other papers presented at the symposium, the case studies explained at this session contribute to the growing body of knowledge about maritime cultural landscapes. The increased understanding of the maritime cultural landscape concept will enable agencies, tribes, Alaska Natives, Pacific Islanders, and State Historic Preservation Offices to more effectively preserve and protect their maritime heritage through interpretation, management, and listing in the National Register of Historic Places.

Daina Penkiunas
Wisconsin State Historic Preservation Office

Drakes Bay Historic and Archaeological District

Paul Engel
Point Reyes National Seashore
National Park Service

Coming from Point Reyes National Seashore, as you might guess, we have a lot of historic properties that can be looked at through this lens of maritime cultural landscapes. I am going to focus on the Drakes Bay Historic and Archaeological District and maritime cultural landscapes, and how these properties are documented within the framework of the National Register of Historic Places. To give you a quick roadmap of this presentation, I will first introduce the basic information about the district, followed by a discussion of aspects of the district with reference to the maritime cultural landscape concept. Lastly, I will evaluate how these attributes were addressed in the documentation for the district and some of the implications for management.

The Drakes Bay Historic and Archaeological District is situated along the shores of Drakes Bay and Drakes Estero which is roughly forty miles north of San Francisco. The district is a nationally significant, sixteenth century landscape that provides material evidence of one of the earliest instances of contact and interaction between European explorers and native peoples on the west coast of what is now the United States. The district is centered on two such historical encounters, Sir Francis Drake's 1579 California landfall and the 1595 shipwreck of the Manila galleon San Agustín within Drakes Bay.

The district was determined eligible under National Historic Landmark (NHL) criterion one for its association with these events, and criterion two for its association with the nationally significant figure Sir Francis Drake. It is also eligible under criterion six for its ability to yield information about these early contacts and their short-term and long-term consequences. If you aren't familiar with the NHL criteria, the analogous National Register of Historic Places criteria are criterion A, criterion B, and criterion D.

The Drakes Bay Historic and Archaeological District consists of seventeen contributing sites. These include the Port of Nova Albion which is the most likely site of Drake's California landfall, the 1595 shipwreck of Manila galleon *San Agustin* situated in Drakes Bay, and fifteen California Indian sites. The fifteen California Indian sites are associated with the Coast Miwok peoples and were found to contain sixteenth century European artifacts from these early colonial encounters. As an archaeological district, the significance of the district and how it is conveyed is relatively straightforward. The seventeen contributing sites contain archaeological materials with potential to address research questions about these early interactions, their consequences, and the degree of variability compared to other contact period sites. As a historic district, however, these contributing sites, which are either subsurface or submerged in Drakes Bay, do not in themselves convey these historical events of the sixteenth century. Rather, this part of the district's significance is really conveyed through the site locations and the combination of landscape features that were imbued with meaning by both European explorers and the Coast Miwok.

In the case of Sir Francis Drake's 1579 California landfall, Drakes Bay was a well needed stopover that allowed Drake and his crew to re-provision and careen their ship, the *Golden Hind*, in order to prepare a leak in its hull. The sheltered harbor of Drakes Bay, the navigable inlet of Drakes Estero, and its surrounding sandbars, are tangible features that, at the time, made Drakes Bay a suitable harbor to Drake and his crew. The white cliffs of Drakes Bay were a prominent landmark that make the bay easily visible and reminded the Englishmen of the southern coast of their homeland, leading them to name the land Nova Albion and claim it for England. All of these features are prominent in the accounts of the voyage, and they were essential in the identification of Nova Albion as the landing place of Sir Francis Drake. These remain evocative of the scene today.

Once again, in this case of the 1595 shipwreck of the *San Agustin*, the sheltered shoreline of Drakes Bay enticed Sebastian Rodriguez Cermeno to make

anchor in 1595 in order to re-provision and assemble a small launch for coastal exploration while enroute from the Philippines to New Spain. This route was part of the regular trade between Manila and Acapulco, where Mexican and South American silver were shipped out of Acapulco and exchanged for Chinese luxury goods that were shipped back to Acapulco. This return trip brought the Manila galleons along the coast of Northern California leading, in this case, Cermeno to land in Drakes Bay. However, shortly after their arrival at Drakes Bay, a southerly storm drove the San Agustin ashore causing it to wreck in the surf. The Spaniards were forced to modify their launch to allow the whole crew to return to Mexico leaving the San Agustin behind in Drakes Bay, which they referred to as la Bahia de San Francisco.

For the Coast Miwok, the wreck of the San Agustin added to the landscape of coastal gathering areas along the bay in the area that they called Tamal-huye, or Bay Point. This is the area where subsistence and material resources were routinely gathered. As suggested by the distribution of Coast Miwok archaeological sites along the coastal margins of Point Reyes, the Coast Miwok relied heavily on marine and estuarine resources. During this period of contact, the European explorers would have entered a developed landscape of coastal villages and camps, processing sites, and collecting areas. The Coast Miwok likely harvested materials from the wrecked San Agustin routinely, not unlike the clam beds and intertidal reefs along the Point Reyes coast.

The materials the Coast Miwok harvested from the cargo of the San Agustin, especially the Chinese export porcelain, were modified and utilized similar to how the Coast Miwok modified traditional material types, such as shell and lithic materials. For instance, Ming Dynasty porcelain vessels were broken into pieces and modified as ornaments similar to abalone pendants and clam shell disk beads. Iron spikes and other metal implements were also likely utilized similar to modified stone implements.

As the variety of names associated with Drakes Bay indicates, the bay and surrounding landscape have held meaning for many cultural groups over the centuries. As a maritime cultural landscape, the Drakes Bay National Historic Landmark demonstrates how both human constructed features and natural landscape features are imbued with cultural meaning to those interacting on the landscape. It is also an example of how maritime cultural landscapes often have a greater radius of human activity and are more open to outside influence compared to their terrestrial counterparts. In this way, the Drakes Bay National Historic Landmark represents this burgeoning global economy of the sixteenth century, and provides a view of its short-term and long-term impact on traditional cultures.

Although all of these aspects of the district that I have just talked about are addressed throughout the documentation for the National Historic Landmark, they are not so well represented in the discussion of the district's significance and how it is conveyed by the contributing resources. This shortcoming seems to reflect some of the constraints of the National Register framework. Many of the district's more visible features, such as the cliffs at Drakes Bay and the navigable inlet to Drakes Estero, do not really fit the property categories defined by the National Register.[1] As a result, these types of features are not listed as contributing resources. Instead, the way the authors managed to incorporate these cultural landscape elements was by including these features by explicitly calling them out in their discussion of integrity, especially as part of the setting and feeling of the district.

Although this is a common approach that is used to document cultural landscapes within the framework of the National Register of Historic Places, this approach could lead to some potential negative implications in the later management of these resources. Resource managers tend to put a lot of emphasis on the list of contributing resources, and use it almost as a short list of what is important in the preservation of a historic property. This could result in significant landscape features being neglected in terms of their preservation and

1 Editor's note: If the National Register boundary encompasses the cliffs, they can be evaluated as a contributing site or as a character defining feature of the overall contributing site.

in the overall interpretation of these properties to the public. This will become a greater issue as we think about the management of maritime cultural landscapes and other historic properties within the context of climate change, and its associated effects of sea level rise and increasing rates of coastal erosion. These maritime cultural landscapes will become increasingly vulnerable over time.

Given the increasing vulnerability of these properties, it is important that resource managers find effective ways to incorporate the maritime cultural landscape perspective within the framework of the National Register of Historic Places so that these values are clearly communicated to future decision makers. The documentation for the Drakes Bay Historic and Archaeological District relies on its discussion of integrity of setting and location to capture several aspects of the maritime cultural landscape. Although this approach does recognize these values within the historic landscape, elevating these components to the level of contributing resources would be a more effective way to communicate their importance within the district to both the public and future decision makers.[2] Other approaches and case studies that successfully integrate the maritime cultural landscape concept within the framework of the National Register should be identified and shared beyond this symposium to inform future documentation efforts. Additionally, in some way redefining the National Register property categories to better include cultural landscapes or significant landscape features might be an approach to better document the significance of these types of properties. **Δ**

Paul Engel is the Archeologist at Point Reyes National Seashore, and has served in that capacity since 2010. In addition to managing the Archeology Program, Paul is the Park's National Historic Preservation Act Coordinator and is responsible for managing compliance with this and other cultural resources laws, as well as coordinating consultation with Native American Tribes, the State Historic Preservation Officer, and the public. Paul holds a BA in History and an MA in Cultural Resources Management from Sonoma State University.

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2 Editors Note: Landscape features can be categorized in the nomination as "character defining features." They cannot be enumerated as buildings, structures, and objects, but they should be described as part of the contributing site and their significance should be noted in the statement of significance. In the inventory, they can be listed as "significant character defining features."

Drakes Bay Historic and Archaeological District, Point Reyes National Seashore, California. The district was designated a National Historic Landmark in 2012. It is directly associated with the earliest documented cross-cultural encounter between California Indians and Europeans, leaving the most complete material record on the West Coast. The nearly 6,000-acre district is part of the Gulf of the Farallones National Marine Sanctuary. Photo by Robert Campbell, 2011; courtesy of the National Historic Landmarks Program.

Landscape vs. Discontinuous District: Florida Dugout Canoes

Julie B. Duggins
Florida State Historic Preservation Office

Florida is home to the largest concentration of dugout canoes in the world. The national significance of these resources is uncontested due to sheer sample size and because dugouts represent the oldest direct evidence of watercraft. In addition to significance, there is agreement that the fragile, organic artifacts are worthy of preservation. The Department of State's conservation lab has treated numerous canoes over the years, and, perhaps more telling, private citizens have repeatedly paid out of pocket for polyethylene glycol (PEG) or spent their free time delicately unwrapping and rewrapping a slow-drying canoe. If there is agreement that Florida's canoes are significant on a worldwide scale and worthy of preservation, why, then, are only a fraction of the hundreds of dugouts from Florida listed in the National Register of Historic Places?

I argue that restrictive National Register categories mirrored by research questions with limited breadth have reduced the number of canoe nominations from Florida. I combat both problems by reframing research questions and, more practically, by first exploring solutions in two NR categories: the Discontiguous District and the Landscape.

Conventional Categories

More of Florida's canoes are not recognized collectively, it seems, because Florida's canoes are physically scattered and not all individual canoes have individual research potential. Canoes are recorded as archaeological sites, therefore people assume the nomination category would be "site," even when a district or landscape might be more appropriate.[1] This hurdle mirrors a problem in canoe research, where analysis and documentation focuses on single canoes within constricted areas or specific time periods. Listed in 2001, the Pithlachocco Canoe Site (Newnans Lake) was nominated as a "site" with National Register boundaries much smaller than the archaeological site boundaries. The Pithlachocco Canoe Site is the world's densest concentration of canoes in a single lake (Smith 2002), but the site does not adequately represent the full distribution of Florida's dugouts, which spans 6,000 years of maritime navigation in lakes, rivers, creeks, and the ocean.

One underlying problem is that most canoe "sites" are in fact just a single artifact, the canoe. Canoe recording, much like other boat recording, has been highly focused on methodology and data collection from the vessel itself. Methods include detailed sketches, thin sections of wood, radiocarbon dates, and a concerted effort to stabilize the artifact. Because recording methods often lack peripheral vision, even site-level interpretations of canoes focus on the boat.

As single artifacts, and as objects recognized as archaeological sites, Florida could individually nominate many of the 423 canoes. An individual canoe may establish the earliest direct evidence of watercraft in the western hemisphere (De Leon Springs), or one unfinished canoe may illuminate canoe manufacture methods (Wakulla Unfinished Canoe). An Archaic period canoe with a thwart or projecting bow may singlehandedly overturn the notions some researchers used to hold about the unilinear nature of canoe typology (Wheeler et al. 2003). This information is important, and site-level research and individual nominations are sometimes appropriate. But, to recognize only the individual significance of Florida's canoes would be to miss an opportunity to use the largest sample size of log boats in the world. I argue that collectively, Florida's 423 dugout canoes hold exponentially more information potential.

Discontiguous District v. Landscape

To recognize the significance of all of Florida's canoes, there are two options: the Discontiguous

1 Editor's note: Sites and districts are property types recognized by the National Register; "landscapes" can be nominated as sites or districts. Both can be wide-ranging in size and significance. A district should not be considered a limitation to nominating collections of related sites.

District and the Landscape.[2] I will briefly consider each with respect to Florida's dataset. "For scattered archaeological properties, a discontiguous district is appropriate when the deposits are related to each other through cultural affiliation, period of use, or site type" (Little et al. 2000). Covering forty-one of Florida's sixty-seven counties, dugout canoes are dispersed and spatially discrete. The space between canoes does not diminish the significance of the resources comprising the district. As a discontiguous district, Florida's canoes are related to each other through site type rather than cultural affiliation or period of use. As defined, a district must "possess a significant concentration, linkage, or continuity of sites," and as the densest concentration of canoes in the world, the canoe district would exist statewide.[3] Recognition as a district would imply that all of Florida's canoes represent a unified entity, even though they are dispersed across a large geographic area.[4]

As NPS defines it, a Cultural Landscape is a "geographic area, including both natural and cultural resources . . . that has been influenced by or reflects human activity . . . " (NPS 2013). This definition is broad enough to encompass areas of canoe use, but it stresses physical features and ignores the cognitive aspects of other landscape definitions (McClelland et al. 1999). More specific to prehistoric boats and navigation routes, a maritime cultural landscape is "the whole network of sailing routes," which for canoes would be the riverine transportation network of interconnected lakes and waterways (Westerdahl 1992, 6). Unlike a discontiguous district, a maritime cultural landscape includes old as well as new routes, meaning the now out-of-use transportation routes can be considered. Canoes have become isolated on the modern landscape as some waterways are no longer navigable due to natural water fluctuations and man-made alterations. Last, the "ports and harbors along the coast" or the villages near canoe concentrations fall within the landscape (Westerdahl 1992, 6).

Superficially, a discontiguous district seems to be a more appropriate fit for Florida's canoes, because the National Register definition for landscape currently focuses on physical elements not cognitive constructs implied by physical elements (NPS 2013). Most of Florida's canoe sites lack the classic associated features of a port. Almost no canoe sites have associated docks, or physical evidence of interface between the water and the land. Many canoe sites probably lie adjacent to villages or campsites, but most adjacent uplands are unsurveyed, so no sites have yet been identified.

Whether through a district nomination or a landscape nomination, canoes fall under Criterion D: "have yielded or may be likely to yield, information important in history or prehistory." What is the information Florida's canoes might collectively yield? And, should the nature of the information influence the category of recognition? To nominate canoes as a discontiguous district held together by site type and separated in space, is to imply that we are analyzing canoes site by site.

But what if it is the spatial relationships themselves that yield important information? Recent research suggests that the information potential of Florida's dugout canoes lies not in the discrete objects but, rather, in the association of canoes with navigable water bodies. And despite the lack of associated villages and ports, if this association and context are the important information in prehistory and history, it follows that one might use a Maritime Cultural Landscape to recognize the context, rather than a Discontiguous District to recognize the site type.

2 Editor's note: "Landscape" is not an option as a property type, but landscapes can be nominated as sites or districts. Another option is preparation of a multiple property documentation form (MPDF) for canoe sites and districts (including discontiguous districts) that presents the context and property types. The MPDF would establish integrity standards to help determine the eligibility of sites and districts.

3 Editor's note: Instead of a discontiguous district that encompasses the entire state, an MPDF that applies to the entire state would be recommended.

4 Editor's note: A discontiguous district is defined as a district "composed of two or more definable significant areas separated by nonsignificant areas." (*How to Apply the National Register Criteria for Evaluation*, page 6)

Why Are Florida's Canoes Significant?

Over the past three years, my agency has digitized the dugout canoe files—transforming a physical filing cabinet into a Microsoft Access database and GIS. Digitization enables the ability to filter by one of over fifty variables, such as time period or bow shape or wood type. It was my assumption that by isolating these variables, we may begin to understand them better, and perhaps realize the potential of previously collected metrics: thin sections of wood, radiocarbon dates, and, in some cases, associated artifacts and sites.

But previous syntheses of Florida's dugouts have already manually isolated variables, for example Newsom and Purdy's 1990 morphological typology. In another synthesis and reevaluation ten years later, Wheeler et al. (2003) overturned the teleological concepts within this typology by focusing on Archaic period canoes from a single lake. Somewhat ironically, despite the arduous journey of separating all the canoe data into seventy-four fields, my recent research on canoe distribution suggests that looking at the entire dataset, rather than picking out one or two canoe features, will capitalize on the information potential of dugouts. Therefore, it is not the database and GIS's power to isolate variables that has provided the most insight, but it is the ability to compile all of the data in one digital location, zoom out, and infer broad patterns by asking big anthropological questions. I have found that the important anthropological information potential of Florida's dugouts lies not in measurements and wood samples from the boats themselves, but in a deliberate consideration of overall canoe distribution in space and time.

Analyzed together, with consideration of the spatial distribution across Florida and the temporal span of 6,000 years, canoes have the potential to answer questions bigger than site-specific research. Big questions I am ready to ask are "Now that we have established that canoe morphology does not indicate a chronological typology, what do different canoe shapes indicate?" (Curci 2006; Wheeler et al. 2003). "Are canoe shapes functionally different or are shapes indicative of stylistic changes?" "If stylistic, can we begin to make inferences about canoe use within social groups or geographic culture areas?" "Geographically, how do Florida's prehistoric populations map on to the landscape of rivers and lakes?" and "Do prehistoric populations and historic period groups use navigable rivers in the same way?" Archaeologists are not ready to answer all of these questions, but I am ready to answer one two-part question "Is the spatial distribution of Florida's dugout canoes non-random? And, if it is non-random, does human behavior explain the pattern?"

Space

First, distribution of canoes in space is non-random. The majority of canoes come from the lakes district in north-central Florida, nevermind for a moment that one-fourth of the entire canoe sample comes from a single lake. These observations do not require GIS, as University of Florida researchers drew this conclusion twenty-five years ago. But "does human behavior explain the pattern?" In 1990, Newsom and Purdy argued that the explanations for the non-random distribution did not lie in patterned human behavior, but instead in (1) environments conducive to preservation, and (2) researcher bias—which I have to point out meant proximity to the University of Florida—(Newsom and Purdy 1990, 167). In their own words, Newsom and Purdy wrote that the distribution was "more of a function of geology and hydrology than a reflection of the greater cultural importance of the dugout in the north central highlands" (1990, 167).

I disagree and argue that human behavior explains the non-random spatial distribution. Although researcher bias and preservation play roles in shaping the canoe dataset, I look to other factors that may play a part, namely, a geographic distribution favoring edges of basins or what I call "drop spots" at major transportation interchanges. Westerdahl (1992, 6) calls these areas "transit points," or "places where a river-based cultural area meets the outer world." In the interest of time, I will not explain the entire drop-spot hypothesis by presenting specific analyses of the data, and I will not even describe the ethnohistoric evidence we have for canoe caching. Instead, I have chosen to use four simple examples of canoe concentrations to illustrate my point. These four sites, Pithlachocco, Stricklin's Peat Bog, Lake Hollingsworth, and Lake Trafford, represent the four largest canoe sites

in Florida. Notice that the first two examples are in the North-Central Lakes Region, but, importantly, the second two are in Central Florida and South Florida. I concur with Newsom and Purdy that the lakes region is of paramount significance, but I will demonstrate why I have concluded that the concentrations of canoes in the lakes district reflects the area's cultural importance as a major interchange, connecting the Atlantic Ocean with the Gulf of Mexico.

First I should orient you on Florida's natural landscape. Florida has a central ridge, which acts like the continental divide. Rivers west of the ridge drain to the Gulf of Mexico, while rivers east of the divide drain to the Atlantic Ocean. The pre-drainage Everglades used to have a prehistoric extent. Florida has nine major basins, three drainage directions, and 314 plotted prehistoric and historic canoe locations. Each of Florida's four largest canoe concentrations sits at the edge of two drainage basins near the headwaters of a river. The first example is Pithlachocco, the densest site with 101 canoes. What is now called Newnans Lake used to feed into a once wet Payne's Prairie, which was connected to Orange Creek and eventually fed into the St. Johns River. The St. Johns, which flows northward, ultimately flows into the Atlantic Ocean. Just ten miles to the northeast by overland travel is Lake Santa Fe, which flows into the Santa Fe River, which meets the Suwannee River and ultimately flows into the Gulf of Mexico. Where does the concentration of canoes at Pithlachocco lie? On a relict of the northeastern shore, the closest point to the interchange with transportation to the Gulf of Mexico.

Second, Stricklin's Peat Bog is also near Lake Santa Fe, located approximately ten miles to the Northeast. With nineteen canoes, it is the second largest canoe concentration from Florida. Stricklin's is situated on the western edge of the St. Johns River Basin, connected to the Atlantic through creeks that feed into the St. Johns. Less than ten miles by overland travel is Lake Santa Fe, which feeds into the Santa Fe River, and reaches the Gulf through the Suwannee River. Again, this concentration of canoes is situated in a critical natural environment, at the same Gulf to Atlantic junction. Yet Stricklin's represents a different interchange because although Pithlachocco and Stricklin's Peat bog are only twenty miles apart by overland travel, by river travel they are 125 miles apart. Stricklin's may represent the north St. Johns junction, while Pithlachocco represents the Middle St. Johns station. This major interchange is even easier to see when all canoes are mapped. Note that the canoe locations are not within the St. Johns Basin or within the Suwannee Basin, but the concentration lies at the interface between the two.

The third largest canoe site is Lake Hollingsworth with fourteen canoes, located at the very northern extent of the Peace River watershed. Lake Hollingsworth is connected to Lake Hancock, which flows into the Peace River and eventually reaches the Gulf of Mexico. Less than five miles by overland travel is the Alafia River, which connects to the Gulf. Also less than five miles from Lake Hollingsworth is Blackwater Creek, which flows to the Gulf via the Hillsborough River.

Lastly, in South Florida, is Lake Trafford, a site with ten canoes. Lake Trafford is located at the westernmost extent of the historic Everglades and at the headwaters of the Caloosahatchee Basin. The Everglades reach the Gulf, the Keys, and the Atlantic. Lake Trafford lies at the headwaters of Corkscrew Swamp, which flows through the Imperial to the Gulf of Mexico. To summarize, the distribution is nonrandom, and it can be explained by human behavior. The natural landscape influenced human use, and the cultural landscape is controlling of the natural environment. The location of Florida's most dense canoe sites at the beginnings and ends of navigable waterways indicates important landscapes used as transportation interchanges. These interchanges create linkages between the riverine routes and the overland routes, representing a physical interface between the water and the land.

Drawing on cultural geography, I identify interchanges as critical transit points in a greater cross-basin transportation network. From this perspective, the natural landscape, or the orientation and location of rivers within what is now Florida, influenced human interaction and use of this landscape. The cultural landscapes that emerged and persisted over time have the potential to help

archaeologists and historians recreate specific ancient mental maps. Thus, the mental imprinting and mapping of functional attributes of the environment (Lofgren 1981 in Westerdahl 1992), or cognitive landscape, is writ large in a canoe distribution that shows specific spatial connections. These spaces became places on the mental map, existing only because the location was embedded with cultural meaning (Dappert 2011, 247).

Time

The nonrandom distribution in space is repeated and mirrored over time. In an effort to make accurate and specific statements about canoe use, researchers have tended to separate the dataset by time period (e.g., Wheeler et al. 2003; Newsom and Purdy 1990; Hartmann 1996; Meide 1995), such as Kandare's 1983 conclusions about Mississippian canoes or Wheeler et al.'s Archaic period canoes (Wheeler et al. 2003). Formerly, archaeologists viewed outlying dates as a problem. We should probably recondition ourselves, at least in the case of canoes, to view such dates not as problematic, but as evidence for continuity of use.

The largest canoe sites are all multicomponent. Radiocarbon dates from Lake Trafford range from 1420 BP to 250 BP. Canoes from Stricklin's Peat Bog dated between 1000 BP and 320 BP. And Pithlachocco canoes range from 4210 BP to 460 BP. Multicomponent canoe sites are important because they indicate a "tradition of usage." Further evidence that a mental map exists and persists: canoe sites with long time spans are evidence of "well-used havens and routes" (Westerdahl 1992, 8), which implies that the cognitive landscape was so real and so important that the central places on the mental map remained relevant generation after generation.

Place names like "Pithlachocco," meaning "place of many long boats" (Smith 2002, 150), demonstrate the importance and persistence of places over time. Seventy percent of the boats at Pithlachocco are Archaic, yet the place name comes from the Miccosukee language, as recorded at contact. The long tradition of use demonstrates that generation after generation learned that Pithlachocco, Trafford, Stricklin's and Hollingsworth were places important enough to incorporate into the cognitive landscape.

Conclusion

To summarize, canoes are significant and worthy of preservation but are typically studied site by site or canoe by canoe. Some of Florida's canoes hold information not at an individual scale, but at a large scale. Florida's canoes collectively hold answers to bigger research questions, such as "does human behavior explain the nonrandom distribution of canoes?"

The densest concentration of canoes in the world could be viewed either as discontinuous resources in a related district or as elements of a landscape, more specifically, a maritime cultural landscape which could be nominated as a series of districts. Preservationists are left with a choice between the two categories.[5] I regard the source of canoe significance as influential in making this decision; in other words, the scale of significance relates to the category of nomination.

In response to big research questions, I identified four maritime cultural landscapes in Florida's canoes. These landscapes recognize the significance of the space as a place on the natural landscape and long traditions of usage in addition to the log boat. The underlying importance of identifying ancient landscapes in concentrations of canoes is a better understanding of the cultural geography of Florida's ancient groups, and a realization that log boats were not static objects scattered across Florida. They were made, used, and deposited by humans. Viewing Florida's canoes collectively as a maritime cultural landscape is the first step in recognizing that the log boats hold value beyond the information stored in the carved wood alone, and that the contexts—in addition to the objects—are worthy of preservation. **Δ**

References

Curci, Jessica Lee. 2006. "Logboats of the Southeastern United States: Investigating the Question of Form." Unpublished Ph.D. Dissertation, Department of Coastal Resources Management, East Carolina University, Greenville.

5 Editor's note: An MCL also could be nominated as a site.

Dappert, Claire P. 2011. "US Shipbuilding Activities at American River, South Australia: Finding Significance of 'Place' in the Maritime Cultural Landscape," in The Archaeology of Maritime Landscapes: When the Land Meets the Sea, edited by B. Ford. (New York: Springer), 247-66.

Kandare, Richard. 1983. "A Contextual Study of Mississippian Dugout Canoes: A Research Design for the Moundville Phase." Unpublished M.A. Thesis, Department of Anthropology, University of Arkansas, Fayetteville.

Little, Barbara, Erika Martin Seibert, Jan Townsend, John H. Sprinkle, Jr., and John Knoerl. 2000. National Register Bulletin Guidelines for Evaluating and Registering Archaeological Properties. NRB 36. U.S. Department of the Interior, National Park Service. Accessed online at http://www.nps.gov/nr/publications/bulletins/pdfs/nrb36.pdf.

McClelland, Linda Flint, J. Timothy Keller, Genevieve P. Keller, and Robert Z. Melnick.1999. Guidelines for Evaluating and Documenting Rural Historic Landscapes. NRB 30. Accessed online at http://www.nps.gov/nr/publications/bulletins/nrb30/.

Meide, Chuck. 1995. "The Dugout Canoe in the Americas: An Archaeological, Ethnohistorical, and Structural Overview." Unpublished Florida State University paper, accessed online at https://www.academia.edu/3250221/The_Dugout_Canoe_in_the_Americas_An_Archaeological_Ethnohistorical_and_Structural_Overview.

National Park Service (NPS). 2013. "Landscape Definitions Used by the National Register." National Register of Historic Places Program: Landscape Initiative. Accessed online at http://www.nps.gov/nr/publications/guidance/nrli/index.htm.

Newsom, Lee Ann, and Barbara A. Purdy. 1990. "Florida Canoes: A Maritime Heritage from the Past." Florida Anthropologist 43 (3): 164-80.

Smith, Roger. 2002. "Florida Frontiers: From Ice Age to New Age," in International Handbook of Underwater Archaeology, edited by Carol V. Ruppé and Janet F. Barstad. (New York: Springer), 143-68.

Westerdahl, Christer. 1992. "The Maritime Cultural Landscape," International Journal of Nautical Archaeology 21 (1): 5-14.

Wheeler, Ryan J., James J. Miller, Ray M. McGee, Donna Ruhl, Brenda Swann and Melissa Memory. 2003. "Archaic Period Canoes from Newnans Lake, Florida." American Antiquity 68 (3): 533-51.

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Delineating Maritime Cultural Landscapes at National Parks Dry Tortugas National Park and St. Croix Scenic Waterway

Bert Ho
Submerged Resources Center
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Edited Transcript of Presentation

Thanks for the invitation. Thanks for thinking of us, our little office in the National Park Service, to give this presentation. When Mike Russo emailed us about participating, he specifically referenced the work we were doing at St. Croix Scenic Waterway, which is not too far away from here. I have my own opinions about that park and how it fits into the National Register, and I'm going to try not to voice my opinions on it too strongly, so I'm not going to say things like "it's perfect, it's a perfect riverway cultural landscape". I'm not going to tell Barbara or Paul or Mike Russo, if you need an example here you go. It's on a silver platter; we just finished the draft report. I'm not going to share those opinions, but if you come to that same conclusion, maybe I did my job.

We're the Submerged Resource Center of the National Park Service. We're archeologists and photographers and we work throughout the Park Service unit. We do work internationally with partners. The National Park Service does manage a lot of waterways and seashores and lakes, including areas that sometimes you don't really think about, like Lake Mead outside of Las Vegas. We do a variety of things. You have to go from the Channel Islands, which is cold water, to Dry Tortugas at different time periods. Sometimes you're diving on a house in Lake Mead or an airplane, and next you're working on trees in Jackson Lake outside of Grand Teton. That's spires. Sometimes we get to do natural resources.

A lot of what we do for parks is Section 110 and Section 106 work.[1] This is kind of where I feel like we have a unique job, because as field archeologists, we get to make management recommendations, but we don't really have to make any decisions. That's great, right? You're not really responsible for the decisions that parks make, but a lot of times they're relying on us to do the underwater work. It also helps that we get to meet a lot of the people. We get to meet a lot of the resource managers and archeologists in parks and that's great, we make new friends, but then the flip side is that we also are like their sounding board. We hear the budget complaints, how they're asked to do more with less, and in some cases they're actually asked to do less with less, which just like everyone in this room and every resource manager, natural and cultural, doing less with less is just not acceptable. It's not something that any resource manager is going to allow themselves to do.

We can help with 110, we can help with 106, and we try to do as much as we can. I guess if any of you guys know us personally or see our office's Facebook page, you probably think we're never at home, which sometimes it does feel that way. The St. Croix National Scenic Riverway is a perfect example of some of the 110 work that we've been asked to do this year. Geneva Wright and Jessica Keller just finished the draft report; it's being reviewed by the park and it's a couple of hundred pages about dams, which I'll talk about. Actually, this is why I'm not going to share my opinion about it. Hopefully you'll see that this was a great example of where the landscape is being altered by human activity and it's continuous, they are integrated, and there are a lot of examples.

St. Croix, if you're familiar with the area, is actually not too far away. It's the border between Minnesota and Wisconsin. We primarily worked out of park headquarters on the Wisconsin side at St. Croix Falls, but we actually stayed in Stillwater. The states had money for our travel and food purchases on both sides of the river, so that was good. We also got to work with regional archeologists who

1 Editor's note: Section 106 of the National Historic Preservation Act requires review of the impacts of proposed work on historic properties if federal funding, licensing, or permitting is involved. Section 110 essentially refers to federal agencies' responsibility to survey and protect historic properties under their jurisdiction.

we don't usually work with, and that's the MWAC, Midwestern Archaeological Center. We work with SEAC, the Southeast Archaeological Center a lot in the southeast, but Erin Dempsey and Nora Drymon were great. They're MWAC archeologists in Lincoln who are terrestrial archeologists. We're primarily underwater archeologists. This a park where both of us are working together, so it tells you this is a true maritime cultural landscape where land and water meet.

If you are familiar with Minnesota, and this area as well, timber was a big industry in the early nineteenth century. Starting around 1830, they were using the St. Croix River to transport the lumber from north on down, eventually though the tributaries of the Mississippi. They built a number of wing dams and closing dams to manipulate the river—to manipulate the flow of the river and also to help guide deeper channels. They were also using closing dams to close off areas around islands to store some of the timber so it didn't jam up the river and create a log jam. They had these structures built by the Army Corps of Engineers starting in 1878 to 1896. In a matter of eighteen years they built well over a hundred structures. These structures are mainly rocks with brush, and some of them have timbers in them. They would carve out some of the deeper channels so some of the boats could travel more easily, as well as just floating more logs down the river.

The project was first to do historical research, and they were able to locate some of the historical maps, which they georectified. We took our side scan. We could see quickly the water is not very clear, but you could see the structures in the side scan. You could see them sometimes from the surface of the boat, sometimes when you ran your boat into them, but you could see that they're there. We tried to pick examples that were diagnostic, a good wing dam and a good closing dam where there's still a lot of structure left. The brush isn't going to last in a river that freezes every year, and some of the logs aren't going to last either, but the rocks are still there, because we ran into them.

We mapped a number of them; I think there were about thirty in the report and they're representative of the dams. There are, I think, one hundred, twenty-seven. We documented around thirty of them. They are examples of humans modifying the landscape. There is a lot of structure remaining in them. I understand that a single dam may not meet the criteria of having all the structure, or maybe not even most of it, but the way I look at this, is it's more of a system and the system is still intact. It's still guiding the river. You can go there and you can see that there's growth all over, closing off on one of the closing dams. It's changing the river. It's still affecting how people operate on the river. Obviously they have to go around these things that are sticking out.

As a riverscape, or as the landscape (if we don't want to add riverscape as a term), it does fit most of the criteria. The report has been written and one of the recommendations that the authors made was that this could be a district. I think as a district the report would be pretty complete for a nomination, but if we are to create a landscape designation, I think this could also fit as well.[2] I don't know if I've convinced any of you guys. I've tried to share my opinion. You can read the report. That might sway you if you're on the fence.

The next site is Dry Tortugas National Park. This is a beautiful park. The Park Service has been doing underwater work here for decades, well before I was around. It's seventy miles west of Key West in the Florida Straits. The primary feature is Fort Jefferson, which was one of the third system forts, a large brick fort. It was never really completed, but it's a Civil War era Union fort way down in South Florida. The Fort Jefferson National Monument was designated in 1935. Not to plug another conference, but I'll talk about that more at the Society for Historical Archaeology meeting in January (2016) in Washington, DC.

The fort has a lot of shipwrecks, probably well over a hundred shipwrecks. As far as designating sites, there are probably fewer sites because a lot of them are isolated finds, such as cannons,

2 Editor's note: Landscape is not a "designation," but could be emphasized as a contributing site in a district.

anchors—I don't know how many anchors and cannons we found just in a couple weeks. This summer we found three more shipwrecks, and not just shipwrecks with ballast, but with actual structure underneath them. Like my co-worker, Dave Conlin, says, "You can't sling a cat without hitting a shipwreck in Dry Tortugas National Park." Not that we would sling cats, but they are everywhere.

The reason I'm using this example is because there are a lot of construction wrecks that contain the construction material that was destined for Fort Jefferson. There's granite, greywacky, and cement barrels, which are barrels that were full of cement powder, and when they hit the water they turned into concrete barrels and the wood fell off over time. There are a lot of examples of that.

There are about eight shipwrecks with significant amounts of construction material. My suggestion is that these could be added to the designation of Fort Jefferson. These are directly related to the fort. They are archaeological sites that are features of the fort, in my opinion. Dry Tortugas could encompass more of the cultural resources, because there are a lot and they span hundreds of years. It might be possible to add these features as part of a landscape.

Under the designations right now, I think just the construction wrecks could fit some of the criteria. They are kind of unique. I don't know how many of the systems of forts actually have shipwrecks in their vicinity with this amount of construction material. In that sense, maybe these are unique. Maybe Dry Tortugas is unique for that time period and this kind of material that was destined for these forts. That's my argument for this one. I wrote this a little while ago, but by listening to some of the remarks this morning, maybe it could be a discontiguous district. Obviously, you could try to link these construction forts and the bricks that are there to some of the areas where they came from in Pensacola and Massachusetts and Apalachicola, where a lot of the bricks for Fort Jefferson came from, but we are parks, we do have boundaries.

I know as a society we draw imaginary lines and this site is mine and that site is yours. You take care of this, you take care of that. For management purposes, we do have to have some boundary, or else it's just unfeasible for any agency—state, local, or federal—to try to manage what's there. My boundary is based on an activity. It's based on the construction of the fort, and that's what I would propose, is that you take these construction wrecks and if they're unique, great. There are cement barrels, and there are also cement sacks which are interesting. It may meet criteria A, C and D, or I would just say add the shipwrecks to Fort Jefferson's monument designation, if that's possible, and add the concrete barrels and sacks as archaeological features that are associated with that.

I don't know if I swayed anyone with my strong opinions, but I just want to say thank you for having the Submerged Resources Center represented here. I know Dave Conlin wished he could be here, as well as the other archeologists in our office. Thank you. **Δ**

Bert Ho is an underwater and marine survey archaeologist with the National Park Service's Submerged Resources Center (SRC). Prior to joining the SRC, Mr. Ho worked for NOAA as a field hydrographer supporting the Office of Coast Survey by collecting various marine survey data to update charts, locate navigational hazards, and respond to emergencies in ports on all coasts. Since joining the NPS, Ho has conducted underwater archaeological site documentation, exploratory marine survey, and a variety of submerged resource science throughout the NPS system in all regions, and with international partners in various countries in Africa, South America, Central America, and the Pacific Islands. His interest and focus are to aid parks and resource managers, both domestic and international, in their efforts to locate, document, and interpret submerged cultural resources from prehistory through the historic period, and continue to explore new regions of the world to discover these resources.

Lake Superior's Apostle Islands: A Maritime Cultural Landscape Case Study

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The Apostle Islands are a National Lakeshore, a unit of the national park system. In a sense they are a maritime cultural landscape (MCL) conceived of through an act of Congress. Some of the problems that other agencies and organizations have had in conceptualizing MCLs were dealt with rather simply at Apostle Islands by Congress drawing a sufficiently large park boundary around the islands to encompass the area's major maritime cultural resources, associated landscapes, and surrounding waters.

Much of what I will be talking about in this presentation is the actual nitty-gritty problem of managing MCL resources. A designation process is just the first step in management. If you are going to designate a "protected" resource, you are eventually going to need to manage it. That is our daily challenge at Apostle Islands: moving from the abstract "60,000 feet up" view down to management on the ground — and water!

There are twenty-two islands in the Apostles archipelago, which is located on the southwest shore of Lake Superior. Apostle Islands sits near the twin ports of Duluth-Superior, which were and are still two of the busiest shipping ports in the world. The Apostle Islands maritime history is very much tied to the development of Duluth-Superior, and both areas are part of a larger Lake Superior maritime cultural landscape. The Apostle Islands is the homeland and spiritual center of the Anishinaabe (Ojibwa) people, as well as an important place in Great Lakes fur trade history. Logging, fishing, farming, shipping, lighthouses, and quarrying were later important Euro-American maritime activities. The park preserves a broad spectrum of cultural and natural resources reflecting the story of both native heritage and European-American use of Lake Superior. Apostle Islands is also home to the largest collection of lighthouses in the National Park system (seven light stations containing ten historic towers). The lights are important tourist attractions, with the local tourism industry, cruise boats, and the community all promoting lighthouse history and the iconography of lighthouses.

Every one of the Apostle's lighthouses has an interesting maritime story tied in with shipping and shipwrecks. The light stations (or at least their individual towers) are all listed on the National Register of Historic Places. The cultural landscapes for each light station have been individually evaluated and determined eligible for the national register. The National Park Service (NPS) has a specific process to inventory and evaluate cultural landscapes, as well as develop treatment recommendations. The NPS Cultural Landscape Inventory is the basic documentation for each landscape. Following the inventory, Cultural Landscape Reports are developed which are the treatment documents for physically managing the landscape. The Apostles light station cultural landscape reports are available online at the park website (https://www.nps.gov/apis/learn/management/hlrclr.htm). These are good examples of on-the-ground NPS cultural landscape management documents.

Some of the Apostles light stations have multiple light towers, and all have multiple structures, everything from boathouses to barns, so each station is different in its complexity. The light stations have a great deal of historical integrity down to original flowerbeds and ornamental plantings, even graffiti from the keepers' children in some cases: they are altogether a very rich resource. The light stations collectively are configured as a means for safely bypassing the islands or navigating within the islands. The outer chain of lights helped keep cross-lake Duluth-Superior shipping safely away from the islands, while an inner chain of lights guided shipping traffic in and out of Chequamegon Bay.

The Apostle Islands is a very ancient maritime landscape. We have at least 5,000 years of documented human use in the islands, and on the main-

land around 10,000 years of human usage. Because the islands had inundated due to inter-glacial lake level changes, much of the area's earliest archaeology is now underwater or was disturbed by lake level change. Still, around one hundred archeological sites from the Archaic and Woodland periods have been documented in the Apostles area. Fishing was probably the most ancient of human activities here and carries through to the present day. The Apostle Islands still has an active commercial fishery, dominated both by native Ojibwe fishermen and also by Euro-Americans, particularly descendants of the Norwegians, Swedes, and French. These represent many ethnographic traditions with an evolved mix of fishing technologies, practices, and watercraft.

There are also a number shipwrecks through the islands, remnants of historic shipping in the iron ore, logging, grain, stone, passenger, package freight, and fishing trades. Other underwater archeological resources include remnants from allied industries, such as stone quarries, sawmills, and wharves. The Wisconsin Historical Society with support from the University of Wisconsin Sea Grant Institute has been conducting an inventory and evaluation of these underwater resources since 1990. Many of the Apostles' underwater archeological sites are listed on the National Register, and many are popular recreational sites for sport diving, snorkeling, kayaking, and visitation by glass-bottom boat.

Logging was an important activity throughout the western Great Lakes, and the Apostle Islands were generally logged somewhat later than the mainland because of difficult access. This challenge brought about some interesting "maritime" methods of logging, foreshadowing some of the technologies used later in coastal Alaska. These methods included the use of bush planes, logging railroads, mechanized equipment, and barges, although conventional horse-logging was done in the islands as well.

In the wake of the loggers came the hard-scrabble Apostle Island farms. These farmers were predominately Scandinavians. Many of them were farming as part of a subsistence fishery, or farming for subsistence with fish as the "cash crop." A study of the Sand Island commercial fishing and farming community is currently under way, with the goal of preserving and managing the cultural landscapes that have survived from those activities.

The human inhabitants of the Apostle Islands have left behind many physical imprints on the landscape. These include surviving structures, features, ruins, and artifacts and of course major changes to the vegetation. All of these resources require varied preservation approaches. In some cases it is a matter of keeping natural forces or human forces from impacting the resources. But in a lot of cases, it means direct management and treatment by the park. This means examining a range of options, depending on management objectives and available funding and resources. This process can get very complicated: you cannot take something that was built with a steam hoist and try and manage it with a pencil.

This challenge really comes home when trying to manage something like historic lighthouses. Lighthouses can be very difficult types of properties to maintain, especially when in challenging environments for access. In 2009 Apostle Islands National Lakeshore began a six-year lighthouse preservation project using a special Congressional appropriation. The project was to conduct long-overdue rehabilitation and stabilization work on the light stations, the largest historic preservation effort ever undertaken at Apostle Islands. It was largely done through contractors, from the architects and engineers to the carpenters, roofers, painters, plasterers, landscapers, and masons. The project covered five light stations and their associated cultural landscapes. Planning occupied the first two seasons, including development of goals, management alternatives, environmental analysis, public and agency consultation, design work, and project cost-estimating. Of course, we didn't have enough money to do everything needed, but we established a prioritized list of maintenance tasks and goals for rehabilitation including detailed landscape treatment recommendations. We were able to fund $4 million worth of the highest and most urgent priorities. Michigan Island Light Station was selected for the most intensive treatment, including interior and exterior rehabilitation of the

old lighthouse, creation and installation of indoor exhibits, and rehabilitation of landscape features such as ornamentals, garden beds, and an orchard.

The project presented numerous logistical challenges. These Lake Superior light stations are located on widely separated islands up to thirty miles offshore. Maintaining these lights requires trained personnel and a small fleet of work boats, including high-speed landing craft. The park also occasionally uses commercially available vessels, including an LCT (Landing Craft-Tank) that is actually the last surviving World War II LCT still operating in the United States. A variety of landing craft are required for the heavy lifting involved in light station preservation, including transport of construction materials (such as concrete, riprap, and ironwork), heavy vehicles (excavators, skid steers, and drilling rigs), and transport of project debris (logs, contaminated soil, asbestos, and broken concrete). All of this was and is done in one of North America's more challenging maritime environments: Lake Superior.

A key but often overlooked part of maintaining a lighthouse is, obviously, you have to be able to see it from the water. The light cannot do its job if the forest is allowed to grow up and around it. It is amazing how quickly historic light stations can become overgrown, and the level of effort needed to bring the station grounds back to even a semblance of their historic openings. This brings up the problem of vegetation clearing and disposal. It's not a matter of just whistling up a truck and wood-chipper for hauling away debris. These clearing efforts become small-scale logging operations when conducted on an island and doing the work to modern environmental and work safety standards. The basic tools for light station landscape maintenance are chainsaws, brush cutters, and brush mowers. Portability is critical. The largest equipment that could be transported up the steep slope at Michigan Island were Bobcat-sized skid steers. Much of the vegetative clearing work had to be done using mechanized hand tools. We are generally not able to fully reclaim large historic openings but the park is trying to maintain sufficient openings to preserve structures and the historic scene.

Landscape management serves many important functions. Much of Apostle Islands visitation is by cruise boat. Proper landscape management allows boaters to be able to see and understand the light stations and to experience the lights in the manner they were seen from historic watercraft. Good landscape management provides breaks against wildfire and windthrow which could damage and destroy these historic sites. By reducing vegetative encroachment, landscape management is also reducing moisture and moisture damage in and around the structures. Apostle Islands also uses prescribed fire as part of landscape maintenance and the park is considering larger broad-scale burning operations on some stations to more cost-effectively maintain historic landscapes.

Light station restoration work has included replacing missing or deteriorated landscape elements such as orchards, windbreaks, and garden beds. Some light stations have required major erosion control, including bank and shoreline stabilization, such as riprapping and bio-retainment. Preservation work is also needed on circulation routes such as sidewalks, to meet modern accessibility standards, as well as installation of modern accessible toilets. All of these issues become concerns when developing a location for public visitation. There are numerous concerns, from removal of hazardous materials, to visitor safety, to visitor accessibility that must be addressed. Historic preservation is not of course just a matter of restoring places to historic conditions and appearances, but also meeting modern expectations and needs as well.

Not all MCL management need be as mechanically-intensive as the examples I have discussed. Management approaches and treatments are all scaled to each type of cultural resource and to management goals. For example, we have many non-built landscapes in the Apostle Islands such as seasonal fishing camps, berry and medicinal plant harvesting areas, sugar bushes and spiritual sites. These areas often were and are very important to native peoples and (in NPS jargon) may qualify as traditional cultural properties and/or ethnographic cultural landscapes. Understanding ethnographic MCLs and their management needs is another set of important challenges for Apostle Islands Nation-

al Lakeshore, and I look forward to joining in that dialogue with our tribal partners.

Before I started working for the National Park Service, I viewed lighthouses and other maritime landscapes in a generalized and perhaps rather romanticized way. After six years of labor-intensive work on these islands I now tend to look at historic landscapes in a very different, very pragmatic way. I am no longer faced with just the question "Why should we do this?" The question has become "Exactly how do we do this?" This is a necessary reality check when we move from the intellectual side of maritime cultural landscapes to the actual management and preservation of these resources. Δ

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The Quincy Smelter Complex as a Maritime Cultural Landscape

Brenda Williams
Quinn Evans Architects

The Quincy Smelter Complex (QSC) is a compelling example of a nationally significant industrial maritime cultural landscape, where preservation of historic resources, environmental concerns, and development pressures must be addressed in concert. The Quincy Mining Company (QMC) National Historic Landmark District was designated in 1989 as an outstanding example of the growth and development of the United States copper industry from its earliest years through 1920.[1]

The district is part of Keweenaw National Historical Park, located north of Wisconsin on the Keweenaw Peninsula. Hancock, Michigan, is about 330 miles north of Madison. The national park features two separate units that help to interpret the region's copper mining past. The landscape is rich in natural resources and scenic beauty, and contains a spine of copper bearing rock and minerals that extends more than 100 miles in length along the peninsula. The area has attracted people seeking the red metal that we call copper and that American Indians referred to as "Miscowabik" for thousands of years.

The Quincy Smelting Works was constructed on land created from stamp sands deposited into

Figure 1: The Quincy Smelter Complex viewed from Houghton, Michigan, facing north, 2007. (source: Dan Johnson, NPS)

Figure 2: Keweenaw National Historical Park is a partnership park located in northern Michigan. (source: NPS)

Portage Lake by a stamp milling operation in the 1880s. Opened in December 1898, the original smelter featured a furnace building, 84 feet by 144 feet, with four reverberatory furnaces vented by 75-foot-tall smokestacks. Numerous other structures supported the operation and the complex was continuously expanded and upgraded until difficulties began in 1913. Although the smelter closed in 1931, it reopened several times over the ensuing decades before, faced with increasing environmental regulations, it closed permanently in 1971.[2]

In 1986, the Torch Lake Superfund site, including the Quincy Smelting Works, was established when the U.S. Environmental Protection Agency (EPA) had concerns about heavy metal runoff into Portage Lake. EPA undertook remediation of the shoreline and a large area that had

1 Lidfors, Kathleen. Potential National Historic Landmark Eligibility of Historic Copper Mining Sites on the Keweenaw Peninsula, Michigan, 1987; and Kathleen Lidfors, Quincy Mine Historic District, National Register Nomination, 1988.
2 www.coppercountryexplorer.com; Horace Jared Stevens, *The Copper Handbook*, Vol. 3, 1903; and Quinn Evans Architects, Woolpert, Inc., and Keweenaw National Historical Park, Quincy Mine Historic Landscape Cultural Landscape Report / Environmental Assessment, 2010.

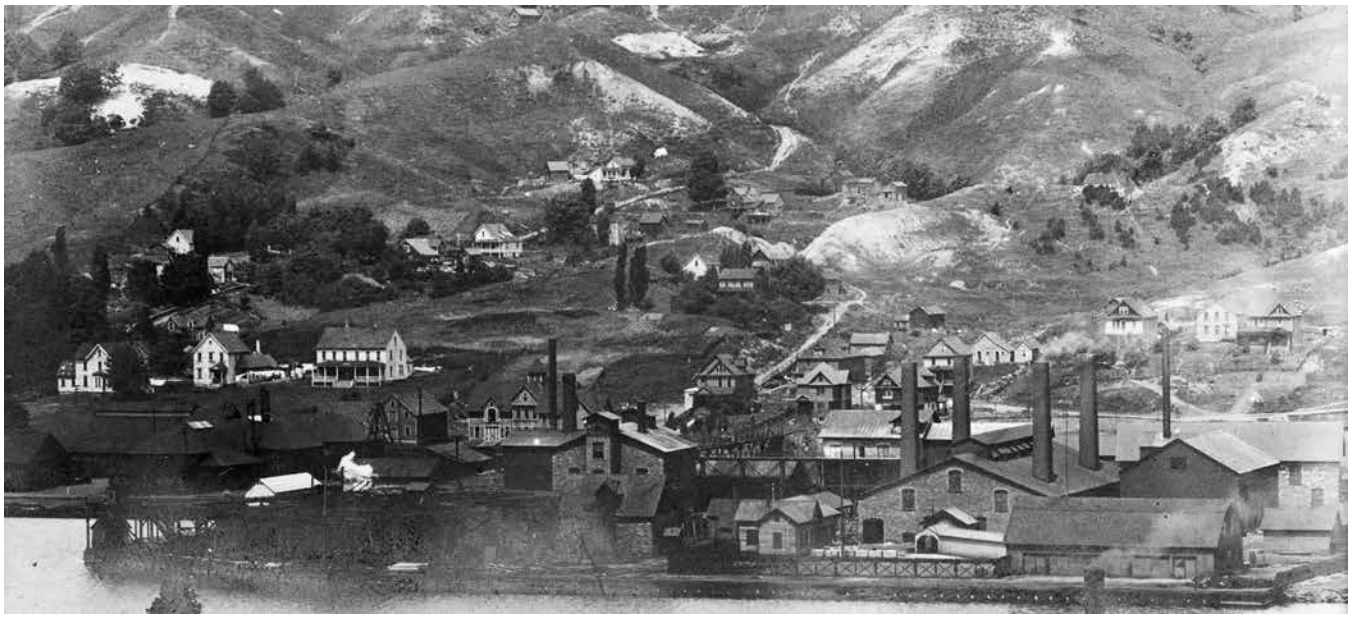

Figure 3: Early 20th century view of Quincy smelter with Quincy Hill in the background, as seen from Houghton, across Portage Lake. (Source: Library of Congress Prints and Photographs Division and HAER MICH, 31-HANC, 1-17; photocopy courtesy of L. G. Koepel)

Figure 4: Aerial view of the Quincy Smelting Site, ca. 2012. (source: Google Maps)

Figure 5: Casting Shed prior to stabilization, 2010. (source: Scott See).

been used for slag piles. Three layers of environmental concerns relate to the site, including the land itself, created from dumped stamp sands; slag piles that are waste from the smelting process; and industrial materials related to the operation of the buildings and equipment on the property.[3] Each of these is also a significant historic resource. Since typical approaches to mitigation of environmental concerns would create impacts to the historic integrity of the property, the EPA endeavored to minimize negative effects by capping selected areas and allowing others to remain intact. A nine-inch ground cover was placed over the stamp sand in selected areas, and turf was planted in former locations of slag piles. The new green space on the waterfront drew attention from the local community, which initiated pressure to establish a park at the location.[4]

The Keweenaw National Historical Park Advisory Commission purchased the property in 2014 and plans to eventually transfer it to the National Park Service. Concepts for use include

3 Scott See, Director, Keweenaw National Historical Park Advisory Commission, personal communication, September 30, 2015.
4 Ibid., and www.coppercountryexplorer.com.

Figure 6: Casting Shed following stabilization, 2012. (source: Scott See)

a joint visitor center for Keweenaw National Historical Park and Isle Royale National Park. Currently, the Isle Royale headquarters is located on the opposite side of the lake. The commission continues to work to stabilize structures and deal with remediation of contaminants while the NPS considers long-term costs associated with the operation of the site. Δ

Brenda Williams, ASLA, is a Senior Associate at Quinn Evans Architects, a consulting firm dedicated to preservation and sustainable stewardship with a perspective informed by history and place. Ms. Williams' career has focused on the conservation of cultural landscapes, particularly those in the public arena. She facilitates a collaborative approach to the planning and management of cultural landscapes, a process that educates stakeholders about the significance of historic landscapes and integrates multiple viewpoints. Her design solutions integrate natural and cultural elements of sites to develop environments that are engaging and inspirational.

Mallows Bay as a Maritime Cultural Landscape

Susan Langley
Maryland State Historic Preservation Office

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Office of National Marine Sanctuaries
Maritime Heritage Program
National Oceanic and Atmospheric Administration

Introduction

Mallows Bay and its environs in Charles County, Maryland, as well as tidal portions of the Potomac River, are situated approximately thirty miles south of the nation's capital (Figure 1). Although renowned for the fleet of nearly one hundred World War I-era wooden steamships which forms its nexus, the region is home to diverse other shipwrecks and vestiges of the cultural history enhanced by scenic beauty and recreational opportunities.

The Maryland Historical Trust (MHT), which houses the State Historic Preservation Office (SHPO), has long recognized the importance of Mallow Bay's cultural heritage, and it was formally recognized by the National Park Service as the Mallows Bay-Widewater Historic and Archeological District in the National Register of Historic Places on April 24, 2015 (Figure 2). The District is considered nationally significant under the main criteria A, C, and D: A. sites/areas that are associated with events that have made a significant contribution to the broad patterns of our history; C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; D. that have yielded, or may be likely to yield, information important in history or prehistory. For Mallows these are:

Figure 1. Location of Mallows Bay; map courtesy of Google Maps.

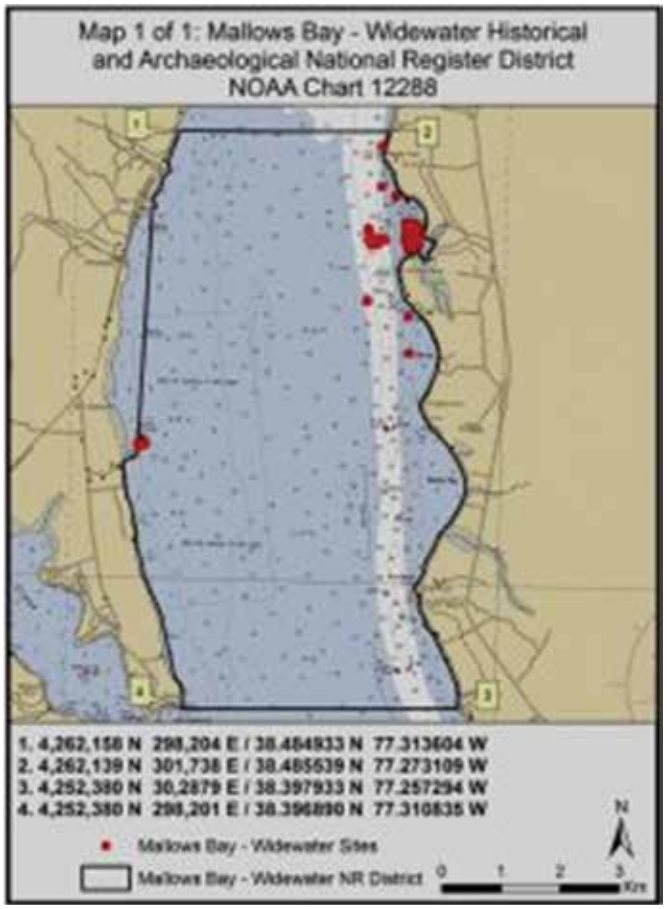

Figure 2: Boundaries of the Mallows Bay- Widewater Historic and Archeological District; map courtesy of NOAA ONMS.

A. Association with the World War I U.S. Shipping Board Emergency Fleet and the related shipbreaking activities;

C. The fleet represents the largest assemblage of wooden and composite steamships in the world and a substantial component of the entire U.S merchant marine fleet built between 1917-1922;

D. Archaeological sites provide information on vessel design, use, and adaptation along with

shipbreaking and salvage operations, site formation processes (taphonomy) and landscape alteration. The District encompasses over 11,000 acres within Maryland State waters and, although Maryland claims the Potomac waters to the mean low water mark on the Virginia shore, there are some areas that fall under the jurisdiction of the Commonwealth of Virginia and cooperative management to include these is a future goal.

History of the WWI Fleet

The U.S. Shipping Board's Emergency Fleet was a civilian endeavor to ferry supplies overseas to Allied nations and serving forces. Supplies were short due to aggressive U-boat activity. The response was the decision to produce 1000 ships in eighteen months to meet this need. The magnitude of this effort becomes clear when considering this would surpass by about four times the total blue-water shipping of the U.S. for the previous six years combined. While there was a metal-hulled sector, mostly constructed on the Great Lakes, those built completely of wood or wood and metal strapping, called composites, were created at 70 shipyards using nine designs. These yards were on the West, Gulf, South and East Coasts, demonstrating the nation-wide aspect of this project. In addition, when the contributing industries such as lumbering, metal extraction, smelting and engine construction are taken into consideration, the level of industry and employment of those not actively in the theatre of combat becomes apparent. This turned the U.S. into the shipbuilding powerhouse of the 20th century.

This shipbuilding effort also had a profound effect on the U.S. Merchant Marine. While America has always had merchant mariners, the need to have mariners sufficient to man 1000 vessels, with all trained to the same standards, led to a fluorescence of a formal Merchant Marine.

The Fleet's obsolescence was due to a number of factors: the war ended before the majority were completed; many experienced problems during sea trials having been built so rapidly and some with green wood which led to leaking when the steam engines caused them to shake; they were not as fast and carried less cargo than anticipated, and they were outmoded by returning metal-hulled vessels with diesel engines. Partially completed vessels were finished and those already completed had cost between $750,000 and $1 million dollars each. Some vessels were sold off to businesses that used them for coastal shipping; some of these ended their days in Curtis Bay near Baltimore. The majority were finally sold, after several unsuccessful efforts, for the cost of one vessel to the Western Marine and Salvage Company for breaking and most of these ended their days in the Potomac River at Widewater and in Mallows Bay as discussed below.

History of the Mallows Bay Region

All aspects of the region's heritage are evident at Mallows Bay. This section of the Potomac River forms part of the traditional homeland and cultural landscape of the State-recognized Piscataway Indian Nation and the Piscataway Conoy Tribe of Maryland. Evidence for the depth of American Indian occupation of this area of the Potomac, from the Archaic Period to the Post-Contact Period, is provided both through archaeological investigations and cultural traditions of the Piscataway people. The Piscataway have identified Mallows Bay and Liverpool Point as areas of significance within their cultural landscape (Strickland, Busby and King 2015:45). It is very likely that Nussamek, one of the villages visited by Captain John Smith during the summer of 1608, is in the area. However, no archaeological sites have yet been identified in a submerged context.

Possibly located in Liverpool Cove at the back of Mallows Bay may be the remains of a patriot longboat used by *Protector*, a Virginia Flotilla galley, which anchored near Mallows Bay so its men could join forces with the Maryland militia (Shomette 1996, 206-207; NRHP 1992, Sec. 7, 3). On July 23, 1776, the patriots from *Protector* arrived in Mallows Bay aboard two longboats and were quickly set-upon by Lord Dunmore's Loyalist Flotilla which was led by Virginia's deposed governor James Murray, the Earl Lord of Dunmore, and manned by loyalists and freed slaves. Dunmore entered the Potomac to try and secure water for his crew and to "harass and annoy the Enemy by landing at different places" (Shomette 1996, 206-207; NRHP 1992, Sec. 7, 3). Dunmore's fleet exchanged gunfire with the local

patriot militia and attempted to seize both of *Protector's* longboats. The patriot forces retreated, but before they fled, they smashed a hole in the bottom of one of the longboats to prevent its capture.

During the Civil War, Camp McGaw was sited above the bay and recently a shipwreck suspected to date to the Civil War was confirmed to be an armed Civil War vessel known lost in the area. In addition, commercial fisheries were prevalent throughout the nineteenth century including significant sturgeon fisheries and caviar canning near Liverpool Point which forms the downstream edge of Mallows Bay. Historical records indicate that three sturgeon skiffs, *Black Bottom*, *W.S. Childs*, and *Edythe*, were abandoned in the area in 1926. These ships were built in 1888 in Philadelphia and imported into the area via train by Captain Morgan L. Monroe who used them in his sturgeon fishing and processing operations. These skiffs were the last "foreign vessels" to gain popularity on the Potomac (NRHP 1992, Sec. 7, 5).

Another workboat, the two-masted pungy schooner *Capitol*, was involved in the first recorded maritime tragedy in the area. In 1896, two pungy schooners, *Capitol* and *Dove*, were sailing in tandem when they were swamped during a storm off Sandy Point. *Dove* and its crew were eventually saved but all personnel aboard *Capitol*, including the Captain, perished and the ship foundered (NRHP 1992, Sec. 7, 5). The remains of at least one centerboard canoe were found in Liverpool Cove. These vessels were common workboats from the seventeenth through the twentieth centuries and have a unique shell-first design. For shell-first construction, the frames, which only provide lateral support for the ship and do not dictate its shape or form, are only added to the vessel after the hull has been assembled (Shomette 1996, 331). Near the centerboard canoe lies the remains of a centerboard schooner (Wreck No. 114 in Shomette 1998) which has a flat-bottomed sharpie configuration. It might be the largest sharpie on record in the Chesapeake and the only one archaeologically documented on the Potomac River (Shomette 1996, 333).

Other intangible but important aspects of the area include the first use of hot air balloons in North America for military surveillance during the Civil War, tethered to purpose-built barges. Samuel Pierpont Langley catapult-launched his successful heavier-than-air experimental flight from the roof of his "houseboat laboratory" at Widewater on May 6, 1896. On a more infamous level, John Wilkes Booth's escape route from Washington, DC to Virginia passes through the area.

The majority of the U.S. Shipping Board Emergency Fleet Corporation vessels were brought to the Potomac in 1922 by the Western Marine and Salvage Company when it purchased them to break them for scrap in Alexandria, Virginia. Other vessels, some unfinished hulls, from the fleet ended up in the Neches and Sabine Rivers, Texas, the James River, Virginia, and Curtis Bay, near Baltimore, Maryland. Originally moored off Widewater, Virginia, the vessels would break loose in storms becoming hazards to navigation or catch fire and response often came from the U.S. Marine Corps base at nearby Quantico. The company was subsequently required to corral the hulls and did so in Mallows Bay; cramming one hundred nearly three-hundred-foot long ship hulls into a half-mile wide embayment. The Company suffered various financial ills and finally failed permanently during the Great Depression, with most of the vessels still present.

Residents from southern Maryland began salvaging the steamships as a means of deriving income during the depression and this wild-cat period continued until the outbreak of World War II (Figure 3). At that time the Bethlehem Steel Corporation determined to undertake shipbreaking on-site to recover metals needed for the war

Figure 3: Shipbreaking at Mallows Bay; photo courtesy of the Library of Congress.

effort. It constructed a lock-like burning basin at the back of the bay. However, after reducing about a dozen hulls to scrap, it pronounced the endeavor not to be cost-effective and operations ceased (Figure 4). Not only do the hulls and burning basin remain, there are also vestiges of marine railways, donkey engines, barges and other associated shipbreaking detritus and artifacts. In a combination of traditional boat disposal methods and the litter philosophy of if-someone-leaves-litter-it's-alright-to-add-to-it, other vessels accrued in Mallows Bay throughout the twentieth century, the last being the metal-hulled ferry *Accomac* (ex. *Virginia Lee*) as recently as 1973.

As numerous plans and schemes for their removal failed or crumbled in scandal, the vessels remained and began to become integral parts of the landscape and play an important role in the environment (Figure 5). As recreational uses increased, such as bass fishing, bird watching, and kayaking, heritage tourism and general visitation has increased commensurately adding the most recent dimension to the maritime cultural landscape.

National Marine Sanctuary Nomination

Since the Mallows Bay National Register of Historic Places Historic and Archaeological District nomination focuses on the WWI-era vessels and the efforts to reduce them, the decision by the National Oceanic and Atmospheric Administration (NOAA) to re-open nominations for new National Marine Sanctuaries was welcomed as an opportunity to address the other significant historical and natural aspects of Mallows and Bay and its environs. NOAA's nomination process has been reinvented to mandate nominations be the result of a community-driven effort. The key agencies in the State of Maryland formed a steering committee to develop a nomination and ensure as many representatives of the community as possible were included and more than one hundred fifty groups, organizations, agencies and individuals responded in support of the establishment of a sanctuary. The main agencies are the State Historic Preservation Office as the stewards of the shipwrecks proper and all heritage resources, the Department of Natural Resources as the managers of the State's bottomlands and living resources, and Charles County government as the manager of the land base in the form of the County Park at Mallows Bay. The steering committee worked diligently to ensure the nomination for the Mallows Bay-Potomac River National Marine Sanctuary was submitted on September 6, 2014, to coincide with the initiation of global commemorations of the centenary of World War I. On January 12, 2015, NOAA officially accepted the nomination into its Inventory for consideration, and on October 6, 2015, President Obama announced that the process to establish the Sanctuary would go forward and the announcement was placed in the Federal Register on October 7, 2015, to begin the public comment period. Two public scoping meetings have been held with resounding support for the Sanctuary, and the comment period continued until January 15, 2016, when the

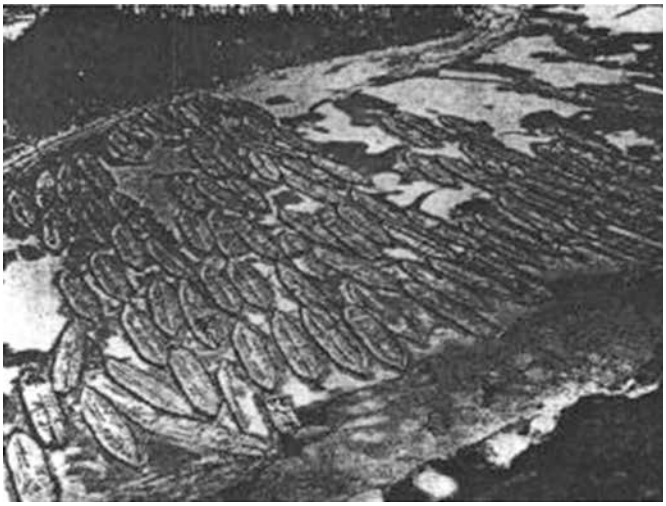

Figure 4: Mallows Bay February 2, 1946, *Washington Star*.

Figure 5: Mallows Bay in the 21st century; photo by Donald Shomette.

Steering committee, now the Partnership Committee, began the Draft Environmental Impact Statement (DEIS) and draft Management Plan taking into consideration the suggestions, questions, and concerns expressed online, by post, or at the public meetings.

The DEIS and Management Plan will provide the means not only to better protect, manage, and interpret the WWI flee, but also to extend these to other heritage resources, natural resources, educational outreach, and recreational activities. The potential of the proposed Sanctuary as a living laboratory is enormous. To paraphrase Aristotle, at Mallows Bay the whole is indeed greater than the sum of its parts. **Δ**

References

Federal Register Notice:
https://www.federalregister.gov/articles/2015/10/07/2015-25510/notice-of-intent-to-conduct-scoping-and-to-prepare-a-draft-environmental-impact-statement-for-the

Mallows Bay National Marine Sanctuary nomination:
http://sanctuaries.noaa.gov/mallows-bay/

Mallows Bay Park
https://www.charlescountyparks.com/parks/mallows-bay-park

Maryland Department of Natural Resources
http://dnr2.maryland.gov/ccs/Pages/mallowsbay.aspx

National Register of Historic Places.
2015. Nomination for the Mallows Bay- Widewater Historic and Archaeological District. http://www.nps.gov/nr/listings/20150424.htm.

Shomette, Donald G.
1996. Ghost Fleet of Mallows Bay and Other Tales of the Lost Chesapeake. Tidewater Publishers, Centreville, MD. (www.amazon.com/Ghost-Fleet-Mallows-Other-Chesapeake/dp/0870334808)
1998. Shipwrecks of Mallows Bay: Inventory and Assessment. The Mallows Bay submerged cultural resource survey. Prepared for the Maryland Historical Trust. Crownsville, MD.

Strickland, Scott M., Virginia R. Busby, and Julia A. King.
2015. Indigenous Cultural Landscapes Study for the Nanjemoy and Mattawoman Creek Watersheds. Prepared for the National Park Service, Annapolis, MD. St. Mary's College of Maryland, St. Mary's City, Maryland.

Susan Langley has been the Maryland State Underwater Archaeologist for more than twenty years, directing the Maryland Maritime Archaeology Program. She is an adjunct professor at several colleges and universities, where she teaches underwater archaeology and the history of piracy. She also taught maritime archaeology in Thailand for several years for the Southeast Asian Ministers of Education Organization (SEAMEO) which is part of UNESCO. She is an active PADI Master SCUBA Diver Trainer, and lectures globally on a variety of subjects including the aforementioned, as well as textile technology, food ways, and the archaeology of beekeeping and current regional practices. She is also the Governor's beekeeper.

Deborah Marx is a maritime archaeologist with NOAA's Office of National Marine Sanctuaries. She has an MA in maritime archaeology and history from East Carolina University and is a NOAA science diver. Since 2002 she has worked with a number of National Marine Sanctuaries including Stellwagen Bank, Olympic Coast, Channel Islands, Florida Keys, Monitor, and Thunder Bay. Her work also includes interpretation, outreach, and media efforts related to NOAA's Maritime Heritage Program projects, such as live internet broadcasts and exhibit management. Lastly, Deborah has extensive knowledge on preparing National Register of Historic Places nominations, and has co-authored over a dozen shipwreck nominations, including three multiple property submissions and one historic and archaeological district.

Waves of History: Maritime Cultural Landscapes in Hawai'i

Hans Van Tilburg
National Oceanic and Atmospheric Administration

Edited Transcript of Presentation

Thank you for having me here. It's really been an interesting day for me to hear these fantastic presentations and I look forward to tomorrow. I'll offer my apology and a caveat: this is going to be a very informal presentation. I just felt what I had to offer were some thoughts and questions, and a look at some assumptions on potential maritime cultural landscapes in Hawai'i.

We don't actually have any nominated shipwreck sites in Hawai'i, with the exception of the *Arizona* and the *Utah* inside Pearl Harbor as part of that park, which is now called Valor in the Pacific National Monument. It's not that cultural resources are not important in the islands. It's exactly the opposite. They have been so important that the topic of shipwrecks is simply the new resource at the table, because those are properties, and Hawai'i has not been focused on properties. They have been focused on relationships and cultural landscapes, relationships to marine areas, and use of resources, but it's a very interesting environment in which to work.

This is timely for me as well, and for folks in Hawai'i, because, of course we have the National Marine Monument, Papahanaumokuakea (there will be a test on how to pronounce that at the end of this talk). That's also a UNESCO World Heritage Site. It's a mixed site, cultural and natural resources, but submerged maritime elements were not part of that nomination. And then, we have a sanctuary in the main Hawaiian Islands, the Humpback Whale Sanctuary, which, unlike the rest of our sites, is a single species sanctuary right now. It does not directly manage or engage cultural properties, per se. Now, that site is in transition and under review to expand its mandate to become ecosystem-based—include properties, cultural resources, shipwrecks, et cetera. That review's in process and it's a very interesting process.

But what I want to emphasize throughout this talk is the multicultural and multilayered nature of elements for landscapes in the islands, and here, if you can make out the different colors on the map, is simply an overlay of waves of history. In this case, one being the Pacific voyaging migration eastwards into the Pacific, the Lapita culture migration, eventually achieving the discovery of Hawai'i; another being whaling exploits, historic whaling beginning in the nineteenth century; and the third being activities in World War II, with the bulk of the activities, many of the battles, and their overlays that wrap around each other and sometimes are related to each other. So, it's a complicated area. There's not one single maritime cultural landscape. There are multiple landscapes to talk about.

I'll mention the whaling landscape though, the potential for one, because this is something for us that's very important and for our system, because most, if not all, of our sanctuary sites include historic whaling elements. And so, discussing a landscape like this can unite, and does unite, our efforts in various ways, and, in fact, ways beyond individual sanctuaries. We've been doing research work in Alaska, certainly in the East Coast, and also West Coast sanctuaries. We have ten recorded whalers lost in the marine national monument, five of which have been discovered. And there are at least 19 lost in the main Hawaiian Islands.

And I thought, "Well, that's obviously a maritime cultural landscape" and then I thought, "Is it a whaling landscape?" Now I believe it is, but I think it's important for someone to ask the question, because they're not actually ocean whaling in those atolls. They're transitioning to whaling areas. And there are about 50 or 60 other shipwrecks in the monument. So, there are vessels that wrecked, so it's a shipwreck cultural landscape. Is it a whaling landscape? We claim it is, but someone could probably look at that assumption.

That whaling as a theme has importance for a landscape analysis, of course, is, I think, fairly obvious: huge impacts for the Pacific and Hawai'i. You know, sailing in the wake of old Captain Cook, trickles of vessels came slowly, maybe one or two a year. The whalers started coming out in 1819 to the Hawaiian Islands. Then it quickly ran up in the mid-nineteenth century to 600 or 700 whalers a year.

To call them cultural ambassadors would be nice, probably not our best example. But the impact on the islands socially, economically, and in every way is quite significant as a trans-shipment port. There were shore whaling stations that were established, a handful of them, we don't have the remains of those, they haven't been identified on land yet, but a number of whalers were lost in the main islands, and up in the northwesterns. The elements of whaling resources then include those shipwrecks, include whaling museums, include the archival materials, and a number of other things that can be included in a landscape, or go beyond landscape. The most significant impacts of those whalers was for the local population of course. The number of Hawaiians and Pacific Islanders that were involved with the American whaling industry is staggering. At times, one-fifth of the entire fleet were Pacific Islanders and Hawaiian whalers. When the fleets were crushed up there in the Chukchi Sea, about half of the survivors of the 1871 incident, which crushed about 33 vessels in the ice, were Pacific Islanders and Hawaiians, and no one lost a life with that incident.

Significant impacts: an obvious one for cultural landscapes, whaling cultural landscapes. These are a little small, but these maps simply show the fact that the located populations of whales didn't include the islands of Hawai'i. They're south of the groups where they were looking. So it was a trans-shipment rest and recreation port. They're going to the whaling grounds, for instance in the lower right map, the Japan grounds or off the Japan grounds—farther to the west of Midway and Kure. That's the business end of whaling. That's the significant areas the whalers would have identified. And there's nothing there. Say nothing there, it's not a bounded area. It wouldn't be included as a cultural landscape element. So I have interesting questions about that, but I think it's clear that we'll continue with a look at the whaling landscape in many ways.

Marine transportation would be another obvious one, especially for the islands, and especially with the advent of harbors. Now, here's another example of interaction between environment and cultural practice and effect to the environment, cultural footprints. I'm reminded of Honolulu itself, Honolulu Harbor. That's not where the ships began to come in, they were on roadstead off of Waikiki. But the freshwater stream from Nu'-u-anu that ran down to the shore prevented the coral growing in one area, which lead to a kind of natural alcove underwater, and the whalers and the ships started going over there. And so all the merchants shifted to what is now Honolulu Harbor and established the whole city out of that natural footprint. This is an important one for us as well, because we're engaged in an island-wide inventory as part of our BOEM funded project—maritime resource studies in preparation for understanding the impacts of offshore energy development as Dave Ball will talk about. And we get accumulations of shipwrecks around these harbors. It's not a random distribution at all.

So the harbors themselves, besides the hundreds of shipwrecks that have been reported in Hawai'i and the many that have been found, although we have a very high energy environment, would be elements of a transportation maritime cultural landscape. Here's an image of one (Figure 1). The traditional harbor up in Mahukona on the Big Island was once the formal entry point for the Kingdom of Hawai'i, and there are a number of resources left there. What are we talking about? Mooring systems, wharves, piers, landings, anchorages, anchors, chains, all kinds of implements dropped over the side, in addition to the harbor itself. This is the conjunction point or transit node of the railways. And, if you think back on your history, with folks like Isambard Kingdom Brunel, he kind of saw those steamship lines as simply an extension of railways, although you could think of it in other ways, as well.

Figure 1: Mahukona Harbor today, once an official port of entry on the Island of Hawai'i. Image NOAA ONMS

This raises the question of how much are we going to nominate as a maritime cultural landscape or an element? We have ships bringing railway equipment and cargo in, we have rail ties and we

have wheels on the bottom of the harbor, then we have the rails leading right down to the harbor, and then the elements of the railways themselves. I'm not sure what the answer is to that one.

It's a pattern distribution if you look at the distribution of shipwrecks. Not a random one. And these give you an idea of where the plantation landings were, servicing all of those steamship vessels beginning in the 1850s, 1860s. So you get an idea of the landscape, the altered landscape, for many of these landings. There are only a couple with really safe harbors. It's a very high energy environment, right? Many others are actually wire rope landings. So a landing would be simply anchors, boring systems on the bottom of the little bay, we call them dog-hole ports there. And then fixed infrastructure in the cliffs, and they would run a wire hawser down over the mooring area, the vessel would come in, and they would run the cargo down the wire and drop it right down into the hold: wire-rope landings, very rough, treacherous. Vessels would have to come in close to the cliffs.

So, if you look at an older map, for instance, we know more sites now, but where were the known shipwreck sites? Remember, this is a little bit misleading because there's been no comprehensive directed survey for all of these underwater cultural resources. It's simply the ones we know about, so you flip back and forth between where the landings are, and you begin to see patterns of distribution in the landscape for predicting and modeling wreck sites.

If you want to be more specific, if you want to change the scale of a landscape discussion, you can look at the steamship landings, because, it would be a subset obviously of marine transportation. Why would you do that though, why would you change the scale? There are all kinds of marine transportation going on. It's a fairly broad category, but the steamship landings are tied to the plantation era, and the plantation era shapes the demography and social—and economic—and political realities of Hawai'i for a long, long time. So it's not until you have a reason, the treaty in 1870, to ship the agricultural products to the mainland that you have the boom in plantations, which then support economically, the steamships, the small mosquito fleet coming out to the islands. Plantation heritage is a recognizable resource heritage onshore. So, we have a number of these steamship wreck sites, and heavier material, of course, stands up very well underwater. The lighter stuff, the wood, is simply all gone.

There's a specific area on one island, Lāna'i Island, which is the disposal site for many of those steamships. So now we're talking about a ship abandonment paradigm, a subset of another cultural landscape. Shipwreck Beach on Lāna'i, where dozens of these vessels were run up onto the beach. Where is the intersection between environmental features and wreck sites? This is one of them (Figure 2). It's a ship trap, due to the configuration of the islands, due to the prevailing trade winds, the fact of these reefs, and the private nature of Lāna'i Island. It was a dull plantation, nobody was going to complain when those ship owners took their vessels over there and abandoned them on the reef and let them drift right up. We get dozens of wreck sites there that are useful for finding survey sites for the annual survey class.

Figure 2: A 19th century steamship wreck at Shipwreck Beach, north shore of Lāna'i Island. Image J. Kuwabara, NOAA ONMS

So there are a couple of different ways to go with the marine transportation; you have a couple of different scales you can discuss. It's interesting to decide which one you want to focus on. I'm glad to see the image of surf sites that came up earlier today, because this is something that's, of course, a huge matter in Hawai'i. A surf site is not a shipwreck site, not a property site, but we're talking about the connection between heritage and traditional practice and modern practice and environments. Surf sites are specific to bottom topography and prevailing swells, et cetera.

Surfing, of course, is a heritage activity that goes back to pre-Western contact days. I think the Ha-

waiians had six different types of traditional surfing, and some interesting books have been written recently about the heritage of surfing. My talk today is on historic types or potentials for landscapes. Tomorrow, we'll hear from Trisha Watson on the native Hawaiian multicultural landscapes perspectives. So, we've broken it up a little bit, to have one talk today, one talk tomorrow. This was traditional practice which has become such a modern competitive sport that we begin to lose sight of the heritage cultural landscape.

The military landscape is a most important one in Hawai'i, and I can't overstress this enough. It's the one I wanted to get to. There's no other example of such potential to talk about all of these military sites in Hawai'i. These are air bases across the islands. These are the coastal defense structures simply on Oahu Island, which play a big role in heritage interpretation. Pill boxes used onshore, remnants of pill boxes underwater, now for artificial barriers, and lots of airfields. There are some eighty plus U.S. Navy ships and submarines in the waters around the islands and over 1400 naval aircraft. Large-scale exercises that were done in the past left traces on the bottom of landing craft and aircraft exercise areas: not combat, not battles, but losses during massive exercises, amphibious training (Figure 3).

Figure 3: LVTs en route to beach during maneuvers near Kihei, Maui, in May 1944. Photograph No. 304281; General Records of the Department of the Navy, 1795-1947: General Photographs 1913-1945 (prints); Record Group 80-G; National Archives and Records Administration–College Park, Maryland.

The questions I have about that kind of military landscape are many, but one is simply of scale. Where do you stop? You can't understand the landscape of military activities and resources in Hawai'i today, why the military does what it does, unless you realize that half of the world is controlled from Pearl Harbor. The Pacific fleet goes right into the Indian Ocean, and so we have to have some kind of artificial limitation: fifty-years, one hundred-years, landscapes of this size, landscapes of that size. To understand those landscapes and elements, there's a question of scale that I'm interested in and don't have the answer.

Finally, I would simply say that the reason for looking at whaling, transportation, surfing, or even these military landscapes for me is to engage the public in something that they'll understand has great relevance. Unexploded ordnance is my best example of that. We're talking about the paradigm, the assumption, and a good assumption that this effort in cultural landscapes is done to protect and preserve properties. But it can't be just an assumption; it has to be an intentional decision because we're a preservation program and a marine resource agency. So we've talked about underwater ordnance, explosive ordnance. Where is our responsibility for adding those to our landscape studies? That ordnance would not be part of an outstanding universal value or something like that in a preservation objective landscape, but it's a huge topic for Hawai'i. So, I have questions about those objectives and those goals. **Δ**

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Risk, Salvage, and Exploring the Concept of the Maritime Frontier: Utilizing Theory to Frame a Maritime Cultural Landscape Approach in the Florida Keys

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For centuries, the rocky shorelines of the Florida Keys were often littered with the sight of bloated corpses, splintered masts, and jettisoned cargoes brutally cast ashore after meeting their fate on the treacherous reefs lying just offshore. While foundering upon the high seas meant imminent death, the prospect of wrecking upon the shore equally held little hope for any assistance (Marano 2012:1). Since vessels first explored the area, the approximate route of the Gulf Stream between the Florida Keys and Bahamas, often simply referred to as "the Straits", have been identified as a dangerous passage. The unpredictable nature of the Gulf Stream combined with a limited knowledge of the area culminated in a disastrous combination as the reefs along the southeastern coastline of Florida became the final resting place for hundreds vessels. As such, the rocky reefs and isolated islets of the Florida Keys exemplify the risks associated with navigating near a desolate and dangerous shoreline.

One of the primary goals of maritime archeology is to identify convincing linkages between the physical associations represented by shipwrecks and the social institutions that helped create them (Gould 2011:24). As such, this proposed study will utilize the National Historic Landmarks (NHL) Revised Thematic Framework to examine the role of salvage in the development of a unique maritime cultural landscape throughout the Florida Keys. While the Thematic Framework has been utilized to provide a means to identify and nominate landmarks through a comparative analysis of similar properties associated within a specific epoch of American history, the framework does not provide an effective means to easily analyze maritime cultural landscapes. While not necessarily a new concept, the effective application of a maritime cultural landscapes approach in the management of submerged cultural heritage within the United States has been difficult. This is particularly true in regards to effective identification, documentation, and analysis of maritime cultural landscapes through preexisting management doctrines such as the National Historic Landmarks program and the National Register of Historic Places (NRHP). While otherwise ubiquitous institutions within the cultural resource management practices of the United States, the terminology, theory, and approaches utilized in the study of maritime cultural landscapes does not currently exist in either these or any other resource management regimes utilized today.[1]

As such, the theoretical foundations of this work will utilize maritime cultural landscape approaches developed and successfully tested in Australia that have only recently been introduced into the United States. These approaches acknowledge the difficulties in conducting the systematic and scientific study of less tangible ideals associated with human agency and cognition in a variety of applications (Duncan 2000, 2004; Richards 2008; Marano 2012; Duncan and Gibbs 2015). Utilizing the methodologies advocated in these approaches, this work will identify several contexts that begin to shed light on local and regional differences in the perceptions and responses to risk in the maritime environment. This approach can provide invaluable insight into the cultural values of a local community that would not otherwise be apparent through more traditional historic, ethnographic, or archeological research efforts. As such, this study will attempt to analyze and explain the development of what could be called a "maritime salvage landscape" through the application of socio-cultural theories to highlight cultural motivators contributing to this landscape. While the development of maritime salvage throughout

1 The author may be correct; however, the NHL program was intended as a designation program. The NRHP is a designation and planning program.

the Florida Keys represents only one of a number of factors contributing to the area's overall cultural landscape, studying the establishment and subsequent evolution of wrecking and salvage practices thematically can significantly contribute to the understanding of both the area's physical and cultural landscapes. Establishing this connection not only helps resource managers locate, identify, and interpret thematically related cultural sites, but by understanding cultural factors contributing to their deposition, value, and use over time, the application of these theoretical paradigms can help explain contemporary perceptions of similar resources.

The Florida Reef, the Concept of Place, and the Identification of a Submerged Maritime Cultural Landscape

While many wrecks undoubtedly occurred offshore, the vast majority occurred within sight of land, often only a few miles from the beach. Those unfortunate enough to survive the initial wrecking event were cast ashore onto isolated, lawless, and mosquito-infested islands, many of which lacked access to fresh water. While occasionally uninhabited, many of these islands were home to native populations that were often hostile towards the poor souls seeking refuge after wrecking on the perilous reefs. Survivors of wrecks were often captured, enslaved, or killed upon discovery by local natives. Tales of torture, abuse, and violence permeated many of the survivor's accounts of their captivity. Possibly due to the indistinguishable physical characteristics of the islands, or the fear of the natives who resided there, historical accounts emphasizing the physical characteristics of the terrestrial landscape of the Florida Keys are lacking. While detailed historical descriptions of the islands forming the Florida Keys are scarce, most sources denoting the locations for obtaining fresh water, safe harbor, and obvious dangers are vaguely described and are apparent in the region's toponomy. As the area was further developed, major settlements in Key West and Indian Key, fortifications at the Dry Tortugas and Key West, and shore-based aids to navigation all contributed to the maritime cultural landscape.

Their importance, however, was secondary to that of the shallow reefs lying just beneath the water's surface. While it could be argued that the presence of more prominent, tangible physical features more traditionally considered landscape characteristics ended at the water's edge, mariners trained by millennia of tradition actively maintained watch for physical indicators of the shallow flats, jagged patch reefs, and the wrecks of less fortunate vessels that dangerously lurked just beneath the surface as menacing threats to those unfamiliar with the minute details of the area's unique bathymetry. While early sailing directions advocated avoidance of the dangerous area, the early need for the detailed survey of the Florida Reef, as well as the establishment of a series of lighthouses, buoys, and beacons to identify and avoid the reefs are well documented in the historic record. As knowledge of the area grew, sailing directions cautiously advised mariners to be on a constant lookout for breaking surf, contrary currents, changes in watercolor (indicating a rapid change in depth or bottom composition), aids to navigation and any other physical indicators of potential threats to their voyage. The ability to identify, analyze, and mitigate the dangers of navigating in an area are considered a staple of good seamanship and remain a vital skill in navigating the treacherous near-shore waterways of the Florida Keys.

While the tiny islets briefly mentioned in early sailing instructions have now been developed beyond recognition, the shoals, rocks, and reefs that form the Florida Reef tract have not appreciably changed throughout the historic period and remain similar to those encountered by mariners throughout antiquity. As such, the study of the discovery, documentation, utilization, and avoidance of many of the unique physical characteristics that remain prominent features in the landscape embody both the historical and contemporary difficulties in utilizing the area and therefore provide insight into an element of a unique cognitive landscape of the area. This insight is vital in developing an understanding of the complex role the exploration, documentation, and utilization of the region's unique landscape plays in the cultural ideals emphasized in the identification and mitigation of risk in the maritime environment.

Introduction to Maritime Salvage in the Florida Keys

For those in peril along the coast of the Florida Keys, the icy grip of death often consumed sailors with little hope of rescue. Prior to the establishment of a systematic salvage system, their only chance of surviving a wreck or disaster lay with the solemn duty of his fellow seafarers to provide assistance. As was often the case, the isolation of the Florida Keys combined with an early lack of vessel traffic, often left little hope of discovery or rescue and nearly ensured shipwrecked mariners along the coast were doomed to their fates. The loss of life and both raw and manufactured material on what was considered the edge of the modern world led to the development of an informal salvage network, first amongst local native inhabitants and subsequently by more formal attempts by the maritime empires sustaining the losses and members of their colonial communities.

While not initially meant to serve as a means to reduce the risk of navigating near the reef, the abundance and constant presence of opportunistic Bahamian wreckers found cruising the Florida Reef soon became so ubiquitous that wrecked mariners began to depend upon their presence for their salvation and agonizingly prayed for their speedy arrival in the event of disaster. Their exploits, both negative and positive, were often recounted as the only means of survival in an otherwise perilous situation. The reputations of the wreckers and the informal salvage network they created developed the preliminary foundations of a cognitive landscape in which help in the event of a disaster was available and, as such, was considered when discussing the risk of operating in the Florida Keys.

While this activity aided in establishing a foundation of a cognitive landscape of risk in the Florida Keys, it was not until the annexation of the state by the United States did this development begin in earnest. Economic development, drastic increases in shipping traffic, and a prevalence of illegal activity throughout the region led to the establishment of a port of entry at Key West in 1828, in addition to the development of a salvage system unique to the area and heavily influenced by the area's physical landscape. The subsequent survey, documentation, and the subsequent establishment of an aid to navigation system in the area by the United States Coast Survey provided some of the first detailed maps of the area and reflected attempts to modify and utilize the area's unique physical landscape.

These systems were in a state of constant development throughout the nineteenth and early-twentieth centuries during which time more than 640 vessels came to grief upon the Florida Reefs, the peak of which was observed during the 1850s when vessels piled up on the coasts at a rate of one per week (Viele 2001:*xiv*). After the turn of the century, advances in shipboard technology, the introduction and utilization of steam, and the continual advancement of survey operations greatly reduced the number of vessels wrecking along the reef. The settlement and development of large portions of the Florida Keys brought unprecedented amounts of people and goods into the area, reducing the need for the salvage of mundane goods, now more easily obtainable through other means on shore. As such, the focus on maritime salvage narrowed to include only valuable, desirable, or illicit goods.

This preferential treatment is particularly meaningful as it represents one of the first major shifts in how local mariners perceived and reacted to risk in the maritime domain. Focus moved from the systematic salvage of all vessels in peril along the Florida Reef to only those that the salvage of which stood to provide a considerable financial gain. As commercial vessel traffic decreased throughout the area, systematic salvage opportunities likewise diminished as the Admiralty Courts at Key West closed in 1911. While the wrecking courts had closed, wrecks and vessel mishaps continued to occur, though to a lesser extent than before. Lacking the valuable cargoes of their predecessors, many of the utilitarian vessels coming to grief in the area, including barges, commercial fishing vessels, and recreational craft, most often lacked the economic incentive for individuals to salvage their remains.

Despite this perceived lack of interest advancing technologies soon offered new opportunities to exploit shipwrecks along the Florida Reef for financial gain. Coinciding with the advent of recreational SCUBA gear following the Second World War,

the concept of salvage in the Florida Keys would be resurrected and reinvented, this time focusing on the recovery of the valuable cargoes of historic shipwrecks. Considered long lost to the ravages of the deep the concept of maritime salvage, both legally and cognitively, was molded to include the recovery of historic cargoes. Early successes in these ventures throughout the 1950s and 1960s energized the populace. While tantalizing fictional tales of treasures hidden amongst the isolated islands and "lost" amongst the dangerous coral reefs throughout the Florida Keys were prevalent throughout popular culture throughout the mid-nineteenth and early twentieth centuries, the romanticized descriptions of finding lost treasures of centuries past aided in creating a treasure hunting culture that captured the imagination of millions. Fueled by the increasing number of major finds located throughout the Florida Keys, the treasure hunting culture developed an insatiable lust for the gold, silver, and jewels once thought forever lost to the abyss, but now once again within reach.

Unfortunately, the methods utilized by those seeking to salvage historic shipwrecks for the sole purpose of capitalizing upon the economic value of their former cargoes were particularly detrimental to both the historic fabric of shipwrecks themselves, and to the natural environment around them, both of which were increasingly considered sensitive resources worthy of protection. Meanwhile, development of the Florida Keys region was progressing at an alarming rate. Following the physical connection of all but the northernmost Florida Keys to the mainland, first by Flagler's railroad in 1912 and later by the completion of a series of roads in the 1920s, the settlement and development of the once desolate island chain progressed at a fever pitch. The construction of new homes, marinas, roads, resorts, and other "improvements" led to a radical transformation of the physical landscape, making many of islands readily distinguishable from the sea and grossly altering the area's viewscape. Following the successful development of the areas along the Miami River and Miami Beach throughout the twentieth century, developers sought to expand construction into the keys, rapidly buying land and making preliminary improvements to islands that had previously escaped development. Land was so scarce, that developers even planned to create artificial islands and build structures and roads directly onto the substrate.

The imminent rapid development of the area, combined with the systematic destruction of the area's submerged cultural resources in the insatiable search for lost treasures, threatened total destruction of the area's unique natural environment and once extensive collection of finite cultural resources. This realization coincided with the development and advancement of a period of political, environmental, and social awareness known as the *conservation movement*. While the initial focus of this movement centered upon the preservation of natural resources, given their similar goals of preserving resources for the betterment and enjoyment of this and future generations, efforts eventually included cultural resources. New pieces of legislation introduced during peaks within this movement throughout the latter half of the twentieth century supported the protection of both cultural and natural resources and revolutionized resource management practices throughout the United States. Renewed public interest in the preservation of resources led to a pronounced development of county and state parks, as well as the National Park System (est. 1916), and the National Marine Sanctuary System, which eventually extended new protections to the vast majority of the cultural and natural resources of the Florida Reef.

The success of the conservation movement, the creation of new legislation specifically protecting archeological sites, and the subsequent establishment of protected marine zones throughout the Florida Keys significantly curbed development of the area in the attempt to ensure its preservation and protection for future generations. While instituted in good faith, each proposed change was met with considerable resistance from those seeking to develop the area in order to capitalize on the region's natural and cultural resources. Of these new protections, the most important for the purposes of this study included the end of the commercial salvage of historic shipwrecks and the development, application, and enforcement of legislation designed protect submerged cultural heritage for posterity signaled the beginning of the end of

commercial treasure hunting in the Florida Keys and yet another shift in both the perceived role of maritime risk in salvage and the cultural versus monetary value of submerged cultural heritage within society. This discourse represents current management issues throughout the region as the integrity of finite archeological resources, while legally protected throughout the vast majority of the study area, is continually under threat due to a persistent cultural attraction of maritime salvage in the area.

Recent Research Efforts and Alternative Approaches

Given the breadth of human activity occurring in the area associated with the discovery, exploration, and utilization of the Florida Straits and its importance on the local, regional, and global scales, the area holds significant potential for future study. Unfortunately, many attempts to study archeological remains in the area have focused solely on individual wreck sites suffering recent damage from a variety of natural and human factors (Lawson and Marano 2012; Marano and Bright 2014a; Wilson 2015; Lawson and Lubkemann 2016) or are simply site specific documentation surveys (Smith et al. 2006a, 2006b; McClarnon 2007; Price et al. 2009; Shefi et al. 2009). Attempts to examine multiple sites in the area have culminated in a series of regional inventories, but have not yet ventured to tie any unifying thematic elements that expand our knowledge of local cultural elements (Fischer 1975; Wild and Brewer 1985; Murphy 1993; Hallas n.d.). As such, this study will utilize theoretical approaches that have been successfully utilized to identify, delineate, and interpret maritime cultural landscapes in Australia. Specifically, this study will analyze the role of risk and frontier in the development of a maritime cultural landscape framed by the maritime salvage industry.

Risk

To most, risk is simply identified as the potential for a negative or undesirable outcome that is usually synonymous with the terms *hazard* or *danger* (Fox 1999:1). For the purposes of this study, however, a better definition of risk may be the, "systematic way of dealing with hazards and insecurities induced and introduced by modernity [modern society] itself" (Beck 1992:21). Beck's definition provides a more insightful definition of the term in that it explains the actual purpose of risk in society whereas the concept of risk may be most familiar only as a factor in personal decision-making. As such, it can be much more influential in larger systems throughout society, the remnants of which may be present as tangible components of cultural landscapes (Marano 2012: 34). It has been argued that, while not the only factor involved, risk and the responses to it play a major role in defining the use of cultural seascapes (Duncan 2004:11). For the purposes of this study it is argued that risk, and more specifically the mitigation of risk in the marine environment, could be considered a near universal trait observable throughout human existence. In order to objectively identify and measure what could otherwise be described as a feeling or an emotion, a non-traditional research strategy is required (Marano 2012:173). Several studies conducted in Australia have developed methodologies to examine the behavioral responses to risk in the development of regional maritime cultural landscapes (Duncan 2000, 2004; Kimura 2006; Duncan and Gibbs 2015). The methods utilized in these studies have only very recently been modified and applied to similar datasets in both the United States and South Africa (Marano 2012; Borrelli 2015).

If the concept of risk in the maritime environment is to be considered a universal and unifying cultural theme within maritime societies, one may question how to systematically and scientifically approach such a cognitive subject and what could be gained from its study. While the concept of risk may be present in most societies, local and regional variations in how society perceives and manages risk provides vital insight into social structures, values, and the development and modification of both cognitive and physical landscapes within local communities. As such, the study of the identification, mitigation, and management of risk within maritime communities holds considerable potential for future study. Through the utilization of broad generalist and multidisciplinary approaches, such studies could be utilized to effectively identify and document maritime cultural landscapes through-

out the world. This approach has been successfully utilized to identify a variety of cultural landscapes formed as a direct result of human attempts to mitigate risk within the marine environment.

The physical landscape of the Florida Keys and its associated reef tract has forced a series of unique adaptations to manage the risk of utilizing the area. Human adaptation to both the physical and cognitive landscape of the area is present throughout the historic period, though it is often only made readily apparent when studied thematically. It is argued here that the unique physical landscape present in the Florida Keys and the subsequent human adaptation to that environment has facilitated the development of a unique cognitive landscape in regards to the mitigation of risk utilizing the area. It is argued here that the development of maritime salvage throughout the Florida Keys represents a physical manifestation of risk mitigation strategies that, due to the local geophysical and environmental conditions present, developed a unique component of the area's maritime cultural landscape. Specifically, it is argued that the thematic study of the development of marine salvage throughout the Florida Keys provides invaluable insight into the perception and management of risk in the development of an isolated island community.

Salvage

It has been argued that for as long as vessels have plied the world's waterways, there has been the risk of wreck or disaster, the occurrence of which should be seen as a mere eventuality. The saving of property from said disaster, the concept of maritime salvage, is therefore potentially as old as the first vessels to venture from the relative safety of their moorings (Muckelroy 1978:10). Salvage has been defined as the "rendering of assistance to vessels and their cargo in distress at sea, whether afloat, shipwrecked or sunken," the legalities and particulars of which are defined through a series of laws as old as seafaring itself (Delgado 1997:353-354). In his seminal work on the subject, the late Keith Muckelroy describes the role historic salvage operations played in the maritime archeological site formation processes. Muckelroy specifically identifies historic salvage operations as both an extracting filter and scrambling device as well as a means to introduce additional contemporary historic material to an archeological site (Muckelroy 1978:57, 159, 166).

While Muckelroy's work is often considered to be one of the first attempts to develop and apply middle range theory, it has been critiqued that while he did acknowledge both natural and cultural factors in the formation of submerged archeological sites, his research primarily focused on the environmental processes associated with the site formation process (Gibbs 2006:4). Recent studies have sought to identify cultural and behavioral elements contributing to both the wrecking of vessels (Duncan 2000, 2004; Kimura 2006; Marano 2012; Borrelli 2015), vessel reuse and abandonment (Richard 2008), as well as their effects on salvage and subsequent archeological site formation processes (Gibbs 2006; Duncan and Gibbs 2015). Variations in cultural values, perceived risk(s), societal structures, and the physical characteristics of the landscape can result in significant variations in the human response to disaster that are often specific to a particular locale. The study of the development of maritime salvage in the Florida Keys is particularly interesting due to its fluid nature over time. The development of maritime salvage throughout the Florida Keys was dynamic and varied considerably throughout history. This variation reflected changes in the perception of risk as well as the variations in both the economic and cultural value of shipwrecks over time. These changes are particularly apparent in efforts to mitigate that risk over time, tangible evidence of which is often preserved in the archeological record. While the study of the development of maritime salvage along the Florida Keys may shed light on how coastal communities throughout the isolated island chain attempted to mitigate the risk of navigating in the area, it does not necessarily explain *why* the unique system specifically developed and utilized in the Florida Keys. Though human utilization and adaptation to the unique physical environment combined with simple economic incentives influenced the development of maritime salvage in the Florida Keys, additional cultural motivators that influence local practices should not be discounted.

Frontier

While the study of the development of maritime salvage in the Florida Keys may provide insight into how the local community worked to mitigate risk during maritime activities and mishaps, it does not necessarily answer why such efforts were expended. While the obvious underlying theme, particularly in its early stages, is economic in nature, it could also be argued that the extreme isolation, danger, and ruggedness of the area forced those utilizing the area to develop a survival mentality similar to that developed and romanticized on the plains frontier of the American west. The concept known as the "Frontier Thesis" was presented in a paper entitled, *The Significance of the Frontier in American History* by historian Frederick Jackson Turner at the World's Columbian Exhibition in 1893. In his paper, Turner argues that the settlement of the American frontier was formative to the development of American ideals and were particularly influential in the development of the country's political, social, and cultural ideals. Turner specifically argues that the availability of free land and the process of developing the frontier created a unique set of cultural ideals that was the base for American democracy and that the American west represented the "meeting point between savagery and civilization" (Turner 1920:6).

While many of Turner's ideas have been justly criticized as being overly nationalistic and discounting of the roles women, minorities, and native populations in the development of the American west (Pierson 1942; Limerick 1987) researchers have also applied the Turnerian model in the identification of comparative frontiers across the globe (Mikesell 1960). It is argued here that the core of his frontier theory, particularly the idea that the development of the frontier was formative to the development of unique cultural ideals, is just as applicable to the study of the maritime frontier as the vast expanses of the Great Plains. For those navigating in the vicinity of dangerous, isolated, and poorly documented shorelines, the idea of a maritime frontier aptly describe the dangerous and often lawless environments where help and hope in the event of disaster are just out of reach. As such, it is argued here that while Turner's theories as a whole, are limited by the social and political climate from which they were developed, the underlying cultural theme attributed to the frontier as discussed by Turner can be identified as a cultural motivator in the development of a unique maritime cultural landscape in the Florida Keys. While the identification and mitigation of risk, the development of maritime salvage, and the perception of value of submerged cultural heritage vary as the focus, nature, and extent of salvage changes over time, the identification of underlying unifying cultural motivators help explain regional variations and the evolution of salvage activity throughout history.

Conclusions

One of the primary goals of maritime archaeology is to identify convincing linkages between the physical association represented by shipwrecks and the social institutions that helped create them (Gould 2011:24). This task, however, is often made difficult by the differing historical and archaeological practices utilized to identify, document, and interpret underwater and terrestrial cultural sites in coastal areas. Bass (1966:15) argued that "archeology underwater, of course, should be called simply *archeology*" meaning that the theoretical approaches and overall goal to examine human culture through their tangible material remains are the same above and below the surface of the water. While this may be true, many of the differences in approaching archeology underwater, including the difficulty in accessing underwater sites, differences in nomenclature and terminology, and the theoretical foundations of the field, often prevent the effective application of traditional archeological approaches in the marine environment. As such, the development of maritime cultural landscape theory has evolved from the perceived differences in the systematic cultural study of human activity where land and sea meet. While Westerdahl's initial ideas developed the theoretical basis for the identification and study of maritime cultural landscapes, their effective application to resource management has remained elusive. Originally utilized to describe cultural resources located somewhere between the terrestrial and underwater environments, the particulars of maritime cultural landscape theory can be as ambiguous as the areas it seeks to define.

It is argued here that many of the difficulties in identifying and defining maritime cultural landscapes stem from the broad interpretation of their individual components and the focus on geophysical rather than cultural components of the landscape. This study will utilize the National Park Service's National Historic Landmarks Revised Thematic Framework to examine the role of salvage in the development of a unique maritime cultural landscape throughout the Florida Keys. As such, this study will attempt to analyze and explain the development of what could be called a "maritime salvage landscape" through the application of socio-cultural theories to highlight cultural motivators contributing to this landscape. While the development of maritime salvage throughout the Florida Keys represents only one of a number of factors contributing to the area's overall cultural landscape, studying the establishment and subsequent evolution of wrecking and salvage practices thematically can shed light on patterns significantly contributing to both the area's physical and cultural landscapes. Establishing this connection not only helps resource managers locate, identify, and interpret thematically related cultural sites, but by understanding cultural factors contributing to their perception and use over time, the application of these theoretical paradigms can help explain contemporary perceptions of similar resources. Δ

References

Bass, George
1966 *Archaeology Under Water*. Frederick A. Praeger Inc., New York, NY.

Beck, Ulrich
1992 *Risk Society: Towards a New Modernity*. Sage, London, UK.

Borrelli, Jeremy R.
2015 The Bay of Storms and Tavern of the Seas: Risk in the Maritime Cultural Landscape of the Harbor at Cape Town, South Africa. Unpublished Masters Thesis, Program in Maritime Studies, Department of History, East Carolina University, Greenville, NC.

Delgado, James P.
1997 *Encyclopedia of Underwater and Maritime Archeology*. Yale University Press, London, UK.

Duncan, Brad G.
2000 Signposts in the Sea: An Investigation of the Shipwreck Patterning and Cultural Seascapes of the Gippsland Region, Victoria. Thesis, School of Anthropology, Archeology, and Sociology, James Cook University, North Queensland, Australia.

2004 Risky Business, The Role of Risk in Shaping the Maritime Cultural Landscape and Shipwreck Patterning: A Case Study Application in the Gippsland Region, Victoria. *Bulletin of the Australasian Institute for Maritime Archeology*, 28, pp 11-24.

Duncan, Brad G. and Martin Gibbs
2015 *Please God Send Me a Wreck: Responses to Shipwreck in a 19th Century AustralianCommunity*. When the Land Meets the Sea: An ACUA and SHA Series, Volume 3, Annalies Corbin and J.W. Joseph, editors, Springer.

Fischer, George
1975 Preliminary Archeological Assessment: Biscayne National Monument, Florida. Manuscript on file, National Park Service, Southeast Archeological Center, Tallahassee, FL.

Fox, Nick
1999 Postmodern Reflections of 'Risk', 'Hazards', and Life Choices. In *Risk and Sociocultural Theory: New Directions and Perspectives*, Deborah Lupton, editor, pp. 12-33, Cambridge University Press, Cambridge, UK.

Gibbs, Martin
2006 Cultural Site Formation Processes in Maritime Archeology: Disaster Response, Salvage and Muckelroy 30 Years On. In *The International Journal of Nautical Archeology* 35.1:4-19.

Gould, Richard A.
2011 Archeology and the Social History of Ships, 2nd edition. Cambridge University Press, New York, NY.

Hallas, Judith F.
N.D. Inventory of Shipwrecks and Groundings: Key Largo National Marine Sanctuary.Manuscript on file at Biscayne National Park, Homestead, FL.

Kimura, Jun
2006 *Interpreting Maritime Cultural Space Through the Utilization of GIS: A Case Study of the Spatial Meaning of Shipwrecks in the Coastal Waters of South Australia*. Master's thesis, Department of Archeology, Flinders University, South Australia.

Lawson, Charles F. and Stephen Lubkemann (editors)
2016 Archeological Assessment and Inventory of the English China Wreck (BISC-2, 8Da9996). Manuscript on file, Biscayne National Park, Homestead, FL.

Lawson, Charles F. and Joshua Marano
2012 Research Design for Archeological Documentation in Advance of the Stabilization of the HMS *Fowey* Shipwreck Site (BISC-20, 8DA11948). National Park Service, Biscayne National Park, Homestead, FL.

Limerick, Patricia N.
1987 *The Legacy of Conquest: The Unbroken Past of the American West*. W.W. Norton & Company; Reprint edition, New York, NY.

Marano, Joshua
2012 Ship Ashore! The Role of Risk in the Development of the United States Life-Saving Service and its Effects on Wrecking Patterns Along the North Carolina Coast. Masters Thesis, Program in Maritime Studies, Department of History, East Carolina University, Greenville, NC.

Marano, Joshua and John Bright
2014 A Joint Research Design for the Archeological Documentation of BISC-9 (08DA11943) and BISC-62 (08DA11970) in Biscayne National Park. Manuscript on file, National Park Service, Biscayne National Park, Homestead, FL.

McClarnon, Daniel P., Roger C. Smith, Debra G. Shefi, and John Broadwater
2007 Archeological and Biological Examination of the Rib Wreck (8MO1880) off Vaca Key, Monroe County, Florida. . Florida Department of State, Division of Historical Resources, Bureau of Archeological Research, Florida Underwater Archeology Team, Tallahassee, FL.

Mikesell, Marvin W.
1960 Comparative Studies in Frontier History. In *Annals of the Association of American Geographers*, 50:62-74.

Muckelroy, Keith
1978 *Maritime Archeology*. Cambridge University Press, Cambridge UK.

Murphy, Larry (editor)
1993 Dry Tortugas National Park Submerged Cultural Resources Assessment. National Park Service, Submerged Cultural Resources Unit, Santa Fe, NM.

National Park Service
2000 Revised Thematic Framework. Department of Interior, National Park Service, Park History Program, Washington, D.C.

Pierson, George W.
1942a American Historians and the Frontier Hypothesis in 1941(I). *The Wisconsin Magazine of History*, Vol 26, No. 1 (Sep., 1942), pp. 36-40.

1942b American Historians and the Frontier Hypothesis in 1941(II). *The Wisconsin Magazine of History*, Vol 26, No. 2 (Dec., 1942), pp. 170-185.

Price, Franklin H., Roger C. Smith, Daniel McClarnon, and Brenda S. Altmeier
2009 Archeological and Biological Examination of the Marker 39 Wreck (8MO1931) off Key Largo, Monroe County, Florida. Florida Department of State, Division of Historical Resources, Bureau of Archeological Research, Florida Underwater Archeology Team, Tallahassee, FL.

Richards, Nathan
2008 *Ships' Graveyards: Abandoned Watercraft and the Archeological Site Formation Process*. University Press of Florida, Gainesville, FL.

Shefi, Debra G., Roger C. Smith, Daniel P. McClarnon, and Brenda S. Altmeier
2009 Archeological and Biological Examination of The Bronze Pin Wreck (8MO1879) off Grassy Key, Monroe County, Florida: An Interim Report. Florida Department of State, Division of Historical Resources, Bureau of Archeological Research, Florida Underwater Archeology Team, Tallahassee, FL.

Smith, Roger C., Della Scott-Ireton, Jennifer McKinnon, Stephen Beckwith, Brenda Altmeier, and Lauri MacLaughlin
2006 Archeological and Biological Examination of "The Mystery Wreck" (8MO143) off Vaca Key, Monroe County, Florida. Submitted to the Florida Keys National Marine Sanctuary, from Florida Department of State, Division of Historical Resources, Bureau of Archeological Research, Florida Underwater Archeology Team, Tallahassee, FL.

Smith, Roger C., Jeffrey T. Moates, Debra G. Shefi, and Brian J. Adams (editors)
2006 Archeological and Biological Examination of the Brick Wreck (8MO1881) off Vaca Key, Monroe County, Florida. Submitted to the Florida Keys National Marine Sanctuary, from Florida Department of State, Division of Historical Resources, Bureau of Archeological Research, Florida Underwater Archeology Team, Tallahassee, FL.

Turner, Frederick J.
1920 *The Frontier in American History*. Frederick Jackson Turner. Reprinted 1921 by Henry Holt and Company, New York, NY.

Viele, John
2001 *The Florida Keys Volume Three: The Wreckers*. Pineapple Press, Inc. Sarasota, FL.

Wild, Kenneth S., David M. Brewer
1985 Underwater Archeological Survey and Site Assessment of Biscayne National Park. National Park Service, Southeast Archeological Center, Tallahassee, FL.

Wilson, Allen, D.
2015 A Fine Wreck in Shallow Water: Investigation into, and Conservation of, a Heavily Disturbed 18th Century British West Indiaman, The Soldier Key Wreck. Department ofAnthropology, University of West Florida, Pensacola, FL. Δ

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From Land to Sea, or Sea to Land: Reconciling Key Features of Terrestrial and Maritime Landscapes

Brinnen Carter
Sitka National Historical Park
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Edited Transcript of Presentation

You'll have to excuse me, I changed my presentation somewhat from the abstract I submitted. I decided it would be deadly boring to just talk about "From Land to Sea, or Sea to Land" so I couched it within Alaska maritime cultural landscapes. You'll see me tacking (like a sailor). I'm going to essentially be blown between two winds: the method and theory wind, and the sort of practical, landscape wind. You'll see me tack back and forth through the presentation, so stay with me, please.

I want to start with a definition, because they're often good to start with. I found our National Park Service definition of what a cultural landscape is, and I want to go over it for review. It's a geographic area that's either associated with a historic event, activity, or person, or exhibiting some other cultural value or aesthetic value. It must meet those basic characteristics. I also went back and reviewed Westerdahl, and he sees it in a more broad way, as focused on the past, but clearly referring to ongoing cultural values. Note that is definition, is focused on remains. The other thing I picked up is that there may be a subtlety in the Swedish word for "remains" that doesn't translate well into English. If anybody knows Swedish, and can look at that word "remains," it may have connotations that aren't effectively brought into English. It may have as much to do with ethnographic remains, as archaeological and architectural remains, which are material as well (but conveyed by ongoing practice rather than physical evidence). Now I'm tacking back to Alaska, or the practical stuff.

Alaska is huge; it's 1.7 million square kilometers. Traditionally, Alaska's population has been really tiny. The first accurate population numbers, which they may or may not be accurate, are from 1880, when they did the census. There were a little over 33,000 people in Alaska at that point. Even today, there are only 710,000 people, and the scale is deceiving. It's about twice the size of Texas, so keep that in mind. One of the things that a small population in a large area yields is a premium on inner-community awareness and relationships. Also, they exhibit a high degree of mobility and trusted connections across that mobile area, so that you can go a long distance and know somebody in the community who can put you up and feed you. I didn't really appreciate that until I moved there, because in the lower 48 your type of community is different. It tends to be much more geographically centralized. You have groups of friends in a local community; your community doesn't necessarily extend over vast distances into other communities. Another characteristic is that trade is assumed to be widespread and relatively regular. There's a regular round to Alaskan life. You move from place to place, from a winter quarters, to a summer subsistence camp, and so on. Subsistence resources, on the other hand, are highly territorial, and vigorously defended. In other words, you may have people in other communities who you visit, but when it comes to the resources you want to harvest for your subsistence, those are very territorial in nature.

My objective is to show that Alaska is a cultural landscape, to show that maritime Alaska is a maritime cultural landscape overlaying multiple marine ethnographic landscapes, and to show that the most important aspects of maritime cultural landscapes are overall historical significance and physical integrity, not individual landscape characteristics, which I think are units of analysis, rather than actual items.

I am really interested in the idea of cognitive landscapes that Westerdahl went into. Has anyone ever used Google Suggest? Does anyone know what that is? When you punch terms into Google, it automatically shows you a list that you can pick

from. There's a great little program online called SEER that will take two Google Suggest terms, and compare them, and show you the relationship between the terms (http://hint.fm/seer/). It's really useful for marketing, because it allows a marketer to figure out what people are looking for, when you put a particular word in there and search for it. I thought this would be a great little tool to figure out the connections between cultural landscapes and maritime landscapes.

I started using SEER to see if I could figure out what those relationships were. The first thing I did was to compare cultural landscapes and maritime landscapes. What pops out at you right away, is that there is no relationship. People who are looking for cultural landscapes are not looking for maritime landscapes, and people who are looking for maritime landscapes aren't looking for cultural landscapes. I would conclude from that, that it's not an overlapping set. There's not much cognition in the general public about the connection between maritime landscapes and cultural landscapes. The other interesting thing, if anybody is interested in a job, the most common thing people are looking for when they look for maritime landscapes is services. You want to start a contract business, I would go into maritime landscape services.

If you think about Westerdahl and Swedish archaeology, maritime landscapes have a very high prominence in Swedish archaeology. I compared Swedish archaeology and maritime landscapes and got a little bit of a connection. It's what you might expect: less connection from Swedish archaeology to maritime landscapes, but quite a bit the other direction. I then looked at the Maritime Sanctuary program, and the National Register program. You can see that there is some connection, but about the same that you see for Swedish archaeology.

Here it becomes very interesting. I think of Alaska and Hawai'i as kind of twin states, way out there in the Pacific. We have a lot of cultural connections. There's a much stronger relationship between maritime landscapes and Hawaiian and Alaskan archaeology. That's an important point.

I wanted to back-check my information, because when you start using some of these tools, you may not know what the hell you're doing. I checked archaeology and nautical archaeology against each other, and it kind of makes sense. People are interested in jobs, they're interested in what the salary is, and they're interested in how to get a degree. My off the cuff interpretation of this is that everybody's got to make a living, and can I make a living doing either nautical archaeology or archaeology? With that in mind, I wanted to review this definition we've already seen. Is Alaska a cultural landscape? It's a geographic area, that's absolutely true.

Let's see, it's associated with a historic event, I think I'd put the check in there that bought Alaska: $7.2 million. The United States paid about $200,000 extra, over $7 million, because there was an ice plant in Sitka that was the only source for ice for San Francisco, up until the purchase. The Russians had been supplying ice for San Francisco, and it was a very lucrative market, obviously. The U.S. paid an extra $200,000 for Alaska, just because of that.

Alaska is also associated with the resumption of manifest destiny, the gold rush, the western Pacific exploration, whaling, and also the expansion of fisheries. It's also associated with one of the most important diplomats in American history, William Seward. He was the visionary leader who had the idea that the U.S. could buy Alaska from Russia. One of the things that he's credited with is reinvigorating manifest destiny or enhancing the prominence of America on the world stage after the Civil War. Alaska played a major role in that.

I think I've shown Alaska as a cultural landscape. I want to go over what that landscape looks like. I blocked out the area of Alaska where you don't have a major influence of the sea, and you can see from the amount of area that is on the coast and connected by the ocean, and from the major river systems in

Alaska, that clearly, a majority of Alaska, if not two-thirds of Alaska, is all some type of maritime-influenced landscape that really overlays with a number of language groups and ethnographic landscapes that were very prominent as late as the mid-1700s, and many of them continue today. About 30 percent of Alaska's population is native Alaskan, and most of the folks still strongly associate with these basic language groups and cultural groups.

The cultural landscape of Alaska is overplayed on these ethnographic landscapes. When I got to Alaska, we had a couple of projects queued up for funding. One was the Russian Bishop's House cultural landscape report. I thought it would be deadly boring to just study the Russian Bishop's House in Sitka, Alaska, as a cultural landscape, because it's about an acre of land and three buildings in a little cluster. I said, why not repurpose that, and talk more broadly about the ecclesiastical landscape of Russian American and how it contributed to use of the Russian Bishop's House in Sitka. We're the only unit in the National Park Service that studies Russian America, so why not use the cultural landscape money to have a broader focus.

A number of folks are looking at Russian American Orthodox landscapes all across Alaska, how they're connected, and how they contribute to the significance of the Russian Bishop's House and the landscape in Sitka. I was also very interested in expansion of the commercial landscape, so we funded a maritime cultural landscape project to study the commercial landscape of Russian America and the expansion of Russian companies into Alaska. That includes significant resources like the Erskine House and the Baranov Castle in Sitka. They have parallels, so they're going to be merged together.

I'm going to tack back, and talk about the various things that you would find in a typical cultural landscape. These are basically characteristics, so I don't think I have to go through them too intensively. They're from *Landscape Lines*, an NPS publication so you can look this up. I'll also mention that the characteristics of the landscape have changed, so there's an evolutionary aspect that's important to recognize. That means that we can evolve into something else, we can talk about something else if we want to. I wanted to figure out where maritime landscapes fit into this broad NPS perspective. The important thing is there are some things that change, and there are some things that stay the same. I want to use an example in Sitka (shows maps). This is the development of Sitka early on, with an area from 1804 and one from 1867, so you can see development of a commercial landscape here, with some elements of it changing and some elements staying the same. I think that's important to recognize.

This is a brief review of Westerdahl's maritime cultural landscape characteristics. I tried to figure out how these could be merged into some sort of system that would work for maritime cultural landscapes, using characteristics from cultural landscapes and maritime cultural landscape features that Westerdal identifies. Natural features and systems could work as maritime ecosystems and features. Land use is fishing grounds, a coastal industry. Cultural traditions, what Westerdal would call the cognitive landscape, would be maritime traditions and maritime ethnography. Circulation has a special meaning in nautical terms; this would be maritime routes and water-site circulation. Westerdal would call those a "network of sailing routes." Topography and some specific sea terms need to be included—things that are a part of a maritime landscape that aren't typically talked about in cultural landscapes.

There are celestial features—what a star field looks like at sea—because it's critical for navigation and way-finding, and it has special meaning in the Pacific Islands where there's different systems of navigation. You need to have a special category for winds, waves, currents, and ice. Those are typically used as well for navigation, but are also special conditions at sea. You also need to have some sort of special consideration of weather, because weather makes all the difference when you're at sea.

With that, I want to switch back and talk about significance and integrity. I think significance and integrity are as important, or more important, than what I talked about before, because the characteristics are really ontological terms, and aren't really a substitute for the actual resources you see in the field. At some point in the future, you'll see some sort of updating of the Russian American National Historic Landmark theme study to incorporate ecclesiastical landscapes and commercial landscapes of Russian America. Δ

Brinnen Carter is the Chief of Resources at Sitka National Historical Park, the only National Park Service unit to commemorate Tlingit resistance to European colonial expansion, the expansion of Czarist Russia, and the living native culture of Southeast Alaska, as the state's oldest park. Previously, he was the Cultural Resource Program Manager at Delaware Water Gap National Recreation Area and a Museum Specialist and Archeologist at the Southeast Archeological Center. He has always studied the archeology of submerged sites—when time has allowed—and has advanced degrees in Nautical Archeology and Prehistoric Underwater Archeology.

Archaeological and Biological Assessment of Submerged Landforms off the California and Oregon Coasts

David Ball
Bureau of Ocean Energy Management

The *Archaeological and Biological Assessment of Submerged Landforms off the Pacific Coast* project was launched by BOEM in August of this year, 2015, and BOEM believes it has a lot of potential; however, the previous project—the *Inventory and Analysis of Coastal and Submerged Archaeological Site Occurrence on the Pacific Outer Continental Shelf* (POCS)—finished in 2013, provides excellent background for understanding the new effort. The Pacific Inventory project was basically a desktop research effort to update our baseline information on archaeological resources on the POCS, similar to what was completed for BOEM in the Gulf of Mexico in 2003 and in the Atlantic region in 2012. This 2013 study of the Pacific updated previous baseline studies that were completed in the Pacific region in 1987 and 1990.

The Pacific Inventory had three components to it. The first was to update our database of historic shipwrecks and provide a geo-referenced database for management and decision-making. The second component was to develop a geo-referenced database of coastal historic properties in order to better understand potential viewshed issues from offshore renewable energy construction. The third component of this 2013 study updated our predictive model for submerged prehistoric sites on the POCS. This included digital elevation modeling (DEM) and a reconstruction of the paleoshorelines in 1,000 year increments, dating back to the Last Glacial Maximum (LGM). For this, numerical values of 1-6 were assigned to 10-meter-grid squares across the POCS, with higher values indicating higher resource areas and more favorable areas for site placement. Stream corridors were expected to have the highest likelihood for containing submerged pre-contact sites. This updated model demonstrated that the southern portion of the POCS had better overall resource potential. However, the southern area also has a narrower shelf and limited stream drainages. Therefore, there are actually more higher value areas concentrated in the northern half of the west coast than in the southern half.

That brings us to this current study (November 2015), the *Archaeological and Biological Assessment of Submerged Landforms off the Pacific Coast*. As the title suggests, this is a multi-disciplinary effort, looking at both archaeological and biological components of the submerged landforms off the West Coast. It was awarded in August of this year through the California Cooperative Ecosystems Studies unit to San Diego State University. Unlike the previous studies I mentioned, which were desk-based research, this one has a strong field component, which will include geophysical and geological surveys of areas that have a high potential for intact submerged landforms. It's a four-year effort, building on the 2013 project. Information collected through this effort will support BOEM's environmental analysis requirements through the National Environmental Policy Act and National Historic Preservation Act.

We have pulled together a strong team of researchers for this project. Todd Braje of San Diego State University is the principal investigator for this project. We are also working with researchers from the University of California Santa Barbara, Oregon State University, SCRIPPS Institute of Oceanography, the University of Oregon, California State University San Bernardino, the Smithsonian Institute, Channel Islands National Park and the Submerged Resource Center of the National Park Service, as well as the Channel Islands National Marine Sanctuary, the NOAA Maritime Heritage Program, and NOAA's Office of Ocean Exploration and Research.

We are focusing specifically on two areas off the POCS, the Northern Channel Islands off of Southern California and the Central Oregon Coast. The Northern Channel Islands are comprised of four islands: San Miguel, Santa Rosa, Santa Cruz and Anacapa. Previous research on these islands has identified some of the earliest evidence for maritime culture in the Western Hemisphere with sites dating back 9,000 to 13,000 years ago, when those four islands actually composed 1 larger island,

referred to as Santa Rosae. As Todd Braje mentioned to me earlier today, the largest concentration of terminal Pleistocene and early Holocene sites are found in this area, concentrated primarily toward the Western end on San Miguel Island.

In addition to the strong evidence of early maritime culture, the islands and the surrounding waters are also protected areas, both through the Channel Islands National Park and the National Marine Sanctuary. A lot of oil and gas activity has also occurred off this area over the last 40 or 50 years; there are at least 15 oil and gas platforms in the area. As a result, there has been a lot of geo-physical survey work done in support of those efforts, and therefore a lot of existing data that we can draw on to build a robust model for identifying intact submerged landforms.

Channel Islands, California. Chumash Tomol crossing to Santa Cruz Island, 2007. Photo courtesy of Robert Schwemmer, NOAA.

The Central Oregon Coast, on the other hand, has very little existing geophysical survey data available; however, the shelf extends almost 60 km west of the current coastline. There has also been a lot of interest expressed recently in development of renewable energy activity off the Oregon coast. BOEM has actually received two unsolicited applications that we are currently reviewing: one for floating wind turbines off the Coos Bay area; the other application is for wave energy off the Newport area, which is just northeast of the Stonewall Bank area. We have identified the central Oregon coast area as a target area of interest to test the model that we develop off the Northern Channel Islands.

What we are hoping to do with the current study is to provide an assessment of BOEM's current geophysical survey guidelines for identifying submerged landforms, as well as assess sensitive biological features and expand our knowledge base for the potential for pre-contact sites on the POCS. This supports some of the other research that BOEM has been doing related to seafloor mapping of hydrocarbon and methane seeps, archaeological inventories, and sensitive habitat studies. It also ties in with some related efforts we have going on in the Gulf of Mexico region and the Atlantic region. For example, in 2007, BOEM's predecessor agency funded Dr. Amanda Evans' dissertation research through a cooperative agreement with Louisiana State University, which looked at submerged pre-contact sites off the coasts of Texas and Louisiana. We also currently have an ongoing project, which Doug Harris mentioned this morning, working with the University of Rhode Island and the Narragansett Indian Tribe off of the Atlantic coast, trying to identify best practices for identifying submerged landforms and also incorporating oral history and traditional knowledge into those best practices. We are hoping to work with some of the Native American communities on the West Coast in the areas that we're targeting for this project to see if we can incorporate some of those oral histories and traditional knowledge into this project as well.

The objectives for the submerged landforms project are to develop and field test a geo-spatial model for identifying submerged landforms, with the goal of improving the regional landscape model to assist in BOEM's decision-making process.

As I mentioned previously, the project was awarded in August of this year (2015) and we have already started compiling all available geophysical survey data. The team has also started refining the 2013 Pacific Inventory model. Fieldwork will focus on the Northern Channel Islands in years one and two, conducting tight grid, high resolution geophysical surveys in four target areas. Once those data are collected and analyzed, we'll identify areas for sampling with vibro-core and box-cores. In years two and three we will further refine the model and begin testing it off the central Oregon coast. The final year of the project will focus on completing the analysis and writing up the results of the project, which is scheduled for completion in August 2019.

Beyond assisting BOEM in evaluating the potential for encountering cultural resources on the POCS during future energy development, the results from this effort will contribute to the Pacific marine spatial planning efforts and provide a better understanding of the submerged landscape. Δ

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5. Non-submerged Prehistoric Maritime Landscapes

Introduction

Archaeological research continues to provide insights into the dynamic relationships between humans and the coastal environments they inhabited. Settlement sites along coastlines were not only characterized by sustenance gathering, but were prominent locations for ceremonial use, natural habitat management, and for engaging with various trade types. Due to the surrounding natural topography following post-glacial sea level rises, several precontact archaeological sites in proximity to coastlines along present-day North America have been preserved; Session 5 of the Maritime Cultural Landscape (MCL) Symposium highlighted several research studies conducted at these types of sites.

Presentations by Matt Sanger, Jeffrey Shanks, and Michael Russo provided contexts for the southeastern Atlantic, while Ken Sassaman and Margo Schwadron discussed sites along the northern and southeastern Gulf of Mexico coast, respectively. While some of these sites are now in danger of being inundated due to continuously rising sea levels, they provide unique opportunities to learn how humans have interacted with coastal landscapes since the earliest precontact periods. Sean Dunham also provided insight from sites located in the Great Lakes region, and Todd Braje discussed research conducted on the Channel Islands in the Pacific Ocean, which were never connected to the mainland during the last glacial period and provide a unique and continuous archaeological record. Information gathered from these various types of sites may help researchers learn about the distribution of precontact settlement sites that are now submerged along the Outer Continental Shelf.

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12,000 Years of MCLs on California's Northern Channel Islands : From Paleocoastal Lithic Workshops to Chinese Abalone Fishing Camps

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Introduction

Since its introduction to archaeology by Christer Westerdahl (1992) over twenty years ago, the idea of maritime cultural landscapes (MCLs) has grown to become a useful concept in anthropology and archaeology. In particular, the model has evolved to include the interconnections between human use of both marine and terrestrial environments. Indeed, maritime landscapes do not end at the shore but include travel routes, subsistence patches, and places of cultural significance on both land and water (Westerdahl 2008:212). This is also a useful concept because what is terrestrial at one moment in time may be submerged at another. For coastal and island archaeologists, this is especially true given the massive fluctuations in eustatic sea levels during the Pleistocene.

In much the same way, archaeologists and other scientists must be careful to recognize the powerful ways humans shaped and re-shaped MCLs through deep time. One of the growing theoretical trends in archaeology has been toward a historical ecological approach. Historical ecology is an interdisciplinary field focused on documenting the long-term dialectical relationship between humans and their environments (Crumley 1994; Rick and Lockwood 2013). Historical ecologists recognize that modern ecosystems are the result of lengthy processes of natural climatic change and human influences, and humans have been key agents of ecological change for millennia (see Balée and Erikson 2006; Swetnam et al. 1999). Historical ecology, while more widely applied in terrestrial settings, has been used in maritime venues and can be a key component in helping to define MCLs. Maritime cultures were engineers of their aquatic and terrestrial environments for millennia, and their actions had a heavy hand in shaping the modern state of land and seascapes. Any discussion of MCLs, then, must include the linkages between ancient and contemporary ecosystems and the role of humans in creating both. Here, I offer a series of case studies from California's Northern Channel Islands that demonstrate how hunter-gatherer-fishers shaped MCLs for over 10,000 years.

The Northern Channel Islands: Environmental and Cultural Context

Southern California's Santa Barbara Channel region has a Mediterranean climate that is characterized by warm, dry summers and cool, wet winters. The mainland coast in this area trends east-west and the region is bordered on the north by the Santa Ynez Mountains and on the south by the Northern Channel Islands. The Northern Channel Islands consist of four offshore islands, from east to west: Anacapa, Santa Cruz, Santa Rosa, and San Miguel. Although a wide variety of plants and other organisms are present, compared to the ecological diversity found on the mainland, island terrestrial resources are relatively impoverished, with few large mammals and limited freshwater and native plants (Schoenherr et al. 1999). Marine ecosystems are exceptionally productive and complex. Intensive local upwelling, a mix of cold northerly and warm southerly currents, and high basal productivity combine to create one of the most productive marine systems in the world that is home to a diverse assortment of flora and fauna, including kelp, shellfish, birds, fishes, and marine mammals (Schoeherr et al. 1999).

The islands were first settled by maritime hunter-gatherers arriving in boats at least 13,000 years ago (Erlandson et al. 20011; Johnson et al. 2002). During the late Pleistocene colonization and into the Early Holocene, the Northern Channel Islands coalesced into a single island, Santarosae. Rising postglacial sea levels since the Last Glacial Maximum, ca. 18,000 years ago, have submerged approximately 75 percent of Santarosae and inundated a vast landscape likely once occupied by Native American hunter-gatherers (Reeder-Myers et al. 2015). Over the ensuing millennia, these small colonizing groups transformed into the large, sedentary populations of Chumash Indians that were first contacted by Spanish explorers in AD

1542. Zooarchaeological analyses detail a general shift from early subsistence systems focused on low-trophic level shellfish to an increasing reliance on higher-trophic level finfish and pinnipeds after about 1500 cal BP (Braje 2010; Erlandson et al. 2009; Kennett 2005; Rick et al. 2005). The Chumash developed a sophisticated set of maritime hunting and gathering technologies, occupied large year-around villages, and participated in a complex sociopolitical system. Spanish explorers marveled at the large-scale harvest of local marine resources and the shell bead trading network that formed the basis of geopolitical connections from the islands to the mainland (Gamble 2008; Rick 2007). Although archaeologists have identified a gradual process of subsistence shifts due to natural climatic changes, growing populations and human predation pressure, and technological innovations, the bulk of the Chumash Islander protein diet, according to both historical accounts and zooarchaeological data, came from nearshore and kelp forest fishing by the time the Spanish arrived in Santa Barbara Channel.

The Construction of Maritime Cultural Land and Seascapes

In the last two decades, a variety of archaeological and historical ecological research has demonstrated that ancient peoples, including hunter-gatherer-fishers, acted as much more than passive organisms in an environment, subject to the whims of natural climatic fluctuations (e.g., Grayson 2001; Kirch et al. 1992; Redman 1999; Redman et al. 2004). Rather, indigenous peoples impacted, both positively and negatively, their local and regional environments in a variety of ways. Through hunting, gathering, fire, and other means, for example, hunter-gatherers encouraged the success of economically important plants and animals (e.g., Kay and Simmons 2002; Krech 1999, 2005).

Decoding the modern state of land and seascapes, then, necessitates an understanding of the ways humans influenced their environments through deep time. Interpreting MCLs requires that we track how both natural and anthropogenic forcing, through periods of stasis and change, created modern environmental conditions. Land and seascapes, then, cannot be divorced from the human actions that helped create them. Research on the Northern Channel Islands offer particularly interesting examples of how human hunting and gathering lifeways shaped and re-shaped both terrestrial and kelp forest ecosystems for millennia.

8,000 Years of Trophic Cascades and Marine Ecosystem Engineering

For at least 13,000 years, Channel Islanders relied on shellfish as a stable of their protein diet. Lacking the diversity and abundance of terrestrial game on the mainland, Islanders focused their hunting and gathering economies on the rich marine resources of local intertidal and kelp forest ecosystems. At most Early Holocene (11,500-7,500 cal BP) sites on the Northern Channel Islands with quantified zooarchaeological data, for example, shellfish such as California mussels (*Mytilus californianus*) and black abalone (*Haliotis cracherodii*) dominate the recovered faunal remains and dietary reconstructions suggest that shellfish provided most of the edible meat, usually upwards of 90 percent by weight (Braje 2010; Erlandson et al. 2004, 2009; Kennett 2005; Rick et al. 2005; for a rare exception see Rick et al. 2001). At most Middle (7,500-3,500 cal BP) and Late Holocene (< 3,500 cal BP) sites, shellfish meat becomes less central to Islander diets, as finfish and sea mammals provide a growing proportion of the animal protein represented (see Braje 2010; Braje et al. 2007; Erlandson et al. 2009; Kennett 2005; Rick et al. 2005). This is likely a response to growing island populations, the intensification of maritime economies, and expanding diet breath due to resource stress (Kennett 2005). Still, even during the Late Holocene when the bulk of animal proteins came from finfish, Islanders harvested shellfish by the millions and the fishing pressure for highly ranked California mussels, abalone (*Haliotis* spp.), and other locally available species (see Braje et al. 2007) must have been tremendous (Braje et al. 2011c).

About a decade ago, Erlandson et al. (2005) proposed that Native American hunters may have reduced sea otter populations in local watersheds, which lead to exceptionally productive red abalone (*Haliotis rufescens*) fisheries. Erlandson et al.'s (2005) hypothesis was proposed to explain the increased abundance of large red abalone shells in many island shell middens between about 8,000

and 3,500 years ago. Since then, a variety of evidence, including zooarchaeological, paleoecological, historical, and modern catch data, has been gathered that support Erlandson et al.'s (2005) conclusions (Braje et al. 2013a, 2009). Not only do these data explain the large sizes and densities of red abalone shell in island middens during certain intervals, but also the exceptional productivity of the Chumash shellfishery with very little evidence of widespread degradation despite tremendous predation pressure through time (see also Braje 2010). It now seems likely that Native American hunters reduced sea otter (*Enhydra lutris*) populations in local watersheds as a deliberate strategy to control predation pressure on economically important shellfish species. This enhanced the availability of abalone, California mussel, sea urchin (*Strongylocentrotus* spp.), and other shellfish and triggered a trophic cascade in local island kelp forest systems, where humans replaced otters as a prime ecosystem predator and kelp forest engineer.

Understanding these dynamics may be essential for helping to manage and restore abalone populations today. Braje et al. (2009), by combining archaeological, ecological, historical, and modern data, argued that for at least 8,000 years San Miguel Island waters acted as the nursery for red abalone across the Santa Barbara Channel region. Protecting these waters may be a key component in rebuilding a red abalone fishery based on the successful strategies employed by the Chumash for millennia. In much the same way, Braje et al. (2016) argued that a historical ecological perspective which considers 10,000 years of human fishing for black abalone can help abalone biologists pinpoint the best locations for modern restoration efforts across the Northern and Southern Channel Islands.

The Unnatural History of Channel Island Pinniped Communities

Today, California's Northern Channel Islands shelter more than 200,000 pinnipeds of six different species (DeLong and Melin 2002), and the far western extent of San Miguel Island, Point Bennett, is one of the largest pinniped breeding grounds in the world. These are remarkable numbers given the wholesale slaughter of marine mammals due to historical overhunting. Most of the pinnipeds that haul out on island beaches and rocky outcrops today were brought to the brink of extinction in the eighteenth and nineteenth centuries as the result of the global fur and blubber trade. Northern elephant seals (*Mirounga angustirostris*) offer an excellent example of how dire the situation was for many of these animals. In 1874, naturalist Charles Melville Scammon wrote:

> We have reliable accounts…of the Sea Elephant being taken for its oil as early as the beginning of the present century. At those islands, or upon the coast of the main, where vessels could find shelter from all winds, the animals have long since been virtually annihilated (as quoted in Ellis 2003:192).

By 1884, no elephant seals were seen anywhere by whalers, sealers, or naturalists, and eight years later when a Smithsonian Institution expedition located eight elephant seals on Guadalupe Island, they killed seven even though they realized that the animals represented "the last of an exceedingly rare species" (Townsend 1912 as quoted in Ellis 2003:193). The Smithsonian scientists were certain that elephant seals were doomed with extinction, and they wanted specimens for the museum before it was too late.

The recovery of many pinniped species in the Pacific and along the shores of California has been a remarkable success story for restoration ecologists and resource managers. State and federal protection has allowed the populations of many species to rebound in rapid fashion, so much so that their growth has become, at times, a point of contention between anglers, regulatory agencies, and scientists (e.g., Cook et al. 2015). Most scientists and managers have assumed that the recovery of these animals followed a "natural" trajectory, and species repopulated the Pacific in ways that mirrored the biogeography and relative abundances of pre-Columbian times. Their resurgence, however, occurred in a demographic vacuum and has created a non-analog system.

Archaeological evidence from both the Channel Islands and California mainland of sea mammal

exploitation suggest that their abundances and biogeography may have been fundamentally different in the deep past (see Braje et al. 2011b; Erlandson et al. 2015; Rick et al. 2009, 2011). Zooarchaeological evidence of marine mammal hunting is largely absent in terminal Pleistocene and Early Holocene archaeological sites, however, the presence of barbed and serrated projectile points in many early assemblages suggests that pinniped or sea otter hunting may have been more important than faunal analyses suggest (Braje et al. 2013b). There is limited faunal evidence for sea mammal hunting at most Middle Holocene sites, but a dramatic intensification of pinniped hunting appears between about 1,500 and 1,200 cal BP (Braje 2010; Kennett 2005). By ~1,200 cal BP, perhaps earlier, pinniped populations probably were restricted to offshore islets and rocks due to large island populations and Native hunters, who used redwood plank canoes (*tomols*) to access hunting grounds. Today, massive pinniped haulouts on island beaches, often near ancient villages and shell middens, suggest that local distributions and behaviors of these animals have shifted since their release from ancient and historical hunting (Braje et al. 2011b). The large, breeding populations of seals and sea lions on the Channel Islands today are a modern creation of human depopulation of the islands and federal and state protections – a novel, non-analog system for at least 10,000 years.

Combined with this, zooarchaeological data suggest that Guadalupe fur seals (*Arctocephalus townsendi*) were the focus of the prehistoric marine mammal hunting economy in the Late Holocene (Rick et al. 2009). Elephant seals (*Mirounga angustirostris*), on the other hand, are rare in archaeological sites and were probably not abundant prehistorically (Rick et al. 2011), whereas today the situation is reversed. This points to major biogeographic shifts from the past to the present, with Guadalupe fur seals and sea otters the most common targets for prehistoric hunters, now largely absent in Channel Island waters, and northern elephant seals and California sea lions hyper-abundant today, but largely absent from archaeological assemblages. The recovery of these animals from the 18th and 19th century fur and oil trades resulted in a biogeographic reversal and their present distributions are a byproduct of modern management and conservation.

Today, the protection of sea mammals along the Pacific and their growing populations on the Northern Channel Islands presents a set of unique challenges for resource managers. For example, on northwest San Miguel Island at Otter Point, this area was historically occupied by harbor seals, elephant seals, and non-breeding, sub-adult California sea lions, where they were largely restricted to local beaches. Because of overcrowding at the primary rookery at Point Bennett, a large population of breeding California sea lions recently moved into the area and, today, approximately 2,500 California sea lion pups are born here annually. Braje et al. (2011a) documented the wide-scale damage these animals can have on archaeological deposits in just a single breeding season, as they haul out atop shell midden sites, creating a conflict between the needs of these federally protected animals and the management of non-renewable cultural resources. From just a single archaeological shell midden site, sea mammals caused the erosion and destruction of nearly two million individual shellfish, over 800,000 animal bones, and more than 1,700 artifacts in twelve months (Braje et al. 2011a).

Anthropogenic Island Landscapes

Although terrestrial environments were not the focus of prehistoric subsistence systems, the Chumash and their ancestors and later Euro-American ranchers did alter and shape Channel Island landscapes in powerful ways over the last 13,000 years. Preliminary evidence suggests that coincident with the initial arrival of humans in the late Pleistocene and Early Holocene, fire frequency increased and may be linked to anthropogenic landscape burning (Hardiman et al. 2016). While this also could be a signature of natural climatic fluctuations, it may be linked to human landscape clearance and management as such practices were an important part of mainland Chumash resource management practices described in ethnohistoric accounts (Timbrook et al. 1982). More definitive signatures of human burning were identified by Anderson et al. (2010) during the dramatic human population increases of the Late Holocene (ca. 3,000 cal BP), which may

have been part of landscape management systems to create favorable conditions for corms and other important plant foods (Gill 2013).

Using San Miguel Island as a case study, Erlandson et al. (2005) argued that a combination of natural climatic processes (e.g., sea level stabilization, coastal erosion, climate change, wildfires) combined with anthropogenic burning during the Middle and Late Holocene to accelerate dune building activities. Rapid dune building fundamentally altered the "geography, hydrology, biology and soil regimes of the island" as humans began to play a more central role to shaping local landscapes, especially through episodic vegetation stripping and soil erosion (Erlandson et al. 2005:1234). Dune field landscapes on San Miguel, and perhaps the other Channel Islands, were stabilized by human settlements over the last 3,000 to 4,000 years as thick deposits of shell and other cultural debris were deposited atop dune sheets, buffering against erosion and encouraging vegetation growth.

By the mid-19th century, indigenous communities had abandoned or were removed from their island homes by Spanish colonizers and the islands converted into commercial ranching outposts. During this interval the most dramatic landscape changes swept across the islands, including the wide-scale introduction of herbivores and exotic plants and deforestation of island oak and pine stands. Island vegetation, dunes, soils, terrestrial ecology, and hydrology were transformed to a degree unprecedented over the last 10,000 years. While landscape changes certainly have been exacerbated by droughts and other natural climatic changes, the scale of change triggered by historical overgrazing and mismanagement has been unprecedented. These changes fundamentally transformed island landscapes, so much so, that is often difficult to decode the pre-Columbian state and establish appropriate restoration baselines and benchmarks.

Decoding Maritime Cultural Landscapes

In the coming years the MCLs concept can continue to be a useful construct in archaeology and anthropology, helping researchers think about the interconnections between land and sea, earth and water, and how ancient maritime peoples interacted with both in complex, interconnected ways. Landscapes for maritime peoples are especially fluid and traverse from the terrestrial to the aquatic, a division that fluctuates daily with the tides and through millennia with sea level oscillations. Defining the cultural landscape for maritime peoples, then, requires a framework that includes the diverse ways in which they inhabit and conceptualize their worlds. More than this, however, we must also consider the ways maritime peoples created and shaped their aquatic and terrestrial worlds, building anthropogenic ecosystems. Historical ecology provides a framework for how landscapes become "cultural" or "anthropogenic" and the complex role humans have played in creating the "natural" world. From such a lens, we can come to a more complete understanding of MCLs. **Δ**

References

Anderson, R. Scott, Scott Starratt, Renata M. Brunner Jass, and Nicholas Pinter.
2010. Fire and Vegetation History on Santa Rosa Island, Channel Islands, and Long-Term Environmental Change in Southern California. *Journal of Quaternary Science* 25(5):782-797.

Balée, William, and Clark L. Erikson (editors).
2006. *Time and Complexity in Historical Ecology: Studies in the Neotropical Lowlands*. Columbia University Press, New York.

Braje, Todd J. 2010. *Modern Oceans, Ancient Sites: Archaeology and Marine Conservation on San Miguel Island, California*. The University of Utah Press, Salt Lake City.

Braje, Todd J., Jon M. Erlandson, and Torben C. Rick. 2013a. Red Abalone, Sea Otters, and Kelp Forest Ecosystems on Historic Period San Miguel Island, California. In *Historical Ecology and Marine Resource Use in the Indo-Pacific Region*s, eds. R. Ono, A. Morrison, and D. Addison, pp. 85-96. Australian National University, Canberra.

Braje, Todd J., Jon M. Erlandson, and Torben C. Rick. 2013b. Points in Space and Time: The Distribution of Paleocoastal Points and Crescents on California's Northern Channel Islands. In *California's Channel Islands: The Archaeology of Hu-*

man-Environmental Interactions, eds. C. Jazwa and J. Perry, pp. 26-39. University of Utah Press, Salt Lake City.

Braje, Todd J., Jon M. Erlandson, Torben C. Rick, Paul K. Dayton, and Marco B.A. Hatch. 2009. Fishing from Past to Present: Long-term Continuity and Resilience of Red Abalone Fisheries on the Northern Channel Islands, CA. *Ecological Applications* 19(4):906-919.

Braje, Todd J., Douglas J. Kennett, Jon M. Erlandson, and Brendan Culleton. 2007. Human Impacts on Nearshore Shellfish Taxa: A 7,000 Year Record from Santa Rosa Island, California. *American Antiquity* 72:735-756.

Braje, Todd J., Torben C. Rick, Jon M. Erlandson, Megan Anderson, and Robert DeLong. 2011a. Conflicts in Natural and Cultural Resource Management: Archaeological Site Disturbances by Seals and Sea Lions on California's Northern Channel Islands. *Journal of Field Archaeology* 36(4):312-321.

Braje, Todd J., Torben C. Rick, Jon M. Erlandson, and Robert L. DeLong. 2011b. Resilience and Reorganization: Archaeology and Historical Ecology of California Channel Island Marine Mammals. In: *Human Impacts on Seals, Sea Lions, and Sea Otters: Integrating Archaeology and Ecology in the Northeast Pacific*, eds. T.J. Braje & T.C. Rick, pp. 273-296. University of California Press, Berkeley.

Braje, Todd J., Torben C. Rick, Jon M. Erlandson, Laura Rogers-Bennett, and Cynthia Catton. 2016. Historical Ecology Can Inform Restoration Site Selection: The Case of Black Abalone (*Haliotis cracherodii*) along California's Channel Islands. *Aquatic Conservation* 26(3):470-481.

Braje, Todd J., Torben C. Rick, Lauren M. Willis, and Jon M. Erlandson. 2011c. Shellfish and the Chumash: Marine Invertebrates and Complex Hunter-Gatherers on Late Holocene San Miguel Island, California. *North American Archaeologist* 32(3):267-290.

Cook, Taylor C., Kira James, and Maddalena Bearzi. 2015. Angler Perceptions of California Sea Lion (*Zalophus californianus*) Depredation and Marine Policy in Southern California. *Marine Policy* 15:573-583.

Crumley Carlo L. (editor). 1994. *Historical Ecology: Cultural Knowledge and Changing Landscapes*. School of American Research Press, Santa Fe, NM.

DeLong, Robert L., and Sharon R. Melin. 2002. Thirty Years of Pinniped Research at San Miguel Island. In *The Fifth California Islands Symposium*, eds. D. Brown, K. Mitchell, and H. Chaney, pp. 401-406. Santa Barbara Museum of Natural History, Santa Barbara.

Ellis, Richard. 2003. *The Empty Ocean*. Island Press/Shearwater Books, Washington.

Erlandson, Jon M., Todd J. Braje, Robert L. DeLong, and Torben C. Rick. 2015. Natural or Anthropogenic? Novel Community Reassembly after Historical Overharvest of Pacific Coast Pinnipeds. In *Marine Historical Ecology in Conservation*, edited by J. N. Kittinger, L. E. McClenachan, K. B. Gedan, and L. K. Blight, pp. 39-62. University of California Press, Berkeley.

Erlandson, Jon M., Torben C. Rick, and Todd J. Braje. 2009. Fishing Up the Food Web?: 12,000 Years of Maritime Subsistence and Adaptive Adjustments on California's Channel Islands. *Pacific Science* 63(4):711-724.

Erlandson, Jon M., Torben C. Rick, Todd J. Braje, Molly Casperson, Brendan Culleton, Brian Fulfrost, Tracy Garcia, Daniel A. Guthrie, Nicholas Jew, Douglas J. Kennett, Madonna L. Moss, Leslie Reeder, Craig Skinner, Jack Watts, and Lauren Willis. 2011. Paleoindian Seafaring, Maritime Technologies, and Coastal Foraging on California's Channel Islands. *Science* 331, 1181-1185.

Erlandson, Jon M., Torben C. Rick, and Curt Peterson. 2005. A Geoarchaeological Chronology of Holocene Dune Building on San Miguel Island, California. *The Holocene* 15:1227-1235.

Erlandson, Jon M., Torben C. Rick, and René L. Vellanoweth. 2004. Human Impacts on Ancient

Environments: A Case Study from California's Northern Channel Islands. In *Voyages of Discovery: The Archaeology of Islands*, ed. S. M. Fitzpatrick, pp. 51-83. Praeger, New York.

Gamble, Lynn H. 2008. *The Chumash World at European Contact: Power, Trade, and Feasting Among Complex Hunter-Gatherers*. University of California Press, Berkeley.

Gill, Kristina M. 2013. Paleoethnobotanical Investigations on the Channel Islands: Current Directions and Theoretical Considerations. In: *California's Channel Islands: The Archaeology of Human-Environmental Interactions*, eds. C. Jazwa & J. Perry, pp. 113-136. University of Utah Press, Salt Lake City.

Grayson, Donald K. 2001. The Archaeological Record of Human Impact on Animal Populations. *Journal of World Prehistory* 15:1-68.

Hardiman, Mark, Andrew C. Scott, Nicholas Pinter, R. Scott Anderson, Ana Ejarque, Alice Carter-Champion, and Richard A. Staff. 2016. Fire History on the California Channel Islands Spanning Human Arrival in the Americas. *Philosophical Transactions of the Royal Society B* 371(1696):DOI: 10.1098/rstb.2015.0167.

Johnson, John R., Thomas W. Stafford, Jr., Henry O. Ajie, and Don P. Morris. 2002. Arlington Springs Revisited. In *Proceedings of the Fifth California Channel Islands Symposium*, eds. D. R. Browne, K. L. Mitchell, and H. W. Chaney, pp. 628-632. Santa Barbara Museum of Natural History, Santa Barbara, CA.

Kay, Charles E. and Randy T. Simmons (editors). 2002. *Wilderness and Political Ecology: Aboriginal Influences and the Original State of Nature*. The University of Utah Press, Salt Lake City.

Kennett, Douglas J. 2005. *The Island Chumash: Behavioral Ecology of a Maritime Society*. University of California Press, Berkeley.

Kirch, Patrick V., John R. Flenley, David W. Steadman, Frances Lamont, and Stewart Dawson. 1992. Ancient Environmental Degradation. *National Geographic Research and Exploration* 8:166-179.

Krech, Shepard III. 1999. *The Ecological Indian: Myth and History*. W.W. Norton, New York.

Krech, Shepard III. 2005. Reflections on Conservation, Sustainability, and Environmentalism in Indigenous North America. *American Anthropologist* 107(1):78-86.

Redman, Charles L. 1999. *Human Impact on Ancient Environments*. University of Arizona Press, Tucson.

Redman, Charles L., Steven R. James, Paul R. Fish, and Daniel Rogers (editors). 2004. *The Archaeology of Global Change: The Impact of Humans on Their Environment*. Smithsonian Books, Washington, D.C.

Reeder-Myers, Leslie, Jon M. Erlandson, Daniel R. Muhs, and Torben C. Rick. 2015. Sea Level, Paleogeography, and Archaeology on California's Northern Channel Islands. *Quaternary Research* 83(2):263-272.

Rick, Torben C., Robert L. DeLong, Jon M. Erlandson, Todd J. Braje, Terry L. Jones, Jeanne E. Arnold, Matthew R. Des Lauriers, Douglas J. Kennett, René Vellanoweth, and Thomas A. Wake. 2011. Where were the northern elephant seals? Holocene archaeology and biogeography of *Mirounga angustirostris*. *Holocene* 21:1159-1166.

Rick, Torben C., Rober L. DeLong, Jon M. Erlandson, Todd J. Braje, Terry L. Jones, Douglas J. Kennett, Thomas A. Wake, and Phillip L. Walker. 2009. A trans-Holocene archaeological record of Guadalupe fur seals (*Arctocephalus townsendi*) on the California Coast. *Marine Mammal Science* 25:487-502.

Rick, Torben C., and Jon M. Erlandson. 2009. Coastal Exploitation. *Science* 325(5943):952-953.

Rick, Torben C., Jon M. Erlandson, and René Vellanoweth. 2001. Paleocoastal Marine Fishing on the Pacific Coast of the Americas: Perspectives from Daisy Cave, California. *American Antiquity* 66:595-614.

Rick, Torben C., Jon M. Erlandson, René L. Vellanoweth, and Todd J. Braje. 2005 From Pleistocene Mariners to Complex Hunter-Gatherers: The Archaeology of the California Channel Islands. *Journal of World Prehistory* 19:169-228.

2007 *The Archaeology and Historical Ecology of Late Holocene San Miguel Island*. Cotsen Institute of Archaeology, University of California, Los Angeles.

Rick, Torben C., and Rowan Lockwood. 2013. Integrating Paleobiology, Archaeology, and History to Inform Biological Conservation. *Conservation Biology* 27(1):45-54.

Schoenherr, Allan A., C. Robert Feldmeth, and Michael J. Emerson. 1999. *Natural History of the Islands of California*. University of California Press, Berkeley.

Swetnam, Thomas W., Craig D. Allen, Julio L. Betancourt. 1999. Applied Historical Ecology: Using the Past to Manage for the Future. *Ecological Applications* 9(4):1189-1206.

Timbrook, Jan, John R. Johnson, and David D. Earle. 1982. Vegetation Burning by the Chumash. *Journal of California and Great Basin Anthropology* 4(2):163-186.

Westerdahl, Christer. 1992. The Maritime Cultural Landscape. *International Journal of Nautical Archaeology* 21(1):5-14.

Westerdahl, Christer. 2007. Fish and Ships: Towards a Theory of Maritime Culture. *Sozialgeschichte Der Schifffahrt* 30:191-236.

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It's Not Just Garbage: Identifying Ceremony and Cosmology in Shell Middens

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Shell middens come in all shapes and sizes from small pits in the ground, to surface scatters, to enormous piles twenty meters tall and hundreds of meters across (Figure 1). There is a long-standing controversy in America as to whether the big prehistoric heaps of shell found along our coasts and inland waterways represent little more than the refuse of meals of former cultures or something with more social, ceremonial or ideological functions or meaning. Limited by their low opinions of cultures other than their own, many nineteenth century archaeologists concluded that yes, indeed, the shell mounds were simply garbage piles, and merely the refuse of feasting.

Today, archaeologists have largely abandoned such ideas, and for at least the last five decades have concentrated on addressing what the shell and vertebrate faunal remains in shell middens can tell us about past environments and how shell mound-building cultures adapted to those environments. This processual approach to shell middens has been an era of "telephone booth archaeology" in which the column sample reigned supreme and ranked species lists served as the data of reckoning.

Such environmental explorations are, of course, necessary and important to modern archaeological understanding of prehistoric maritime cultures and, up until recent years, shell mounds and rings, when they were examined at all, were the subject of these kinds of processual analyses—what did the folks eat and discard at these rings, and what did that tell us about their relationship with the environment? In the early 1990s, however, during a survey of NPS's Timicuan Ecological and Historic Preserve in Northeast Florida, two shell ring sites were discovered, and these begged deeper analysis.

Shell rings were circular and semi-circular "rings" of shell ranging from fifty to eighty meters in diameter and about a meter or two in height.

Figure 1: Shell middens

Dating between 3,500 and 5,000 years in age and at first found only along the coasts of South Carolina and Georgia, the peculiar shapes of the rings puzzled nineteenth century and early twentieth century investigators who recognized them as being made of the same kinds of shell refuse found in most shell middens, but who speculated that their shapes must have also held some social or spiritual significance.

The two rings discovered in the Timucuan Preserve were the first to be recognized in Florida and were a bit different. At two hundred or more meters in diameter and up to four meters high, they were much larger (Figure 2).

One of these, the Rollins Ring, actually consisted of one large ring, with thirteen smaller asymmetrically-shaped "rings" attached around its perimeter (Figure 3). Nothing exactly like them had been found in the heart of shell ring country in Georgia and South Carolina.

In 2006, the known forty-two Archaic shell rings along the South East U.S. coast were identified in a National Historic Landmarks Theme Study (Russo 2006) and the Fig Island shell ring complex of South Carolina (Figure 4) was listed in the National Register for its potential to yield important information on a national level of significance related to the

Figure 2

builders adaptation to the 4,500 year-old environmental conditions that existed at the time. And those conditions were far different than they stood at the time of nomination. The theme study recognized that all shell rings were originally built on high land in maritime forests. But contemporary Fig Island stood in a saltwater marsh subject to daily tidal submergences of its base deposits.

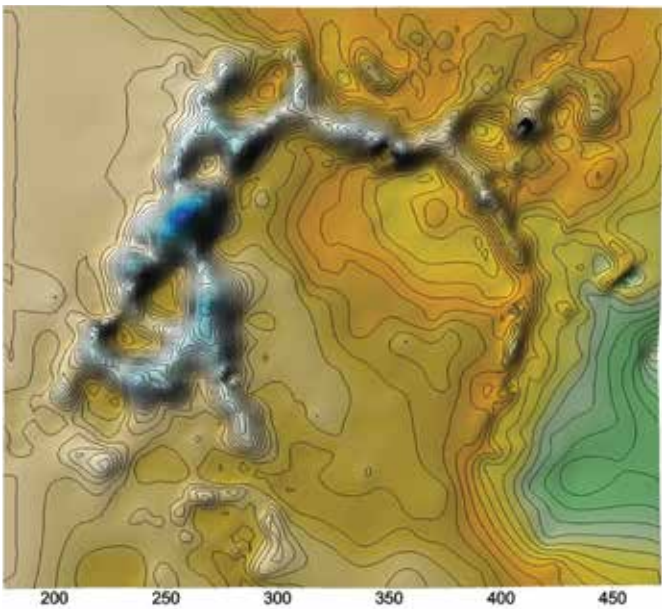

Figure 3

But for the first time, the Theme Study and nomination recognized shell rings as something other than just middens — as social places wherein the deposits which consisted of little more than food refuse held the potential to reveal insights into the social rankings of individuals and groups within the society, and communal events involving large-scale feasting that culminated in the construction of the rings as monuments. Using comparative analyses from circular communities throughout the world, and spatial theory of proxemics that analyzed "the

Figure 4

organization of space in houses and buildings, and ultimately the layout of towns" (Hall 1963), the nomination argued that all shell rings, regardless of their shapes as circles, Cs, or Us, were constructed of large piles of shell representing single, sequential feasting events, with the most shell being piled at points in the ring that spatial theory predicted were symbolically significant points in society often held by the economically and symbolically most important groups or individuals in a society in comparative analyses. The evidence for feasting was represented in cross-sectioning of the rings that reveal not sequential construction layers, but overlapping large piles of shell representing temporally isolated events. The nomination suggested that rings were not built in construction sequences like Mississippian mounds, but rather communally as the epiphenomena of periodic feasting events that resulted in large amounts of shell. Purposefully and intentionally, the shell from each feast was gathered in one location in the ring over the course of time, enlarging and increasing the height of the rings, with more shell being deposited in those particularly symbolic points in the circle, C, or U plan of the construction.

Also in 2006, potential symbolic meaning was beginning to be discovered in a different, much younger type of shell ring along the northwest Florida gulf coast. In northwest Florida, the Middle to Late Woodland archaeological cultures were known as the Swift Creek, identified by their complicated stamped ceramics, and the Weeden Island culture, identified by their intricate incised and punctuated ceramics and a series of effigy vessels that functioned primary as mortuary ware (Figure 5).

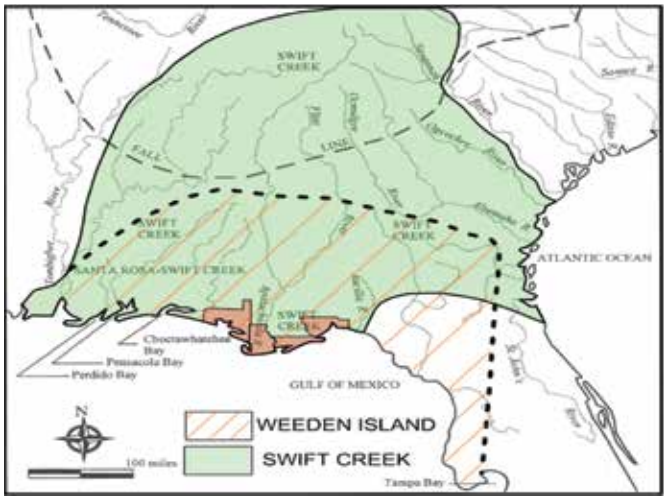

Figure 5

Many coastal Swift Creek and Weeden Island sites are demarcated by a roughly circular-shaped shell-bearing midden surrounding a "clean," level, open area or plaza (Figure 6). These sites have been termed "ring middens," "shell enclosures," or "annular middens." Aside from the organically-stained soils, coastal ring middens contain mostly animal remains (shell and bone) that are universally inferred to reflect the accumulated daily food discard of long-term occupants, either permanent or seasonal, and are most often interpreted to be the remnants of villages or base camps.

Figure 6

Many of the Woodland Period ring middens on the northwest Florida coast are adjacent to sand mounds that contained multiple burials, and it is these mounds that have received the most attention over the years, many of them being excavated over a century ago by avocational archaeologist Clarence B. Moore (1900, 1902, 1918). During the 1970s the operating model tended to describe the burial mounds as sacred areas and the adjacent ring middens as secular spaces (Percy and Brose 1974). This sacred-secular dichotomy is now recognized as being overly-simplistic, and subsequent excavation has shown that in many cases it is simply wrong, as evidence of ceremonial activities can be found throughout the ring middens and plazas (Russo et al. 2014). But the influence of that model has still been pervasive, and the mounds and ring middens are still often thought of and discussed as separate archaeological features, and in many cases even have separate site numbers despite being nearly adjacent.

For the last ten years, the Southeast Archaeological Center of the National Park Service has been working on a series of Woodland mound and midden sites at Tyndall Air Force Base near Panama City. The mounds were originally excavated by Moore, but little archaeological work had been done on the middens. The four sites at which NPS did their most extensive work are the Swift Creek Baker's Landing site, the Weeden Island Strange's Landing site, and the Pearl Bayou and Hare Hammock sites which have both cultural phases represented (Figure. 7). As a result of these excavations, and the large number of radiocarbon dates that were obtained, we have a very good understanding of both the relative and absolute local chronology for the area, as well as some intriguing observations on the nature of the shift from Swift Creek Middle Woodland to the Weeden Island Late Woodland. The past two years we have moved our focus farther east to Wakulla County south of Tallahassee, where we have found similar patterns in site formation, ceramic seriation, and chronology at several Woodland sites, particularly Mound Field and Byrd Hammock. This suggests that certain phenomena observable in the archaeological record associated with the shift from Middle to Late Woodland may have been regional in extent rather than isolated locally to the Tyndall Peninsula.

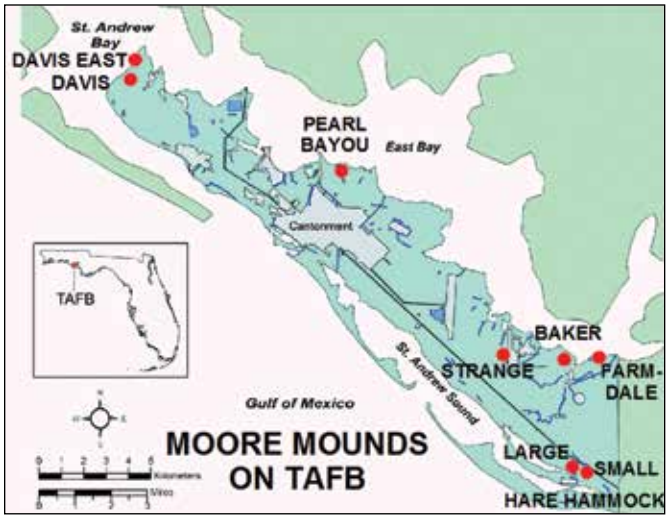

Figure 7

These patterns only became apparent, however, when we started to view these mound and midden sites through the lens of landscape archaeology, viewing the various components as part of larger, integrated spatial complexes. These complexes were laid out in a generally concentric ring formation from the central plaza to the outer edge of the ring and beyond to the mound, constituting five basic zones where community activities took place (Figure 8). The plaza represents the central, public/sacred space, surrounded by a ring of houses (temporary or permanent) oriented facing the plaza. Outside the domiciliary ring, a concentric ring of refuse lay behind the houses. This is where discard, represented by shell and other waste, was deposited. Among Swift Creek and Weeden Island communities, a fourth concentric zone beyond the refuse may be a vacant area between the ring midden and mound, and the final fifth ring is the space in which the burial mound would be placed. Together, these constituted the basic structure of the built environment at coastal ring midden sites in this area. In contrast to previous models that spoke of the ring midden as the sole quotidian component of the village, this model posits that all concentric ring zones constitute the landscape of the many and diverse activity spheres—including the ceremonial and ideological—that constituted village life.

When we expand our landscape view spatially to incorporate the greater coastal region and temporally to include the shift from the Middle to the Late Woodland, more patterns emerge (Figure 9). At the Swift Creek sites, the rings tend to be smaller and shell refuse tends to be heavily concentrated and evenly distributed around the entire circumference of the ring midden. With the Weeden Island sites, the shell is deposited only in certain locations within the ring, usually one side, and the ring itself is only fully discernable by looking at the distribution of ceramics.

The Weeden Island ring middens are also larger in diameter than their Swift Creek counterparts. Based on the time of occupation of the sites and the amount of shell in the middens, there is no evidence of an increase in population. So there had to be some other reason why the inhabitants of the Hare Hammock ring midden required more dispersed living areas with a larger plaza than their Swift Creek predecessors.

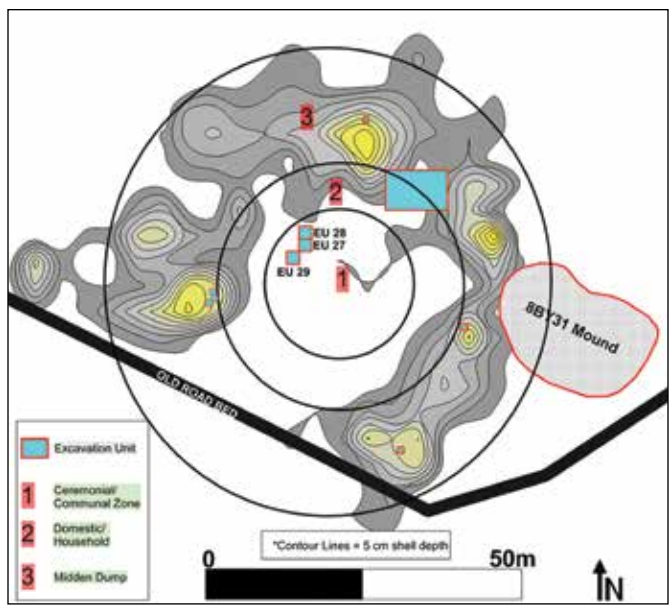

Figure 8

One of the more interesting conclusions we can draw from our extensive radio carbon dating is how rapidly the shift from the Swift Creek sites to the Weeden Island sites occurs. Around AD 650 to 700, the Swift Creek middens and mound go out of use and new Weeden Island middens and mounds appear, sometimes only a few dozen meters away as at Byrd Hammock and Hare Hammock. Within a very short period of time, coincident with the introduction of the Weeden Island ceramics into the area, the people of this region felt the need to not only shift their villages to new, larger footprints accommodating a much greater plaza area, but also

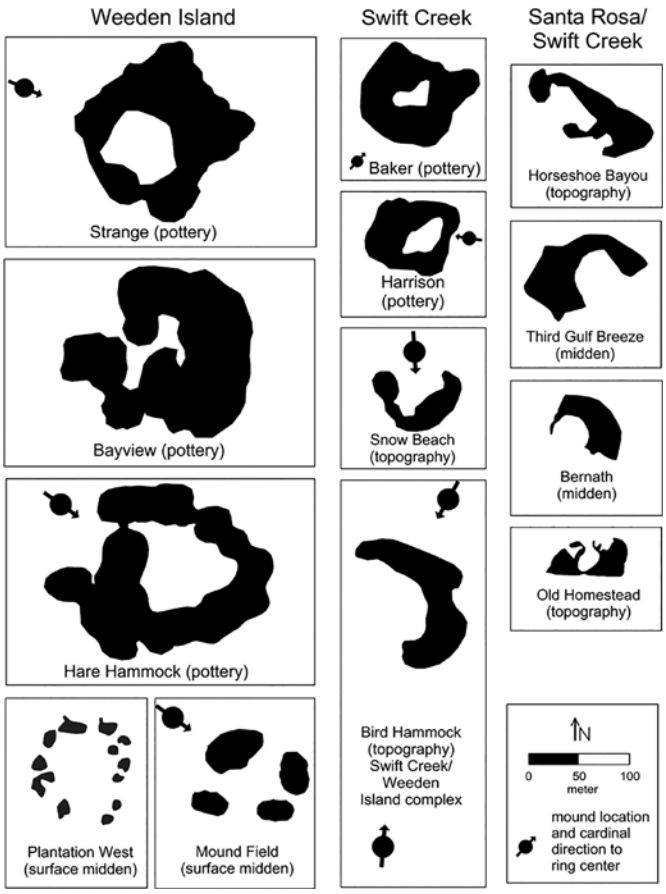

Figure 9

to construct a new burial mound with a possibly solar-oriented placement. At Hare Hammock there is even evidence suggesting that burials may have been exhumed from the older Swift Creek mound and reinterred in the new Weeden Island mound. So what we may have is evidence in the archaeological record of a new religious idea, a new mortuary cult that spreads through the region, but this is only something that becomes apparent when these sites are viewed collectively as a cultural landscape.

So by shifting our focus from looking at certain types of coastal shell middens as merely garbage and food refuse, and recognizing them as part of a larger cultural landscape, new social and ideological patterns can emerge and new archaeological and cultural significance may become discernible. Sites that when viewed in isolation may not meet the threshold for nomination alone, can instead become contributing elements of a greater cultural landscape. Δ

References

Hall, Eward T. 1963. A System for the Notation of Proxemic Behavior. *American Anthropologist*. (65.5): 1003–1026.

Moore, Clarence B. 1900. *Certain Antiquities of the Florida West-coast*. University of Alabama Press, Tuscaloosa, Alabama. Reprint 1999.

_____. 1902. "Certain Aboriginal Remains of the Northwest Florida Coast, Part II," *Journal of the Academy of Natural Sciences of Philadelphia* (12):127–358.

_____. 1918. "The Northwestern Florida Coast Revisited," *Journal of the Academy of Natural Sciences of Philadelphia* (16): 513–581.

Percy, George W., and David S. Brose. 1974. "Weeden Island Ecology, Subsistence, and Village Life in Northwest Florida." Paper presented at the 39th Annual Meeting of the Society for American Archaeology, Washington.

Russo, Michael. 2006. *Archaic Shell Rings of the Southeast U.S.* National Historic Landmarks,

Historic Context Study. Southeast Archeological Center, National Park Service. https://www.nps.gov/nhl/learn/themes/ArchaicShellRings.pdf

Russo, Michael, Craig Dengel, and Jeffrey Shanks. 2014. "Northwest Florida Woodland Mounds and Middens: The Sacred and the Not-So Secular," in *New Histories of Pre-Columbian Florida*, edited by Neill J. Wallis and Asa R. Randall. University Press of Florida, Gainesville, 121-142

Jeffrey Shanks has been an Archaeologist with the National Park Service for eight years. Prior to that, he worked for the Florida Bureau of Archaeological Research. He is currently the acting program leader for the External Programs and NHL division at the Southeast Archeological Center (SEAC) in Tallahassee. In recent years his primary area of research has been Woodland period sites on the northwest Florida Gulf Coast.

Island Landscapes of the North American South Atlantic: Deep Histories and Endangered Resources

Matthew Sanger
State University of New York at Binghamton

Edited Transcript of Presentation

Although lines between oceanic waters and coastal landmasses are subject to tidal fluctuations, and storm surges, and other intermittent changes, we often take the division between land and sea as stable and intractable. Modern sea level rises challenge these preconceived notions of shoreline stability and may soon require a reworking of how we speak of coastal landscapes. We may need to develop a new vocabulary to talk about new, old, and future coastlines, and to talk about inundated cities and ever-encroaching sea levels.

While this is a terrifying reality, this is not the first time humankind has been faced with a volatile and dynamic oceanic coastline. Archeological and geological studies have uncovered numerous sea level rises and drops over prior millennia. This paper investigates one such point of dynamic change coming to light through research in the American Southeast.

Geologic studies show that sea levels stabilize at or near modern levels roughly 4,700 years ago. Prior to this time, levels were significantly lower, and the coast was more than 50 kilometers away. For a variety of reasons, sea levels began to rise roughly 5,000 years ago, plateauing around 4,700 to 4,300 BP, at which point modern islands, coastlands, and marshlands formed.

We know little about how these sea levels impacted native peoples, but it's very likely that families were displaced, homelands were inundated, and residents of earlier coasts found themselves retreating from ever-encroaching coastlines. Likewise, people who once lived kilometers away from the oceans found the waters coming closer every year, as well as perhaps the peoples displaced from those coastlines. Arising at the same time as sea level stabilization was a novel human construction, categorized by archeologists as shell rings. Generally, these mounded deposits are made of oyster shells, with smaller numbers of clams, mussels, and periwinkles. Mounded deposits encircle open areas often described as plazas, which contain little or no shell.

Shell rings vary in size and morphology based on where they are located on the coast. Smaller circular rings, often occurring in multiples and near one another, dominate the coasts of Georgia and South Carolina. These rings generally measure between 50 and 100 meters wide, and deposits range from half a meter to a meter-and-a-half in height. In contrast, larger single rings typically formed as open arcs, are more common in Florida. Florida rings often measure several hundred meters in length, and can reach heights of more than four meters.

The function of shell rings has been much debated. Earlier researchers saw them as fish traps or defensive structures. Although still contentious, recent research, such as what we just heard, discredit these earlier theories, and instead suggest that shell rings were places of residence, and perhaps also areas for communal gatherings.[1] The creation of shell rings is of broader anthropological interest, as they were constructed by non-agricultural peoples. Ring builders were fishers, and hunters, and gatherers, who fed themselves without reliance on domesticated foods or animals. The fact that these non-agriculturalists invested significant efforts in creating such massive rings upsets traditional anthropological notions that assume hunter-gatherers lived hand to mouth and had no time, ability, or inclination for the creation of large-scale constructions.

My current research focuses on two rings on St. Catherines Island, Georgia. St. Catherines Island is one of the many sea islands that populate the southeastern seaboard. Sea islands are barrier islands, meaning they are long, narrow deposits of

1 Editor's note: See paper by Jeffrey Shanks.

sand running parallel to the coastline. Separated from the mainland by shallow bays and intracoastal waterways, and from one another by narrow tidal inlets, barrier islands protect vast marshlands from the open sea, and form a critical part of the coastal ecozone. Prior to sea level stabilization, St. Catherines Island was a high dune ridge, but as sea levels rose and the lower elevations behind the island filled, it became an island, and was quickly populated by people.

The earliest sites that we have on St. Catherines Island are two shell rings located on opposite sides of the island. Almost 50 radiometric dates have been drawn from the rings and show they are largely contemporaneous. The St. Catherines Shell Rings are moderate in size. Each is roughly about 70 meters wide, and shell deposits range between half a meter to a meter-and-a-half in height. Almost a decade of research shows that these were homes to small resident communities who held festivals and feasts that brought together people from across the region. A key finding from this research, and one that I want to focus on in this presentation, is how St. Catherines Island Shell Rings were implicated in larger social networks, and likely served as a critical locus of trade, interaction, and communality.

These findings run counter to traditional narratives that assume ancient hunter-gatherers lived in small groups that rarely interacted with one another. Instead, traditional narratives prefer to see the creation of large communities of deeply interrelated peoples as arising alongside agriculture and societal complexity. Instead, findings from the St. Catherines Island shell rings clearly show that pre-agricultural peoples engaged in exchange and communication at a variety of scales, many far beyond the presumed norm. These findings are important for a number of reasons, not the least of which is that they show coastal peoples have long been involved in expansive social networks, and likely conceived of their landscape as extending well beyond their immediate environments.

This is particularly important for the study of island peoples, as archeologists are often content to study single island landmasses and assume the boundary between themselves and the mainland was an important boundary for past peoples as well. The findings offered in this paper clearly repudiate this limited view, and instead show that ancient Native American communities had an expansive understanding of their social landscape that did not stop at the water's edge. As such, terms like "maritime cultural landscapes" are vitally important, as they blur lines between aquatic and terrestrial spaces, as human actions and practices commonly involve both realms.

To develop an appreciation of the scale of movement, exchange, and communication occurring at the shell rings, we can first turn to the most common object found at them, the shells themselves. As already noted, oysters are the most common component of shell rings. For a long time, archeologists assumed that these were being gathered from nearby local environments. To our surprise, research on St. Catherines Island shows that oysters were collected from relatively distant waterways more often than not. Using the shape of the shells as proxy for their home ecozone, a large portion of oysters did not originate in the small intertidal creeks and marshlands abutting the rings, but rather came from high-velocity or more sandy conditions. We can not definitively say exactly where these shellfish originated, but they most likely came from areas closer to the mainland, from marshes more distant, and from intertidal coastways.

Our findings are replicated on nearby Sapelo Island, where research using isotopic data also showed that shellfish built in shell rings were commonly gathered from locales several kilometers distant. Traditional interpretations assume that more distant shellfish were collected because local sources were over-harvested, yet our data from St. Catherines Island repudiates this idea, as we have no evidence of over-harvesting. Specifically, size and age of shellfish, which are our two best indicators of over-harvesting, remain the same throughout the deposits of both rings. In other words, residents of both rings were collecting shellfish from relatively far away and bringing them back home, even though their local sources seem to be unaffected.

The fact that shells were brought back at all strongly suggests that boats were being used, because if boats were not used, native peoples most likely would not have been bringing back the bulky shells with them. They probably would have shucked them where they collected them. Even if we assume boats were being used, we still need to address why shell ring residents chose to gather shellfish from relatively distant locales.

There are several possible answers to this question. Perhaps shellfish were being collected alongside other tasks taking place around the islands. Perhaps communities or families owned shellfish beds that were more distant from their homes. Now, I can't disprove any of these theories, but I'd like to propose an alternative hypothesis that ties this data to the rest of the data that I'll provide in this paper. That is that shell ring residents were very conscious of spacial and ecological diversity, and strove to bring objects and animals from these different locales together within the rings themselves.

To reinforce this theory, we can turn to the excavations conducted in direct centers of the rings. At the St. Catherines Shell Ring located on the western edge of the island, the ring's center was marked by at least six, maybe nine, maybe even 10 different pits that all overlap each other. These are large pits, measuring about a meter to a meter-and-a-half in width, most of them being more than a meter, sometimes two meters deep, and reaching the water table below. They were isolated from any other features around them. These were places just in the direct center of the ring with no other features in their vicinity.

Their placement, isolation, remarkable depth, and multiplicity in such a small space suggests that these pits were meaningful, although we struggle with what that exact meaning is. They seem to lack any clear utilitarian purpose, however, as they are too large to be post holes. They show no signs of being used to haul trash or hearths. They may have been used for storage, but since they reach this water table, they would have been a wet environment, something not very amenable to storage.

The contents of the pits are somewhat equivocal about what they were used for, yet they suggest they were invested with cosmological meaning. Specifically, the most striking object found in the pit was a discoidal stone, worked and polished to form a smooth face. This is the only ground stone found at either ring, and has no clear utilitarian purpose. It certainly originated off the island, as there are no natural stone sources either on the island or nearby mainlands. Instead, a likely source is roughly midway up the Savannah River, where similar discoidal stones have been found in contemporaneous sites, such as Stallings Island.

We have other evidence for connections between people living along the Savannah River and the residents of the St. Catherines Shell Ring, including stone tools made from materials found along the Savannah River and pottery that is remarkably similar between Savannah River peoples and peoples living on St. Catherines Island. Now, at Stallings Island, discoidal stones were often found alongside human burials, and were thought to have some sort of ritual purpose. It is possible that the center pits at St. Catherines Shell Ring were also used for human burial, because we have found a number of heavily-fragmented and calcine bones. Now, to date, none of these bones have been identified as human, but rather appear to be nonhumans, including deer and birds. This data is incomplete, however, as the bones were so burned and so broken that only a handful have been identified.

A more complete picture is available from the second shell ring on St. Catherines Island, McQueens Shell Ring, where, in consultation with the Georgia Indian Council, a mixture of human and nonhuman bones were recovered from a single, central pit. Analysis revealed the presence of at least six human individuals within this pit, as well as an unusual conglomeration of nonhuman bodies. Human and nonhuman bodies were treated in much the same manner, as both were burned and crushed into small fragments. Human and nonhuman remains were then mixed together, either prior to or while being placed in the pits in the center of McQueen.

The nonhuman remains found in the center of McQueen were almost certainly not the remains of food consumption, or, if they were, these were not normal foods. I make this assertion based on the animals found in the ring center, including skeletal remains from a sperm whale. To my knowledge, this is the only whale found in an Archaic site from the American southeast. Based on morphometrics drawn from a vertebrae, this whale was a fully-grown adult and, based on its condition, was drawn from a complete body rather than being a random element perhaps washed up on shore.

Beyond the unusual, even unheard-of presence of a whale bone, the nonhuman remains included other rare animals, including birds. The remains of birds are rarely found anywhere else at the ring, yet make up a sizeable proportion of the finds from the center. The birds found in the center of McQueen are even more notable, in that birds recovered elsewhere include ducks, sparrows, and ground-nesting species, while the vast majority of birds found at the burial pit were birds of prey, including falcons and eagles. Numerous alligators and dog remains were also found in the burial pit, along with an eagle ray—all animals rarely or never encountered elsewhere in the ring. Finally, deer bones were quite common, but unlike elsewhere in the ring, where deer legs, ribs, and vertebrae were typically recovered, almost all the deer bones from the ring center were cranial elements.

How do we understand this odd conglomeration of human and nonhuman bodies? Traditional archeological interpretations would assume some level of ritual imports to these animals, and likely leave it at that. Perhaps this is all we can say, although zooarcheologists Elizabeth Reitz and Carol Colaninno suggest that we can get more out of these finds, as they posit these animals form a powerful conglomeration of creatures that reference a tripartite understanding of the world as divided between above, middle, and below worlds—divisions that translate into elemental divisions between air, earth, and water. In Colaninno and Reitz's interpretation, each animal is chosen for interment because they reside in particular elemental spheres, and likely reflect or symbolize the power of those locales.

Now, it's possible that Elizabeth Reitz and Colaninno are correct, yet this is quite difficult to test empirically. Something that we can say with more certainty is that these animals that were drawn together, all originate in different spacial and ecological locales. Specifically, whales live in deep oceanic waters. Rays are found in the surf. Deer live in maritime forests, birds of prey in meadows and along waterways, and dogs among human villages. Thinking back to the shells that make up the ring, which were drawn from multiple locales, I suggest a theme of collection is occurring, a particular type of collection in which spacial and ecological diversity is being referenced even as it is being collapsed to form these interesting conglomerations of objects and animals and peoples.

Although this theory is clearly speculative, material remains from McQueen echo this interest in drawing together objects from diverse locales. In contrast to the stones found in the center of the St. Catherines Shell Ring, which were largely sourced in the nearby Savannah River and local waterways, stones found in McQueen often originated in far more distant locales. These include dark chert in the Appalachian Mountains and associated valleys, as well as pieces of petrified wood whose origin points are unknown but are not local. Pottery from McQueen is also decorated in manners unlike those from St. Catherines Shell Ring, and are more similar to vessels found in Florida. These finds suggest significant networks of communication spanning much of the southeastern United States.

Although impressive, the distance incurred in the movement of pottery and stone pales in comparison to the most surprising find from McQueens Shell Ring, a piece of worked copper from the ring's center. This object may be an armband or similar piece of personal adornment, as it has been hammered flat and is exceedingly well-made. Copper use is extraordinarily rare in the American southeast, particularly during the Archaic Period. A few copper beads have been reported from Florida and South Carolina that may be Archaic in age, and small items have been recovered from Poverty Point, located in Louisiana.

These items are not locally made, however, and instead, originate much farther to our north. They originate from the Great Lakes region, where copper working was relatively common at the time. Preliminary compositional studies show that copper from St. Catherines also originated from the Great Lakes, some 1,500 kilometers distant. At this time, we can only speculate about how this copper object traveled from the Great Lakes to St. Catherines Island.

On their own, each piece of evidence for exchange and communication is somewhat precarious. Yet when taken together, a pattern emerges. At a variety of scale, beginning at the local level, animals from diverse ecological zones are brought together, either to form the arc of shell, or to be cremated and buried alongside human remains in the center of the ring. Moving beyond the local level, we find a slight divergence between the two rings, with people at the St. Catherines Shell Ring drawing together stones and pottery styles from the supra-local level, while people at McQueen extend to the regional level. Finally, the extent of interactions reaches a subcontinental level at McQueen, where the copper object ties together people living along the Great Lakes with those from the southern Atlantic seaboard.

Taken together, the finds from St. Catherines shell rings challenge traditional notions of simple hunter-gatherers living along the coastline and, instead, suggest an expansive network of social ties spanning half the continent, including the coast as an important node. These finds are important to our current discussion regarding marine coastal landscapes, because they highlight the usefulness of thinking about expansive social networks and conception of space going back to the very formation of our current coastline, if not before.

Certainly, the adoption of agriculture and the invention of more powerful modes of transportation allowed the creation of new types of maritime landscapes, but this does not preclude the consideration of hunter-gatherers engaged in similar life-ways that cross traditional boundaries between land and water. Because of modern sea level changes, places like St. Catherines Island are threatened by erosion and inundation. Current estimates suggest vast portions of the island will be lost in the next few decades, and with this destruction will come an irreversible loss of the archeological record, including sites like shell rings, which hold valuable information demonstrating that humankind has adapted to and lived along the water's edge for millennia. Thank you. Δ

Matthew Sanger is the Director of the Public Archaeology program at Binghamton University and conducts research on hunter-gatherer sites across the Eastern Woodlands. His primary research area is in Georgia and South Carolina where he studies Native American adaptions to coastal landscapes that had first formed during the Archaic period. Depending on Native American philosophers and writers, Sanger strives to expand archaeological understandings of adaption and ecology to include indigenous worldviews that embrace expansive understandings of living landscapes, populated by powerful non-human entities, and open to meaningful communication. Sanger's methodological foci revolve around employing new technologies, such as computed tomography, to better understand the past through material studies.

Maritime Cultural Landscapes in Motion: Futures Past along the Northern Gulf Coast of Florida

Kenneth Sassaman
University of Florida

Edited Transcript of Presentation

I don't mind telling you that I'd never heard of Maritime Cultural Landscapes before Mike Russo called me a couple months ago to invite to this symposium. He suggested that I read Westerdahl's 1992 article and the introduction to Ben Ford's 2011 edited volume. And so I did, finding a few points of entry and the encouragement that I actually could contribute something to this effort. I also sensed an opportunity to address what has been nagging me since my midlife crisis, which is to make archeology more relevant to public policy beyond historic preservation. The readings Mike recommended also encouraged me to rethink the landscape concepts that I had, until recently, applied to only terrestrial settings. My theoretical proclivity in thinking about landscape and dwelling is phenomenology, a paradigm that is gaining purchase on making sense of maritime cultures.

Phenomenology may sound a bit scary, but it is simply the study of the subjectivity of experience. Archeologists of ancient indigenous history do not have direct access to the subjectivities of those they hope to understand. We have less trouble documenting experience we tend to objectify: we can reconstruct the biophysical world that people inhabited, and we can model how people made a living in that world, the resources they collected, where they chose to live, bury their dead, and so forth. We tend to think of these as the more objective conditions of human existence, the stuff that impacts directly the biological well-being and social stability of people.

The *subjectivity* of experience, as opposed to the *substance* of experience, is not something archeologists can infer from material remains alone. One would have to live through the experiences of a given time, place, and people in order to appreciate how experience was perceived and how it informed action or practice. This latter uncertainty underscores the relevance of subjectivity to the material world in that historically situated frames of references, or ways of seeing, prefigure material outcomes as those very material outcomes prefigure future experience.

The biggest impediment in this logic to archeological inference is the dissonance between the subjectivity of those whose experiences we hope to understand and the subjectivity of the archeological enterprise itself. I am not descended from the indigenous coastal people I study through archeology; even if I were, I could never claim to have experiential knowledge about life on the coast 1,500 or 4,000 years ago. "Who would?" I once asked rhetorically in a public lecture in Berkeley. A person of Native American identity suggested that I "just ask any Indian." By that she meant, basically, ask anyone who was not subject to (victim of) the enlightenment, Cartesian reductionism, and everything else that structures Western ontologies. Nonwestern ontologies provide good alternatives to western logic and have analytical value inasmuch as they are structured by actual experience, for which we have some archeological purchase.

With an overarching interest in the impact of sea-level rise on coastal living, my graduate students and I started in 2009 a long-term survey project on the northern Gulf Coast of Florida in partnership with the U.S. Fish and Wildlife Service. Founded in a phenomenological perspective, the project was designed from the start to involve more than archeology. It involved spending time with people in the historic fishing community of Cedar Key. It involved experimental working the estuary. And it involved living in that environment, being in that place, learning what it was like to deal with the tides and the winds and the storms. It involved being stranded on an offshore island during a blowout tide of winter, and enduring the interruption to boat travel with an abundant supply of subtidal oysters.

The experiences of ancient coastal people most relevant to own our futures are those associated with sea-level rise. I am particularly interested in understanding the connection between the per-

ception of sea-level rise and interventions taken to avert its negative impacts, to basically anticipate futures and not live by fate alone. Part of the bias of a western mind is that we think of nonwestern peoples, modern and ancient, as subject to fate alone. It did not take me long to understand that this would never be the case for those dwelling in an environment of constant motion.

My emphasis on futures is more than theoretical posturing; it is intrinsic, I think, to the rational for cultural resource management. The spirit of statutes protecting cultural resources reside in the *potential* to provide information important to history. In this sense we can think of the historical value of anything archeological, including MCLs, to reside in futures planning. It follows that the archeological record can be viewed as an archive of futures past, the consequence of actions taken in the past to intervene against uncertain futures. I believe that when we suspend disbelief about the passivity of ancient coastal people, we confront the traces of temporalities that far outstrip the short-term perspectives of modern planners. I contend that indigenous people of the ancient past viewed pasts and futures at the scale of centuries, and were able to inscribe memories of change in material forms that endured for millennia.

Living through, perceiving, and anticipating change is the consequence of patterned variation in motion. Maritime cultural landscapes are in constant motion. There are intrinsic movements in coastal environments that are experienced at various scales. Water moves constantly, but in asynchronous rhythms: there are the tides, with multiple temporal cycles; currents and winds that flow constantly, but at different rates and directions; sediments move around eventfully; and biota, including human bodies, travel out of sync. There is constant movement. That's the first thing that struck me working on the Gulf Coast. To these intrinsic qualities we can add extrinsic movements, things that arrive from "outside." I think that Westerdahl, near the end of his classic article, raises the point that MCLs have to be conceptualized as open-ended, because there are movements of things in and out of them—not only storm events precipitated by global forcing variables, El Niños, and long-term trends like rising postglacial seas, but also migrations of humans, animals, and plants with extralocal origins.

Synergies of movement take us to a higher level of complexity for which long-term perspectives and lived experience bear relevance. For instance, we learned from our colleagues in geology that the low-lying salt marshes of our study area are often able to keep pace with rising sea. Over the past several thousand years, in fact, there have been multi-century stretches of time during which marshes aggraded at rates equal to eustatic sea level rise. Critical to this synchronicity of change are the health of oyster reefs, which entrap both the freshwater that empties into the Gulf of Mexico from rivers and springs, as well as the sediment of marsh aggradation. Given how sediment-poor freshwater run-off is in the region, the coastal erosion of Pleistocene sand dunes supplied the necessary substrate for both marsh aggradation and the offshore sand shoals that support productive sea grasses. Anything that reduces the health of the oyster reefs has the potential to diminish the overall quality of the estuary. In recent years, for example, the extraction of groundwater upriver has decreased freshwater input in the Gulf, which then led to salinity levels conducive to parasitism of oysters, the collapse of the reef, and the loss of structural impediments to near-shore erosion. Storm events under these circumstances then have the potential to "overstep" shorelines and erode marshes to the point of abrupt and impactful sea-level transgression. The upshot is that change can be very eventful, often catastrophic, but it is the result of long-term processes that involve many moving parts, not all of which are in sync.

Maritime Cultural Landscapes of such historical complexity pose several challenges for archeology. One is the sense that although we study the past, it is not for the sake of the past, but instead the present and future. The spirit of the law may allow that we study the past to plan for the future, but the letter of the law does not clearly mandate that. There is nothing in law mandating that every archeological site that is identified as being significant provide results that can be mobilized for futures planning. However, federal agencies and programs geared towards futures planning expect archeologists to look forward too,

not just back. When I first started working on the coast I looked into the Sea Grants program administered by NOAA. The first thing the Sea Grants administrator for Florida told me was, "Hey, archeology's cool and but how can you package it in a way that will help the economic viability of coastal communities? Or, how can you package it in a way to help us understand the ecological sustainability of these local environments?" He was insinuating, through the filter of public policy, that archeological knowledge had no intrinsic value to the modern world. As far as Sea Grants was concerned, its relevance had to be attentive to modern and future concerns.

This leads to a second implication. Instead of looking at archeology as an archive of extinct experiences and past humans who lived their lives and then evolved into something else, we can look at the archeological record as an archive of alternative futures. By this I do not mean simply contrivances about the past that we can mobilize for our own futures, but the sense that all our ancient counterparts intervened in their worlds to determine their own fates, that they anticipated, through mobilizing knowledge about their own experiences, what was to come. This, I think, is largely a matter of experience and social memory, a matter of recognizing long-term patterns, and sensing when those patterns are disrupted and demand intervention. Certainly, there were many moments in ancient time when events occurred for which people had no prior experience and thus could not have anticipated. Such events at times precipitated existential crises, with consequences for daily practice and land use, as well as ritual traditions. These sorts of revolutionary moments are what make up the divides between our cultural-historical periods and phases. In his presentation, Jeffrey Shanks provided a good example: the cosmological transformation from Swift Creek to Weeden Island, which in fact may have coincided with a major environmental event like the overstepping of rapid sea-level rise.

One final implication before delving into our project results is that our narratives about the past need not be linear, nor dependent on continuity. One of the dilemmas we face as archeologists is that if we aim to mobilize knowledge about the ancient past for our own futures, are we obliged to establish continuity of practice or the continuity of human lineages, the sort of evidence that would allow us to use the direct historical approach and talk about homologies of practice, not simply convenient analogs? I am not sure any of that matters as much as we may think. I am reminded of a point Jim Delgado made yesterday in regard to shipwrecks no longer on the beach. As long as there's a memory about that ship, there is the attenuation of values and meaning that could be reinterpreted and redeployed for various purposes, and that does not require a continuity of physical reality for that to happen. I think that is true generally of the maritime landscapes of our study area. These landscapes accreted not only marsh sediments and oyster reefs, but also massive amounts of anthropogenic deposition that enabled a future no one anticipated so long ago. The town of Cedar Key, for instance, wouldn't exist today were it not for the 2-3 meters of shell midden that accumulated between 4000-2000 years ago. It would instead be underwater. And its namesake industry, cedar harvesting, would not have been possible were it not for the calcareous soils of shell middens that enhanced cedar production. Despite discontinuity of practice and heritage, the experiences of coastal dwellers hundreds, even thousands of years ago not only provide relevant historical touchstones for dealing with future change, but also the physical realities that preconfigured recent life on the northern Gulf Coast (i.e., where to live, how to make a living).

Lower Suwannee Archaeological Survey

Our long-term coastal project, The Lower Suwannee Archaeological Survey, involves the inventory and assessment of sites along a 42-km-long stretch of the northern Gulf Coast of Florida, roughly coincident with the Lower Suwannee and Cedar Keys National Wildlife Refuges. This map in Figure 1 shows the study area and some physiographic features worth noting. There's not much historic bathymetric detail here, but the shoreline of 5,500 years ago is marked by the bold dashed line. The dashed linear polygons in Gulf water are the major oyster reefs that formed after 5,000 years ago. The shoreline today is crenulated with tidal creeks, peninsulas, nearshore hammocks, and offshore islands. Dividing the shoreline of the study area is the Suwannee River and its delta, the major source

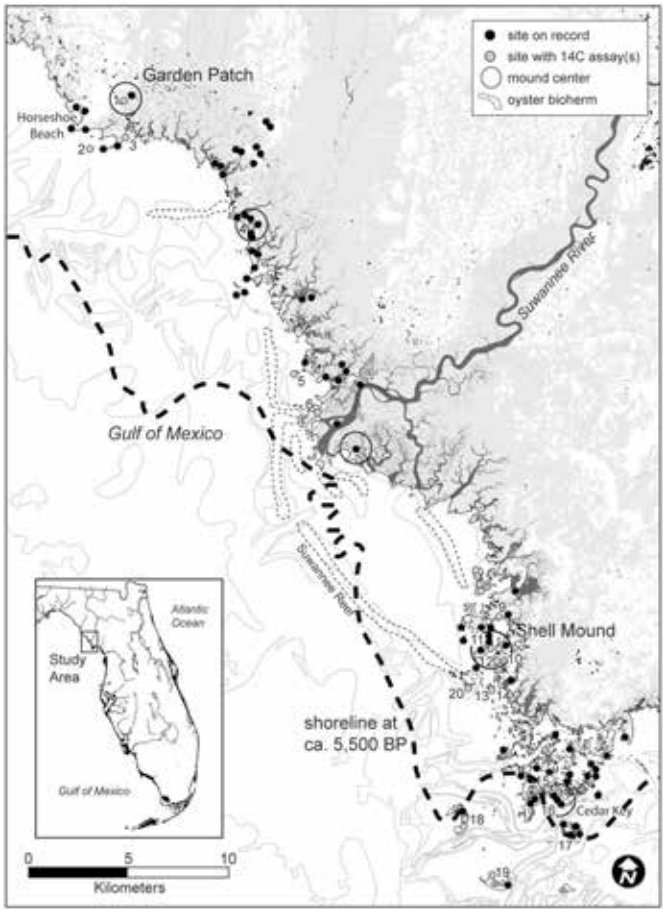

Figure 1: Map of the study area of the Lower Suwannee Archaeological Survey, showing archeological site locations, mound centers, oyster reefs, and the shoreline at ca. 5,500 years ago.

of freshwater for this wind-driven estuary. As noted, the river is not a great source of sediment, but sandy dunes in the area make up the difference. These are parabolic dunes that formed in the Pleistocene, when sea level was as much as 100 m below present levels and the shoreline 250 km to the west. As the sea rose over ensuing millennia, dunes eroded and the sands were redistributed in spits, shoals, and salt marsh. Relict dune features surviving erosion and inundation often contain archeological deposits, including cemeteries emplaced on the ends of dune arms, a practice that seems to have endured for at least two millennia.

Our survey methods are varied but generally depend on reconnaissance of the ever-eroding shorelines of islands and the mainland, much as Todd Braje described for coastal surveys in California. We actually got a head start from local citizens who collected eroding sites for years. Some individuals not only shared everything they knew about the area, but also donated their collections. In two cases the collectors keep site-level provenience and they tended to pick up everything, even tiny sherds and flakes of chert. Some of the bigger sites in the area were already well known to archeologists, notably those with mounds of earth and shell, as well as cemeteries. Bear in mind that the archeological record of coastal dwelling in the study area, as with that of most of the Gulf and Atlantic coasts, was truncated at about 5,000 years ago by rising sea. Coastal sites predating 5,000 years are today either inundated in water and sediment, or eroded by transgressive shorelines. Sites dating since then have at least ephemeral terrestrial components, with the exception of the period of ca. 3,500-2,900 years ago, an apparent hiatus in coastal settlement, or possibly a coastal regression. Settlement after about 2,000 years ago was at times intensive, especially when Woodland-period civic-ceremonial centers were constructed at several locations in the study area, and beyond.

Our study area is divided into five survey tracts (not shown in Figure 1), each centered on a cluster of known sites, at least one of which includes mounds and the related infrastructure of civic-ceremonial centers. In addition to the centers, sites with shell deposited in rings, ridges, and other forms signal diverse traditions of landscape architecture, or, arguably, terraforming, meaning constructions of cosmological design. Deposits are sited and formed in ways that suggest attention to celestial cycles. The placement of cemeteries, for instance, seems to acknowledge the setting winter solstice sun. As I noted earlier, cemeteries dating as early as 4,500 years ago were sited on the ends of parabolic dune arms. As nature would have it, dunes formed from Ice Age winds blowing from the southwest, migrating on an azimuth of about 60 degrees east of north, the direction of the summer solstice rise. Its reciprocal azimuth (240 degrees east of north), the direction of dune arms, or horns, is the winter solstice set. Such was the maritime landscape for people attuned to the annual solar cycles, among other celestial cycles. Like the periglacial fissures beneath Stonehenge that pointed to the solstices, the dunes of the study area inscribed solar movements on the earth that could be used not only for calendrical purposes, but to monitor changes on the land, relative to dunes, and, if so inclined, impose temporal order to such change by referring it to cosmic cycles.

After a history of experience dwelling in this maritime setting, terraforming the landscape, and emplacing the dead at the end of dune arms, civic-ceremonial centers cemented in place, for about 200-300 years, places of large-scale ritual gathering. At the one known best to us, Shell Mound, just north of Cedar Key, people gathered during summer solstices for ritual feasts. We have uncovered traces of the massive infrastructure required to feed large gatherings of people (Figure 2): many pits that were used as earth ovens up to 2 m wide and just as

Figure 2: The infrastructure of ca. AD 550 summer solstice feasting uncovered at Shell Mound (8LV42), Levy County, Florida.

deep; the sherds of earthenware pots up to 15-gallons in volume that were made, used, broken, and discarded in the span of one event; and evidence for large fish traps. We even have good evidence for oyster mariculture thanks to the work of Jessica Jenkins. Inside the large pits at Shell Mound we find the bony remains of feasting, including large quantities of mullet, drum, jack, and other large fish, marine turtles, and fledging sea birds. As Josh Goodwin has shown, the bones of juvenile white ibis are especially common and they provide some of the best evidence for summer solstice timing. Large-scale gatherings and the subsistence economies they intensified were suspended at about AD 650, but cemeteries continued to receive pottery, if not also human bodies, through the 12th century.

Beyond sites of ritual activity, the study area has some very well stratified sites—particularly on offshore islands tested by Ginessa Mahar—that register changes in environment and land use over the past 5,000 years. These sites also register the sedimentary consequences of storm surge, and periods of abandonment following such events. Coupled with work at centers and other sites, stratified sites provide excellent opportunity for building a detailed chronology of land use from radiometric assays. So far we have obtained around 100 AMS assays from good contexts at about 18 sites. It will take hundreds more dates from many more contexts to construct a chronology sufficient to monitor both environmental and human consequences of sea-level change. As the chronology now stands, we have some substantial gaps, notably the one I mentioned earlier. We also must refine our reconstructions of relative sea level and the magnitude and tempo of overstep events beyond those already established by geologists. The recent geoarcheological work of Paulette McFadden is a big step in that direction.

Alternative Futures Past

Technical results of the Lower Suwannee Archaeological Survey are available in open access reports through the Laboratory of Southeastern Archaeology, University of Florida (http://lsa.anthro.ufl.edu/publications.html), as well as a variety of academic publications (https://florida.academia.edu/KennethSassaman). The work is ongoing, with the hope that team members will monitor and investigate sites as they succumb to inundation and erosion as sea continues to rise in decades to come. Here I want to close by briefly touching on four examples of futures past, or alternative futures, in the emerging archeological history of the study area.

The first has to do with land-use patterns in the Late Archaic period (ca. 5,000-3,500 years ago) when, after several prior millennia, the rate of sea-level rise slowed to a pace that may not have affected every generation. Still, they seem to have maintained a land-use practice of siting settlements back from the intertidal zone and accessing subtidal resources via tidal creeks. Even with sea level down at least one meter below present levels, Late Archaic sites several kilometers from the subtidal zones today contain the shells of high salinity species like scallop. Their land-use reflects a set-back sensibility for places vulnerable to storm surge and inundation. It is as if the permanent infrastructure of Miami Beach were set back to the landward ridge of Hialeah, which would be less vulnerable to flooding.

The second futures past also traces to Late Archaic practices, in this case the siting of cemeteries. We had the experience a few years ago of rescuing a cemetery—at the behest of the Florida State Archaeologist and with the consent of the Seminole Tribe of Florida—that was washing out of the beach face of an island known as McClamory Key. Two other cemeteries of this age have also been exposed by erosion on islands distributed evenly along the study area coastline. They were all emplaced at the end of what at the time would have been a dune arm, and they are all at the same elevation and orientation. With sea level down at least one meter, these cemeteries would have been emplaced back from the coast, like their settlements. More to the point, most of the individuals in these cemeteries were secondary interments, meaning they had decomposed elsewhere, probably were disinterred and then reinterred in the cemeteries we see eroding today. I have been working with the hypothesis that these secondary burials were removed from cemeteries that were being exposed by coastal erosion about 4,500 years ago, much as these are today, but farther seaward, at now inundated coastlines. If so, Late Archaic people anticipated futures by relocating their ancestors to future coastlines, all structured by cosmological principles involving dunes and solstices, a practice that would endure for at least 3,000 years.

The third futures past involves a new form of place-making, when at ca. AD 200, large civic-ceremonial centers were established back from the coast. Geologists tell us that an overstep event at this time resulted in 2-3 km of shoreline retreat. The two biggest centers in the greater northern Gulf coast region are Crystal River to the south of our study area, and Garden Patch at the north end of our study area. The former was sited about 7 km back from the coast, the latter about 3 km landward. Shell Mound is the exception but was sited on top of a dune arm, just to the east of a cemetery known as Palmetto Mound, as documented by Mark Donop. All three of these centers were preceded by cemeteries, suggesting the dead continued to lead the living into the future. It is in the memory of their lives that future lives could be imagined.

Then, finally, as places of gathering, civic-ceremonial centers involved people who were spread over vast stretches of the Southeast. The pottery sourcing work of Neill Wallis attests to expansive social networks of people who gathered at coastal centers. The abandonment of such centers after ca. AD 650 may have been disruptive to coastal people, but the networks of allies they enjoyed across the interior Southeast provided options for relocating in times of stress. This may be the future for coastal populations in places like Miami, which in some estimates is scheduled to be inundated by sea by the end of this century. Perhaps the social networks of Miamians could be used to plan the relocating of vulnerable communities to places for which they have existing ties.

The Lower Suwannee Archaeological Survey will continue to investigate the history of coastal dwelling along the northern Gulf Coast with an eye towards modern and future challenges. It is useful to remind ourselves that humans have not experienced rates of sea-level rise projected for the next century or two since the Middle Holocene. Extreme projections involving the collapse of the Greenland and West Antarctic ice sheets would result in a rate and magnitude of rise not experienced since the end of the Ice Age. Without getting lost down in the discontinuities of history or, worse, the western bias of an ancient past inhabited by primitive people who could not possibly see what's coming, we could focus on long-term experiences, in particular maritime landscapes to see how other peoples' futures may help to alleviate some of the uncertainty of our own. **Δ**

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MCLs on Eastern National Forests: The Example of Late Woodland Landscapes in the Eastern Upper Peninsula of Michigan

Sean Dunham
Chippewa National Forest
United States Forest Service

The Eastern Region of the Forest Service (R9) covers a large portion of the Northeastern and Midwestern United States from Maine to West Virginia and Missouri to Minnesota (Figure 1). R9 Forests are situated along the shores of the Great Lakes, along the banks of the Mississippi and Ohio Rivers, as well as countless other lakes and streams. The cultural and historical relationships between this region and its lakes, rivers, and streams are deeply woven into the fabric of Americana. Native Americans and French voyageurs used the waters as highways. Lumbermen drove logs on the rivers and used those same streams to power their mills. Keel boats and barges are part of the past and present of the Ohio and Mississippi Rivers and huge freighters continue to traverse the Great Lakes today.

Figure 1. Region 9 National Forests. http://www.fs.usda.gov/r9/?id=6140

The lakes and rivers have also been important for other reasons as well. People have camped along these bodies of water for millennia, and they continue to be used for this purpose today. Likewise, these waters have fed people for millennia, and they continue to be a source of subsistence – the inland shores fishery on the Great Lakes and wild rice being prime examples. In this presentation, I will delve into later prehistory and explore the relationship between people and their physical environment using an example from the Late Woodland period from the Upper Peninsula of Michigan (Figure 2). The Late Woodland period in the eastern UP began about AD 700 and continued until contact with Europeans (ca. AD 1600). The dominant settlement model for this region derives from a relatively small number of coastal Great Lakes archaeological sites and is linked to the development of the Inland Shores Fishery and especially to the advent of deep water fall fishing.

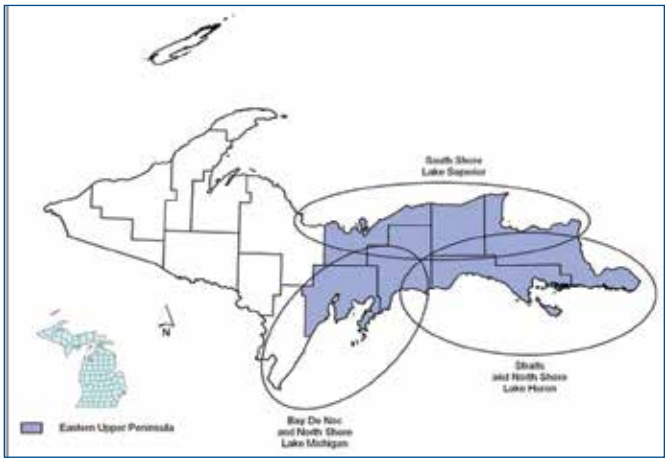

Figure 2. Upper Peninsula of Michigan. James Montney and Sean Dunham 2014

Cleland (1982) constructed a model in which the development of gill net fishery technology represents the cornerstone of a series of changes in resource use and site placement as well as social transformations in the Late Woodland period. The shift towards the fall fishery was the result of new technologies and social practices – specifically deep-water gill nets and storage technology (drying and freezing) which are thought to have led to the development of larger settlements of increasing duration of occupation and greater cooperation among social groups.

The combination of gill nets, increased social cooperation, and storage are critical to the success of this process. The effort of capturing and processing the fish was thought to require an increased level of social organization, and this leads to a combination of practical and social storage. In other words, the intensive processing of fish for storage is

carried out, in part, with the understanding that it will be available for future use by all the members of the group engaged in its processing.

The Late Woodland people in the region are characterized as mobile hunter-gatherers. In basic terms, the subsistence round is built around two axes—spring and fall fishing. The underlying logic is that people came together to harvest seasonally dense resources, in this case spring and fall spawning fish, and dispersed when resources were more scarce such as in the cold season, or were more broadly distributed across the landscape (as in the warm season).

This model was generated based on a relatively small number of coastal sites. Recent research examines data from a larger set of archaeological sites including both coastal and interior settings resulting in a fuller picture of Late Woodland settlement dynamics. The results show that Late Woodland peoples exploited certain settings and habitats more extensively than others. Some site settings appear to change over time, and others exhibit characteristics of culturally modified landscapes. This presentation is concerned with the potential effects of this pattern on Late Woodland site locations.

There are 81 known Late Woodland sites in the eastern UP (Figure 3). These archaeological sites were used to generate an inductive archaeological sensitivity model as well as a site diversity use index (for additional information see Dunham 2014). These two exercises produced different types of information. The sensitivity model found that over half of the Late Woodland sites in the eastern UP have been found in mixed pine habitats within 120 m of a major source of water (these are classified as high sensitivity areas) (Figure 4). The high sensitivity areas account for only three and a half percent of the eastern UP land base. The image on the left of Slide 4 shows a slice of the eastern UP and the one on the right is a close up of Grand Island with Late Woodland sites depicted.

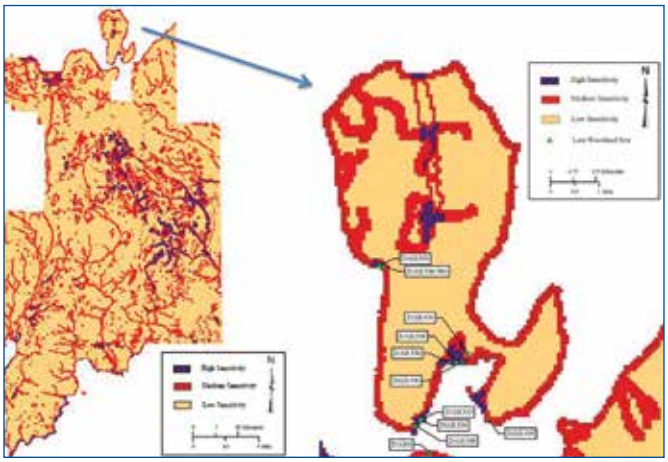

Figure 4. High Sensitivity areas. James Montney and Sean Dunham 2014

The diversity index identified three classes of Late Woodland sites – extended, intermediate, and limited diversity sites (Figure 5). The index is based on the assumption that different tools are used for different activities and that a greater diversity of tools on a given site should reflect a greater range of activities (extended diversity sites). Conversely, a lack of tool diversity on a given site could suggest a more limited range in activities (limited diversity sites). In a sense, the diversity index is a simple scale addressing a greater or lesser range of activities on a site that may help differentiate how that site was used.

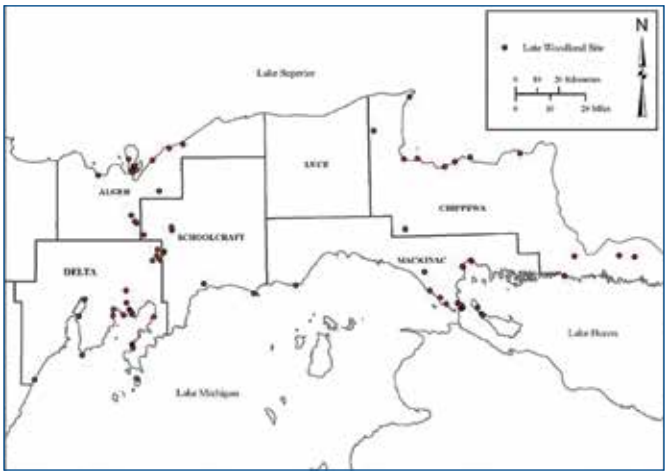

Figure 3. Late Woodland Sites. James Montney and Sean Dunham 2014

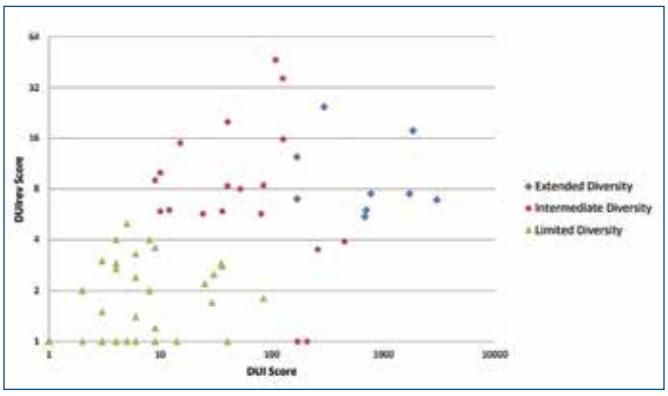

Figure 5. Late Woodland Diversity sites. Sean Dunham 2014

Based in the diversity index, nine Late Woodland components from seven sites were identified as the most likely candidates for the larger, residential sites that were used as the seasonal aggregation locales where spring and/or fall fishing took place (Figure 6). Williams Landing and the Juntunen site have been highlighted because they will be featured in the following discussion (Figure 7). Each of the extended diversity sites is located along the shore of one of the Great Lakes; they produced spring and/or fall spawning fish remains, and each is multicomponent – including earlier and/or later occupations as well as multiple Late Woodland occupations.

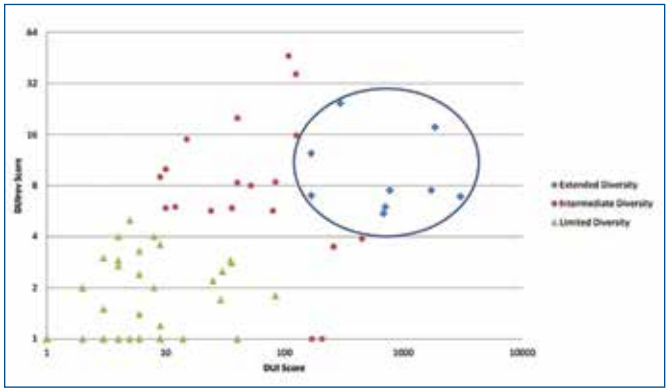

Figure 6. Late Woodland Diversity sites highlighted. Sean Dunham 2014

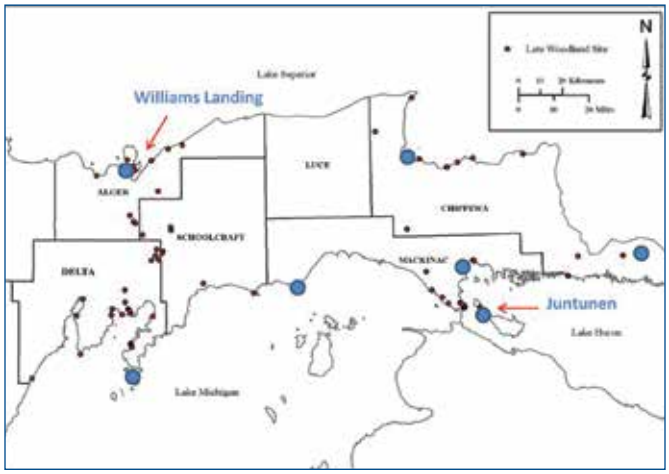

Figure 7. The Location of Sites with Extended Diversity. James Montney and Sean Dunham 2014

These sites share many characteristics associated with persistent places – high concentration of desirable resources (in this case access to spring and/or fall spawning fish), include natural features that structure reuse (the Great Lakes shoreline), and/or are created and maintained over an extended period of time. For example, the Native American occupation sequence begins at least 4,000 years ago and continues through the historic period at the Williams Landing locale on Grand Island (Dunham and Anderton 1999; Skibo et al. 2004). Likewise, the Juntunen site (20MK1) has produced evidence for Native American occupation from about 2,000 years ago to the early eighteenth century (McPherron 1967).

Further, when the social significance of the extended diversity coastal fishing sites is considered they become more than simply resource procurement locales. The Juntunen site, for example, includes ossuary burials in the late prehistoric Juntunen Phase component which adds to the social importance of the locale (McPherron 1967). Ossuaries are associated with important integrative rituals, such as the Feast of the Dead, in the late prehistoric and early historic periods (Hickerson 1960).

Another critical aspect of persistent places is that the presence of long term human occupation which can alter the physical environment of the locale. Considering the Juntunen site once again, the site locale is interpreted to have been transitioned from a forested area to an open meadow during the course of its occupation which was, at least partially, a result of human activity (McPherron 1967). Thus, the environmental setting of the Juntunen site exhibits evidence for a culturally modified landscape.

This pattern may also be illustrated by Late Woodland site locations on Grand Island (Figure 8). Note that the Late Woodland sites are clustered in areas with high archaeological sensitivity (with mixed pine habitat). The farther one goes from the site, the lower the archaeological sensitivity. The site location and area immediately around the site ALSO include the greatest level of human activity. In case you may think this is a trick of being adjacent to water, the image on the left shows the distribution of mixed pine habitat on the island. While the Late Woodland sites are adjacent to water, in this case Lake Superior, so are most of the mixed pine habitats. This begs the question of whether there is a relationship between the increased, long term human activity at the Late Woodland sites and areas that are coded as high archaeological sensitivity locales?

Mixed pine habitats are a critical factor in high sensitivity areas. Red oak is a prominent component of the two habitat types where archaeological

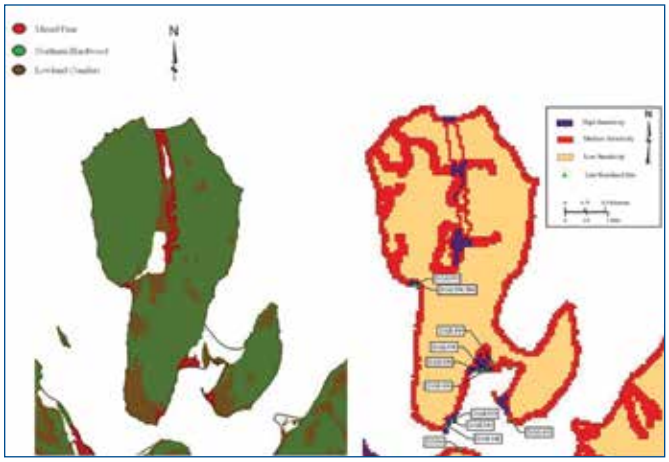

Figure 8. Late Woodland site locations on Grand Island. James Montney and Sean Dunham 2014

sites were encountered in the mixed pine group. These habitats also provide a variety of resources that were attractive to Woodland peoples in the region. The forest succession pattern is conducive to beaver, moose, and warm season deer habitat. Such habitats also include a higher incidence of certain fruits, such as blueberries as well as other resources, such as acorns, that were utilized as food by Native Americans as well as by the animals they hunted. Is the relationship between mixed pine habitats and Late Woodland archaeological sites the result of human activity on the landscape?

There are numerous examples of how human activity can modify the landscape. Small scale plant management, patterns of residential mobility, or certain landscape management practices have the potential to create heterogeneous habitat mosaics which may increase the potential for subsistence resources.

Mixed pine habitats are the most likely to be affected by natural disturbances and also share many of the attributes of anthropomorphic landscapes. Native Americans in the Upper Great Lakes region, and elsewhere, modified the composition of the landscape through the use of fire. Low intensity fires occurring at fairly frequent intervals shaped forest composition around settlements. The areas that were burned contained higher incidences of mast and fruit producing species that were commonly used as food. While many of these studies suggest forest and understory clearing for horticulture as a primary rationale for the burning, habitat improvement for wildlife and other resources, such as nuts and berries, are other likely candidates.

There is direct evidence for historic burning in northern Michigan by Native American peoples. A study conducted by Albert and Minc (1984) demonstrated that modern stands of red oak at Colonial Point were established as a result of Anishinaabek agricultural practices in the 1840s and 1850s. Charcoal recovered from plots within these stands was predominately beech and sugar maple, indicating that the original forest had been northern hardwoods, and that Native American burning to clear land for planting fostered the transition to oak.

Similarly, Loope and Anderton (1998) have demonstrated a much higher incidence of fire in coastal pine stands in northern Michigan than in interior stands in the eighteenth century through early twentieth century. The fire intervals in the interior stands seem to correspond with naturally occurring fire regimes, whereas the coastal pattern is interpreted to reflect Native American land use practices – possibly burning associated with the maintenance of berry patches near settlements (Native American tribes in the eastern UP practiced such burning until stopped by the USDA Forest Service in the 1930s as part of wildland fire suppression programs).

Andrew Blackbird's (1897:10-11) childhood recollection of Cross Village in the 1830s appears to reflect such a fire altered, culturally modified landscape:

> "My first recollection of the country of Arbor Croche, . . . there was nothing but small shrubbery here and there in small patches, such as wild cherry trees, but most of it was grassy plain: and such an abundance of wild strawberries, raspberries and blackberries that they fairly perfumed the air of the whole coast with the fragrant scent of ripe fruit."

Recent studies of Anishinaabek traditional landscape management practices in Ontario show that fire was, and is, used for a variety of purposes. Fire is used to clear undergrowth for gardens, to facilitate vegetation growth (such as berries and other resources like birch bark), and for habitat improvement for wild game. Importantly, fire is seen by these people "… as beings which possess agency and who intentionally create order in landscapes" (Miller and Davidson-Hunt 2010:401). Miler and

Davidson-Hunt (2010:410) quote Whitehead Moose on the topic of fire as saying:

> "The Creator has a match and that match is the thunderbird. He brings that match to the land when the forest gets too old and can't grow anymore. So the thunderbird comes to earth. After the forest is burnt new growth starts. Animals get tired of eating old food. Just like you and me. The Creator knows that animals need new food. After the fire there is fresh food to eat."

The evidence outlined above shows that Native Americans in the Upper Great Lakes region were actively modifying their landscape throughout the post-European contact period (post AD 1600). Likewise, the evidence from Grand Island and the Juntunen site makes a strong case for similar practices in the Late Woodland period.

The culturally modified landscapes described in this paper were created by Late Woodland peoples as a result of their dynamic settlement and subsistence practices. The best fishing locations were situated in Great Lakes coastal settings and were thus spatially constrained. These archaeological sites were occupied over long periods of time and can be characterized as "persistent places." The long term and diverse occupations at these sites created anthropogenic landscapes which became more desirable as resource procurement locales over time. These were also cultural and normative landscapes, such as those described by Andrew Blackbird and Whitehead Moose, and provide a useful example of cultural landscapes from Region 9. **Δ**

Works Cited in Text

Albert, D. and L. Minc
1987 *The Natural Ecology and Cultural History of the Colonial Point Red Oak Stands*. University of Michigan Biological Research Station, Michigan Department of Natural Resources, Lansing, Michigan.

Blackbird, A. J.
1897 *Complete Both Early and Late History of the Ottawa and Chippewa Indians of Michigan*. Babcock and Darling, Harbor Springs, Michigan.

Cleland, C. E.
1982 The Inland Shore Fishery of the Northern Great Lakes: Its Development and Importance in Prehistory. *American Antiquity* 47:761-784.

Dunham, S. B.
2014 *Late Woodland Settlement and Subsistence in the in the Eastern Upper Peninsula of Michigan*. Doctoral dissertation, Department of Anthropology, Michigan State University, East Lansing. https://etd.lib.msu.edu/islandora/object/etd%3A3165

Dunham, S. B. and J. B. Anderton
1999 Late Archaic Radiocarbon Dates from the Popper Site (FS 09-10-03-825/20AR350): A Multicomponent Site on Grand Island, Michigan. *The Michigan Archaeologist* 45:1-22.

Hickerson, H.
1960 The Feast of the Dead among the Seventeenth-Century Algonkians of the Upper Great Lakes. *American Anthropologist* 62:81-107.

Loope, W. and J. Anderton
1998 Human vs. Lightning Ignition of Presettlement Surface Fires in Coastal Pine Forests of the Upper Great Lakes. *American Midland Naturalist* 140(2):206-218.

McPherron, A.
1967 *The Juntunen Site and the Late Woodland Prehistory of the Upper Great Lakes Area*. Anthropological Papers No. 30. University of Michigan Museum of Anthropology, Ann Arbor.

Miller, A. M. and I. Davidson-Hunt
2010 Fire, Agency and Scale in the Creation of Aboriginal Cultural Landscapes. *Human Ecology* 38:401-414.

Skibo, J. M., T. Martin, E. Drake, and J. Franzen
2004 Gete Odena: Grand Island's Post-Contact Occupation at Williams Landing. *Midcontinental Journal of Archaeology* 29(2)167-190.

Sean B. Dunham, PhD, is the Heritage Program Manager (Forest Archaeologist) at the Chippewa National Forest in northern Minnesota. His current research interests focus on the relationship between people, their culture, and their environment. His dissertation addressed the interaction of hunter-gatherers and low-level food producers with their environment, as well as how their decisions influenced resource use and scheduling (including the use of domestic plants) during the Late Woodland period in northern Michigan.

Before his career with the Forest Service, he worked as a cultural resources consultant on many projects in the Eastern Region National Forests. He has also had the pleasure of working on archaeological projects in England and Germany. Through the years it has become clear that he has a real fondness for working in the "north woods" of Michigan, Wisconsin, and Minnesota.

Constructing Shell Landscapes in Southwest Florida

Margo Schwadron
Southeast Archeological Center
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This case study details a new, important example of prehistoric hunter-fisher-gatherers from the Ten Thousand Islands region of the Everglades, Florida. As the largest subtropical wilderness in the US, the Everglades are an unparalleled landscape which provides important habitats for numerous rare and endangered species. The Everglades are an international treasure recognized as a World Heritage Site environmentally, an International Biosphere Reserve, and a Wetland of International Importance. While the natural and environmental significance of the Everglades have long been recognized, the human history of the Everglades is much less understood. This study fills an important gap in understanding the role of humans within this rich ecosystem and stands as an excellent example of a prehistoric maritime cultural landscape.

Studies on midden sites typically focus on diet, subsistence and paleo-environmental studies with a normative and long standing view of shell middens as domestic refuse, simply the remains of daily meals discarded in garbage piles. However, recent work by some researchers has challenged this idea. At the Southeast Archeological Center (SEAC), we have expanded our interpretations to beyond these strictly garbage pile contexts. This case study examines a little known but significant type of shell midden site called "shell works", which are among the world's largest, most-complex, prehistoric shell built landscapes ever known. They deserve far more consideration than the simple garbage pile perspective.

Shell works are complex sites that were socially constructed landscapes that reflect a unique maritime-hunter-gatherer adaptation and tradition of shell construction. These shell works sites represent some of the world's best examples of prehistoric maritime cultural landscapes, as their preservation is unparalleled. Preserved in almost their entirety, the Ten Thousand Islands region is a vast prehistoric domain of waterways, islands, seascapes and shellscapes that stretch for some hundred miles along the southwest Florida coast.

South Florida contains an immense wetland of marshes, swamps, rivers and estuaries dominated by the Everglades, the largest sub-tropical wetland in North America. The lower southwest coast contains the Ten Thousand Islands, a vast maze of lagoons, mangrove swamps and marine meadows comprising one of the most productive sub-tropical estuaries in North America. The region contains over 400 recorded shell middens sites. Shell middens take many forms, including small heaps, linear or mounded accumulations, and are traditionally viewed as either primary or secondary refuse, the results of daily refuse from domestic garbage accumulations.

Another type of site is shell works, a parallel term to earthwork. Shell works are more than just large, happenstance shell middens accumulations; they were purposefully constructed features, intentional borrowed, piled, arranged and formed into mounds, ridges, rings, platforms and depressions. Shell works suggest planned landscapes and terraforming to define public, domestic, sacred and ceremonial spaces, suggesting that organized labor, community planning and the ideological constructs of monumentality and ceremonialism shaped these complex maritime cultural landscapes.

This investigation offers the first large scale settlement pattern of the region and employs the only holistic maritime landscape approach. To date, 15 shell work complexes have been investigated, with over 200 radiocarbon dates generated for the region. Sites range from very small, less than half an acre, to architecturally non-complex ring shaped middens, to massive sites comprising entire islands constructed from elaborate shell work features measuring up to 100 acres in extent. Comparison of shell work forms throughout the region demonstrates significant similarities, including several

recurring site forms such as ring shape features, mounds and linear ridges.

There are 13 major shell work sites, ranging in size from 30 to 100 acres in extent, which likely represent large, nucleated villages. These sites occur with a regular spatial frequency. Eight of the largest sites occur three to four miles within the northern part of the region and become less frequent toward the southern end of the region. Thirty-one small shell work sites and 12 shell rings are also present.

The most well-known and northernmost of shell work sites in the region was the Key Marco site. Unfortunately, it is now mostly destroyed by development. Frank Hamilton Cushing's 1890s map, digitized and brought into ARC-GIS, shows the site's occupants engineered the island landscape with shell, creating features such as radiating finger ridges, water courts, flat top mounds, plazas and canals. These shell work constructions suggest organization and a planned maritime community.

Another larger shell work site, Dismal Key, is a massive crescent shaped shell work island measuring 75 acres, containing shell mounds, ridges, plazas, canals, water courts, finger ridges and sea walls. At the northern edge of the site is a small crescent-shaped shell ring, similar in size and shape to other southeastern shell rings. South of the ring is the main portion of the site, which contains elaborate shell work architecture, including extensive shell fields and a central district of shell mounds, ramps, and canals. Two 6-meter-tall flat top shell mounds are bisected by a long central canal leading into the center of the site, suggesting a high amount of coordinated labor to build and maintain a functioning canal.

Archaeological testing determined that Dismal Key's inner shell ring, the earliest component of the site, was built rapidly and dates to the terminal archaic. Testing of 4 of the largest flat top shell mounds suggests that intensive mound building occurred between 580 and 900 AD, a series of shell midden finger ridges at the west margins of the site are the most recently built features, dating from AD 990 to 1290. Terminal radiocarbon dates and ceramic chronology suggest Dismal Key became abandoned just prior to AD 1300.

Fakahatchee Key is a massive 98-acre shell work site with several curvilinear or ring shaped shell midden ridges. Investigation determined it contains elaborate shell works including mounds, platforms, water courts, canals, and radiating finger ridges. The curvilinear site plan of the site appears to be oriented towards the interior of the site, facing a low central area of shell fields and a large, flat, plaza-like area. Much like the Dismal Key site, the nested inner ring shaped middens of the site were determined to be the earliest dated components of the site, from BC 350 to AD 260. Also, the radiating finger ridges are the most recent features of the site, dating from AD 710 to 1280. Yeoman's Mound is an isolated shell mound complex that appears to be purposefully separated from the main portion of the site and is to be discussed later. In tandem with Dismal Key, Fakahatchee Key appears to be abandoned just prior to AD 1300.

Survey mapping of Sandfly Key show a series of large nested crescents and rings. The earliest components of the site are the northernmost ring arms and two isolated sand and shell mounds, one of which dates to the transitional period between the Late Archaic and Early Woodland period. At the southern end of the site, Sandfly Key contains some shell work features including a flat top mound, possible house platforms, fish traps, canals, water courts and extensive shell fields. The shell work features date most recently, suggesting that over time Sandfly Key residents shifted from constructing simple ring shape middens to construction of more elaborate shell work features, suggesting an expanding community population and perhaps an increasingly complex social organization.

Russell Key is a 60-acre site and like other shell work islands, is composed almost entirely of oyster shell. Like Dismal and Sandfly Key, the northern end of the site contains a large, low shell ring almost completely buried under mangrove swamp, suggesting a post occupational sea level rise. Testing of the shell ring suggests the ring is the earliest component of the site and likely has much deeper and earlier deposits, probably dating to late archaic.

South of the shell ring is the main portion of the site. It displays bilateral symmetry with a central plaza-like area. The central plaza is flanked on the east, west and south sides of the site with a series of radiating shell finger ridges. The ridges occur in distinct groupings suggesting that they were constructed as part of planned, organized activity areas, residential zones or habitation areas. Archaeological testing of these features indicated that they were built rapidly and they are contemporaneous.

As is the pattern at all other shell work sites, the radiating finger ridges at the southern edge of the site were determined to date most recently, from about AD 900 to 1200. This suggest a regional, temporal significance to these feature in that over time, Russell Key inhabitants continually expanded the site in a southern seaward direction, constructing additional habitable landscapes by continuing to build a new site area out of shell.

One of the most perplexing of shell work features are basins or depressions found around the margins of many sites. Collectively called water courts, it is not yet known what these features functioned for. These features are almost always in association with finger ridges, suggesting, perhaps, some type of fish or shell fish storage or fresh water impoundment structure. Along the southern edge of the site is one single, large water court, the largest found on Russel Key, measuring 15 by 50 meters. Radiocarbon dating places construction of this feature around AD 1030 to 1290. The presence of one large water court may suggest a shift towards a centralization or control of resources, whether fish storage, water or another function. Like the other large shell work sites, Russell Key was abandoned by AD 1300.

Today the site is thickly surrounded by mangroves. ARC-GIS spatial analysis is used to model a two-foot rise in sea level. With this scenario, the site appears more approachable by canoe and one can visualize how some of the sites finger ridges and water courts may have looked and functioned. With a two-meter high sea level rise, the long finger ridges are no longer encased in mangroves and are surrounded by water. The finger ridges likely functioned as canoe docks or jetties or functioned as platforms for people to engage in group fish netting with the nearby water courts functioning as temporary storage ponds.

Shell works demonstrate similar spatial and temporal patterns. Regionally there are strong temporal similarities and site structures, forms and layouts that imply nearby settlements must have been socially connected communities, sharing similar social, political and ideological characteristics that became manifested within their socially constructed landscapes. These constructed landscapes reflect a dynamic and recursive relationship with the environment, the sea, communities and their shellscapes. Shell works demonstrate not only a maritime cultural landscape that reflects changes in social organization over time but that the landscape itself is a repository for social memory and history and may be imbued with meaning and significance connected to a larger system of monuments and ceremonial landscapes, seascapes, and shellscapes.

For example, the Fakahatchee Key 3 site shows evidence of a possible ritual landscape suggested by the re-appropriation of the landscape features with the placement of a conical mound and two ramp projections superimposed on top of a much earlier, previously abandoned shell ring. This association or re-appropriation of the earlier features suggests that the builders of the conical mound may have viewed their earlier shell ring feature with some kind of significance, perhaps reflecting a material persistence of memory that now marks the landscape. The mound may represent a communal mortuary moment, perhaps to memorialize ancestors or it may mark a boundary, territory or forbidden place for the settlement.

A similar association is also found at Russell Key, with a flat top mound and ramp superimposed on a much earlier shell ring. These mounds may be suggestive of monuments which may have served a functional role, such as a special structure for elites or for religious use, or may have served a more ontological, cosmological or symbolic purpose.

Sandfly Key is also suggestive of a ritualized or ceremonial landscape, with a pair of conical burial mounds, out of view and deeply hidden within the mangrove swamp, surrounded by an extensive,

protective ring of shell midden and separated from the rest of the site by water. The hidden nature of the mounds suggests a sacred context and their placement within a watery swamp may have further symbolic significance as water is often viewed by Native Americans as a sacred or protective supernatural barrier or portal to another world.

Lastly, the Yeoman's Mound complex is another example of a ritual or sacred maritime landscape. The site contains a pair of two six-meter tall conical shell mounds, set along the edge of a ring or bowl-shaped midden within an arena-like complex. The interior is open and flat and is encircled by a raised ring of shell along its outer perimeter. At the southwestern edge of the site is a ramp of shell that gradually leads up into the complex, suggesting a directed entrance or perhaps a processional route into the complex. Its isolated position and separation by water also suggest secrecy or symbolic importance—purposefully separated from the secular, domestic areas of Fakahatchee Key. Human remains reported from the mounds and found within the plaza of the site suggest that it served special mortuary functions for the community.

In conclusion, the shell works of the Ten Thousand Islands represent some of the largest and most complex prehistoric shell constructions in the world and are unique, preserved prehistoric landscapes that reflect important hunter-gatherer-fisher histories. These represent an exceptional example of a prehistoric maritime cultural landscape. Nomination of these sites as a maritime cultural landscape and as a National Historic Landmark would fill an important gap in documenting and understanding the important histories of prehistoric maritime people of the world. **Δ**

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6. Native American, Alaskan and Hawaiian Landscapes

Introduction

This session illustrates the importance of incorporating multiple voices and perspectives into landscape-level analysis and management. Presentations feature indigenous MCLs in Alaska, Hawai'i, New England, Oregon, and Wisconsin. Unlike so much research and work conducted in past decades by outsiders on indigenous communities and places, the projects presented here are grounded in self-determination, and have been designed and implemented by native peoples, sometimes in collaboration with external partners. As places and resources are able to be better documented and preserved in this way, the benefits are mutual—to the resources, the communities, as well as to land and water management agencies and potential project applicants who frequently want to "do the right thing," and may need some help figuring out what that is.

Several key themes emerge in this session, which highlight the role of the shoreline as bridge rather than boundary, to borrow Ben Ford's concept. We see the importance of native peoples' involvement in preserving their own heritage, and associated positive outcomes for the landscape and resources, as well as to the people and communities. We also see the interrelationships of cultural and natural resources, rather than the artificial divide that has emerged through non-native management and policy. And through both of these phenomena— self-determined research and cultural/natural integration—we see increased empowerment of native voices and perspectives on the landscape, both in preservation of the past and management for the future.

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Cultural Resources Coordinator
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National Marine Protected Areas Center, NOAA

Sitka Indian Village: A History Unpreserved?

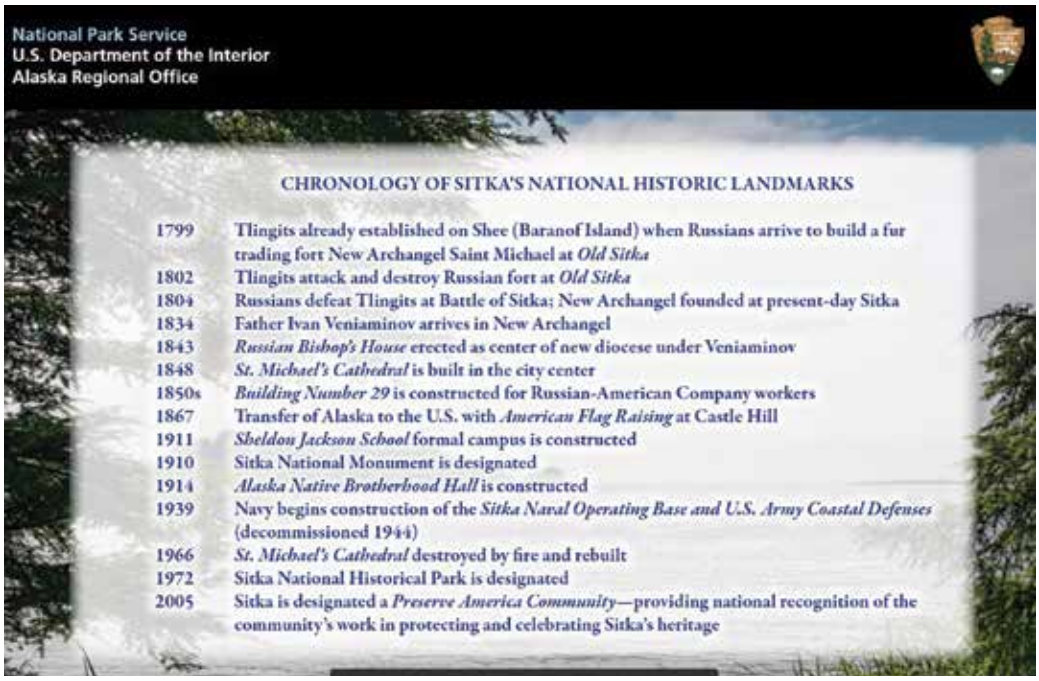
Jessica Perkins
Former Sitka Tribal Attorney
Sitka National Historical Park
National Park Service

Sitka is in the Southeast panhandle of Alaska, also known as the Alexander Archipelago. It is on the outer coast of an island and you can only get there by ferry or plane. It is also within the traditional territory of the Tlingit, and known by the Tlingit as Shee Atika, or Sheet'ka. The Tlingit are nicknamed the people of the tides. Not a lot of archaeology work is conducted around Sitka, but local radiocarbon dating confirms humans were living near Sitka for at least 5,000 years. It was also the capital of Russian America from 1804 to 1867 and currently it's an isolated fishing and tourist community with a year-round population of about 9,000.

As I was researching this topic, I found a National Park Service publication that described the National Historic Landmarks in Sitka. (See Figure 1.) This is a fairly decent rundown of Sitka's historic milestones, but it is missing recognition of the first people of this land: the Tlingit. Is this because the Tlingit have done nothing of national significance, or because the Tlingit history is under-represented in the National Register program?

I think the Tlingit history in Sitka is nationally significant. When the Russians first arrived in Sitka in 1802, the Tlingit attacked the Russians and the Russians left. The Russians came back two years later and they battled again. In 1804, the history books say the Russians won. But, did the Tlingits lose? The Tlingit retreated. That 1804 battle was an important point and the Russians took over Sitka harbor. But, the Tlingit survived. From 1804 onward, the Tlingit people endured—first attack and occupation of their land by the Russians, and then, after 1867, the United States. Despite the attempts by the governments in power to eliminate the traditional ways of living of the Tlingit people, the Tlingit people and culture have endured, even if not recognized.

After the 1804 battle with the Russians, the Tlingit traveled north on foot to a seasonal fish camp on the north part of the island at a strategic location. You can only get to Sitka safely at that time through the Inside Passage. They set up camp along one channel you need to pass to get to Sitka, and staged an embargo. They stopped all ships from entering or leaving Sitka. The Tlingit relied on the sea for food, travel, spirituality and clothing. They define a maritime culture.

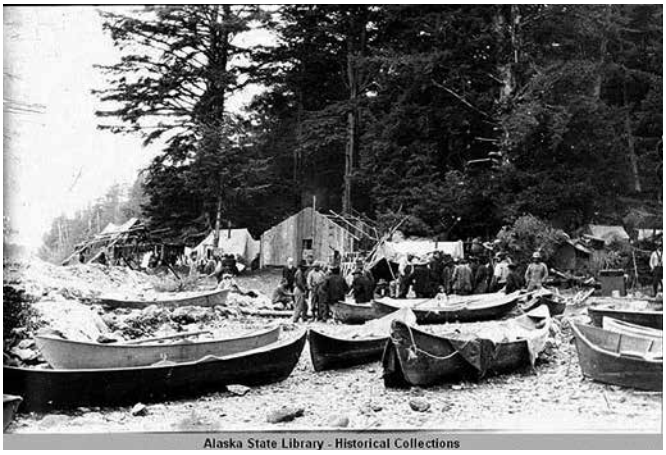


1. Chronology of Sitka's National Historic Landmarks; courtesy of the National Park Service.

In about 1825, the Tlingit returned to Sitka. The Russian approach to dealing with the Tlingit was a segregated approach. The Russians

built a wall separating the Tlingit Village from New Archangel (the Russian name for Sitka). The wall had guards in blockhouses and cannons pointed at the Tlingit Village during the time of Russian rule (1825-1867).

Starting in 1867, the American government did not treat the Tlingit any better. When the United States government took over control of Alaska, the American way of life was brought to the Tlingit people. Sanitary laws were used to tell the Tlingit people that they needed to rebuild their houses. All the old houses were burnt, and new ones ordered to be reconstructed according to American standards. (See Figures 2 and 3.)



2. Typical Tlingit fish camp, c.1890-1920; Alaska State Library, Historical Collections, William R. Norton Photographs.

In 1904, then territorial governor, John Brady allowed for what they called the last great potlatch. "In 1902, several members approached Governor Brady, a former Presbyterian missionary, and requested that he issue a proclamation that would command all Natives to change and that if they did not they should be punished. Like other missionaries and governmental officials, Governor Brady considered the potlatch a practice that perpetuated prejudice, superstition, clan rivalry and retarded progress. He was committed to breaking up the offensive clan system and replacing it with the independent family unit, but he was not eager to impose legal sanctions. Therefore, in a dramatic gesture, Brady decided to endorse one last potlatch at Sitka."[1] From 1867 through 1924, the Tlingit were not permitted to own any land because they were not citizens. The Tlingit weren't recognized as US citizens until 1924. They were not permitted to vote until 1945.

The Tlingit culture is a matrilineal society that is built by clans, so you have parity, you have a raven and an eagle, and then a raven would marry an eagle and then you inherit your lineage through your mother. My husband is an eagle, so his father's clan, the Kik.sadi, which is a raven clan, adopted me and then my children, who are Alaska Native, as part of that clan. We have all been adopted through traditional ceremony and given Tlingit names. My house is called Sh'teen Hit, which is the steel bar house. The house was so named because

3. The Sitka Indian Village, 1889; photo courtesy of the Alaska State Library Place Files, Photographs.

it had a steel bar. The Sh'teen Hit was located so close to the stockade wall, a steel bar was necessary to protect the house. The clan house in traditional Tlingit culture was the seat of traditional government. Traditional law was that you would bring things to the clan house and the clan leader, and they would decide things and use their own way of dealing with things. The village here is the location of the Sitka Clan houses.

Sitka Tribe of Alaska had a small historic preservation grant from the National Park Service. This is one of the many projects I worked on at Sitka Tribe. I put together the possibility of the village being a historic district. I did my best, but it was

1 http://www.penn.museum/documents/publications/expedition/PDFs/47-2/The%20Centennial%20Potlatch.pdf

hard, because if you look at this picture, you can tell that there is all sorts of development there. You can see the traditional houses, but you can also see fish processing plants, and you can see lots of boats in the harbor and these other uses. I put together the district nomination, but it was definitely a discontiguous situation. It never felt like I was doing the right analysis. I knew in my heart this was a historic place that should be recognized and protected. I knew in my heart that I held a lot of history that was important to a lot of people. The words I had to use on the paper to match up with that history was a disconnect.

Figure 4. A Kaagwaantaan and L'uk'nax.adi Clan House; photo by Jessica Perkins.

Each of the clan houses in this photograph (Figure 4) has been determined eligible for the National Register individually. They stand on what's called restricted Indian property. These properties are transferred according to western inheritance rules—to your surviving children typically. That means the traditional clan people and the clan members of those houses are not the current owners. What you have is based the individual family unit. The house on the left suffered, the foundation had some issues, and so we had to do some repair work and during that time we went through the Section106 process and it was determined eligible. The house on the right was owned by a L'uk'nax. adi clan (raven) leader when the deed was issued in the 1950s. When he died, the house went to his children, who were Kaagwaantaan (eagle), they inherited it. As time went on, there are now 47 different owners who do not get along. They are not from that clan, and so it's hard to get a mass of folks to agree that this is what we want. Some folks want to take it down and put something different up. Some folks want to preserve it as it was. Some folks don't even want it. Originally, 43 clan houses were within the Sitka Indian Village. Due to lack of sufficient resources, and impending health and safety concerns, the Tribal Council has had to take down two clan houses since 1995. These houses are 2 of the last 9 standing clan houses in Sitka. It has almost become too complicated to save some of the most important history that still exists in Sitka.

In the end, it is clear to me that the village has significant historic resources. The historic district designation doesn't feel like the right fit, but I can make it fit, by turning this word into that word and checking the boxes. I think a maritime cultural landscape should include the natural resources and the cultural resources, because where there is a herring house, there are people who associate with the herring. Even in the village, we have something that is a very old ceremonial place for the Kik.sadi people—herring rock. It is truly a maritime cultural landscape. It contains all the elements of ethnographic landscapes, as well as those of vernacular landscapes. It is also part of the larger Tlingit maritime cultural landscape.

Figure 5. A look at the bigger picture cultural landscape around Sitka. The yellow shading is National Forest land; the orange areas are National Forest Wilderness Areas; and the green dots are the approximate locations of historic sites within the larger landscape. Map compiled by Jessica Perkins.

There is also a larger cultural and natural landscape to be preserved. Alaska is still a lot like the new frontier. If you look at Tlingit country as a bigger picture, you have the area called the Sheet'ka K'waan (the traditional territory of the Sitka Tribe). Through the interviewing process of folks who still speak Tlingit, the anthropologist we had on staff at the time was able to collect place names. Every red dot on that map is a place name. To me, that documents a connection to the natural and cultural resources throughout the region. When I think about cultural landscapes and I think about scale, I think about how each of the rivers that flow out into the ocean was its own individual landscape, but, back in the day when you would go from place to place, it was one big landscape. We have evidence of oyster farming, canoe haulouts, and individual village sites throughout the area. There is a lot of development that folks think is still coming. Yes, it's currently a national forest, but that does not mean it will always be a national forest. There is a small scale approach and a big scale approach. You can tie landscapes together, or you can look at them as small. I think in both cases, the types of resources there are important for preservation. Based on the tools available today, the Sitka Indian Village and the greater cultural landscape of the Sheet'ka Kwaan are difficult to preserve. But, with diligence and perseverance, I am hopeful the history of the Tlingit in Sitka is preserved for generations to come. **Δ**

Jessica Perkins grew up in rural Rhode Island and obtained her BA in sociology with honors from the University of New Hampshire. Jess received her juris doctorate with a certificate in natural resources and environmental law with a specific focus on American Indian Law from Lewis and Clark Law School. After law school, Jess worked eleven years at the Sitka Tribe of Alaska, serving as realty officer, resources protection director, and tribal attorney. During this time, Jess spent many hours researching and pursuing Tlingit land claims throughout the Sitka area. She also married the son of a Tlingit clan leader and became a member of the Kik.sádi clan. After a short stint away from Sitka, Jess recently returned to work at Sitka National Historical Park—which was created to commemorate two important pieces of Sitka's history—the 1804 Tlingit-Russian battleground and the 1843 Russian Bishop's House.

Hawaiian Maritime Cultural Landscapes: Integrating Knowledge Systems, Protecting Heritage Areas

Trisha Kehaulani Watson
Honua Consulting

> In a traditional Hawaiian context, nature and culture are one and the same, there is no division between the two. The wealth and limitations of the land and ocean resources gave birth to, and shaped the Hawaiian world view. The ʻāina (land), wai (water), kai (ocean), and lewa (sky) were the foundation of life and the source of the spiritual relationship between people and their environments.
>
> – Kepa Maly, Cultural Practitioner

Introduction

Hawaiian cultural landscapes are well-suited to support the emerging identification of maritime cultural landscapes (Westerdahl 1992) and historic sites across the United States due to the intrinsically holistic nature of Hawaiʻi's traditional cultural landscapes, which, as articulated in the quote above, were inclusive of the land, sea, and sky. This presentation discusses how traditional cultural landscapes contain a range of unique elements that significantly enrich the public's ability to understand heritage areas and historic places. Through data sets enhanced by indigenous knowledge systems and engagement with native communities, the National Register eligibility determination process expands to better coordinate with other policies and regulations. It also potentially sees better efficacy in implementing historic preservation and environmental policies such that heritage resources are better preserved.

The concept of a maritime cultural landscape is critical to the development of a Hawaiian cultural landscape, as it illustrates that the notion of landscapes are ultimately fluid and dynamic. Maritime cultural landscapes thereby play an important role in creating opportunities for marginalized groups, like indigenous peoples, to insert their histories into formal, regulatory processes and the academic discourse.

Hawaiian Maritime Cultural Landscapes

Whereas archaeologists have historically focused on tangible elements of landscapes, indigenous peoples have additionally focused on spiritual and intangible elements of landscapes. Therefore, this paper will discuss both the tangible and intangible components of Hawaiian cultural landscapes, and why all of these elements are critical to the future of historic preservation. (For a new, comprehensive listing of Hawaiian wao that extend from the mountain peak to the deep sea, see Table 1.)

For example, Oʻahu is split into six different moku or districts. In 800 A.D., the high chief, Maʻilikūkahi, developed a geopolitical land system called the ahupuaʻa[1] system (Kamakau 2010). He took the island, and then divided it into six districts. Within each district, he further divided into the ahupuaʻa system (Kamehameha Schools 1994). Each district is then further divided into pie-shaped wedges that extended from ridge out to the reef (Pukui, Elbert, & Mookini 1974). Each basically watershed system goes up all the way out and contains an ocean area. It was either one mile or to the fringing reef. This system, you can see, there are different divisions that essentially correlate with biomes that basically had a fully sustainable system (Minerbi 1999). What is rather amazing is this basically survived to today in various legal and policy forms. When we talk about a Hawaiian cultural landscape, I very much, as do others, think about this system.

Also, when I talk about a Hawaiian cultural landscape, I am going to talk about first settlement versus second settlement. First settlement was really the arrival of Polynesians to Hawaiʻi. While we have talked about the impact of human settlement throughout these two days, I think it is important to remember that while there was human impact, it was nominal and very minimal, the human impact in the footprint that first settlement left compared

1 Ahupuaʻa literally means pig altar (ahu being the word for altar and puaʻa being the word for pig) as this referenced the stone alter that served as the boundary marker for each ahupuaʻa district. Traditionally a pig or another similar levy would be placed upon the ahu as duty to the government.

to the second settlement, which is when foreigners came to Hawaiʻi.

Unlike some of the tribes here, Hawaiians settled our islands much later and are therefore a younger culture. There is no evidence indicating we have submerged settlements to the degree other groups here may have. While we likely have some submerged sites, like traditional Hawaiian fishponds, we have record of most of these sites and the submersion of these historic features occurred comparatively contemporaneously. It is possible we also have some submerged voyaging canoes, but recoveries of those are unlikely. Most of our maritime cultural landscapes would therefore be associated with intangible cultural heritage features like spiritual vistas or sites of historic events.

The ahupuaʻa system basically is where you have the high waters that come down. They come and feed into the valleys of Hawaiʻi. Water sources are highest up. Forest areas are also high up (Lyon 1918). Agricultural systems are further down. All these are what we call wao or realms (Malo 1951). You have the living area of people in the lower coastal areas, and then you have fishing villages along the coast.

We never really went up, in traditional times, into the highland areas. That is why when you look at images of or studies of ecological footprints along first settlements or the first settlement period, you do not see that in upland areas. I think that is something important that we have not talked about is the fact that in traditional cultures, in sacred places, you will not necessarily see that there was human presence there. It does not mean that we did not value those places if you do not find evidence of material culture there. It meant that in certain cultures, to revere them, you did not go there. That was specifically because we valued the ecosystem services that came from certain places. We were not going to settle where our most valued water sources came from, for example.

In this example of Pu'u Kukui, in the mauka (toward the mountain) area, which is the mountain area, you can see the value of the water source versus what happens down makai (toward the ocean), which is equally valued, but is a far more habitable area, which is why you are going to find a lot more archaeological activity.

The primary maritime culture of Hawaiʻi was the fishponds. This was a picture, a drawing from 1825, of a fishpond village in Oʻahu, actually from the district that I am from. In addition to extensive fishponds, we had over 400 originally at the time of the second contact, you had navigation (Baybayan & Kawahara 1996). You had salt ponds. All of the homes you can see at the bottom of the photo, that there were homes and different just regular human living along the coastal areas that were extensive.

A different area on the island of Oʻahu, illustrates it as well. You have these extensive landscapes that, even by the early 1900s, you still had of the earlier 400, 100 traditional Hawaiian fishponds that were fully functional throughout the state of Hawaiʻi (Apple and Kikuchi 1975).

There is one area where you can see the different arrows pointing to all the different archaeological sites that are fishponds, heiau, which are religious sites, salt ponds, and different archaeological sites along the coastlines in just one district. Of 400, this is just one area where you had extensive mariculture activity throughout the Hawaiian Islands. This is not even the island where we had the most concentration of traditional Hawaiian fishponds.

What is important to remember, and I think an extensive challenge in Hawaiʻi, is that these fishponds are still used. My company, for the last three years, worked on a project to restore, to work on programmatically restoring traditional fishponds throughout the state. For twenty years, traditional Hawaiian fishpond practitioners struggled, and I mean struggled, with just getting the permits to protect and restore fishponds. It took seventeen permits to be able to restore a fishpond and hundreds of thousands of dollars to be able to secure those permits. It took twelve different agencies, and these are community groups (Honua Consulting 2013). Even fishponds that, and you can see clearly, from the aerial photo on the left, are still there.

This was a twenty-year problem for the Hawaiian community. The EPA put a significant amount

of money into looking at the problem, and it was a multi-faceted problem consisting of jurisdictional and administrative challenges. You had to go through many different agencies; challenges of doing this are discussed elsewhere in this collection.

We ultimately did a programmatic EA (environmental assessment), and we did also implemente a statewide program that now allows any community group to apply to a single state agency for authorization to use the statewide programmatic authorities. We proactively conducted the statewide programmatic assessments on these historic fishponds, inclusive of all the authorizations the community groups would need. We did an essential fish habitat study. We went through the ESA. We did the MMPA studies. We did everything. We brought everybody to the table. By doing that at an agency and state level where we looked at it as a system instead of looking at them as sites, we were able to create a comprehensive program where communities are able to now just come in to get approval under this programmatic approval that we received.

We basically did it under a nationwide permit with Army Corps. Then we did a master CDUP, which is a Conservation District Use Permit, at the state level. Communities are able to go in and use that to restore and protect and maintain these individual sites that way. Really, that was because we stopped looking at them as sites, individual fishpond sites, and looked at them as parts of systems that provide ecosystem services (Watson 2016).

When we work with communities, what is always really important is that indigenous communities do not always have a lot of capacity. For those who talk about working on a planner level, that is really hard for us, as Hawaiians, because Hawaiians do not think on a two-dimensional level. We do not even think on a three-dimensional level. We do not think just terrestrially. We think about depth. We have names for every point along the horizon. We go up into the sky. We are navigators. We have celestial maps. We think not only about the significance of a rock or an area or the depths of the sea or the stars in the sky. We also think about the spawning seasons. We think about moon calendars. Then we also think about the importance of ceremony. We think about the importance of individual gods. We also think about natural heritage, tangible cultural heritage and then the intangible cultural heritage.

When we are working with communities, we like to do baseline assessments that get communities to take stock of what they have along these different grids. When you can meet communities where they are from a traditional knowledge or ancestral knowledge standpoint, you will find that there is a tremendous amount to gain from these partnerships. Developing a quality relationship with the impacted community as early as possible is really the best way to reduce conflict. Communities have so much to offer a project. Too often, project leaders see the community as an impediment, but people need to remember that the community has to live with the project. They have the most to gain and the most to lose. Finding quality community partners, especially from indigenous communities, can add so much value to a project, because they often have so much understanding about an area.

As evident from the comprehensive nature of the listing in Table 1 [and Figure 1], the Hawaiian traditional identification of sites within a cultural landscape were intricately intertwined with natural heritage features (i.e., mountains, reefs), vegetation, agriculture, natural elements, and intangible cultural features. When utilized, these physical spaces intersect with temporal features and historic events, truly engendering the need for further dialogue on how to revisit National Register criteria to account for the complex and holistic nature of indigenous landscapes. As the largest Native population in the United States, with over 500,000 individuals, Native Hawaiians are a large living culture with a huge cache of native language resources that remain grossly under-utilized in our historic preservation activities (Nogelmeier 2010).

For this reason, we like to focus far more on capacity building and education. This is a program we are taking part in on Lāna'i. For years now, we've been working with the students there, teaching them about archeology, teaching them how to restore their own landscapes (Maly, Watson, & Osorio 2014). This past summer students did a lot of building on the skills. They are actually doing

the restoration currently, where they are restoring fishponds. They are restoring terraces. This was the third year of a three-year program, but we are getting additional funding to keep the program going. It demonstrates that you really can teach the next generation, and there is so much potential in the future of historic preservation.

Conclusion

We do all of this because we really, in the middle of the Pacific, recognize that the elephant in the room is the necessity to do renewable energy projects. We realize that climate change is a very, very real problem. We recognize the need to preserve historic preservation sites, but we also recognize that we have very, very close relations in the Pacific that are facing real challenges, as are we in Hawai'i. It is just not about the individual sites, but cultures and nations that may be lost. We realize it is about much more than us, but about all the cultures in the Pacific that need us to find solutions to these very real problems. **Δ**

References

Advisory Council on Historic Preservation. (1989). *Public Participation in Section 106 Review: a Guide for Agency Officials*. Washington, DC: Advisory Council on Historic Preservation.

Advisory Council on Historic Preservation and National Park Service. (1988). *Identification of Historic Properties: a Decision Making Guide for Managers*. Washington, DC: Advisory Council on Historic Preservation.

Apple, Russell Anderson and William Kenji Kikuchi. (1975). *Ancient Hawai'i Shore Zone Fishponds: An Evaluation of Survivors for Historical Preservation*. Honolulu: Office of the State Director, National Park Service, United States Department of the Interior.

Baybayan, C., & Kawahara, D. (1996). *Polynesian Voyaging Society: Voyaging Manuel*. Honolulu, Hawai'i: Polynesian Voyaging Society.

Bond, Jr., S. & Gmirkin, R. (2003). "Restoring a Part of Hawai'i's Past: Kaloko Fishpond Restoration." *Ecological Restoration* 21, no. 4: 285-289. Available online from Academic Search Premier.

Carlson, N. K. (1952). *Pālā'au and the Saltwater Fishponds of Moloka'i*. Honolulu.

Choy, S., Nakamura, N.K., Kondo, D.H., Maruyama, M.H., & Maynard, S.D. (1981). "The Mokauea Fishpond Project: A Beginning" *The History, the Accomplishments from September 1980 through March 1981*. Honolulu: Marine Option Program, University of Hawai'i at Manoa.

Choy, Shelley, William Piazzie, Brian Atchison and Sherwood Maynard. (1982)."The Mokauea Fishpond Project: Phase II," April 1981-March 1982. Honolulu: Marine Option Program, University of Hawai'i.

Cie, D. (n.d.) *Native Hawaiian Fishponds: Environmental and Economic Relevance*. http://cmbc.ucsd.edu/Research/student_research/fishponds/

Coastal Geology Group. (2009). *Coastal Hazard Analysis Report*, National Park Service, Available at http://www.soest.Hawa'i.edu/coasts/nps/

Costa-Pierce, B. A. (1987). "Aquaculture in Ancient Hawai'i," *Bioscience*. 37:320-31.

Dahiell, Eugene P. and others. (1995). *Waikalua Loko Fishpond Preservation Plan: Kane'ohe, O'ahu, Hawai'i*. Honolulu: E.P. Dashiell.

DHM Planners Inc. (1989). *Bernice Pauahi Bishop Museum, Applied Research Group, Public Archaeology Section. Hawaiian Fishpond Study: Islands of O'ahu, Moloka'i and Hawai'i*. Honolulu: DHM Planners.

DHM Planners Inc. (1990a). *Bernice Pauahi Bishop Museum, Applied Research Group, Public Archaeology Section and Moon, O'Connor, Tam & Yuen. Hawaiian Fishpond Study: Islands of Hawai'i, Maui, Lāna'i and Kaua'i*. Honolulu: DHM Planners.

DHM Planners Inc. (1990b). *Bernice Pauahi Bishop Museum, Applied Research Group, Public Archaeology Section and Moon, O'Connor, Tam & Yuen. Hawai'i In-Depth Studies: Hawaiian Fishpond Study*. Honolulu: DHM Planners.

DHM Planners Inc. (1990c). *Bernice Pauahi Bishop Museum, Applied Research Group, Public Archaeology Section and Moon, O'Connor, Tam & Yuen. Maui, Lānaʻi and Kauaʻi In-Depth Studies: Hawaiian Fishpond Study*. Honolulu: DHM Planners.

Fornander, A. (1996). *Ancient History of the Hawaiian People*. Mutual Publishing, Honolulu, Hawaiʻi.

Greene, Linda Wedel. (1993). *A Cultural History of Three Traditional Hawaiian Sites on the West Coast of Hawaiʻi Island*. Denver: United States Department of the Interior, National Park Service, Denver Service Center, Available online.

Haleʼole, S.N. (1919). *The Hawaiian Romance of Laieikawai*. Hawaiian text with English trans. by Martha Warren Beckwith. Washington: Government Printing Office, Washington, D.C.

Handy, E.S.C. (1927). *Polynesian Religion*. Honolulu: Bishop Museum.

Handy, E.S.C., Handy, E.G. & Pukui, M.K. (1972). *Native Planters in Old Hawaiʻi: Their Life, Lore, and Environment*. Honolulu: Bishop Museum, Honolulu, HI.

Handy, E.S.C. & Pukui, M.K. (1972.) *The Polynesian Family System in Kaʼ-u Hawaiʻi*. Tuttle.Rutland, VT.

Honua Consulting. (2013). *Statewide Programmatic General Permit and Programmatic Agreement for the Restoration, Repair, Maintenance, and Reconstruction of Traditional Hawaiian Fishpond Systems Across Hawaiʻi*. Prepared for the Department of Land and Natural Resources. Honolulu, Hawaiʻi: State of Hawaiʻi Office of Environmental Quality and Control.

Hoʻomanawanui, Kuʻualoha. (2014). *Voices of Fire: Reweaving the Literary Lei of Pele and Hiʻiaka*. Minneapolis, MN. U of Minnesota Press.

Kamakau, S. M. (1976). *The Works of the People of Old: Na Hana a ka Poʻe Kahiko*. Honolulu: Bishop Museum Press.

Kamehameha Schools. (1994). *The Ahupuaʻa Life in Early Hawaiʻi*. Honolulu: Kamehameha Schools Press.
Kanahele, G. S. (1995). *Waikiki 100 B.C. to 1900 A.D.: An Untold Story*. Honolulu, Hawaiʻi: The Queen Emma Foundation.

Kelly, Marion. (1979a). *Background History of Huilua Fishpond, Kahana Bay, Koʻolauloa*. Honolulu: Bernice Pauahi Bishop Museum, Department of Anthropology, 1979.

Kelly, Marion. (1979b). *Brief History of Kawainui Fishpond and Associated Sites*. Honolulu: Bishop Museum, Dept. of Anthropology.

Kelly, Marion. (1976). Heʻeia Fishpond, a Testament to Hawaiian Fish-Farming Technology. Honolulu: Bernice P. Bishop Museum, Dept. of Anthropology.

Kelly, Marion. (2000). *Loko Iʻa O Heʻeia: Heʻeia Fishpond, 2nd ed*. Honolulu: Bernice Pauahi Bishop Museum, Department of Anthropology, 2000.

Kelly, Marion. (1973). *Some Legendary and Historical Aspects of Heʻeia Fishpond, Koʻolau, Oʻahu*. Honolulu: Bernice P. Bishop Museum, Dept. of Anthropology.

Lyon, H. (1918). "The forests of Hawaiʻi." *Hawaiʻi's Planter Record*, 20, 276-279.

Malo, D. (1951). *Hawaiian Antiquities, Moʻolelo Hawaiʻi* (Special Publication 2, Second Edition ed.). (N. B. Emerson, Trans.) Honolulu, Hawaiʻi: Bernice P. Bishop Museum Press.

Maly, K. & Maly, O. (2007). *E ʻIke Hou Iā Lānaʻi. To Know Lānaʻi Once Again: A Historical Reference and Guide to the Island of Lānaʻi*. Lānaʻi City, Hawaiʻi: The Lānaʻi Culture & Heritage Center.

Maly, K., & Maly, O. (2001). *Mālama Pono I ka ʻĀina: An Overview of the Hawaiian Cultural Landscape*. Available online at http://www.kumupono.com/Hawaiian%20Cultural%20Landscape.pdf (last visited August 1, 2016).
Maly, K., & Maly, O. (2003). *Vol I: Ka Hana Lawaiʻa A Me Nā Koʻa o Na Kai ʻEwalu: A History of Fishing Practices and Marine Fisheries of the Hawaiian Islands.* Compiled from: *Native Hawaiian Traditions,*

Historical Accounts, Government Communications, Kamaʻāina Testimony and Ethnography. Prepared for The Nature Conservancy. Hilo, Hawaiʻi: Kumu Pono Associates.

Maly, K., Watson, T., Osorio, J., (2014). E ʻIke Hou Iā Lānaʻi (To See Lānaʻi Once Again): A Case Study on Culture and Education in an Island Community. Lānaʻi Culture and Heritage Center / IUCN (International Union for Conservation of Nature), in *Post-2015 Dialogues on Culture and Development*, (2015), United National Education, Scientific and Cultural Organization (UNESCO), the United Nations Population Fund (UNFPA) and United Nations Development Program (UNDP), New York, NY.

Manu, Moke & others. (1992). *Hawaiian Fishing Traditions*. (Edited by Dennis Kawaharada.) Honolulu: Kalamaku Press.

Minerbi, L. (1999). Indigenous Management Models and Protection of the Ahupuaʻa. S*ocial Process in Hawaiʻi* , 39, 208-225.
Mueller-Dombois, D. (1992). Distributional Dynamics in the Hawaiian Vegetation. *Pacific Science* , 46 (2), 221-231.

Nakuina, M. K. (2005). *The Wind Goud of Laamaomao*. (E. T. Mookini, & S. Nakoa, Trans.) Honolulu, Hawaiʻi, USA: University of Hawaiʻi Press.

National Park Service . (1988). *The Section 110 Guidelines: Guidelines for Federal Agency Responsibilities Under Section 110 of the National Historic Preservation Act*. 53 FR 4727-46. Washinton, DC: National Park Service .

National Park Service. (1983). *Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines*. Washington, DC: National Park Service .

Nogelmeier, P. (2010). *Mai Paʻa I Ka Leo: Historical Voice in Hawaiian Primary Materials, Looking Forward and Listening Back*. Honolulu, Hawaiʻi: University of Hawaiʻi Press.
Osorio, J. K. (2002). *Dismembering Lahui: A History of the Hawaiian Nation of 1887*. Honolulu, Hawaiʻi: University of Hawaiʻi Press.

Pukui, M.K., & Elbert, S.H. (1971). *Hawaiian Dictionary*. University of Hawaiʻi Press, Honolulu, HI.

Pukui, M. K., Elbert, S. H., & Mookini, E. T. (1974). *Place Names of Hawaiʻi* (Revised and Expanded ed.). Honolulu, Hawaiʻi: University of Hawaiʻi Press.

Sterling, E. P., & Summers, C. C. (1978). *Sites of Oʻahu*. Honolulu, Hawaiʻi: Bishop Museum Press.

Sterling, E. (1998). *Sites of Maui*. Honolulu, Hawaiʻi: Bishop Museum Press .

Summers, Catherine C. (1964). Hawaiian Fishponds. Honolulu: Bishop Museum Press.

Summers, Catherine C. (1971). *Molokaʻi: A Site Survey*. Honolulu: Bernice Pauahi Bishop Museum, Department of Anthropology.

Udvardy, M. D. (1975). *A classification of the biogeographical provinces of the world*. IUCN Occasional Paper no. 18. Morges, Switzerland: International Union for the Conservation of Nature.

Udvardy, M. D. (1975). World Biogeographical Provinces (Map). *The CoEvolution Quarterly*.

Watson T. (2016). Successfully Implementing Indigenous Policy Within Western Frameworks: The Case of Traditional Hawaiian Fishponds in Hawaiʻi. From Solutions to Resolutions: A New Social Compact for Just and Effectives Conservation of Biocultural Diversity, Policy Matters, Watson, T., Noshirwani, M., Burlando, C., Seagle, & Mead, A. (eds) International Union for the Conservation of Nature Commission on Environmental, Economic and Social Policy, Gland, Switzerland.

Westerdahl, C. (1992). The Maritime Cultural Landscape. *International Journal of Nautical Archaeology*, 21 (1), 5-14.

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Ceremonial Stone Landscapes of New England and Developing Best Practices to Assess Submerged Paleocultural Landscapes

Doug Harris
Narragansett Tribe

Doug Jones
Bureau of Ocean Energy Management

Edited Transcript of Presentation

Doug Harris

Trisha (Watson), where are you? Thank you. I'm honored to follow all of what you had to say. Thank you so very much. You create a model for what I need to be saying in the future, as we study more and commit more to what we have to protect. Thank you very much.

In our tradition, we do not travel a lot. I arrive here. I do ceremony. I invite the ancestors of this place to join me and support me in what it is that I have to achieve in this forum. I have been getting strange ripples every now and then, certain terms that come up. I'm going to make this quick. "Prehistoric," we have a problem with that. We, meaning not only Doug, but all the spirits that came in the room with him.

Our history is ancient. It is in this land, and it is here, and in the study of what is here. "Prehistoric" is an inappropriate term. I am offended by it. I respect all of you. I am beginning to like and love some of you. That term hurts me and hurts those spirits that are in the room with me and with all of us. I had to get that out of the way. Otherwise I cannot go to balance and harmony, and that's a place where I like to live.

My partners have been identified. John Brown is the [Narragansett] Tribal Historic Preservation Officer and the guide of much of the work that I do. I am taught by those who taught him, the elder Medicine Man, Lloyd "Running Wolf" Wilcox, and Ella Sekatau and the new Medicine Woman, Wenonah Harris. I have got a very difficult process I've got to engage in. I have got to start with ceremonial stones and I have got to end up with submerged landscapes, but that is what I have to do every day, so I guess I can handle it.

Ceremonial stone landscapes. Anybody here, never heard the term? That is great, we have got a few, a few takers. Ceremonial stone landscapes. *Manitou hassunash*, spirit stones. We are attempting as best we can to be bilingual in dealing with ceremonial stone landscapes. What I found was that when I tried to speak English to other tribal people about what we were saying in our protective enclaves, they did not know what I was talking about. I realized that it was a simple problem. It was not resonating in their spirits when I would use words like ceremonial stone landscapes. But *manitou*, spirit, *hassunash* are stones in groups. Our stones are identified as ceremonial stone groupings, as you see here, as opposed to stone piles, because in our tradition stones are our grandfathers. If in fact you are talking about grandfathers who are congregated out in the field, you would not call them a pile of grandfathers. At least, I would not. I could not get away with that, so *manitou hassunash*, spirit stones or ceremonial stone groupings in English.

This is another type of ceremonial stone grouping, it is on a boulder. I will take you quickly through these, I hope. This is a ceremonial stone grouping on a large boulder that no longer exists in this form. The landholder, when we began to negotiate at this particular site, dealing with an FCC project, the placement of a cell tower, became enraged that Indians had anything to say about what was on his property. He went up there with a backhoe and played golf one day. Ultimately, he apologized for that, but by that time it had been determined by FCC that there would never be a cell tower on his property. Could not be licensed.

Ultimately we went back and renegotiated, there is now a cell tower. What was negotiated was an opportunity to map every ceremonial stone grouping on that property. After the mapping, to be able to identify where they would be, areas of no

ceremonial stones. Since there were no ceremonial stones, we had an issue a mile away in the valley with a *hassunnegk*, a ceremonial stone chamber which viewed all of the stones on this hill. What we sought was to create, to find a void in that set of alignments, where a cell tower could go but not affect any of the alignments. We did find that; ultimately we agreed that a cell tower could go there.

Finally, what happened was that the land owner, within a town meeting with both of his children, told the people in the town that he had done some impacts. He did not understand what he was engaging in when he did it. He still does not understand these stones but said that he would make sure that that property was sold into preservation. It only took two more years before we were able to acquire the funds to buy the property from him. The Narragansett Indian Tribal Historic Preservation Trust now owns that particular ceremonial stone landscape. Those stones, though, are no longer in place.

This is an adjacent piece of property. This is a shadow casting stone in an array of stones—*Okatopsk*, as it is called in the Mohegan language. We have not done the ground-truthing yet to confirm whether or not the shadow casting is by sunlight or by moonlight, but we have identified that that is what it is.

This is one of the effigy figures that we have. If you are not familiar with the animals of our region, that is a turtle effigy. You can see their head, the carapace, paw, paw, and another paw. There's also a tail in the rear. This is a serpent effigy, and the serpent effigies are quite often in dispute because the presumption is that they are stone walls. Most often, they are too low to pen anything in, but we identify them by other means. Usually they do have a head, such as the one you see here. This particular one, just behind the head, also has a space and an orange stone, because we believe that they are related to the serpent effigy that is in the area of Scorpius that the Cherokee referred to as the Uktena,that is a serpent with an orange stone. In its terra form, it is a jewel and it is horned, but this is, as below, so above.

This is a *Manitou* Stone, one of two forms of *Manitou* Stone. This is one that takes a more human shape. This is another form of *Manitou* Stone. It is a peaked stone. Both of those two are at a wondrous place where we first had our breakthrough with ceremonial stones. It is called the Turner Falls Airport, that in 2008 was the first determination of eligibility for a site that had ceremonial stones.

Thank you, National Register for proving that we were wrong. We assumed that if the Federal Aviation Administration teamed up with somebody in Washington D.C. to make a determination, that we did not have a chance, but that was not the case. What we were told when we visited the National Register is that we will give you a fair hearing. We will give you a fair hearing and a fair hearing is what we got. As a result, in December of 2008 was a National Register determination, much to the displeasure of the state archaeologist of Massachusetts whose opinion was also published.

This, is also on that same hill. It is a stone row. Some of the stones have been knocked down, but this is an oval stone at a break. This is another oval stone at that break, and off-center is this stone. That creates a triangle. If you stand on the base of this triangle, you are standing perpendicular to Mount Pocumtuck, 15-1/2 miles away. August 11th, 12th, 13th, in that time frame the sun sets in a notch on Mount Pocumtuck, 15-1/2 miles away.

It was that evidence that we presented to the National Register to say that this is a place of ceremony, this is a ceremonial calendar. Our ancients, for all of their proper reasons, identified this as a ceremonial calendar. What do we find coincidental with it? This is the highest concentration of a Perseid meteor shower. It happens at this particular time when the sun sets in that notch. Coincidental with that, the Narragansett now are in the 340th recorded year of an annual August meeting, an August celebration. Some refer to it as a harvest celebration. It happens coincidentally at this time of year.

One of the key elements in it is an acknowledgement of families who have lost loved ones during the year. They come into the circle from the

northeast and dance around towards the southwest. Later on, there is an acknowledgment of the individual families who have been lost. At this time of year, for many tribes, this is the time of the year when the deceased come as spirits across the sky out of the northeast into the southwest toward *Kautontawit's* House, which is the preferred spot in the western area for spirits to reside. We take all of this coincidence and we acknowledge that we have a landscape that has been created by our ancients.

This is on the Narragansett Indian reservation. We were putting together a health center. The area where they wanted to put the health center was on the edge of a bowl. The bowl had ceremonial stone groupings in it, so we said, we have got to have a survey here. At that point, we had developed a system of survey. That system of survey was developed from the Turner Falls Airport experience. When we went to our elder Medicine Man and we said, "We are not going to win this one. It is clear that the Federal Aviation Administration and the town are mounting a battle. What do we do?"

He said, "In battling against the public and the government, in trying to protect these places, do not lead with oral history or with Tribal law. Allow the landscape to speak for itself. Let the lore and the oral history stand as its witness."

When I got that piece of advice, I stepped out of his office knowing that I had the answer. It only took me three days to figure out, I did not know what the hell he was talking about. How do you let a landscape speak for itself? I did not know. I began to ask and I began to ask in ceremony. Ultimately a few people began to surface in that region. There is one woman who is now part of our ceremonial landscape survey work, who had identified 80 distinct ceremonial stone landscapes, and had them mapped. She came forward with that. She had been looking at ceremonial stone landscapes since she was taken into the woods at age eight and shown them.

Creator and the ancestors began to deliver the people with all of the pieces of the puzzle. At the reservation, one of the things that we found was that we had buried, because you could only see the very top of this, we had buried a seat for observing astronomical events. This is a young man of the tribe sitting in that seat. This is the seat out of silhouette. You can see at the very top of it, the area that was visible. Just that. Once the area was cleared, we realized we in fact did have a seat. The photograph that I do not have is the back side of this, that has a face. I will make sure in the future that that is available.

It is time? Thank you. I am much slower than I thought I would be. Where I will go with this is that, those set of alignments from that seat. That is one of the stones that it is visualizing. This is a signal rock. This is a chamber, a *hassunnegk*, our word for stone chamber. This is an alignment for looking at ... That is a seat, another seat. This is for looking at the Big Dipper at the time of the Equinox. This is another effigy figure and I'll make my transition with this. Thank you so much for checking me on my time.

This is a whale effigy. A whale effigy, with that I would like to make this transition into our submerged landscape work, where Dr. Ella Sekatau gave us the pearl that we needed. That was that more than 15,000 years ago the ancient villages of the Narragansett were out where the ocean is now. Where the ocean is now was an open vegetated plain 15,000 years ago. Therefore, we can ask the question, how will federal undertakings determine the presence or absence of those cultural resources out on the continental shelf? I turn it over to my colleague.

Doug Jones
Thank you, Val. Thank you everybody else for allowing us to be part of this today. Thanks, Doug, for giving me a hard act to follow there. Doug's presentation did provide an eloquent illustration of one of the primary objectives of the project that I am going to be discussing, which is how do we as Federal regulators and Federal agencies utilize that vast Tribal knowledge, to the extent that we are allowed to be included in that Tribal knowledge, towards our regulatory responsibilities? From an archaeological perspective, how do we move past the conceptual or theoretical approach of maritime cultural landscapes toward actually finding, identifying, and managing these sites offshore during our Section 106 process?

I think Brandi Carrier said yesterday in her talk, how do we move past simply avoiding potential paleo landforms that we observe in geophysical data, and approving or denying Outer Continental Shelf (OCS) development projects based on an assumption of what may or may not be present, rather than based on actual, real data on that presence or absence? Towards that end, in 2012, the Bureau of Ocean Energy Management entered into a cooperative agreement with the University of Rhode Island's Graduate School of Oceanography and with the Narragansett Tribal Historic Preservation Office to develop and fund a study titled "Developing Protocols for Reconstructing Submerged Paleo-Cultural Landscapes and Identifying Ancient Native American Archaeological Sites in Submerged Environments." Or, since that does not fit on our PowerPoint Slide, just the "Submerged Paleo-Cultural Landscapes Project."

The study is being co-led by Dave Robinson and John King at the University of Rhode Island, and by Doug Harris of the Narragansett, and the BOEM technical lead is Brian Jordan, who I am sure most if not all of you are familiar with. He is our Headquarters archaeologist and Federal Preservation Officer. Unfortunately he was not able to be here this week, so he asked me to give a brief overview of this project in his place. Before I do, I will back up a little bit.

We showed this slide once or twice yesterday, but to go over a little bit about our BOEM program, we manage offshore energy development for around 1.6 billion acres on the outer continental shelf. Our regulatory program is split up into three separate program areas: oil and gas, renewable energy, and marine minerals, which is essentially sand and gravel extraction for coastal restoration projects. Underlying and supporting those three program areas is a fourth program area, which is the Environmental Studies Program. This program is mandated by the Outer Continental Shelf Lands Act, which is the underlying Federal legislation that gives the Department of the Interior responsibility over OCS energy management.

The mission statement of the Environmental Studies Program is to provide the information needed to predict, assess, and manage impacts from offshore energy and marine mineral exploration and from development and production activities on human, marine, and coastal environments. It is another mouthful, but essentially this program is a funding mechanism, whereby our agency can conduct sound scientific studies, the results of which are then fed back into our decision-making process for all of our regulatory program activities; again, oil and gas, renewable energy and marine minerals. Since the 1990s, BOEM has funded more than $14 million in archaeology related studies nationwide.

Several of those studies have attempted to answer some of the questions we have been talking about over the past couple days, namely trying to model paleo-landscape recreations along all of our coastlines. In the Atlantic, we had a recent study in 2012 to inventory and analyze both ancient and historic archaeological sites and assess archaeological site potential along the Atlantic coast OCS. That study built on a few previous studies that covered the entire Atlantic coast dating back to the 1970s and early 1980s; one that covered from Florida to Cape Hatteras [NC], and another from Cape Hatteras up to Maine. There have also been more recent studies in the Gulf of Mexico and Pacific, some which Dave Ball mentioned in his talk yesterday.

One common limitation of all those studies has been that they are essentially desktop studies that necessarily have a very broad level of analysis toward landscape recreations and modeling sea level change. They more or less look at the bathtub model because they are looking at the entire coastline and have these very coarse hypotheses or models about what site potential looks like on the outer continental shelf because they are looking at such a broad area. Of course, this does not take into account the localized type of changes that are really the determining factors in site preservation, whether the site's low lying areas are quickly inundated and preserved or whether they are exposed longer during the marine transgression process and effectively obliterated throughout that destructive, erosional process.

As one example that came up in this study that John King had pointed out, and something that I, particularly as a shipwreck guy, had never really thought about, but as sea level rises so too does the surrounding water table. At the project area that is being studied here off the coast of Rhode Island, as the sea level rose relatively rapidly between 15,000 and 6,000 years ago, you also had a corresponding inland water level rise where inland lakes were expanding or in some cases being created. Then, as those continued to expand, you had a subsequent wider area that was attractive to Native American use, and as those lakes continued to expand those sites would be covered and theoretically preserved and protected in a fairly benign flooding environment. By the time that the saltwater intrusion actually happened several thousand years later, those sites might still be intact.

Those are the kinds of higher resolution data that our previous studies were not able to capture. Additionally, those studies did not include any field work components to attempt to ground truth the modeling conclusions that they were coming up with. Nor did they incorporate tribal oral histories or true tribal partners in the research designs. Those are all limitations that this current study was attempting to address. Namely, by bringing together scientific knowledge from archaeologists and geologists, along with tribal knowledge and perspectives, to create a best practices approach that can be used by government resource managers to identify and evaluate submerged paleo-cultural landscapes and any preserved sites that they may contain.

I will just briefly go over the specifics of this study. It is a fairly straightforward research design. There were four primary research areas beginning inland and near shore areas and then moving in a more or less linear transect out to the OCS. The first area is in the north part of Greenwich Bay, specifically Gorton Pond and Cedar Tree Beach, which is an area in North Greenwich Bay that has an abundance of Native American artifacts; points and flakes have been washing up on the beach and being collected by locals for decades. The artifacts themselves go back to at least 9,000 years I believe, if not a little bit older than that.

The second study area is off of Block Island, where we are looking at some analogous sites on the western side of the island. The third study area is called The Mudhole, which is one of these former fresh water lakes that is east of current Block Island. Then finally, the Rhode Island and Massachusetts areas of mutual interest, the large red box in the lower right. It is an area of mutual interest for a potential offshore renewable energy development. The PIs for this study have outlined a desired best practices approach that, at least initially, has taken a five-step process towards looking at these sites.

The first is a paleo-environmental reconstruction of known preserved land forms and preserved archaeological sites in the inland environment. The second step is to create a predictive model of site locations based on seismic data offshore. Then, to take that merged Tribal knowledge along with the remote sensing data, with the archaeological and geological data, and reconstruct potential submerged paleolandscapes. Finally, we ground-truth those areas with the hopes of identifying sites and moving on to excavation.

Along with this, but arguably equally as important to the field work and data collection aspects of the study, are objectives that are aimed more toward the interest of Tribal coordination that was at the heart of this study. Those additional efforts include a series of multi-day workshops between scientific, Tribal, and government regulatory personnel. There have been two of those so far with plans potentially for a third. Those meetings are intended to come to an agreement, or at least have a discussion about mutual needs between all the parties, and everybody's recommendation for best practices. What works? What does not work? What do they hope to see out of this project? What are the next steps that should be taken?

Also there is an effort to train Tribal scientists during this project. There were several members of the Narragansett that are now students at URI and have successfully completed scientific diver training through the university. They have been involved with every step of the field work so far, with the hope that they will, as their careers progress,

pass that scientific expertise and that diving expertise onto the next generation of tribal scientists (Figure 1). Finally, there is a documentary film that is being developed throughout this process as well, and I will show a short clip of the most recent YouTube video of that at the conclusion.

Figure 1: Narragansett Indian Tribal member and University of Rhode Island student Chali Machado investigates an exposed ca. 6,500 year old tree trunk and root structure off Block Island, RI. Photo by David Robison, University of Rhode Island Graduate School of Oceanography

I think I mentioned that this is a four-year study. We are currently just wrapping up year three. The first year was focused on the Greenwich Bay part of the study area. There were basically coring and diver excavations up in Greenwich Bay, along with some geophysical magnetometer surveys. Year one and year two were focused on that area. Year three, we spent some time off of Block Island. A State of Rhode Island archaeologist and an archaeologist with the Mashantucket Pequot have been doing some work on the island following Hurricane Sandy, which exposed a lot of paleo-land forms on the island itself.

Recently, some *in situ* trees in their original growth positions and some exposed peat layers were observed extending out to the west of the island in the surf zone. We went back out with Dave Robinson and the Tribal divers this past summer to do a preliminary mapping of how far that landscape extended out into the water. We mapped out 40 to 50 meters before it was covered over by the sand. There was cultural material that was preserved in that peat layer, as you can see in some of those photographs (Figure 2). I believe for year four, next year, the plan is to do a little bit more work on mapping the area in Block Island and also do additional coring and AUV surveys in the OCS areas of the study, the Mudhole, and the AMI (Area of Mutual Interest).

Figure 2: URI divers record cultural material embedded within a ca. 6,500 year old peat layer off Block Island, RI. Photo by David Robison, University of Rhode Island Graduate School of Oceanography

That is pretty much it. I will just conclude here with a short clip from the documentary I mentioned. It is about two minutes long, and this just will let you hear for yourselves from the words of some of the Tribal participants and partners that we have had, and what they have gotten out of this project and hope to see moving forward.

Video

Tribal Diver 1 [Norman Machado, Narragansett Indian Tribe]: But I do not only do this for myself, I do this for my Tribe. I do this for my ancestors. I do this for my son; I do this for my daughter. I do this for the generations to come.

Tribal Diver 2 [Chali Machado, Narragansett Indian Tribe]: It is very important to me because I am very passionate about the people and obviously the ancestors. This is a legacy for all Tribes, because it is not just my people, it is all of us, we are all one. If it is important to us, then Indian Country should find it important also and maybe look into it. If they saw the things that we have found, they would understand that.

Tribal Diver 1 [Norman Machado, Narragansett Indian Tribe]: It is scientific in the research, all that you usually do not find them connect with the spiritual and cultural world. What we are doing is we are out in the field searching for those things.

Scientist 1 [David Robinson, URI]: Those of us who are doing the excavations are not just non-Tribal scientists, but also Tribal scientists. They are the ones who are doing the majority of the excavation work to identify cultural materials and they are really taking an active leadership role in the day to day operations out on site. We have got young people that we're working with, for some of them, this is their first opportunity at managing and directing work in the underwater. This project, because of the benign conditions that we are working in, it is close to shore, the water is quite shallow. It is a perfect opportunity, it is a perfect classroom for training the next generation of underwater archeologists who are also tribal archeologists in the work that we are doing.

Scientist 2 [Doug Harris, Narragansett Indian Tribe]: These young people who we are training, it would be my hope that with the inspiration of the ancestors, they will reread the laws that we have read and they will interpret the nuances that we may have not yet interpreted. They will push the law to better serve tribal historic preservation.

Doug Jones
Sorry, that is the end of the audio. Sorry about the lag there. This computer didn't like that video. Thank you.

Doug Harris is a veteran of more than twenty years of training and service to the cultural resource mission of the Narragansett Indian Tribal Historic Preservation Office. He is a Deputy Tribal Historic Preservation Officer with a Tribal specialization as Preservationist for Ceremonial Landscapes. In the BOEM-sponsored partnership between the University of Rhode Island Graduate School of Oceanography and the Narragansett Indian Tribal Historic Preservation Office, Harris serves with Principal Investigator, Dr. John King and David Robinson, Co-Principal Investigator, in a five-year research project to establish protocols for determining the presence/absence of ancient Tribal cultural resources in submerged Paleo-cultural landscape environments off the coast of Rhode Island on the Atlantic Continental Shelf.

Doug Jones is the Senior Marine Archaeologist for BOEM's Gulf of Mexico Region. Jones has been with BOEM for five years and has worked as a professional marine archaeologist for fourteen years, with a research focus on mid-nineteenth to mid-twentieth century shipwrecks and general Gulf of Mexico maritime history. Mr. Jones received his MA from East Carolina University's Maritime Studies Program in 2007. His current responsibilities with BOEM include Section 106 reviews of BOEM-permitted oil and gas development and marine mineral extraction activities; oversight of archaeology studies funded through the agency's Environmental Studies Program; scientific diving projects in association with BOEM studies and interagency partnerships; and regional tribal consultation liaison.

The Grand Ronde: Linking Tribal Cultural Landscapes and MCLs

Briece Edwards
Confederated Tribes of Grand Ronde

Edited Transcript of Presentation

Thank you, everybody. Thank you for the invitations. Thank you to the people whose land, people who call this place home. Because of time I'm going to try and keep this short, so bear with me. I kind of have three parts here. I apologize, but I kind of need some stage setting before we can get to what, I think, is the cool part with the pretty pictures.

First off you may have heard yet another landscape study project out there. Valerie Grussing mentioned it, a couple of other people have, and this is the Tribal Cultural Landscapes Project. It is a little bit different. It's a little bit unique from other projects that are agency driven in that this one started from a tribal perspective. It was initiated by tribal response. It was found to be of value by a federal agency, and that led to yet another unique element, which was collaboration between tribes. For the West Coast project that BOEM was initiating, we received one of those lovely letters that THPOs get: "Hey we're doing cool things, tell us everything you know about it". We hate those letters. This was a unique opportunity because normally we just brown file. In this case it was, "No, this is significant". Here's an agency that actually is listening, so let's turn this around. Let's say we appreciate what you're after, but you're missing the voice and perspective that can actually give, from a tribal position, value and meaning to what you're after.

There it is. Meaningful consultation is what we're actually after. We proposed, let's look at developing a methodology. Let's look at proposing recommendations at the conclusion, and let's run a case study to see if the methodology has legs. It's great to have ideas, but if it's not going to work, if it's not actually going to make people's lives easier, it's just going to fall to the wayside. The products out of this proposal were an analysis guide and a case study.

The core participants were BOEM, NOAA, (the Marine Sanctuaries Program), the tribes: Grand Ronde, Macaw, Urlock, as well as 27 other tribes and 25 federal and state agencies. You think getting two guys to agree on something is hard, it's a miracle. We started from a position of, we've got this concept, we kind of all have a sense of where we want to go with it, but because we're dealing with agencies and we want something that has legs and longevity, let's find a definition. That's where we started: let's get a definition established and created by tribes that other tribes can get on board with. Then let's see how well that definition will stand with technical staff in agencies. Whether it's the SHPOs, or the THPOs, how's it going to do with the Forest Service or National Parks? So we held workshops. What we got out of this is that's pretty much the definition along with some modification. It took a good solid 12 hours on day one to come up with that.

It's pretty simple. Loosely translated to "Tribes say what's important to tribes or to indigenous groups*." You'll notice that's there with an asterisk because not all indigenous groups have federal recognition. Whether it's Hawai'i, Alaskan corporations. This isn't, and for those of you in federal agencies, it's going to be your hurdle to determine how you choose or not to apply this. Tribes determine what's important to them. That's not at the exclusion of any other tribes understanding.

For instance, at Mount Hood, Grand Ronde holds a lot of understanding about that place, about the practices that go on there, and our neighboring tribes also have connection. Our understanding doesn't exclude the others. This kind of comes back to what was brought up yesterday, the multiple lenses of understanding a landscape, whether we dial it in for whaling perspectives, or whether we're dialing it in for the spiritual understanding across the landscape, or world history epics. I'm going to quickly try to page through this.

We came up with a framework to use. One of the key points that came out of this amongst the

tribes that we were engaging with is to stop focusing on place. It's good archeo training to start from finding a place, but when it comes to actually understanding a landscape, shift the lens, take a half step over. Look at it from a place of practice. Once you understand practice it's a lot easier to go find a place, and when you do find place you'll actually have a better concept of what you're looking at. That's easy to say from a West Coast perspective. With tribes there's a lot more understanding that's not as fragmented as you find in other places in the country—but that information still resides out there. It's professionals scratching the surface, digging a little deeper into it; looking at how wide; looking for bounds. Looking for ways of defining the extent of a shell midden or the distribution.

One thing that we came up with in tribal understanding is, again, shift the perspective, step away from the desire to go with the intent of drawing lines, but let's say no. The landscape is as big as it needs to be. It goes as far as it goes until you stop thinking about it. It's hard to put a line around that and it probably makes every federal agency cringe a bit, but we're talking about identification practices here. Not regulatory, not enforcement, not necessarily protection, we're talking about identification. The other thing is, and I already mentioned this, one tribe's understanding, one group's, one individual's understanding is going to be different than another's. This approach is to be all-encompassing.

Now, again, I'm going to delve into a kind of perspective here. You've seen this model in a lot of different ways. Most of you have addressed this in different ways—tangible, intangible concepts. We use a model of a tree. Trust me, if I could make that model cedar or spruce, I'd be much happier. Oaks work too. Imagine culture as a tree. You've got the tangible, that's the part you can see. It's very expansive, it goes all the way out to the leaves of intimate knowledge—the individual's experience on a landscape. For everything you see above ground it's also reflected below surface; that intangible, that out of sight, but you know that it's there. It's as far reaching. Any of you who do forestry or have been ground foresters, the root system is as broad as the reach of the branches above ground. Same concept applies here. That is one of the founding elements, one of the Legos, if you will, that we were operating with when we set this up.

Methodology. This is a really simple method: conceptualization, data acquisition, tear reference, synthesis, and presentation. The cool parts in the data acquisition and the synthesis. Presentation is this: we set out with another kind of side board on this project which was sensitive information—what are we not going to present? We have elders telling us, we have other traditionalists in the community saying "We don't want to talk about this." We said "No problem. How about if we can find it printed and published, or somehow already in the public domain? Are you good with that?" Begrudgingly, yes, so that's where we went.

Oregon has had a lot written about it. There's been a whole spread of historical work done in the late 1800s, early 1900s, with a lot of world history recorded. We sat down and went through those ethnographic field notes line-by-line and recorded every man, animal, mineral, vegetable and place. Where a sentence may refer to multiple things, you kind of categorize or pigeonhole in each one. Then we geo referenced it.

What we came up with is that, as a resolution on that, the further away we get from shore we get a broader understanding, but it's still a valid presentation of what's understood out there from a land-based community. What you're seeing there is the three study areas that we took. These are defined on land area, land forms, concentrations of data, and diversity of information. The other side board that we were operating on is a traditional understanding of the landscape. Roughly on three levels that would be described as time in western concept. I apologize for the word historic. If you imagine today, we feel our understanding of the landscape is firm. We understand it because we have a first person experience with it. We have a greater reliance on that understanding. Take a look further back in time and we get a little less confident. Maybe the sources we're not familiar with or we're using newspaper articles from the 1820s, there was yellow journalism, it's a little spotty, but

the information is still there and you kind of pick and pull, kind of squint and make sure that it fits right.

With the Grand Ronde tribes, those that make up the confederation, we also had the Ikanham. That's that myth time. That's that time that sits in the back. That's the stories of south wind. That's the stories of coyote. These are the foundations of understanding life, how they live it correctly, how they read that book that you're seeing there. That landscape is a chapter. Each component on that is a chapter of understanding. It's far back in time, so we have, supposedly, a lot less reliance on what it's telling us in a western lens. What we did is we compressed all that information, it's all equal, in a dataset.

Quick notion of data sources: one of the first and foremost, and one that is often forgotten, is what's actually happening there today. We want to see tribes, indigenous understanding as something in the past—still canoeing on the ocean. I love pointing out that they are these points. Those red spots on the map are places where South Wind set the world, or elements of the world, in order. That's a map of Lewis and Clark. It gives us great ethnic graphic information. I'll point out all this cultural and tribal understanding in the landscape and whaling and this and that and like "Oh, really". Lewis and Clark recorded it, "Oh, that's really right on."

This is an interesting point. There's a single point of landform there. Surviving today, the lower left of the foundations of that middle site and dock that you see there photographed in the 1880s, 1890s. That's an advertisement from the Portland newspaper for taking the boat, I think Astoria, down the general miles. Now the general miles had a crew member on crew, a tribal member on crew coming in. On their photograph there's a plank house on the top of that hill behind the mill. Half the mill workers were tribal members, and, as you'll see later, that entire bay, Tilamek Bay, is a stories landscape going back to time immemorial.

I'm going to wrap up very quickly, with two things. This is what taking all those data points look like together—language, places, place names, final resources that have been recorded. The size of the dot refers to how many times that boat shows up in historical records and archaeological sight, and then the amalgamation of all of them. What that looks like when you start learning lines of site between them because that seems to be a key variable. This is the tool that we can use for management and development of future plans in the area—so that we can start engaging with all of the proprietary information behind the scenes. We don't run the risk of violating taboo, but we've now got a tool and a mechanism to start talking. I'll point out there are some very cool hot spots offshore. This is all land-based for the most part, but you see hot spots where there are strong cultural connection based on lines of sight. With that, and paleo-landscape stuff, we can talk about that. Δ

Briece Edwards is archaeologist for the Confederated Tribes of Grand Ronde Community of Oregon, based in the Tribal Historic Preservation Office. He coordinates cultural resource actions on Tribal Lands as well as develops and maintains the Tribe's Site Inventory. As an archaeologist, he is dedicated to developing partnerships with agencies and organizations for the protection of cultural resources throughout the Tribe's ceded lands. He serves as the Tribe's Cultural Resources compliance review contact for multiple state and federal agencies, as well as coordinating interns and special projects within the THPO/Cultural Resources Protection Program. He has also been responsible for the development of the Program's GIS system to record, track, and monitor cultural resources of importance to the Tribe, as well as the Traditional Cultural Landscape Project. Briece has a BA in Anthropology from the University of Maryland, MA from North Carolina State University, and MPhil from the University of Bradford.

Bad River Water and Culture Maps Project: Countermapping with Bad River Ojibwe

Jessie Conaway
University of Wisconsin

Edited Transcript of Presentation

I'm here to talk about the Bad River Water & Culture Maps Project: Countermapping with the Bad River Band of Lake Superior Ojibwe. As Val mentioned, my research partner is Edith Leoso. She's the Bad River Tribal Historic Preservation Officer and she was going to be speaking today as well, but I'm here to let you know about this project that I did as part of my Ph.D. research here at UW Madison. Let's get started.

These are my funders and sponsors. This is community-based research, so this image shows the many small contributions that made this project happen. So here's what we're up to today. I'm talking about participatory mapping of Traditional Ecological Knowledge (TEK). I'm going to tell you a little bit about the people and the place, and then talk about process cartography to reflect and leverage traditional knowledge.

This is qualitative mapping, so we leverage story and narrative alongside quantitative data about watersheds. Then I'll finish up by talking about the impacts of this project: local, regional, educational, and policy. To get oriented, we're up here on the Great Lakes, western Lake Superior. This is America's north coast. The Apostle Islands; Dave Cooper was talking to you about these yesterday. The Apostle Islands are the spiritual and cultural hub for Lake Superior Ojibwe people. The Bad River Indian Reservation is right there at the southern end of the islands. Here's a zoom-in on the Bad River watershed and reservation. The light green shape files show the Bad River watershed boundary and then the light brown is showing the reservation boundary.

The water flows north here out of the Penokee Mountains into Lake Superior. That describes the Nest of the Thunderbirds that Edith Leoso was going to be talking to you about today. That's the Nest, that light green boundary there. This is an image of the Penokee Mountains. These rise eleven hundred feet above the level of Lake Superior and then again water flows north there. This is a very water-rich environment, rich in wetlands, waterfalls, and springs. This is the headwaters of the Bad River, so this is one of the headwater wetlands of the Bad River watershed. In Ojibwe, this is MashkiiZiibi which means "wetland medicine river." It got renamed the "Bad," but that's a story for another day. Here is a picture of one of the waterfalls in the highlands. This is on Tyler Forks, which is one of the main tributaries of the Bad River. Then here's one of the reservation beaches, so where the Bad River comes out into Lake Superior, this is what it looks like there.

This is the crown jewel of the Bad River Reservation. This is called the Bad River and Kakagon Sloughs. This is the largest coastal estuary that's intact on Lake Superior. It's also the largest intact wild rice bed on all of the Great Lakes. Here you can see the Bad River coming out and then you can see one of the old oxbows there. You can also see on the bottom of the photograph some of the wild rice beds. On the top of the photograph is a smaller river called Kakagon coming out into the west-side of this slough. This is an enormous cultural and ecological resource that the Bad River Band are stewards of. These are the wild rice beds. Zooming in on the sloughs, this is what it looks like when you're in a boat on the water and you're looking at the rice. Here's a close-up of wild rice. Wild rice is food that grows on water.

Lake Superior Ojibwe people were guided to this place by prophecy, a migration story, which is their origin story: from the east coast, up what's now called the Saint Lawrence Seaway, to the place where food grows on water. This area was the seventh stopping place and the place that then became, like I said, the spiritual and cultural hub for all of Lake Superior Ojibwe on the US and Canada side. Again, it's an enormous ecological and cultural resource that the Bad River are keeping. This is a picture of the Manoomin pow wow. In Lake Superior Ojibwe tradition, the women are the

keepers of the water, and so here they're depicted. This is the Midewiwin, or women of the medicine lodge, who are doing a water ceremony in these copper kettles. Many of these of copper kettles have been passed down for many generations. You might have heard of Grandmother Josephine Mandamin, who's the Midewiwin of Lake Superior Ojibwe from Grand Portage. She's walked around all of the Great Lakes in ceremonies for Great Lakes water stewardship. These ceremonies are a big part of water stewardship.

For my project, I worked with youth and elders in cultural mapping. This is a picture of two of my helpers, Joe Rose, Sr., is on the left, and then Tia Burns is one of my youth helpers. This project resulted in four maps and four media: a cultural atlas, a wall map, a web map that the tribal youth made, and then also an enormous interactive watershed floor map that's twenty by thirty feet, and that has traveled all over the state. We wanted to make maps for use and outreach, education, and policy. Also, I wanted to, as an academic, contribute to best practices for outsiders and university people who are working in indigenous communities and participatory mapping. I built on the work of GLIFWC, the Great Lakes Indian Fish and Wildlife Commission. They produce this Ojibwemowin, Ojibwe language map. The pink on the bottom is the Bad River Reservation. What we did was zoom in on the reservation to map more of the local places that this larger area map did not depict.

What did this look like on the ground? This is community-based research that we launched last year. It took two years of planning and execution, and then, like I said, it was launched in 2014. Working with elders and youth, the goal was that this was decolonizing, so collaborative, tribally-led, using indigenous research methods, having local research partners who are tribal members from the community, and bringing in tribal priorities, such as language. If you're not familiar with the term, "countermapping" means using western mapping methods for indigenous purposes, and so that's where that term comes from. We're leveraging a counter-narrative. If I'm a tourist visiting Madeline Island, for example, I might hear one narrative of the people who are living there now, the Swedes and the Finns, but the counter-narrative is a layer below: the indigenous narrative, and so maps are very effective at portraying this.

Also, with the Bad River watershed, recently you may have heard, it didn't hit the national media too much, but you may have heard that a mine for Taconite was being proposed in the headwaters of the Bad River. This project helped to address that threat in real time. This is a picture of the wall map. In the process of making these, I interviewed thirteen elders and other community leaders in Bad River. They interacted with two large poster maps with Mylar over them and then used sharpies and stickers to indicate areas that told a particularly important story about water in the Bad River watershed, but also in the whole Ojibwe seated territories, which stretches across Michigan, Minnesota, and Wisconsin. That was the first layer of data.

I also worked with a youth group. We did a watershed education program called Bad River Youth Outdoors. That was another part of my project, which was team taught by myself and community members in Bad River, elders, natural resource employees. This was a four week program in which we developed a campus based on the maps that the elders had helped me produce and then we developed our campus for the youth based on that. Then the kids went to these places and added their own layer of data to our story maps. This is a picture of us paddling on MashkiiZiibi, which is now called in English, the Bad River. These kids were clicking waypoints, so here's one of them with a GPS, so they're clicking waypoints and then adding audio and photos to their layer of data for these story maps. This is us at Sugar Bush Lake—that was our holy grail. Then here, that's a picture of Edith Leoso. This is us out on Madeline Island on the Bad River tribal land that is on the east/northeast end of the island. One of our products was the wall map, like I mentioned. This is us at our map launch at the pow-wow grounds. Then here's a picture of the floor map that has, like I said, traveled all over the state. We're at an audience of over ten thousand now for this floor map.

The web map and cultural atlas and wall map are all Ojibwe perspectives. I'll pass this around. The floor map was a blank slate, so this is a pub-

lic conversation starter. This map is made out of billboard material and people add stories to it with sharpies about the Bad River watershed and the Apostle Islands. There's a picture of myself and one of my assistant instructors on the floor map. People are interacting with it, so they're adding place names, they're adding personal stories. These are tribal and non-tribal stories that get added to this. We went spearing here, and this is the kids talking about spearing for walleye on Namekagon. The kids are excited about their map. This is Tia showing off the web map that the kids made the following winter at one of our public launches in 2014. Stories are missing from watershed data, so when we think about watersheds, it's mostly numbers that contribute to our academic understanding.

What we did with this project was to look at how narratives from tribal people can be mapped as a layer of data, multiple layers of data. Like I said, youth and elders, to contribute to both tribal and non-tribal understanding of that watershed and that place. This project showed that water and stories are both organizing forces in communities, and they're also a common ground for myself as an academic and a paddler, working in a tribal community. Water and stories were what we really found as common ground. This use of narrative in mapping is appropriate for representing traditional knowledge. This is more of the academic backdrop to it, if you're interested in that: looking at maps as a middle ground and creating learning communities to make this work happen, leveraging indigenous research methods, like I said, talking circles.

To make sure that the products that we were launching—that everybody in the community was okay with those—we did multiple community feedback sessions with drafts of the maps. People would weigh in on what they wanted in the maps, what they didn't want in the maps, and so we did community feedback sessions over about six months with these maps. Edith also helped me with disclaimers for the maps. Trying to map indigenous perspectives about a place doesn't always jibe with what someone might expect when they're looking at a map. The way we explained that, was we used disclaimers to explain more of the native perspective backdrop to how these maps are produced and used. You'll see some of these in the booklet that's going around, those disclaimers. To wrap up, I'll just key in on a couple of our impacts.

The Bad River Band wanted to use these for education and outreach and that has been awesome. In our first year the maps were at fifteen events all over the state. We've also developed curriculum for the maps for teaching middle school, high school, and college level, using Act 31 as a local native education policy that was implemented after the Walleye Wars here in Wisconsin, and so we used the Act 31 statutes to produce our curriculum for these maps.[1] All of this is available on our website, which is BadRiverMaps.Nelson.wisc.edu. You'll see more about the project there, as well as the maps that are featured there. The maps are copyrighted to the Bad River Tribe and so now those are on the website as well and people can download those or use them in the classroom.

The maps are also used by Bad River Tribal Council in regional politics and also in sustainable economic development planning. They actually have another version, a blank version of the enormous floor map that they use for regional planning. Those are some unexpected impacts that are also very rewarding, and so the maps are working. This is a picture of us. Here at UW Madison we hosted a UW Native Nations Summit this past year. It was the first time in a hundred years that we had leadership and other representatives from all the Wisconsin tribes here on campus. This was a centennial event. Here are many of the tribal leaders on the floor map. That's a way to stay in touch. Δ

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1 Act 31 is Wisconsin legislation related to Ojibwe treaties and includes funding for Ojibwe education.

with the Native Nations of Wisconsin. Current projects include: water conservation; cultural mapping; environmental education and natural resource career pathways for tribal youth; and climate change adaptation. She lives in Madison, Wisconsin, and is now Faculty Associate for Native Nations Engagement, Nelson Institute for Environmental Studies, UW Madison as of 2016.

7. Management and Protections of MCLs

Introduction

The session on the management and protection of maritime cultural landscapes provided an opportunity for two federal agencies—the National Park Service and the National Oceanic and Atmospheric Administration—to explain how these essential activities are undertaken in MCLs within their jurisdictions. In her talk on Coastal Battlefields, Kristen McMasters, an archeologist with the NPS American Battlefield Protection Program, provided an overview of the ABPP, with emphasis on the special issues raised by underwater battlefields and submerged battle resources. Anna Gibson Holloway, maritime historian with the NPS Maritime Heritage Program, demonstrated the educational opportunities available when historic tragedies are interpreted for the public. In her talk, "USS *Huron*: From National Tragedy to National Register," she discussed the 1877 storm off Nags Head, North Carolina, that resulted in the sinking of the USS *Huron*, en route to Cuba, and the changing landscape around the sunken ship.

Most of the papers in this session revolve around maritime landscapes and military history, but Susan Dolan extends our consideration to the realities of management of these sites—and other cultural landscapes—in the wake of the impacts of climate change. Brad Barr, a Senior Policy Advisor in NOAA's National Marine Sanctuaries, Maritime Heritage Program, revealed a story of Civil War intrigue and destruction in his talk about the Confederate Sea Raider the CSS *Shenandoah*. His topic raised several provocative questions, including, what are the associated cultural landscapes, given the *Shenandoah*'s circumnavigation via the western Arctic? To conclude the session, Joe Hoyt, a maritime archeologist with NOAA's National Marine Sanctuaries, focused on sites associated with World War II and the Battle of the Atlantic. He described research, conservation, and interpretation efforts being taken at the Monitor National Marine Sanctuary, which safeguards one of the few World War II battle sites near American soil.

Barbara Wyatt
National Register of Historic Places/National Historic Landmarks Program
National Park Service

An Introduction to the American Battlefield Protection Program: Working with Coastal Resources and Underwater Battlefield Archeology

Kristen McMasters
American Battlefield Protection Program
National Park Service

Edited Transcript of Presentation

I work for the American Battlefield Protection Program (ABPP), which is part of the National Park Service (NPS); however, you will notice I'm not in uniform. That's because I work for an external program. The NPS external programs, like the National Register of Historic Places and the National Heritage Areas, are meant to be of service to outside communities and people outside of National Park Service units. In some strange way I'm an archeologist who is not assigned a national park. Our legislation directs us to work with nonprofits, governments and local communities to steward battlefields:

"…to assist citizens, public and private institutions, and governments…in planning, interpreting, and protecting sites where historic battles were fought on American soil during the armed conflicts …,in order that present and future generations may learn and gain inspiration from the ground where Americans made their ultimate sacrifice." 16 USC 469k-1, as amended

We are fortunate to have an explicit mission statement, because then we don't have to live with the mission creep other managers may suffer. We have Congress telling us what to do. We are to be assisting citizens, the public, private institutions and governments in planning and interpreting and protecting battlefields. They're to be on American soil or territories. That includes all the territories, from the U.S. Virgin Islands out to Saipan or Guam, so we have a pretty big span. As long as I can call our technical assistance "domestic", we can be helpful. We're here to preserve and protect battlefields in perpetuity.

We were a product of necessity, to Congress, after the Disney event near Manassas. Disney was going to develop a theme park 30 years ago around Manassas. That issue got settled with a very expensive Congressional "taking of land" or use of eminent domain. Essentially the question morphed to, "How many significant or principal battlefields are there out there that are going to cause these kind of disasters, where the government has to come in and purchase land?" The Park Service did not know. We manage our own land, and we didn't have an inventory of what was out there in the rest of the world. There was no good systematic survey or inventory of Civil War battlefields across the U.S. We started with a survey and inventory of historic sites. We ended up with 384 of principal battlefields discussed in a 1993 report to Congress, to give them the condition of these significant battlefields throughout the nation.

These battlefields really were the principal ones in the nation that had an outcome that affected the Civil War's actual unfolding, or a campaign, or a famous person. By 1996 it was clear to Congress and the ABPP that not just Civil War battlefields needed attention and assistance, so our grant abilities were expanded to include helping any battlefield at any time period in the U.S. For example, there were engagements in the U.S. Virgin Islands, like the one between the Dutch and the British. As long as the battleground is on American soil, we can be involved.

We also have created reports to Congress that prioritize battlefields and their endangered status. By 1998 we were offering funds to buy Civil War battlefields in fee purchase or in easement; to date we have leveraged over $87 million dollars that have been given to us by Congress for land acquisition. As a matching program, that means there's an equal amount 50% out there, at least $87 million dollars that someone else provided toward securing battlefields. By 2003 we were asked by the President's Advisory Council on Historic Preservation to be of assistance on battlefields that had adverse projects as determined through the National Historic Preservation Section 106 process. So now we help our sister agencies to try to come up with

good mitigation efforts, or to identify the battlefields that are under threat from Federal action.

By 2007, we were asked to create an equivalent report to Congress for Revolutionary War and War of 1812 battlefields, and over 270 battlefields were assessed in that report for their priority for their threat, and for their significance. That report, titled "Report to Congress on the Historic Preservation of Revolutionary War and War of 1812 Sites in the United States," is available on our website.

In 2010 we were asked to update the Civil War reports, since they were already dated. They are also available on our website on a state by state basis and can be found under the title of "Update to the Civil War Sites Advisory Commission Report on the Nation's Civil War Battlefields."

We have a specific philosophy for preservation with all our battlefields. We see battlefields as cultural landscapes. Each has a unique history, unique resources, and are within a unique community. We look at local advocacy as key for stewardship, and essential for preservation. I find it interesting today to hear many of the conference presentations discuss the importance of having a shared *lingua franca*, a common language, and a common methodology. Because we have so many battlefields in the nation we found the same issues. Our program has become very rigorous in our methodology, and very rigorous in our labeling of how we identify battlefields. The labeling and the method are the same whether the resource is terrestrial or underwater.

Of all the criticisms I've heard over the years of our studies, perhaps our 1993 study was most criticized. It was not because we got the battle action in the wrong place, but because we didn't have underwater resources identified quite correctly or as expansively as we should have. I think we've made great strides to change that with our updated studies. How we establish the battlefield boundaries has expanded since 2004.

Let me take a moment and talk a little bit about defining battlefields. For us, a battlefield is any space that has been fought over. The space must have gun fire and must have been taken or received by two governments in conflict. We automatically consider any tribal activity as government sanctioned. The engagement does have to be an actual exchange of fire. We don't look at massacres or sites of civil disobedience. For example, the 9/11 site in New York would not be considered a battlefield, nor would some Tribal massacres of women and children.

Most Americans cannot imagine the number of battlefields that exist in the U.S. There are 3,000 battlefields related to the Revolutionary War and War of 1812, and over 10,000 sites of Civil War engagements.

In this paper, I will just discuss the principle battlefields, and how we deal with those. Principle battlefields are those that have an influence on a major campaign or the outcome of the war. There are a whole lot more places of conflict than just the three wars I have mentioned: French and Indian War; plenty of Indian wars in the West and the Mexican-American War. There are also lots of engagement sites in the U.S. I have to smile in thinking what a moment in archeological time battlefields are. Many of our places of conflict were only for a few hours, and what a slight signature that leaves in the archeological record! What an instant they are, and how differently we look at our dataset for battlefield sites. We are far less concerned about stratigraphy and dating items; if you're at Gettysburg and you don't know when that Minie ball flew from the gun, you can guess it is within three days in time in 1863. We have different concerns, and underwater battlefields actually allow us a certain amount of freedom to think differently as well.

To understand the submerged battlefield, it is important to see whole strata from prehistoric layers, to the battle layer, to layers above—reflecting all the activities that have happened since the conflict. Our program focuses at that middle, that battlefield layer. It's not that we disregard the upper layers, and it's not that the lower layers aren't important. However, Congress gives us a mandate for top consideration for the battle layer, and we consider everything within the battle layer. We consider that battle layer the "middle of the Oreo cookie." We hope our program will be protecting that battle layer and the other layers will be swept

up in that action of stewardship. Everything below and everything above hopefully will be maintained, but our focus has to stay with the battle layer.

I'm going to explain how we identify our battlefields and how we put boundaries around them. There was a time when we would go to a historian, and ask, "Hey, where's the battle?" They would give us a blob on a map. We would often go to the National Register of Historic Places and ask for the blob that's on their maps. We would take that, and that would be our blob and that would be how we would look at it. Nowadays, we're actually looking a lot closer at our battlefields, and we start by looking for defining features. We borrow that term from the National Register of Historic Places: key defining features. We assign defining features for battlefields for any spot, any location, that can be found where the conflict happened: that "tree," that "bridge," that "fence," that "rock," that "corner of a building." If a spot where conflict happened can be located, they can be referred to as a defining feature.

That leaves out that General's order, that concept, that specific movement. What concentrating on the ground does is to pin things to a three-dimensional spot on the planet. What's a little bit revolutionary about our program is we have always considered natural resources just as important as cultural resources. That rock where Turkey Foot stood matters. That escarpment where the men hid matters. That ravine, that defile, that water crossing all could be a defining feature. Even that swamp could be an obstacle to be removed by troops (that's a very big defining feature!) We've always looked at the natural and cultural as being tightly linked.

Once you get your list of defining features, you just put them on the ground on a map. Once we get our defining features on the ground, then we put a boundary around it, a Battlefield Boundary area. All defining features have to be within the battlefield. We don't have defining features outside of the Battlefield Boundary. The heaviest area of fighting, the area that saw perhaps the most action, the area that really has a key outcome to your objectives, that one area that really is very important, it's called the Core Area.

As preservationists, we're beginning to think that concept might be a little outdated, and the reason is that people tend to say, "Where's the core area? Well, that's all we're going to put on the National Register. Where's the core area? That's all we're going to say. That's the only land we're going to buy." We really are having trouble with that concept of Core Area as only being part of the whole, and that may be actually deleted as a program term in the future. We'll have to see what our next studies bring us.

On top of the Battlefield Boundary and Core Area, we impose what we call a Potential National Register area or PotNR. Some sections on the periphery may be removed from the Potential National Register area. It might have a Walmart on it or there might be something that so erased the readability of the battlefield that it's just clear from driving around that there's nothing left. The determinations are based on windshield surveys, and to archeologists, I know, that's not very welcoming. These surveys can be done in a couple of days. You pull together your defining features as you have your first look around. It gives us a way to begin our understanding of the battlefield. Grant funds enable us to flush out a better understanding as we go.

How do we put this concept underwater? We find the defining features, then we create the Battlefield Boundary. We also show troop movements. On old maps features might have looked differently, reflects the whole idea of using defining features. This is pretty consistent with National Register Bulletin 40; our system is just an elaboration.[1]

All those defining features can actually be broken down even further. We've found in battlefields that it's important to use, again, the same language among different time periods in different parts of the country and different engagements. All our defining features actually can fall within one of these five rubrics, and can be Key Terrain or a Key Position. Some people call Key Terrain

1 Patrick Andrus. *Guidelines for Identifying, Evaluating and Registering America's Historic Battlefields* (Washington D.C.: National Park Service, 1992;1999)

also a decisive location. It might be the way you know that you've reached your objective. If you're told as a military unit to go take Hill #409, then Hill #409 is Key Terrain. It is your decisive position or your objective. Observation and Fields of Fire could be another type of defining feature. I think some of you may have seen KOCOA analysis out there, where Observation and Field of Fire has been considered in marine settings.[2] This can include looking around the corners of islands. Anybody who can do that is really smart, but having that field of vision to be able to see or fire around the corners may really influence how that battlefield event turns out.

Being able to see through fog, being able to deal with weather, being able to deal with water current patterns may be other factors in considering battlefield outcomes. Conceal and Cover are terms also within KOCOA. It is the reverse of what can be seen. If you can't be seen because of fog, or you can't be seen because you're around the corner of an island, then that's concealment and cover. I was on a plane once and I asked a military guy if he knew what KOCOA was and, of course, he said they teach it in basic training. I wish I was smart enough to make up the system myself. The only thing I did was apply KOCOA to archeology. I once asked the difference between Concealment and Cover, and I was told, "Well, if you're concealed, the enemy can't see to shoot you. If you're covered, the enemy can't actually shoot you." He said he'd pick cover every time. I like that explanation.

Obstacles are those funny features that get in the way of mobility or movement. A swamp can be an obstacle. It can stop you from moving around on the battlefield. In a marine setting it could be an obstacle of wind, it could be an obstacle of current, it could be an obstacle of getting into a river setting. The obstacles can be many, and in an avenue of approach the question is, how did you get to the Field of Fire, or how did you get to that place of contest? When did you know it began, and when did it end, as the edges of the battlefield's avenue of approach?

For all these principal battlefields—the 384 of them we've done with this KOCOA system, the 270-plus for the Rev War and War of 1812—we have them all in GIS. I offered to Jimmy Moore with BOEM, if he thought that would be useful, we'd be happy to share all that GIS data so that you know where we think battlefields are right now. We can be helpful with that. You don't have to do this from scratch, even though you might want to challenge our thoughts and our findings.

Here's a way that we can rethink some of our underwater resources. If you look at Credit Island in Iowa, look at the most likely British gun position. KOCOA ideas are imposed on the known history to predict the gun location. Now, one thing we're doing, and I've got to give it to the Mashantucket Pequot Museum, they have done something called a Reverse KOCOA. They don't have the best written backgrounds for their engagements, but Kevin McBride actually took all five KOCOA principles and said, "Every battlefield has at least these." Some defining features fall within a couple of the categories. He said, "What am I missing? Which KOCOA attributes am I missing?" He did a reverse KOCOA. I think at Credit Island, Iowa, they did the same thing—looking for where the gun positions were based on what was missing. KOCOA can help you with your predictive modeling, if you're interested in doing that on battlefields.

You might say to me, "Kris, where can I find a list of battlefields that have had some basic research by our grant office?" You can look online, and we have all of our grants listed. You can see where our reports are for the Revolutionary War and Civil War, and you can see GIS data maps online for the Civil War Principal Battlefields. Otherwise, you can contact me and I'm happy to get you some information. Also, if you want to know where our program projects are, like the Charleston Harbor one project I was just talking about, you can go back through the years of our previous grant winners and you can see a little three-line write-up and the dollar amount, and see the research proposed.

2 KOCOA stands for Key Terrain Observation and Fields of Fire, Cover and Concealment, Obstacles, Avenues of Approach.

I suggest that we should be thinking outside the box. For example, we have used heritage tours and projects with mapping for dive shops and PSA's in tours in Saipan. We've considered Kiska and Peleliu for island inventories, where we used both terrestrial and underwater resources. At Kiska, we actually considered the resources of the air, because it was a firefight using airplanes. That's a third dimension for airplane fights we have to think about. We've also done the handbook with the Lake Champlain folks, which is available. I'll step you through a couple of our good examples.

In Saipan, we've worked with Dr. T. Carrell and Dr. J. McKinnon, and Ships of Discovery. It seemed the tourists were ripping off pieces of WWII tanks and taking them home. We came up with a heritage tourism trail to help the community. We did a basic site inventory of materials underground, and we came up with posters and public service announcements in order to advise people not to rip stuff off. We trained the dive shop owners in how to treat these archeological resources with respect, and I hope it's turning out well.

On Peleliu, we had some basic problems with understanding the boundaries of the battlefield, partly because landowners were concerned. We've done at least two archeological projects in order to work out ways to talk with folks about assuring them how important it is to protect what we're finding. We've used archaeologists to get at issues of landscape and issues of local cultural concern, and the archeologists seem to like being used.

Valcour Bay has had a dive program for years, and we have spent a couple of years supporting that effort. We give seed money, we're not really meant for long-term preservation projects, but just to spark things. We have sparked some research on the zebra mussels on the Spitfire. We have got our underwater manual up on our website, and we've done a compilation of some of the research from Valcour Bay. We've done entire engagements, surveys for entire river settings, and regional inventories. You can always ask me for a bibliography. Eligible sites are above ground and underground.

In sum, the ABPP can help with best practices, and we can even help potential applicants form grant requests. We have KOCOA Cheat Sheets and we have a submerged resource manual on how to do KOCOA on underwater battlefields. These are available through our office, including online. Although the staff is small, it is there to help. Δ

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USS *Huron*: From National Tragedy to National Register

Anna Gibson Holloway
Maritime Heritage Program
National Park Service

'Twas a dark stormy day when orders came to sail;
Mountain high the billows ran, fierce winds did screech and wail.
Round the capstan sailors brave the anchor quick did weigh
Of the noble steamer Huron, whose fate was sealed that day.

Our story begins on November 23, 1877, as the vessel (built in 1875), its sixteen officers and one hundred eighteen crew left Hampton Roads, VA bound for Cuba on a survey mission. Shortly after 1 a.m. on November 24, 1877, however, the *Huron* ran ashore off Nags Head in a gale. Just two hundred yards from the shore, it was well within the range of the Lyle guns typically used by the U.S. Life Saving Service, which had a presence both up and down the shore from where the ship lay. But there was no response from the USLSS—the station was not scheduled to open until December 1, just six days later. Lack of budget and concerted government support meant that the stations were only open between December and April. In the roiling surf, the *Huron* was a doomed vessel, and most of its men were as well; only thirty-four of its men would survive the night. Fishermen and their families stood helpless on shore as they watched the tragedy unfold—giving aid to those who did make it to shore.

The ensuing inquiry into this tragedy—and national embarrassment caused by this and the subsequent sinking of the steamer *Metropolis* near Corolla just two months later—ultimately resulted in better funding and longer operating seasons for USLSS stations. Not considered a hazard to navigation, the *Huron* lies just offshore as the land, the sea, and the world has changed around it.

The title of this presentation, which was delivered at the Maritime Cultural Landscapes Symposium in Madison, WI, in October 2015, serves as an homage to Richard Lawrence, former State Underwater Archaeologist of North Carolina. Richard, along with East Carolina University graduate student Joe Friday, wrote the successful National Register nomination for the wreck site of the USS *Huron* in 1991. Shortly after, Richard and his team at the North Carolina Underwater Archaeology Unit worked to have the wreck site designated as North Carolina's first Shipwreck Preserve—essentially an underwater state park. All of this, of course, was a result of recommendations written into the Abandoned Shipwreck Act to offer both access and protection to submerged cultural resources.

The National Register nomination of the *Huron* indicates that the site of this 175 ft. vessel lies approximately two hundred fifty yards from the beach between mileposts 11 and 12 on North Carolina Route 12 in Nags Head, just northwest of the Nags Head Fishing pier, at the foot of Bladen Street. Lying in approximately twenty ft. of water, the site as described in the National Register nomination extends one hundred fifty ft. from the center of the wreck in a 360 degree circular boundary. I will argue that this physical boundary is correct. I believe, however, that we can gain a greater sense of the totality of this vessel's particular maritime cultural landscape by applying a more holistic approach to this wreck, a method I have applied successfully to the USS *Monitor*.

The *Huron*, which sank off the coast of North Carolina on November 24, 1877, is part of a maritime cultural landscape which is undeniably physical, yet the ship has also created a landscape that can be apprehended in far-flung places: in gravesites and front page headlines, in doggerel verse and in Instagram photos. While the listing on the Register has long been established, what I am talking about is a bit more theoretical. Yes—I will deal with how this site has been successfully managed and made accessible—but I also want to talk about how we can use existing sites to broaden our view of what can be a maritime cultural landscape.

I came to be interested in the *Huron* in a less predictable way than most. I am not a diver, though I have been able to visit the displays about the *Huron* in Nags Head. I did not approach it first from a naval history perspective, nor from the perspective of this wreck's influence upon the reforms that led to an expanded life-saving service, though these are all important aspects of this vessel's significance. My interest began because of the salvage company I have been researching. This was a company so good at what they did that they rarely left any discernable traces for an archaeologist (or a historian, for that matter) to find. They were the B & J Baker & Company of Norfolk, VA, and they "were not known for doing things by halves." They were intimately, and tragically, involved with the *Huron* and are very much a part of that vessel's story.

But I also come at this from the perspective of a historian interested in the micro-historical approach. I like to take a vessel and reach as far out as I can to tease out the cultural milieu in which it operated and find the cultural memory derived from whatever event associated with it most resonates within the public consciousness. Thus, my vision of a maritime cultural landscape is multi-dimensional, passing through time, space, and memory.

Using Keith Muckelroy's work as a starting point, and expanding on it with Brad Duncan and Martin Gibbs' incredible exploration of responses to "shipping mishaps" in Australia, which Josh Marano discussed in his paper at this conference, I have applied a modified framework with which to view the maritime cultural landscape of the USS *Huron*. The "shipping mishap," in this case the wreck of the *Huron*, forms the center of the landscape, and is both an event and a place. The event, however, does not need to be confined to a proscribed moment in time, nor should the place be confined to a single set of coordinates. In addition, the significance of the wreck has acquired multiple layers of meaning in the ensuing years. Those layers stretch far beyond that 360 degree circle that extends one hundred fifty ft. from the center of the wreck.

This is very much in keeping with Jim Delgado's remarks at this conference concerning the *Titanic* as well as Hans Van Tilberg's discussion of the potential global reach of the Hawaiian cultural landscape. Delgado declared that the maritime cultural landscape is not always tangible and that the cultural landscape extends far beyond the wreck site. Von Tilberg challenged us all by asking, "How much are we willing to include in a maritime cultural landscape?" and "How far is too far, and where do we draw the line?" I will argue that by pushing that line further out to the intangible and cognitive and by embracing the layers of memory associated with this "shipping mishap," we can protect and manage sites such as the *Huron* far better for the benefit of the resource as well as for the benefit of the public.

1. **Pre-impact (threat)**: This aspect could stretch back to the building of the vessel (or before), the training of the crew, any maintenance, or changes to the vessel, etc.
2. **Pre-impact (warning)**: This is the more immediate threat, and involves weather systems, immediate surroundings, environmental conditions, decisions made by officers and crew, etc.
3. **Impact (crisis salvage)**: The wrecking event itself. Immediate decisions made concerning safety of crew, passengers, vessel, and cargo.
4. **Rescue**: Attempts to bring people, cargo, etc. out of harm's way. This also involves any survivor camps that may arise as a result of the wrecking event.
5. **Post-impact (systemic salvage and immediate public response)**: This stage involves the attempts at salvage at the request of marine underwriters, ship owners, etc. Immediate public response includes in-person response as well as news reporting, courts martial, etc.
6. **Post-impact (opportunistic salvage and long-term public response)**: Long-term public response involves editorial commentary of event; art, literature, poetry, or music associated with the event; mementos or popular culture items; memorials, etc. Opportunistic salvage is associated with either deliberate action or happenstance. This phase continues into the present.
7. **Current Disposition**: The current state of the wreck site at the present time. This stage also involves present protections, management, and access.

At the center of this landscape is the *Huron* itself. Built in Chester, PA by John Roach & Sons, this Alert-class iron hulled sloop-rigged screw steam gunboat was commissioned in November 1875. This class (also *Alert* and *Ranger*) would be the last iron-hulled steam vessels that would carry sail. The *Huron* was thus a compromise: it was a vessel caught between the old and new navies. Likewise it carried both old and new ordnance. Civil War relics sat next to a fifty-caliber Gatling gun.

Its length was one hundred seventy-five ft.; its beam, thirty-two ft., and depth of hold, fifteen ft. Relatively small, it displaced only 1020 tons. Serving first off Mexico under Commander Charles C. Carpenter, it returned to Boston in late 1876 where it was overhauled. There it received its new commanding officer, George P. Ryan. Under Ryan's command, the *Huron* headed south to conduct cartographic surveys of the Caribbean and the Gulf, touching in Barbados, Trinidad, Curacao, Aspinwall (now known as Colón, Panama) Mobile, AL, and Port Royal, SC, before returning to Hampton Roads. In Mobile, the crew surveyed the site of a tragic shipwreck; that of the monitor *Tecumseh* in Mobile Bay in which ninety-four U.S. Navy personnel lost their lives on August 5, 1864. After a brief stay in Hampton Roads, the *Huron* sailed north to New York in the late summer/early fall of 1877. There it was once more hauled out and received a new propeller. This, then, is the Huron that makes up the center of our landscape.

To continue with the template:

Pre-impact (threat)

The *Huron* returned to Norfolk, Virginia on November 17, 1877. The officers made the social rounds and were fondly received by the local community. But their time in Norfolk was to be brief. Rear Admiral Stephen D. Trenchard, commander of the North Atlantic station at Hampton Roads, issued an order to depart when ready to Captain Ryan. That departure was delayed, however, until a draughtsman could be brought on board for the survey mission. Even with the draughtsman safely aboard, however, the vessel was perhaps not as ready as it should have been. The compass had not been corrected since leaving New York. Moreover,

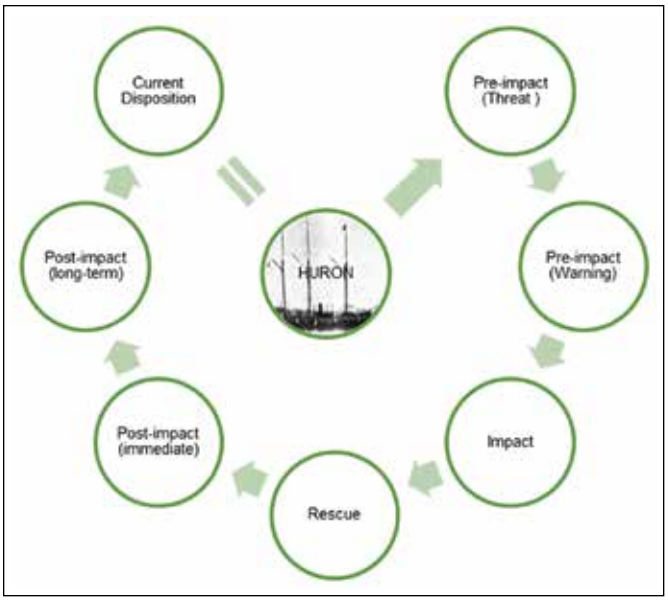

Figure 1.

while the standard deviation of the compass had been given to the commanding officer, the deviation calculated for when the ship experienced an extreme heel had not been supplied. Professor Benjamin F. Greene later testified that "The heeling coefficient was so small, and that her southern cruise would take her where the heeling deviation would become less and less." Thus, the *Huron*'s officers were already operating on insufficient information.

A low pressure system, which had entered the Pacific Northwest on November 16, moved across the country and strengthened when it made its way offshore near the Georgia/South Carolina border on November 22. The daily weather observations dictated that cautionary flags fly in Hampton Roads, Kittyhawk, and Cape Hatteras stations. Those flags had been flying since the Wednesday before *Huron*'s departure. The barometer, however, though falling slightly, gave no one cause for concern. It had held relatively steady. Feeling no apprehension at the time, Ryan asked for permission to leave Hampton Roads. Trenchard responded, "Use your discretion."

At 10 a.m. on November 23, the *Huron* left Hampton Roads, passing Cape Henry between 1 and 2 p.m, at which time the harbor pilot was discharged to return to Hampton Roads. Once on the open sea, Ryan ordered a course of south by east one-quarter east. The *Huron* was making six

and a half knots with her jib, fore, and main trisails and spanker set. Ten miles south of Cape Henry, it passed by a buoy that B & J Baker had left on a wreck site, a marker which confirmed that their course was true. Some crewmen unbent the anchor chains and secured the anchors (which was not standard procedure), while others shoved jackasses into the hawsepipes to minimize water intrusion. Several vessels passed the *Huron*—all headed north. By 6 p.m. Currituck Lighthouse was off the starboard beam, about seven or eight miles distant, but the winds began to increase. The air temperature as well as that of the water hovered between the upper 50s and lower 60s.

Pre-impact (Warning)

Shortly after 6 p.m. both the jib-stay and the flying jib-stay carried away. The men "secured the sail and set the fore storm staysail; took in [the] spanker" and by 8 p.m. had "put a single reef in [the] fore trysail, and a double reef in the main trysail." The vessel moved on under both sail and steam at a slower five and a half knots. The officer of the watch reckoned the wind at east-southeast at force seven or eight, which indicated a moderate gale at 26-33 knots to a fresh gale at 33-40 knots. Ryan's course was calculated to take the vessel far enough from shore to not imperil the vessel, but not so far as to enter the Gulf Stream, a mistake he had made off Port Royal and did not wish to repeat. Constant soundings with the lead line were consistent with the assumed course. The gale was not considered alarming, and officers were more concerned with whether they would be able to sleep while off watch, since the course would take them into a heavy sea. The barometer remained steady at 30.04 inches. The strong currents, though noted, were not considered a matter for concern. But the storm intensified. At midnight, Master French asked one of the quartermasters what was the state of the weather. The response was simple. "Bad," the man replied.

Impact

Shortly after 1 a.m. on November 24, 1877, a heavy shock awoke sleeping sailors and startled those on watch. Many initially thought that there had been a collision with another vessel as there was the clear sound of water rushing over the rail. The next thump, however, told a worse story. The vessel was aground, keeled over on her port side 30 degrees to windward, but quickly settling at an angle of 40 to 45 degrees. The men could not stand upright without holding on. The impact swept away all of the ships boats on the port side. The main gaff fell and drove an awning stanchion through the starboard ship's cutter. Escape by boat was rendered nearly impossible. Yet the hole was not so severe, and some of the men believed they might be able to take the boat to shore, carrying a line which would help effect the escape of the rest of the crew. But how far away was the shore? The air was thick with spray and the men could not see clearly. Some declared that they had struck a reef some eight or nine miles off the coast, while others felt that they were aground very near the shore. Captain Ryan, who firmly believed the former theory, asked the men to point to where they believed they saw the shore. As he looked through the flying spray and foam, he saw a chilling sight: they were on no reef, they were near the breakers. The shore lay scarce two hundred yards from their location. He moaned, "My God! How did we get in here?"

In a heave of the ocean, the cutter swamped and was carried away with no men on board. That avenue was now closed, though there still remained a few boats. After the near-paralysis of the first seconds of disbelief, the men quickly sprang into action. Captain Ryan gave orders to lower the sails. Executive Officer Simmons likewise issued orders to batten down the hatches, using the sails as covers on those hatches that could not be battened due to downed spars and rigging. Those proved imperfect covers, allowing water to rush below decks to the engine room. The men also made ready to throw the guns overboard. As the vessel continued to thump against the seabed, it became clear that the masts should be cut away to keep them from becoming deadly pile drivers which would hasten the demise of the vessel. Men began hacking at the starboard lanyards of the fore-rigging. The foremast fell to windward, taking with it the jibboom and main topmast. The guns, however, remained where they were. Throwing them overboard would risk stoving a hole in the side of the vessel.

There was equal action below decks. Ensign Lucien Young retrieved two boxes of Coston flares

and rockets and sought a sheltered place from which to light them: the captain's water-closet. Using lit candles as ignition, he and Lieutenant Lambert Palmer fashioned launchers for the rockets out of wood stripped from the decorative trim in the cabin. They were able to launch five rockets and burned over a hundred flares before their position became untenable. They moved forward.

In the engine room, engineers stopped the engine briefly after a signal from the deck. Lieutenant Palmer then called down to them, "Can you back her?" The chief engineer replied, "We can!" and engaged the reversing gear. The engine began to back, but to no avail. After a little more than an hour, the engine stopped on its own and would not restart. With each thump of the vessel, the hull buckled inward, shifting the boilers. Still, the engineers and machinists remained in their precarious post, attempting to keep the boilers fired to provide steam for the bilge pumps. By 2:15 a.m. it became clear that the engine room could soon become deadly, so the fires were hauled. The bilge pumps ceased operation, and the steam whistle, which had been blowing a distress call, slowly fell silent. Captain Ryan ordered all hands on deck. With the mechanical life leaving the vessel, the sea moved in to dismantle it.

Only a few small boats remained on the vessel—the ship's launch and a knock-down bolsa that required assembly and inflation. The bolsa was packed away below. Crewmen scurried below to retrieve it, and to extinguish any lights. The risk of a fire from an overturned lantern was too great. The vessel settled into darkness as the flood tide rose around them. Men began to make their way to the forecastle and into the rigging to escape the churning seas as the waves broke over the vessel. Those who did not have a firm grip were soon washed overboard.

Near dawn, Captain Ryan ordered the launch lowered. He and several men, including Lieutenant Palmer were going to attempt to get a line to shore. As they were attempting to lower the boat, the sea carried it away to leave it dangling stern down from one davit. Ryan fell between the boat and the *Huron* and disappeared. Lieutenant Palmer and another man clung to the davit until they too were swept away. The launch and the remaining dinghy then vanished in the roiling sea. Broken apart by the force, the remains of the small boats washed ashore, next to the bodies of the men who had been washed overboard. Only the bolsa now remained on board

Just before dawn, the men on the *Huron* saw a light appear on shore. They would be saved! Giving three cheers for the light, the remaining men briefly found renewed energy. Ensign Lucien Young and seaman Antoine Williams volunteered to take a line to shore in the fragile bolsa. However, the foremast rigging and spars which had been cut away were dangling over the starboard side. The bolsa became tangled in the mess and Young and Williams had to use precious moments to cut it free. The lifeline attached to the bolsa—the very thing that might bring relief to the remaining men on board, was also the very thing that hindered the bolsa from leaving the vessel intact. At the insistence of the men still on deck, Young cut the line with a penknife and he and Williams were swept to the stern where they capsized. Regaining the bolsa, the two used it as a flotation device, pushing it before them while swimming behind it. Though continually pummeled in the surf, the two made for the light they had seen on shore and for the telegraph poles which they first took for masts of a fishing fleet. They reached the shore at the same time, exhausted but alive.

Yet still, the men left aboard the *Huron* did not believe that the men of the lifesaving stations they knew to be nearby would not rescue them. With Coston signals having lit up the sky and, for a time, the steam whistle having sounded, and now with Young and Williams ashore, there was no way that help would not come.

And yet it did not.

They began to go overboard—some falling from exhaustion and some leaping deliberately. Those remaining on board watched helplessly as their shipmates were swept out to sea. They could not know from their vantage point that the currents set back in towards shore, delivering a few men to

safety. Flotsam and jetsam from the vessel afforded those lucky few who survived the plunge into the sea assistance in their journey to shore. Some men remained lashed to the rigging, waiting for rescue as the cold and relentless sea slowly sapped their strength.

Rescue

Local fishermen heard the steam whistle and saw the Coston flares, almost from the first minute they were fired, but stood helpless (either in reality or by design) to assist. They gathered in clusters to watch the tragedy unfold, too afraid to break into the Life Saving Stations that were a few miles away. The Kittyhawk station was seven miles up the beach from the wrecksite, and the Nags Head station was three miles to the south. The stations were not due to open until December 1, exactly one week later. The stations were locked, and the crews were safe at their homes, many over on Roanoke Island. Though word had been sent, the distance meant that the crews would be unable to arrive in time to save those who could be seen feebly waving from the rapidly disintegrating rigging. Those who made it to shore quickly apprehended the situation, and those who were physically able fanned out across the landscape to retrieve lifesaving equipment, to retrieve one another, and to retrieve the dead.

Ensign Young, barefoot and bruised, ran to the Nags Head station where he broke down the doors and took out the Lyle gun, lines, and powder. Sheriff Brinkley, driving a mule team, met him there. Brinkley rushed Young and the equipment toward the wreck. They were less than a quarter mile away when they saw the last mast go over, taking with it all of the men lashed or clinging to the rigging. The equipment would be useless.

Ninety-eight men had lost their lives only two hundred yards from shore—well within reach of the Lyle gun, and thus, safety, had U.S. Lifesaving Service crews been on duty. But only thirty-four survivors found their way to land, and they did so under horrific circumstances, with no assistance from the shore.

Once ashore, however, they found clothing, warmth, and food, readied for them by the locals. While they may have been too afraid to break into the Life Saving Stations, the local inhabitants were not the heartless "wreckers" the papers made them out to be, at least not to the living. The exhausted, cold, and wounded men of the *Huron* found shelter in beach shanties, huts, and private homes where they were given clothing, blankets, and warm food. Ensign Young recalled eating warm canned tomatoes and corn supplemented by bread that had washed ashore from the vessel. By Saturday evening, all thirty-four survivors were moved to central locations; the four officers were taken to Sheriff Brinkley's house while the men were housed in the Life-saving station. Wreckage from the vessel, along with personal items and papers continued to wash ashore. Only eight bodies had been recovered at that point, however.

While the Lifesaving Stations may have been closed, the weather observer from the signal corps was at his station. He telegraphed to Norfolk for assistance, sending messages to the Navy and to B & J Baker & Co. Naval vessels *Powhatan*, *Swatara* and *Fortune* prepared to leave for the wreck.

The old wrecker Captain Joseph Baker ordered his partner Ebenezer Stoddard to ready the *B & J Baker* for the journey south. Messages went out around the waterfront in Norfolk, Berkeley, and Portsmouth for the most experienced divers and surfmen, for "the company well knew the highly dangerous service they were about to enter on." Simultaneously, Baker telegraphed the Secretary of the Navy in DC to find if there were any special instructions for the wreckers. Baker soon received a dispatch from the Secretary asking the Bakers to consult with Rear Admiral Trenchard before departure. This Stoddard did, and left for the wreck, stopping first at Old Point Comfort to take on two passengers: Captain John Julius Guthrie, superintendent of the Sixth Life-saving District, and Henry L. Brooke, a reporter for the Norfolk *Virginian*.

The *B & J Baker* was first on the scene the next morning, the naval vessels arriving shortly after. Unfortunately, the fate of the *Huron* was already sealed by the time this rescue fleet arrived, the vessel having already begun breaking up with no

living souls still visible on board. By means of wig-wag signals from ship to the small survivor camp, Stoddard discovered that those who had made it to shore believed there might be sailors still trapped inside the vessel. Guthrie wanted to gain the shore as soon as possible, to deploy lifelines and life cars from the shuttered Lifesaving stations, as no vessels could approach the *Huron* in the current sea state. Though the surf remained rough, Stoddard launched a surfboat from the *B&J Baker* to bring Guthrie to shore. Nine men, including Stoddard and Guthrie were aboard. Henry Earle, James Saxton, Stephen Bell, Dennis McCoy, Willis Walker and James T. King were all divers and surfmen for the Baker company. Brooke, the reporter, asked to be taken along. Brooke recalled:

When we had gotten within two hundred yards of the beach the surf rose high, and the boat gained speed. Further on an immense boulder swept along, and on this it was attempted to go in. Capt. Stoddard cried out, "pull for your lives," and the men bent to their oars. It was too late, however, the billow passed, and the succeeding wave swept the boat along at a prodigious rate. The oar in the hands of Saxton broke, and in an instant the craft was thrown sideways into the trough of the sea, where she was struck by a huge mass of water which completely capsized her and hurled her occupants into the surging waves.

Clinging to oars and to the capsized boat, the men fought to make it to shore. Brooke and Stoddard, along with King and Earle, succeeded. However, Saxton, Bell, McCoy, and Walker of Stoddard's crew, as well as Captain J.J. Guthrie of the Lifesaving Service, drowned in the ill-fated attempt. The *Huron* had claimed five more victims.

Post-impact (systemic salvage and immediate public response)

Stoddard took little time to recover, however. He quickly sprang to action, telegraphing Captain Sumner Kimball of the U.S. Life-Saving Service in Washington DC for permission to "collect the life station men, with the boats and apparatus, to assist in recovering the bodies on the wreck and along the beach. The necessary authority was promptly granted and as there is every indication of settled weather, the wreckers will get to work to-morrow. It is to be hoped that under the skillful direction of Capt. Stoddard, the bodies of the lost officers will be speedily recovered…" In fact, Kimball granted Stoddard the authority to activate all the life-saving stations between Cape Henry and Kitty Hawk to patrol the shores looking for survivors, and bodies. Over the next several weeks bodies of the *Huron*'s men would come ashore in a 40 mile swath. A surviving crewman marked each one with their names in India ink, that is, if he could identify them at all. They were buried where they were found; their resting places designated by how far they were from Norfolk, and which telegraph pole they were nearest. Unidentified bodies and body parts were similarly listed.

Seas remained rough in the subsequent days, and the Baker vessels had to seek shelter in Hampton Roads. While there, Stoddard met with the commandant of the Navy Yard. He requested plans for the *Huron*, which would aid his divers and crew in salvaging the vessel. The *New York Herald* reported that Commandant J. Blakely Creighton remarked, "with a merry twinkle in his eye," that "There is no use in your going for that strong box, that safe; it will be labor lost. There was nothing in it but some old truck." Stoddard, clearly not amused with the insinuation, replied, "We are not after that. We merely want the plan, in order to work more intelligently under water, as it is supposed there may be several bodies in the ship." Though initially rebuffed as a grasping wrecker looking for the paymaster's safe, this would likely be far from the truth for Stoddard. A former acting master in the U.S. Navy, he had served on board the USS *Kearsarge* during the Civil War. His attention to detail had helped to bring down the CSS *Alabama*. That trait was needed in this dangerous operation. The strong box would ultimately be recovered, however. It was seen in front of an antique shop on Taylor Street in Norfolk in 1888, being used as an advertising sign.

Stoddard finally deployed his divers to the wreck as the seas calmed, looking for bodies as well as items to salvage. By December 3, the divers had finished their initial survey of the wreck. Stoddard telegraphed the Secretary of the Navy the following:

> Examined *Huron* aft with divers. Find upper works gone; both decks floated up nearly to spar deck, so that divers could not get in ward room. Will examine forward this afternoon. The undertow and current are very bad. The spar deck is entirely submerged, the port side being eight feet underwater. Will be obliged to blow up spar deck to see if there are bodies in ward room. Ship seems to be hogged about four feet forward. Pivot gun in place. E.M. STODDARD.

Heavy weather plagued the recovery efforts, but eventually guns, clothing, navigation US Life-Saving Service US Life-Saving Service US Life-Saving Service equipment, machinery, and naval stores began to reach the Navy Yard at Portsmouth.

The *New York Herald* reported on the ongoing salvage efforts on December 20, 1877. "Such stuff as can be recovered from the *Huron* is now reaching the Navy Yard. To-day there arrived a quantity of working clothes and thirty packages of clothing, &c., consisting of overshirts, undershirts, drawers, stockings, blankets, flannel, satinet, shoes, sheeting, white pants and ducking; also one twelve-pound howitzer and a quantity of carbines and navy revolvers." More was expected in a few days.

Though Henry L. Brooke had been through a nightmare, he continued to report on the *Huron* disaster. Rival papers to the *Virginian* carried his columns, and the *Public Ledger* congratulated him on his professionalism and wished him "a long, prosperous and happy reportorial life, and trust that in the future, his search after news may be under a cloudless sky and over an unruffled ocean."

Ultimately, much of what was useful from the *Huron* was salvaged and brought back to Hampton Roads. Yet the dynamic nature of the wreck-site made complete salvage difficult. The strong undertow made work difficult for the divers, and many areas of the vessel were inaccessible. The firm used explosives to open up areas of the vessel. After many weeks of work in difficult conditions, however, the salvage firm made the unusual move to abandon the site, likely at the request of the Navy. The *Huron* they left behind was a vastly altered vessel. Thus, the *Huron* became a part of the Graveyard of the Atlantic—and part of the cultural landscape of those shifting sands.

Recovered portions of the *Huron* create their own landscapes. The guns brought up by the Bakers still maintain a silent vigil at Trophy Park in Portsmouth, VA, while other recovered items can be found in the collections of The Mariners' Museum in Newport News, VA. B & J Baker & Co. received $7,575 for working the *Huron*.

Bodies were exhumed: some finding their way home to their loved ones in metal boxes; others finding their final resting place on the grounds of the USNA. The inquiry into the causes of the wreck was held in Washington DC in December 1877. The exhausted officers and several crewmen well enough to be questioned were all asked to give their accounts. The superintendent of compasses for the US Navy was questioned. Ultimately, it was determined that "the evidence shows that many well-found merchant steamers, wooden and iron, commanded by experienced navigators of our coast have been wrecked near the point on which the *Huron* was lost." Yet she was no merchant steamer. The court found that Commander Ryan was primarily responsible for the grounding and loss of the *Huron*, as well as the navigating officer, Lieutenant Lambert Palmer. For five years, the latter's family and friends worked to exonerate the young navigator. Finally in 1883, after an impassioned letter from Palmer's widow, Secretary of the Navy William E. Chandler agreed to publish the letters exonerating Palmer, but refused to reopen the case.

Post-impact (opportunistic salvage and long-term public response)

The *Huron*'s story was seared into the public's consciousness in 1877, commanding front pages for weeks in newspapers across the country. Reporting turned to editorializing with opinions offered about the sorry state of the US Life-Saving Service. A Thomas Nast cartoon in *Harper's Weekly* showed the apathetic visage of Uncle Sam staring at the wreckage of the *Huron*, dead bodies lying in the sand around him. The caption reads "U.S.: I suppose I must spend a little on Life-saving Service,

Life-boat Stations, Life-Boats, Surf-Boats, etc.; but it is too bad to be obliged to waste so much money."

As survivors traveled to Washington to give depositions at the official inquiry, churches held fundraisers in Norfolk seeking to aid the families of those lost in the Baker surfboat. The wreck of the *Huron* reverberated throughout the nation as large towns and small communities alike mourned the passing of so many young men. An op-ed piece in Norfolk's *Public Ledger* summed up the collective grief:

> The loss of the sloop-of-war *Huron* … has stirred the sympathies of our entire community to an unusual degree. Although none of the ill-fated crew were to the manner born, the fact that the lifeless corpses of over one hundred human beings were thrown upon the shores of North Carolina, or whirled and tossed amidst the maddened waves of old ocean, who but the day previous were full of life and hope in our own community, sent a thrill of pain to every heart and carried a settled gloom over our entire community.
>
> This feeling was greatly intensified when, on yesterday afternoon, the telegraph announced that Captain GUTHRIE, of Portsmouth, Superintendent of the Life-Saving Stations from Cape Henry to Cape Hatteras, with four others, residents of the city and Berkley, had been drowned by the swamping of the surf-boat in which they were attempting to go to the aid of the crew of the *Huron*; for Captain G. was well known and universally respected in this whole section of country.

The expressions of grief turned to music and prose. Poet Edith Thomas entreated the public to

Sing for the brave ship lost;
Chant for the lives that lie
In unknown haven tossed,
Under a sobbing sky.

George A. Cragg of Baltimore, MD. quickly published a song in early December 1877 entitled *The Wreck of the* Huron, which he "respectfully dedicated to the survivors of the wreck." Author Frank Taylor of New York's *Daily Graphic* visited the scene of the wreck on the 7th of December. After finding a letter on the shore amongst the wreckage, he was moved to pen what is likely the first poem published about the tragedy:

HER LETTER.

We walked at night the wreck-strewn sand,
We walked and watched the dying storm;
With eager eye and ready hand
We sought to find some sea-tossed form
And as we walked the guard and I,
The tide crept out till broad and gray
The shingled sand shone smooth and dry,
Beneath our fitful lantern's ray.

On either side, and everywhere,
Lay limp and broken bits of wreck,
Of clothing, ropes, of wooden-ware-
All kinds of things one finds on deck.

From out this scattered wreckage waste
I stooped and picked a little note:
A dainty monogram was traced
Above the lines the owner wrote:

"My darling:" but it gave no name,
As if he only of mankind
To such sweet title had a claim:
The words were coined her love to bind.

'Twas written full, and crossed again,
All interlined with afterthought;
'Twas spotted o'er with salter stain
Than e'en the sea could yet have wrought.

"My darling," there a fold was pressed,
The words just here were fainter yet,
As though 'twere worn upon his breast,
A prized and sacred amulet.

Anon, she wrote her hopes and fears,
Of fickle fortune's smile or frown,
Of homelike joys in coming years,
When they were wed and "settled down."

She spoke of Spring and Easter flowers,
Of silk and satin for her bonnet,

Of sick friends, funerals, marriage dowers,
Her new suit and the trimmings on it.

And so this unknown maiden wrote
Her loving letter to its end,
And little dreamed the waves would float
Her writing to a stranger's hand.

Somewhere, to-night, a girlish face
Is raised to God in mute despair;
Somewhere, a woman prays for grace
And strength of soul her load to bear.
Somewhere along the wintry coast
Her hopes lie buried in the sand,
While this tells of the love that's lost
This sea-stained letter in my hand.

Thus, pieces of the *Huron* were dispersed throughout the country—through salvage, through imagery, in poetry, song, and prose, and in the very bodies of the men who lost their lives on the night of November 24, 1877. That physical and cognitive landscape stretched for countless miles, radiating ever outward from the vessel's resting place.

As with most tragedies, the nation's grief began to ease after the first weeks of shock. However, the wreck of the *Metropolis* just a few miles north of the *Huron* site on January 31, 1878, raised the specter of the Huron once again. The combined tragedy of these two vessels cost two hundred and five lives, and altered so many more. The embarrassment heaped upon the US Life-saving Service forever altered that agency as well—for the better. Stations were manned year-round, for, as the *Huron* and other deadly wrecks had proven, disaster at sea has no season.

Current Disposition

Though close to shore, the *Huron* lay largely undisturbed by man—though quite disturbed by nature—until the advent of the popularity of sport diving in the 1960s. As a near-shore wreck, it is accessible as a beach dive, though the unpredictability of its environment can make it an intermediate to advanced dive at times. Still—it can be apprehended from a kayak, surfboard, and on the right days—as a free dive or snorkel adventure.

But greater attention and unfettered accessibility brought renewed 'salvage' efforts, thus leading to a desire to protect this resource in a way that was at once proscribed, yet still accessible. Further still, it was understood that visiting the wreck was not something that a large majority of visitors would be able or willing to do, even on the best of days. Thus, *Huron* became a site that is both underwater and on shore, accessible to divers as well as beach walkers. Interpretive panels in a gazebo located at the beach access nearest the wreck make her more widely available to all. The Shipwreck Preserve—designated as such on November 24, 1991,—is a partnership between the US Navy, the State of NC, and the town of Nags Head. The wrecksite is marked with buoys in season and lifeguards stationed nearby can make sure no one is walking off with pieces of the vessel. Likewise, they are able to maintain a count of visitors. Thomas Horn's recent thesis/study on seasonal corrosion rates on the *Huron* will be useful in developing a new management plan for the site.

Last summer, there was a day where the conditions for snorkeling the *Huron* were perfect. Outer Banks diver and historian Marc Corbett took his then 12-year-old daughter out on a surfboard for her first trip to the *Huron*. He told her the story of the vessel, the horrific wreck, and the subsequent salvage. Armed with her camera, she was able to see all that her father had told her—and to take pictures of several of the features of the *Huron* that told the story. She was able to marvel at the vibrant forms of sea life that had now made the vessel their home. Physically, she and her father visited the three-hundred foot diameter site just two hundred yards off shore. But the stories that vessel told took them much further away.

So what, then, is the maritime cultural landscape of the *Huron*? I believe it is multi-faceted and contains both physical and cognitive elements. It is not a landscape tied permanently to one place, nor even one time. I have told you the story—I have expanded our view beyond the boundaries of the designated site—into the clouds, following the telegraph poles up the coast to Norfolk, to DC, to Annapolis and perhaps beyond. How far is too far to look for a maritime cultural landscape? For my

part, I want to keep looking beyond the physical. For me, that is just the starting point. Δ

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NPS Response to Climate Change and Cultural Resource Preservation

Susan Dolan
Park Cultural Landscapes Program
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Edited Transcript of Presentation

I'm going to talk about Climate Change and Cultural Resources Preservation in the National Park Service. Then I'll talk briefly about cultural landscapes and the National Register of Historic Places.

Barbara Wyatt asked me to talk about a policy and guidance framework that the NPS is using to respond to climate change and to protect cultural resources, and also the tools we're using to identify impacts associated with climate change phenomena. The NPS established a Climate Change Response Program in 2007. Marcia Rockman is our Cultural Resources Coordinator with the Climate Change Response Program.[1] The program created a service-wide climate change response strategy in 2010 and there are four basic tenets of this strategy: science, adaptation, mitigation and communication.

As an agency, the NPS is conducting scientific research to support adaptation, mitigation and communication. For mitigation, we're reducing the carbon footprint of NPS operations. For adaptation, we're developing the adaptive capacity to protect resources within a changing climate. For communication, we're developing tools to effectively communicate about climate change to our partners and to the public.

The four pillar climate change response strategy is now integrated into all areas of natural and cultural resources management. With cultural resources management, "science" is where our Section 110 baseline inventory work comes into play. Cultural Landscape Inventories (CLI) are part of this science effort. "Mitigation" is where we implement rehabilitation treatments, to conserve energy in the operation and maintenance of historic properties. For "adaptation," we're implementing rehabilitation treatments to increase the resilience of historic properties. For "communication," we're developing tools to communicate how impacts are affecting cultural resources.

We also have a brand new Climate Change and Stewardship of Cultural Resources Policy signed by the director in 2014. It calls for our work in cultural resources management to take a flexible approach that integrates the type and level of significance and unique characteristics of the resources in our decision-making. The policy calls for the integration of cultural and natural resources data in research, planning and stewardship efforts, and asks managers to use discretion to respond to emerging threats rapidly, and to incorporate cultural resources into sustainable operations plans.

The policy encourages the NPS to engage fully in cooperative conservation and civic engagement, and to refocus our inventory efforts on the lands that have not been inventoried and those that are most vulnerable. The policy calls for us to try to understand the fullest range of climate change effects, including those that are perhaps more difficult to recognize as they may be slow and less dramatic.

In the policy, the NPS director also talks about loss, and the fact that we must recognize that some of our decision-making may involve loss. We must collaborate and move forward before we have all the information, based on the best available information. We should integrate new information as it becomes available to us.

We've just talked about the NPS Climate Change Response Strategy; well now there's also a Cultural Resources Climate Change Strategy. It divides our process into research, planning, and stewardship—how we think about cultural resources management in the service. We have policy and guidance for how we do research, planning and stewardship. The research is about using climate change projec-

1 The Climate Change Response Program website is https://www.nps.gov/orgs/ccrp/index.htm

tions and vulnerability assessments on a landscape scale to prioritize the areas to be inventoried on the ground that have not been inventoried or are already threatened.

What we want to come out of this first effort is a prioritization of resources that need action. In the planning stage, we develop goals for vulnerable resources, we identify a range of adaptation options, and then we filter those options through constraints and opportunities. In the stewardship stage, we adopt and implement maintenance actions on a cyclic basis. We monitor and we continue to make adjustments, if necessary, but if conditions on the ground change, we return to the planning stage. Or if climate projections change, we return to the research stage again. This is the NPS Climate Change Cultural Resources Strategy.

Tools that we're using to identify cultural re- source impacts from climate change on a service-wide scale include stepping up and refocusing our use of baseline inventory, our Section 110 work.[2] We do inventories for historic structures, archeology and cultural landscapes, and we reassess conditions on a periodic cycle. In other words, we do an inventory and then we go back and do it again. We update it, and we do a condition reassessment. Now we're using vulnerability to climate change impacts as a driver to identify the interval at which we will redo the condition assessment. We have adopted a more extensive range of condition impacts to select from in documenting the condition of the cultural resources. There are 40 standardized impacts that we can pick from in our Cultural Landscapes Inventory database to identify problems with the existing conditions of a landscape. The picklist of impacts allows us to query the service-wide database and understand where patterns of similar types of impacts occurring across the country. We've updated the list of impacts in recent years that are particular to climate change phenomena.

Also, the NPS Climate Change Response Program is working on a new tool that is a resource vulnerability assessment framework. The underlying philosophy behind it is that the vulnerability of a resource to climate change impacts is based on climate change phenomena present, and the amount of exposure that the resource is getting to those phenomena, minus it's adaptive capacity. Capacity to adapt includes our ability to adapt the resource, or the resource's own inherent ability to adapt. About half the 408 NPS units now have climate projection models on a park scale that can be integrated into our research and planning and stewardship efforts.

The NPS has also published a Coastal Adaptation Strategies Handbook. It includes 24 case studies of national parks adapting to climate change.[3] The report highlights how climate change will impact infrastructure and cultural and natural resources in featured park units. The report is not prescriptive, but illustrates examples of potential actions that other parks might take with similar circumstances in response to climate change. It includes a map that shows trends in changing sea levels. An example of a case study is Yellowstone Lake in Yellowstone National Park, where a

Historic Peale Island Cabin on Yellowstone Lake is threatened by shoreline change due to tectonic uplift. Photo from *Coastal Adaptation Strategies: Case Studies*, NPS.

2 Section 110 of NHPA governs Federal agency programs by providing for consideration of historic preservation in the management of properties under Federal ownership or control. The amended Section 110 requires each Federal agency to establish a historic preservation program. The program must provide for the identification and protection of the agency's historic properties; ensure that such properties are maintained and managed with due consideration for preservation of their historic values; and contain procedures to implement Section 106, which must be consistent with the Advisory Council's regulations.
3 Courtney A. Schupp, Rebecca L. Beavers, and Maria A. Caffrey, eds. *Coastal Adaptation Strategies: Case Studies* (Lakewood, CO, NPS Geologic Resources Division, and University of Colorado Boulder Geological Sciences Department, 2015)

historic cabin cluster is being inundated by lake water. The report discusses the reasons for the changing lake levels, and the adaptation options the park is exploring. The report states that 111 out of 408 national park units are vulnerable to sea level change.

Now I'd like to briefly discuss cultural landscapes and the National Register of Historic Places. The National Register property types are objects, structures, buildings, sites and districts. The NPS has cultural resource categories—archeology, historic structures, museum collections, ethnographic resources and cultural landscapes. So for the NPS and the program that I manage, a cultural landscape is one category of cultural resource. Cultural landscapes and archeology are identified by the NPS as different cultural resource types, for with the National Register, they share some commonalities. Both are listed in the National Register as a site or a district. A Determination of Eligibility (DOE) with the SHPO is used to determine whether the landscape or archeological resource is eligible as a site or a district.

The NPS world of cultural resources can fit through the filter of the National Register property types. Historic structures fit into National Register as objects, structures and buildings. Ethnographic resources can be categorized as any of the five National Register property types. Museum collections may be listed on the National Register as objects. But archeology and cultural landscapes share the phenomenon of being listed in the National Register as sites or districts.

Universally, cultural landscapes are perceived as any place on the globe where there's an imprint of humanity. That is not how the NPS defines a cultural landscape. When the NPS uses the term "cultural landscape," we're referring to lands that are eligible for the National Register as a site or a district. The NPS definition is more constrained that the universal view. In other words, for the NPS, we are only referring to properties that have historic significance and integrity and are therefore eligible for listing in the National Register as sites or districts.

When NPS nominates cultural landscapes to the National Register as sites or districts, we use our typology of landscape characteristics to describe the property and evaluate its integrity. The landscape characteristics are a system of patterns and processes that were present historically but still exist today. Landscape characteristics by definition, influenced the use or development of the landscape historically and are still extant. So we use these as a mechanism for identifying integrity in the landscape. We include landscape characteristics and their associated features in Section 7 and Section 8 of a nomination—the description of the property and the statement of significance. The point is to build the case though these characteristics, by describing how they are associated with the significance and are still evident today. It is very important that they appear in both Section 7 and Section 8—they are reinforced by appearing in both the description of the property and in the statement of significance.

Even though some of these characteristics, such as "Vegetation" or "Spatial Organization" may not end up in the contributing resources count on the second page of the nomination, they are still documented. The characteristics exist within the boundary of the site or district, and are therefore "counted" by being included in the narrative sections of the nomination. There is a concern that the features associated with these characteristics may be overlooked, however, as they are not counted in the contributing resources list.

It's possible the recognition that landscapes as places worth preserving may be short-changed by using the National Register vocabulary 'site' or 'district' instead of "landscape." "Landscape" is often a more comfortable term for land than "site" or "district," and we must select from "site" or "district" for a nomination based upon somewhat abstract concepts. If a landscape contains a single concentration or locus of features, it is identified in the National Register nomination as a site. If the landscape has a series of interconnected concentrations or loci of features, it is identified as a district. Still, it can be done, and many cultural landscapes are recognized by listing in the National Register. Another limitation of the NR

property types with cultural landscapes is that it is not possible to count districts within districts, only sites, buildings, structures and objects within districts, which limits our granularity of analysis somewhat. Natural features with cultural significance can be included in nominations in those narrative sections. In cultural landscapes, we find integrity in the natural systems and features where they shaped the development or use of the landscape historically, and are still evident today. So we can include natural features in nomination of sites and districts. They do not end up in the countable contributing resource list, but they are still included in the nomination.

There's a need for more information from the National Register on cultural landscapes, through enhanced guidance and bulletins. We also need the SHPOs to get on board and understand that sites and districts do represent landscapes, and that they are matrices of landscape characteristics – interwoven historic patterns and processes that still remain today. And we all need to do a better job of writing quality nominations, that are holistic but well-justified through the description of the property and the statement of significance.

I'd like to make a final point about cultural landscapes and setting. Cultural landscapes are not "setting." They're a type of cultural resource that are equivalent to two National Register property types that can be surrounded by setting. All of the National Register property types —those five property types—can have a setting. This is the area outside the historic property boundary that contributes to the historic character and significance. Setting is one of the aspects of integrity. Objects can have a setting, and so can buildings, structures, sites and districts. The setting of an object extends outside of its boundary, just like the setting of a structure or building. Sites and districts can have a setting beyond their National Register boundaries. We can talk about the integrity and the historic context of that setting.

The cultural landscape itself is not a setting, just like the site or district is not its own setting. Where setting retains integrity, it is worth describing in a nomination. This can lead to the justification for conservation easements, zoning and planning codes, and design guidelines that could potentially protect these places. It is a useful and productive effort to identify setting in a National Register nomination. It can be leveraged for great planning work in the future. Many thanks for the opportunity to talk with you. **Δ**

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The Epic Saga of the Confederate Sea Raider *Shenandoah*: A Different Type of "Battlefield" on Multiple Maritime Cultural Landscapes

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Summary

During the US Civil War, the Confederacy launched a two-part naval strategy focused on defending key Southern-held ports and commissioning privateers and naval vessels to attack and undermine the economy of the North. While there remains some debate about the ultimate effectiveness of this strategy, the South achieved some of what they hoped to accomplish through the course of the war. A number of Confederate "Sea Raiders" were fitted-out, and these were fast and capable ships acquired by the South for the sole purpose of harassing and taking Yankee ships of commerce. It was a bold and desperate strategy by the Confederate Navy, which possessed many fewer ships than the Union and was challenged by diminishing resources and manpower as the War continued, so it could not compete with the wartime shipbuilding capacity of the North.

It was the last of these ships, the CSS *Shenandoah*, which arguably had the greatest and most enduring legacy of the Sea Raiders. In October of 1864, the *Sea King* was purchased surreptitiously by Confederate agents in England and then secretly sailed to the Madeiras where it was armed, provisioned, and manned with Confederate officers. Embarking under the new name *Shenandoah* with orders to seize and destroy Union merchant ships, it set off on a voyage that would take it around the globe, leaving devastation in its wake.

The Confederates' orders further directed that their ultimate mission was to specifically target the Yankee whaling fleet—whaling being a critically important part of the North's economy—and that it head for the North Pacific whaling grounds, the epicenter of American whaling in the 1860s. Heading south and east on the first leg of its circumnavigation, the *Shenandoah* seized and burned five merchant ships and one whaler before heading to Melbourne, Australia for repairs. After departing Melbourne, the neutral Australians found themselves subject to great diplomatic pressure from the US Government for having allowed the ship to enter their port. The vessel then headed to Ascension Island, where four more Yankee whalers were destroyed. This last of the Sea Raiders was perhaps most notable for its actions in the whaling grounds of the Western Arctic. It was late May of 1865 when the *Shenandoah* reached the Sea of Okhotsk. While the South had already surrendered at Appomattox Court House in Virginia, the captain, James Waddell, was unwilling to believe the war was over, having received no official reports in this remote corner of the world. He had his orders. Seizing the opportunity to fulfill his mission, Waddell sailed into the whaling fleet, and over seven days in June, captured twenty-four whaling ships. While four of these ships were bonded and released, twenty were reported to "light up the night sky" of the Bering Strait as they burned to the waterline, fueled by the remains of the whale oil that impregnated their decks. *Shenandoah* destroyed a little less than half the fleet on the grounds that year. No officer or crew of any of the ships captured was intentionally harmed, and all were released alive, set adrift in whaleboats or bonded vessels that were dismasted. The *Shenandoah*, having quite successfully struck the intended blow, and Captain Waddell, finally accepting the war was over, hastily completed their circumnavigation around Cape Horn, evading the Union warships, and surrendered in England, where the vessel's fateful journey began. All told, the *Shenandoah* accomplished a circumnavigation of 58,000 miles in less than thirteen months, lost only two crew members (to natural causes), and took thirty-two ships with an estimated value of around $1.1 million in 1865 (equivalent to approximately $1 billion today).

What insights do the compelling saga of the *Shenandoah* offer with regard to maritime cultural landscapes? While the definition and potential criteria for what makes a maritime cultural landscape worthy of preservation are still yet to be de-

termined, the National Register evaluation criteria provide some useful guidance. With regard to determining the "quality of significance in American history," the Register guidance states, in part, that a property, district, or site should be "associated with events that have made a significant contribution to the broad patterns of our history." It has been argued that the *Shenandoah*'s exploits contributed significantly to the demise of the American whaling industry. When taken in context with other major losses to the whaling fleet in the Western Arctic in 1871, 1876, and 1898, it had an undeniable and profound effect on the whaling heritage of the Western Arctic, the United States, and, ultimately, the global whaling heritage landscape. Whaling was becoming economically less attractive with the discovery of petroleum, and whale populations had been seriously depleted in the latter half of the 19th century, but they may have persisted longer into the 20th century had these losses not occurred. Certainly, on a global scale, whaling did continue elsewhere in the world by other countries, and it still persists today. However, American whaling was the dominant player in the global whaling trade through the beginning of the 20th century, and its withdrawal from whaling undoubtedly altered the trajectory of history at this global scale. While it may not have affected the outcome of the Civil War, if it is indeed true that the *Shenandoah* "drove the first nail in the coffin" of American whaling, it could be argued quite convincingly that this was a "significant contribution to the broad patterns" of American history.

As alluded above, the geographic extent of the significance of an event like the exploits of the *Shenandoah* has some influence over the appropriate boundary that might be drawn around a maritime cultural landscape. Either individually or as part of a cumulative significance of a cascade of events influencing significant changes to the broad sweep of history, such as that described for American whaling in the Western Arctic, the appropriate geography of the maritime cultural landscape is formed and shaped by the history of that place. In this instance, various potentially relevant maritime cultural landscapes might be identified based on the significant influence that event or events had on the cultural landscape at various geographic scales. The maritime cultural landscapes incorporating the story of the *Shenandoah* might be a global landscape, encompassing the entire circumnavigation, to the discrete parts of the story located in the cultural landscapes of places like the Western Arctic. Clearly, a reasonably compelling argument could be made for this event that significantly influences the history of American whaling, which has relevance to both the United States and globally, given the prominence of Yankee whaling around the world in the 19th century. However, the voyage of the *Shenandoah* was perhaps also potentially a somewhat significant event in the maritime history of Australia, Micronesia, and England. The relevance to maritime cultural landscape boundary delineation appears to be that most significant historical events influence heritage landscapes at multiple scales, and selecting one or more landscapes that are most appropriate for preservation may be linked to how much influence, individually and cumulatively, these events had on that landscape and how significant the associated event or events were in influencing the "broad patterns" of history of that place.

Another, and perhaps most critical, element of determining the significance of a maritime cultural landscape—also still to be determined—is some evaluation of the integrity of the cultural landscape. The National Register criteria state that "integrity is the ability of a property to convey its significance," and identify seven aspects of integrity: location, design, setting, materials, workmanship, feeling and association. Few of these aspects seem directly relevant to maritime cultural landscapes, but more generally, the integrity of a maritime cultural landscape might be how comprehensively it integrates the full sweep of significant historical events that occurred in that place through time and across cultures that they influenced, and were in turn influenced by that landscape. Through time, more than one significant historical event likely took place, and more broadly, elements of that place's history significantly influenced what we see there today, and what may be unseen could still potentially be important in defining that cultural landscape today. Therefore, the integrity of a maritime cultural landscape may be the ability of that landscape to convey its cumulative signifi-

cance over time and across cultures. An event like the *Shenandoah* saga may attract our attention to a place, that event contributing to its historical significance, but this is only a snapshot of something important that happened there and not a full representation of the cultural significance of that place. For example, while the Western Arctic may be a highly significant maritime cultural landscape with regard to Yankee whaling, it is also possesses a much longer and arguably equally, if not more important, significance related to the whaling heritage of native cultures, primarily the Iñupiat and Yupik. The Western Arctic is also a place with a long, rich, and compelling history related to Arctic exploration, and below the Bering Strait it is important with regard to the maritime history of the Alaska Gold Rush of the 1890s. Again, while a maritime cultural landscape may have a particularly significant event that calls our attention to this place, such landscapes could be considered to have high integrity when they are found to be more broadly significant through time and across cultures, possessing "cumulative significance."

The idea of maritime cultural landscapes may be decades old, since Westerdahl first proposed the concept, but how we delineate these places, how we evaluate their relative significance, and how we decide as a society what is worthy of preservation remains unresolved. Taking a closer look at places like the Western Arctic and its whaling heritage is one way to address this challenge, helping to frame the questions that need answers. Taking a maritime cultural landscape approach to identify what we believe to be worthy of preservation potentially has much to offer. These landscapes represent a "big-picture" view of what we collectively believe are culturally significant places. Landscapes can contain and integrate more broadly valued cultural elements, and their effective identification and evaluation can help to prioritize our preservation efforts. Like place-based ecosystem preservation initiatives that often are initiated and focused on a particular "charismatic species," events like the *Shenandoah* saga can alert us to places that may be worthy of more landscape-level preservation and management. From one perspective, the historical significance of the *Shenandoah* is reasonably clear, but whether the landscape—at whatever appropriate geographic scale—is one we collectively believe to be worthy of preservation depends on how we ultimately define and evaluate maritime cultural landscapes. It may be that resolving how we robustly define "integrity" is the critical, yet elusive, next step. **Δ**

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World War II and the Battle of the Atlantic

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This paper is about theoretical approaches to cultural landscapes, specifically an applied cultural landscape approach that we have internalized at the Monitor National Marine Sanctuary. We opened the USS *Monitor* Center in 2007, which put to bed one era of the work that we were doing in the North Carolina area and began an ongoing period of conservation.

Around that time, we began to say "All right, what's next? We've got all of this experience and all of this expertise working on heritage resources, offshore North Carolina." It was pretty exciting to have the ability to begin the process of identifying resources and to be able to frame them under the lens of cultural landscapes; we could look at the broad area and understand it.

We completed an overview study, *Graveyard of the Atlantic, An Overview of North Carolina's Maritime Cultural Landscape*, which is available online.[1] The first step in the study was to wrap our heads around the vast resources which exist around this area. We developed a database that includes about 2,000 points of named shipwrecks and associated terrestrial sites, lifesaving service stations, airfields, things like this. We thematically stove-piped all of this information so that we could begin to use it as a roadmap to cherry pick individual points from, and do in-depth analyses.

We framed our data sets by breaking them into topics like the pre-Contact period, the Colonial era period, maritime commerce, various conflicts that have happened along the coast, as well as properties and places associated with coastal vernacular water craft and fishing heritage. This is discussed in more detail in the assessment.

Once we completed this approach, we considered what we should dive deeper into first. The natural progression was to begin with World War II. There are ten thousand battlefield sites in the United States from various conflicts. Very, very few are from World War II: Pearl Harbor, Aleutian Islands, a couple of isolated sites on the west coast. The Battle of the Atlantic on the east coast of the United States and the Gulf of Mexico is an American battlefield that has not been well interpreted and made known to the broader public. We saw an opportunity to apply some of the expertise of the sanctuary program to characterize this story in a way that has not been done before, and project it to as many people as possible.

Right after the attack on Pearl Harbor on December 7, 1941, Hitler declared war on the United States (December 11), and by January 18, 1942, the first ship was sunk off of North Carolina. It is pretty remarkable how quickly this happened. Clearly, U.S. enemies were ready for a war that we were trying to resist becoming involved in. As a consequence, there really was not a lot of coastal defense on the east coast, especially because the popular support for the war was in the Pacific theater at that time. We had all of these vessels operating up and down the eastern seaboard that were relatively exposed, with U-boats nearby, just sinking ships.

Why were they doing this? Predominantly, because of oil. There are huge oil fields in the Gulf of Mexico. Oil was coming up the east coast to Cape Hatteras, riding the Gulf Stream, then taking a right, heading towards Europe, where it fueled the RAF bombing raids and other initiatives. There was a huge resource of oil and tankers coming up the east coast, and the thinking of the German Navy was "We're not going to be able to compete

1 Joseph Hoyt, James P. Delgado, Bradley Barr, Bruce Terrell and Valerie Grussing. *Graveyard of the Atlantic, An Overview of North Carolina's Maritime Cultural Landscape*, Maritime Heritage Program Series: Number 4 (National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries, September 2014). Available at https://nmsmonitor.blob.core.windows.net/monitor-prod/media/archive/pdfs/gota-final.pdf

with Britain or the US; we're not on par with their surface fleet. What we can do is cut off the supply chain and, hopefully, squelch the ability for them to wage war in the European theater."

Most battles take place over a relatively short period of time, maybe over the course of a couple of days or weeks. The Battle of the Atlantic is just different. It was a very protracted engagement that took place from the onset of World War II all the way to the end. It was underway in the North Atlantic well before the U.S. was even involved in WWII.

How do you characterize wartime action that took place over a long period of time, and really understand how it worked, especially if it is a huge geographic area, from Nova Scotia down into the Gulf of Mexico? In order to make sense of it all geographically and temporally we began a comprehensive shipwreck assessment of these World War II resources off of North Carolina. Through this process we really began to understand that North Carolina played a unique role in this history, but what made it unique?

We started to understand how incorporating features of the landscape was applicable to the overall interpretation of what was going on. North Carolina has some really unique geological features that made it particularly appealing, tactically, for the way that U-boats were operating. The shipping lanes were coming up on the Gulf Stream and two major oceanic currents come to a head right off of the Outer Banks. Historically, not just in the World War II era, these were massively important currents, because it was possible to get a few knots of speed pushing you towards Europe. It resembles one of those moving walkways in an airport. All of these ships were laden with fuel oil, heading across the Atlantic to support that war effort, and they came right along Cape Hatteras that acted as a natural bottleneck.

Also interesting about this particular naval engagement is that up until this point in history, prior to World War I and World War II, naval battles took place predominantly on the surface plane of the sea. There, they were interacting with the environment—during the age of sail they were trying to gain the weather gauge or deal with shore line features, but the action generally takes place on a plane or surface. The Battle of the Atlantic was involved with merchant vessels, surface craft, but also submersibles, where the water column itself has a role, tactically, and also the water depth where they could operate. There was also the atmospheric column—air coverage was a massive threat to the U-boats, one of the best defensive aids against them. So there was this atmospheric 3-D column of space within which all of these different players were operating. Knowing this really allows us to understand and characterize encounters through that lens and understand the players' roles, tactically.

The significance of some of the geographical elements to the Battle of the Atlantic was that the U-boats were a very good offensive weapon, but a pretty terrible defensive weapon. They relied on stealth; they relied on their ability to make sneak attacks. If they were spotted on the surface or they had to engage with a surface vessel, their main battery was still their torpedoes, and they had to actually maneuver the vessel on the surface. They were quite easy to sink, because they were comparatively delicate not made to be great surface crafts. Their primary defense was to be able to hide in deep waters. They wanted to be close to the shipping lanes, but they wanted to be able to get to deep water quickly, to be able to evade counterattacks.

The continental shelf is situated very far off shore on the east coast, north of Cape Hatteras, and it goes hundreds of miles off shore, heading north to New York, Boston, and New England. There are still heavy shipping lanes there, but the ability to get to deep water for safety is limited. So, there was U-boat activity there but the shipping lanes were more dispersed. It was better to operate in areas where the continental shelf was close to shore, narrow and in sync with the shipping lanes.

South of Hatteras, the continental shelf is very close to shore and heading farther south, it remains close to shore, but less favorable due to dispersed concentration of shipping, and the water is much warmer. Why is warm water a factor? U-boats typically liked to operate at night and there was a much

higher concentration of bio-luminescent algae in that area. For that reason, they wanted to avoid that region because it could make them easier to spot at night by patrolling aircraft.

Thus, there are all sorts of natural features that made Cape Hatteras emerge as a hot spot of U-boat activity. This became known to the Germans, who were incentivized based on tonnage sunk, that this was a place where a captain could make his mark and hopefully gain a promotion. Cape Hatteras was preferred as a hunting ground. Many of the features in the landscape mentioned are relevant to other elements in the broader study. These conditions provide a baseline understanding, not just related to World War II history, but to other history as well.

Specific to the battlefield, there are other elements that we have been assessing—mercurial elements, like cloud cover, weather, visibility, airspace. Harry Kane, Jr., with the U.S. Army Air Corps out of Cherry Point, North Carolina, was the pilot of a Hudson aircraft who was the first person to sink a U-boat with aircraft off of the east coast. He sank the U-701 just off Cape Hatteras. In the narrative of his attack, he said he used cloud cover to conceal his approach; the U-boats were very aware that they were most vulnerable from air attacks. They actually had on the conning tower four people, any time they were on the surface, specifically to watch different squadrons of air so that they could crash dive if there was a threat of aircraft attack.

Harry Kane knew this, so he knew that if he was going to be on anti-submarine patrol that he had to conceal, as best as possible, his approach, and he did that using cloud cover. It is interesting that even intangible, fleeting elements have a role in the way human beings interact in this landscape. In World War II, it had an influence on tactics, in the battlefield sense.

There are, of course, tangible elements related to the battlefield, such as the proximity of air bases like the Elizabeth City airship base, Cherry Point Naval Air Station, and lifesaving stations along the beach. Also, there were the proximity of deep water ports; a defensive mine field off of Hatteras that influenced the way vessels operated in the area; and, of course, the shipwrecks themselves.

We began this larger study looking from a broad view for all of the types of resources we knew about. We focused on about a six-month period when there was heavy activity that resulted in about 90 vessels sunk—this was quite alarming because it was an amazing number of vessels to go down in a short period of time just off of North Carolina alone. We peeled that number back to the vessels that, we believed, were on the continental shelf, and that was about 50 sites.

That was quite a lot to manage and to try to understand, so we started with a GIS exercise. Through this, we were able to depict not just sites where there is actual, tangible material deposited vis-a-vis a shipwreck, but where there was any type of engagement. For example, a U-boat may have attacked and struck a merchant vessel with a torpedo, but the merchant vessel was sailing ballasted and it didn't sink, and was able to be refitted. That was still recorded, because it is relevant to the overall story of how vessels were interacting in this environment. It allowed us to understand why certain areas had more significance than other.

We take this information, apply some statistical analyses, and start to develop hot spots of areas of battle-related events. This is important, not only for helping us understand where these hot spots are, but because we are a place-based management program. In order to position ourselves to argue for an expanded sanctuary in this area, we need to be able to back it up with reasons. Why an area like Cape Hatteras and not an area like Wilmington or anywhere else along the coast? This gives us the ability to, not only interpret the events more accurately and completely, but to be able to convey to the public, and anyone who is consuming it, why we think an area has significance, based on real data.

That's the 30,000-foot view. Then, we began, also through an American Battlefield Protection Program (ABPP) grant, a partnership with East Carolina University, and the Bureau of Ocean Energy Management, a more laser-focused study looking

directly at one discrete convoy battle. This broad study started by looking at all the different activity that was taking place over a six-month window.

Now, we are applying the same approach to one particular afternoon in July of 1942. There was a convoy of 19 ships sailing from Norfolk, Virginia, to Key West, escorted by five vessels and some aircraft, which was attacked by the U-576. A Nicaraguan freighter called the *Bluefields* was sunk immediately. Two other vessels, the *J. A. Mowinckel* and the *Chilore*, were struck but did not sink. As a result of this, the U-boat popped to the center of the convoy in broad daylight. An armed merchant vessel called the *Unicoi* opened fire and two Navy Kingfisher aircraft came in and sunk the U-boat. All of this took place in the span of about 15 minutes.

We wondered, first, how can we find where this happened? Then, is it going to be applicable to study it as a key part of our ABPP grant? The first thing that we did was to partner with East Carolina University and grad student John Bright, who worked on developing some of the modeling. We collected archival material and started to figure how the convoy would have been situated and how it would have been moving through this space based on what we knew of how it was set up. There were five escort vessels that had zones set up along the convoy. There was a pattern to the position of the 19 ships. We were modeling based on the narrative of the event, which told us the most likely position of the U-boat. In our model, lines of different colors depicted the operational restrictions of the torpedoes, such as the maximum ranges and the optimum ranges of where they could be fired.

We could not know where something fit in the 3-D space until tangible remains were found—that was the focus of one of our projects. The survey model could help us figure out where to look. The model was permeated with elements of a landscape approach. You'll see here, this is just a probability model that was developed based on all of the historic information that we had. You'll see these individual positions are After Action Reports, which is really frustrating because there's a half dozen After Action Reports. All talking about the exact same event that only happened in one place but they plot out like a 40 square mile area. It was really convenient.

Then, you have these other elements where we know the typical convoy route was to follow the 100 fathom curve lines so that it could avoid the Diamond Shoals. That's what you're seeing here, you're seeing this lighter, snaking line. That's just were we know the convoy ought to have been running. Then, if you see, coming into shore here, we know that when the *Chilore* and the *J. A. Mowinckel* were struck. They were towed out of the field of fire and into an area where they were ostensibly going to be repaired, but unfortunately, were towed directly into the minefield where they also struck mines.

All of this information came together and we developed a probability model, and then we broke it down into areas that had the most likelihood to survey. We ended up using this model to develop and dictate the surveys we carried out. In the first year that we looked, we later found, we had been within 160 feet of the U-boat.

Fortunately, last year (2014), we were able to find the remains of the *Bluefields*. Fortunately, for interpretive reasons, the U-boat was about 200 yards away from the *Bluefields*. We're hoping to get back to get some better imagery of these sites. The proximity of these features to each other is such an easy way to digest this notion of a battlefield, where you've got both of these elements that are really close together, in this one space, that allow us to interpret these activities. The remains of the U-576 were in deep water, about 700 feet down, so it's got a really good level of preservation.

That is the focus we've had and the way the cultural landscape approach has directed our research. I'd like to mention that it has also permeated every aspect of our management, as we've been moving towards looking at things like expanded boundaries. I should also mention that by the end of 2015 we will have about 12 of these sites nominated to the National Register, working with Dede Marx who has prepared a lot of the nominations, as well as a multiple property documentation form for World War II resources in the east coast and Gulf of Mexico.

To finish, this approach, this way of thinking, has permeated every element of our management, from research through the public process. It allows us, not just in the Battle of the Atlantic aspect, but in the broader approach, to help form and identify stakeholders who we might not have had connections with in the past. We now have advisory councils made up of members of the public. We ask them to inform us about the concerns in the communities. We have to have something to say to a restaurant owner, "Here's what the resource is, here's the way that we interpret it. Now you can have a voice that's more informed on how we should move things forward." So, our advisory council made a recommendation that we look into expanding the boundaries to include other resources. All of that has been funneled through this lens of the cultural landscape approach, even towards the development of the boundaries themselves, which are still in flux and up in the air.

Then, ultimately if we do go forward with an expanded effort, we can use the elements of this cultural landscape approach to help develop required documents, such as our draft environmental impact studies. We can use that to better define the affected resources. It really ends up being our guiding framework, moving forward, at our little site. Δ

Joe Hoyt is a maritime archaeologist with NOAA's Office of National Marine Sanctuaries. He specializes in archaeological recording of deep water shipwrecks. He has worked on several NOAA projects in the Thunder Bay, Florida Keys, and Monitor National Marine Sanctuaries since 2001. In 2004, he was awarded the North American Rolex Scholarship through the Our World Underwater Scholarship Society. He has worked on underwater archaeology projects in the Great Lakes, Atlantic and Pacific Oceans, and several inland rivers. Joe is also an avid underwater photographer and technical diver and has crewed documentary expeditions on BBC's Planet Earth and PBS. For the last 6 years, Hoyt has been the PI on a multifaceted wide area investigation of WWII era shipwrecks lost off the coast of North Carolina. Hoyt holds an MA in Maritime History and Nautical Archaeology from East Carolina University.

8. Legal Considerations: Maritime Cultural Landscapes Panel Discussion

Introduction

This session was a panel discussion intended to give participants with legal expertise an opportunity to comment on laws that may affect the nomination of maritime cultural landscapes to the National Register. Collectively, the panelists had a wealth of knowledge about legal issues and cultural resource designation and management. With experience ranging from tribal law to international law to environmental law, the panel was equipped to address questions about MCLs and their intersection with the National Register.

The discussion encompassed the meaning of "maritime cultural landscapes," integrity considerations, the application of federal laws and regulations, and the adequacy of current NPS guidance. The panel did not attempt to put closure on topics, but raised further questions for consideration as MCLs become better recognized by preservation programs.

Barbara Wyatt
National Register of Historic Places/National Historic Landmarks Program
National Park Service

Moderator
James Delgado, NOAA

Participants
Caroline Blanco, Assistant General Counsel for the Environment, National Science Foundation

Chip Brown, Senior Compliance Officer – Lead, Wisconsin SHPO

J. Paul Loether, Chief, National Register and National Historic Landmarks Program, NPS

Jessica Perkins, Former Tribal Attorney, Sitka Tribe of Alaska

David Thulman, George Washington University

Ole Varmer, Office of General Counsel, International Section, NOAA

Summary of MCL Legal Considerations

David Thulman
George Washington University

The purpose of the legal roundtable was to address some important questions. First, are maritime cultural landscapes (MCLs) legal under existing statutory and regulatory authority? Second, if so, what potential problems or obstacles could arise? The legality question was quickly dispatched; the consensus was a clear thumbs-up for the adequacy of existing authority. "Just do it" was a common refrain, meaning that if an MCL met all the existing legal criteria for a cultural landscape, nothing about it being adjacent to water or underwater prevents an MCL from being considered or accepted for listing in the National Register of Historic Places (NRHP). What followed was a freewheeling discussion that touched on a number of issues but no clear resolutions. The ideas tossed about identified the potential power of MCLs to better frame research and conceptions of the connectedness of cultural resources, but also troublesome management problems and questions about the utility of MCLs.

This paper is divided into sections that describe some of the major issues raised and briefly summarizes positions expressed by panel members and the audience. Most of the issues raised cut across at least one of these boundaries, and some are not limited to MCLs. Some questions raised in the session deserving further consideration are listed at the end of this summary.

The Legal Authority for MCLs

The consensus among all participants was that MCLs are simply a subset of cultural landscapes and they can be nominated as National Historic Landmarks or as National Register sites or districts on any level, as long as they meet the criteria. Unlike other statutes that distinguish submerged lands, as far as the NRHP is concerned, land is land, regardless of whether it is wet or dry or both. Thus, owners and land managers should "just do it," and move forward with MCLs using the criteria for nominating and evaluating cultural landscapes where appropriate.

MCLs Need Boundaries

The discussion made clear that MCL is not a precisely defined concept anywhere in the many NRHP bulletins, even those focused on landscapes and marine resources; outside the NRHP guidance, MCL may have as many definitions as people defining it. However, within the NRHP, it is rarely specifically addressed. Some saw that as a problem, whereas others saw the generality as facilitating an expansive view that could encompass landscapes not yet imagined. This may suggest that the NRHP guidance, including the relationship of the landscape to water, is poorly defined in terms that might distinguish an MCL. With these kinds of nonformalized boundaries for an MCL, it seemed to the panel that nearly any kind of connection to water could be enough to define a maritime landscape. Thus, unsurprisingly, water as economic lifeblood, as transportation corridor, as boundary to landbased habitats dependent on maritime activities all constitute sufficient nexus between culture and sea, lake or river to constitute a maritime cultural landscape. Interestingly, the panelists seemed unconcerned whether a current water-based landscape had little or no connection to the sea or other water body during its historically significant use. Therefore, a prehistoric terrestrially-oriented cultural landscape that is now submerged due to sea level rise or reservoir flooding thousands of years after occupation could be an MCL.

By definition, landscapes include lands, some of which may be unaffected by human activity. As such, the panel thought that MCLs must incorporate the non-human environment as well as modifications such as docks, bridges, and the like; it is the spatial organization of land use and activities and human responses to the environment that distinguish cultural landscapes from other types of properties. However, an audience member asked whether a geographic area considered an MCL should integrate all cultures that used it, or should each culture be considered a separate MCL? The discussion seemed to arise, in part,

from what some perceived as the privileged place that shipwrecks have in submerged situations, when, in contrast, precontact cultural use of the same or nearby ocean-bottom landscapes are more rarely given attention in NRHP nominations. In addition, several participants noted that native and non-native groups might see, and thus conceive of, very different landscapes while looking at the same geographic area. Should their views also be considered in a nomination? Although not discussed at the time, looking back, we might now suggest that drowned prehistory landscapes have historically gotten short shrift in terms of NRHP nominations, in part, because they are much more difficult to investigate than many shipwrecks. And too, as this conference demonstrates, many agencies are attempting to fix that deficiency and are including native and other cultural views into their surveys beneath and near the shore.

As originally conceived by Christer Westerdahl, MCLs can extend vast distances, especially when including water transportation corridors. The panel discussed the issue particular to agencies such as BOEM, NOAA, and the states who owned most of the nearby offshore water bottom and water column rights. When multiple agencies control only part of the maritime cultural landscape, it may prove difficult to get consensus on nominating an entire MCL to the NRHP. Given the potentially enormous geographic areas of MCLs, they may include some arbitrary boundaries by necessity.

Several issues concerning boundaries not raised during the session deserve highlighting and further discussion. Is the water column above an MCL automatically included in the designation? What happens to mobile cultural objects in an MCL that are moved by storms outside the MCL boundary? Such a circumstance can pertain to moveable objects such as ships, airplanes, and trains listed in the National Register. What is the situation when such moves are not anticipated? Is the property automatically delisted, as suggested by the regulations if permission is not granted in advance of a move? What would happen if the object moves onto a parcel owned or managed by a different entity who objects to the nomination of an MCL?

MCLs as Frameworks for Conceptualizing Cultural Landscapes

Near universal agreement was expressed on the value of MCLs as conceptual frames for understanding and researching cultural landscapes. This seemed especially so when water tied the cultural use or conceptualization of the landscape together. Hawaiian MCLs with linear geographic areas that start with water sources in the mountains and end at the ocean were presented as good representative examples. By following the flow of water from the mountains to the sea and the native Hawaiians' concerted efforts to alter and manage the waterscape for advanced farming and fishing efforts, the entire island can be seen as a vast and intricate cultural landscape linked to both fresh and marine water environments.

Like the different ways to conceptualize the same geographic area mentioned above, some discussants were concerned that conflict could arise between cultural and natural resource managers of the same area due to their different definitions of preservation. Cultural preservation means retaining some measure of integrity of the cultural asset. On land, preservation typically means controlling termites, cutting grass, and repainting the structure to stem natural degradation with a goal of permanence, although several managers accepted the ultimate futility of their efforts. In contrast, submerged cultural objects are often substrate for aquatic organisms, many of which are agents of destruction. Natural resource managers are inclined to preserve these organisms and manage accordingly. The conflict is obvious, but under most, maybe all, federal and state environmental law, the natural resources take priority to the cultural.

The MCL approach to a landscape that includes culturally and historically significant resources may also help natural resource managers be more integrative under NEPA, especially if humans are considered as part of, rather than outside of, the natural environment. The view of MCLs as part of the natural ecosystem may be similar to the transition of the view of natural resources managers from a strict focus on species management to the more inclusive, integrated ecosystems management that dominate many programs today. Alternatively,

it may reflect the change from strictly watercourse management to watershed management, both of which have fundamentally changed how natural resource managers view the interconnectedness of the natural world. Similarly, some panelists suggested that if cultural resources could be integrated into current management strategies already practiced for natural systems, MCLs might stand a better chance for long-term protection.

Whatever the approach to integrating MCLs into successful management practices and programs, the panel concluded that a more comprehensive MCL analysis could facilitate greater concern for consultation and connection with affected and interested parties. As we pull in more connections, more time periods, more groups, more people into the process, the complexity of the temporal and spatial interrelationships of cultural resources and their stewards grow, which improves our understanding of the MCL. Perhaps the greatest benefit of such an approach would be to compel natural resource agencies not to overlook the human element and cultural resource agencies not to diminish the importance of the environment.

Challenges in Managing MCLs

Whereas participants agreed that an MCL approach would improve research and understanding of both natural and cultural systems, opinion was split on whether an MCL would improve management of individual cultural resources. Identifying a vast amount of land and cultural objects and sites as an integrated MCL, might just add a new layer of complexity to an already complex task for managers. Further, MCLs do not solve or simplify existing challenges in the NRHP regulations and guidance.

Many participants were concerned with what constitutes appropriate management of the cultural elements in an MCL. If a property is important enough to nominate, why should it be allowed to degrade? How actively should managers try to preserve structures or shipwrecks? The process of in situ preservation on land is well understood, but what does that mean for submerged resources? Many considered their responsibility was to prevent humans from accelerating the natural destructive processes in the underwater environment. Managed destruction, damage through neglect, and proactive neglect were terms used to describe this management approach. The notion that cultural resources might be allowed to degrade made some managers anxious, because it is so foreign to their understanding of preservation under prevailing constructs.

The problem of preservation is not just one of conflict with natural resource managers. The ocean is a dynamic system, and many, if not most, MCLs have been damaged by sea level transgression, storms, and biological agents for centuries, if not millennia, before they are nominated. What level of preservation is appropriate in that circumstance? Many wooden shipwrecks are mostly destroyed. Storms may repeatedly cover and uncover wrecks and move their location. We may have no good handle on what the precontact landscape looked like. On land, these conditions are relatively easy to address, but below water?

One audience member suggested the conflict prompt a new approach to integrated management of maritime cultural and natural resources. However, it is difficult see how these views could be reconciled without fundamental changes. Another audience member suggested archaeologists might consider discarding their focus on preserving the past in favor of collecting data before sites are naturally destroyed. Thus, some cultural resources, such as Native American mounds or cemeteries, are allowed to degrade as the environment dictates. Perhaps embracing the inevitability of change and destruction would provide a fruitful paradigm for integration. No resolution was reached on this issue.

Topics for Further Consideration

These topics were culled from the session and include some that were unarticulated but I think implied.

- What is and what is not an MCL? Should the definition be precise or general?
- What limits should be placed on the size of an MCL that is potentially enormous? Should the overlying water column be included?

How should mobile cultural items that could be dislocated through natural processes be addressed?

- Is MCL a useful research frame? Should it best be used when water is the connecting or most dominant thread, or is it useful whenever water is present in a cultural landscape? Should it include all cultures that used the landscape?

- Is the MCL approach better for ensuring that the unused and unmodified environment of a landscape is adequately considered in its evaluation? Does this need to consider the environment distinguish MCLs from other cultural landscape approaches?

- Are historic uses overemphasized compared to precontact uses of maritime landscapes? Is there a bias in favor of historic uses? Is this a problem that should be remedied?

- Is managed destruction a viable management approach for structures or artifacts in MCLs? When would active preservation be appropriate?

- How should management of submerged cultural and submerged natural landscapes be integrated? Will environmental regulations limit the ability of cultural resource managers to retard natural destruction of submerged resources and, if so, how should that be incorporated in a management plan?

- Would the nomination and management of MCLs benefit from specific guidance? Do MCLs present unique problems that are not easily handled by existing guidance?

Concluding Thoughts

Whereas little of the discussion in the legal session of the MCL symposium concerned few purely legal issues, the topics raised and discussed indicate that further discussions are needed. Most of the topics listed above are a mix of law and policy and will take a while to flesh out. My discussions with audience members after the session found few who were satisfied, mainly because little guidance was provided for practical problems. For example, although clear legal authority exists to nominate MCLs, practical issues abound concerning boundaries and other details for integrating MCLs into current NRHP guidance. My sense is that MCLs, or at least those that contain submerged cultural resources, are distinct enough from terrestrial landscapes to benefit from additional guidance addressing their unique issues.

Salem Maritime National Historic Site, Salem, Massachusetts. Once more than 50 wharves extended into Salem Harbor. Three remain at the NPS historic site, which interprets colonial trade. Derby Wharf, built in 1806, is a half-mile long. The shorter Hatch's Wharf and Central Wharf were built in 1819 and 1791, respectively. The historic site includes some nine acres of land along the waterfront of Salem Harbor, including historic buildings, a replica of a tall ship, and the light station, built in 1871. Photo courtesy of the National Park Service.

9. MCL Symposium Conclusion

Introduction

Ben Ford graciously agreed to provide concluding remarks at the Maritime Cultural Landscape Symposium. During the two-day gathering of MCL scholars, managers, and cultural landscape specialists, nearly 40 papers were presented, representing an impressive diversity of site types and locations, status of research and field work, and management issues. An individual with his extensive familiarity with MCLs and their intellectual mooring was needed to provide a fundamental understanding of the collective vision suggested by presenters. His concluding remarks did not disappoint.

Dr. Ford is internationally recognized for his MCL scholarship, writing, and field work. His influential book *The Archaeology of Maritime Landscapes* (2011) is considered an essential text and field manual. In it, he draws on his considerable field work and research to integrate marine and terrestrial archeological techniques and thus merge the history, culture, and archeology of shore and water.

In his concluding remarks, Dr. Ford, in his own words, focuses on "how I see all of the excellent research and initiatives presented in the symposium dovetailing with the federal cultural resource protection process. These comments are based on the papers presented in the symposium, as filtered through my decade of attempting to apply an MCL approach on the land and on the water." His remarks were an excellent conclusion to the symposium. They are presented in their entirety.

Barbara Wyatt
National Register of Historic Places/
National Historic Landmarks Program
National Park Service

Concluding Remarks about the MCL Symposium, Ben Ford, Indiana University of Pennsylvania

Ben Ford
Indiana University of Pennsylvania

Introduction

I have the daunting task of offering concluding remarks after what amounts to a two-day master course in the theory and application of Maritime Cultural Landscapes. I sincerely appreciate the efforts of the organizers to bring the symposium together, it has been a stimulating experience, and I'm thrilled just to be involved. I am always in awe of the depth of thought that John Jensen and Todd Braje bring to these matters, and as a result of this symposium I've added several others to my 'must read' list. It is very exciting to see so many state, tribal, and federal agencies interested in utilizing a Maritime Cultural Landscape (MCL) approach, but I am going to attempt to tamp down my excitement about specific examples and focus my remarks on how I see all of the excellent research and initiatives presented in the symposium dovetailing with the federal cultural resource protection process. These comments are based on the papers presented in the symposium as filtered through my decade of attempting to apply an MCL approach on the land and on the water.

I came to MCL studies early in my academic career after several years in terrestrial and maritime Cultural Resource Management (CRM). MCL appealed to me because it allowed me to use the archaeological survey skills I had developed in CRM to answer anthropological questions in a wide variety of environments. I was late to the MCL game. I first read Westerdahl's 1992 article in 2005, only 13 years after it was first published, and saw that it was clearly a management approach. Since publishing that first English-language article, Westerdahl has moved on to more theoretical questions, which is also exciting as it shows that MCL is an evolving concept with room for growth and innovation. The approach he laid out in his early work—the approach that has been the foundation for much of the discussion in this symposium—allowed me to do anthropological maritime archaeology, to combine terrestrial and maritime archaeology into a unified field of study, and explore the maritime archaeological record beyond shipwrecks. Since then I have read and thought widely about maritime cultural landscapes and integrated an MCL approach into my Great Lakes research.

What follows will be organized into a discussion of the benefits of an MCL approach, the challenges that such an approach might entail, and a few suggestions for incorporating an MCL approach into the federal management process.

Benefits

MCL supports varying perspectives. Multiple theoretical perspectives can be pursued under the MCL aegis; cultural ecology to phenomenology and Marxism to practice theory can all be explored within an MCL framework. Importantly, MCL also takes in a management perspective, allowing us to organize and manage cultural resources. It is a broad church. What we've been calling MCLs are in fact places that are important to a variety of groups with varying perspectives. The perspectives of the public, managers, and scholars can all be accommodated within an MCL approach and there is a recursive relationship between these groups. Scholarship today is grounded in the beliefs of today, in how we currently see the environment, and what we choose to study influences what becomes important to the public in the future. The relationship between the public and scholars is grounded in today and building towards the future. Furthermore, anthropological theory, as we've heard in previous papers, helps give meaning to what the public cares about. Theory allows us to frame an argument for what is important and worth preserving, it offers the motive for the story we tell about a place, it provides the context that makes our findings relevant. Theory transforms cool old stuff into places that matter for a reason.

The views of many publics as well as multiple groups of professionals can coexist in an MCL because space is what we all share. Cultures come and go, but the places they create remain. Differ-

ent groups may interpret a space differently, but it is still the same location. The importance and meaning that people invest in a place is tied to that location along with everyone else's. This fact of geography binds disparate groups together and gives them a common understanding. I may see a place one way and someone else may see it differently, but we are seeing the same physical space and that is a commonality we can build on. MCLs also help engage one group that is often ignored in maritime archaeology—the landsmen. I believe that the view from the water is important. The world looks different when viewed from the water towards the shore and what is a refreshing breeze on land can make a small boat unpleasant to be in. However, the MCL approach does allow maritime heritage to stretch onto land and, when we consider sea level change, to push the water back. In this way it encourages the non-diving, non-boating, non-swimming population to participate. The result is larger populations and multiple constituencies interested in preserving a place.

MCLs also allow for linkages across multiple preservation fields—built environment, archaeology, traditional cultural places (TCP), ecology, etc. Ecology—the role of humans as animals in nature— and links to environmental protection pulls in even larger communities interested in similar resources for different reasons. People like old stuff, but they really like clean water and livable communities. Many maritime resources have both environmental and heritage value, further building the constituency that wants to protect them. In a broader sense, water is universal; it links the world through modern commerce, the history of global expansion, and as the key to life. It is important to all people. We don't have to agree why it is important, just that it is.

The physical and environmental characteristics that make up an MCL—the view, wind, sunset, weather, etc.—give an inkling of the past and links us to our forbearers. Those who came before us experienced the storms, walked the ice, heard the waves, and watched the clouds that we interact with today. This means that scholars working in these places share some of the same experiences with those they study, possibly enriching their understanding of the past. It also means that the interested public can share experiences with their cultural or geographical ancestors. This place-based experience, plus the physicality of being in a place, makes heritage tangible. Physicality is what sets heritage apart from history. I can hand a student a 10,000-year-old artifact and simultaneously deepen their appreciation for the past and spark their imagination. Landscapes allow us to do the same thing on a much larger scale. This connection increases the enjoyment of the user; it supplements and deepens the natural beauty of a place.

Finally, I believe that an MCL approach allows for better research and interpretations. For a long time maritime archaeology treated the seas, lakes, and rivers as blue plains with a few shipwrecks scattered about. Shipwrecks are rich archaeological sites that lead to important discoveries about the human past, but an MCL approach allows us to put them into a larger context and understand that all ships were going from one place to another, often as parts of longer journeys for the cargoes and passengers on board. Exploring these connections, as well as the ways that people wrote their perceptions of water onto the landscape, allows for the synthesis of multiple lines of evidence leading to new discoveries. An MCL approach allows us to make connections across space and time that draw in First Peoples, as well as later waves of immigrants, to explore how they affected the water and how water affected them. All of these groups are linked by place, and an MCL approach demands that we treat them equally.

Problems

MCL is a broad church, a powerful tool, an opportunity to employ big data, and ask questions that matter. I see a lot of promise in it for heritage management and interpretation but it is not without problems, especially within the National Register of Historic Places (NRHP) framework. The problems largely center on the interconnected issues of scale, boundaries, and integrity.

Hans Van Tilberg brought up the scale question of how far away from the water can be considered maritime. Resources flowed from the hinterlands to the sea and back again, which could argue for an

expanded maritime landscape, but if the movement of resources is the only requirement for being maritime, we run the risk of diluting the distinction to meaninglessness. Homer solved this problem neatly when Odysseus was instructed to carry an oar inland until the residents mistook it for a winnowing fan. Homer is exactly correct, what makes a place maritime is linked to the lives of the people who live there and the character of the place. How humans use a landscape allows us to define it as maritime, and the requirements of this use limit the landward scale of the landscape.

How far to expand an MCL seaward is also worth considering. As Matthew Sanger showed in his presentation, there were expansive networks connected by water from long before written history, and by the sixteenth century those connections became global. It would be possible to argue for a worldwide MCL connected through the trade and transportation routes that dominated the postmedieval period. These worldwide connections are certainly worth considering and are a tool for telling a great story of how the modern world came to be. A global MCL, however, risks losing its meaning to the public. It will tend to lose the physicality that draws people to a place and will leave many people cold. It would also be nearly impossible to manage. Conversely, an MCL that is too small loses the power of a landscape approach to link people together. An overly small MCL does not reflect the breadth of how people lived and experienced the place and essentially returns us to a site-based model. It will take careful consideration to find a happy middle ground between large and small and draw a line somewhere.

Drawing a line—defining boundaries—is particularly difficult with MCLs because they are literally fluid. All landscapes are constantly in flux because they are based in nature and it is the nature of nature to change. For example, sea levels have changed, shifting what is water and what is land, and sediment drift alongshore can drastically alter the shape of the littoral. Water also provides almost frictionless travel allowing individuals to move through maritime landscapes and across jurisdictional boundaries with ease. An MCL approach has the ability to break down cultural, temporal, political, and environmental boundaries by focusing on the entirety of a space. I see this as a generally good thing. It dissolves the prehistoric/ historic boundary, which we've heard is insulting, but also isn't always useful. People were there before, people were there after; the landscape was present and changing throughout. Where I work on the Great Lakes, the international boundary was largely ignored because it was easier to visit neighbors across the lake then countrymen back East. Not even the waterline is a hard boundary for maritime peoples. They moved back and forth across the waterline seamlessly, leaving artifacts and creating sites on both sides. However, the National Register of Historic Places requires boundaries in order to define a property. Briece Edwards has made some suggestions for dealing with NRHP boundaries in an MCL context and this issue will require additional consideration.

MCLs have the additional complication that some of the attributes that make the landscape significant may be transitory. The energy of moving water and the frictionlessness of travel by water cause water, fish, sediments, people, and birds to continuously move through a maritime setting. In some instances it may be the maritime resources (fish, birds, etc.) that are important to defining the landscape. Their movement might cause the landscape to move or a defining feature of a landscape to be present only at certain times. For an officially recognized and bounded landscape this might mean that important components of the landscape cannot be exclusively managed within the landscape. We may have to consider ways to manage and protect resources that define a landscape while they are outside of the boundaries of the landscape. There are therefore two problems with bounding many MCLs: 1) the characteristics of the MCL are fluid and do not lend themselves to defined boundaries, and 2) aspects of the MCL may exist for periods of time outside of the MCL, placing them at risk and making them difficult to manage. Bounding an MCL can also present jurisdictional headaches. In instances where an MCL cuts across the waterline, private, state, tribal, and federal jurisdictions can come into play complicating the management of the landscape.

Many of the examples during this symposium represent one facet of an MCL, for example a group of shipwrecks, a series of fortifications, or the First Peoples' sites and TCPs in a region. A landscape, however, incorporates all of these things and more. A landscape is a space and all of the human uses of that space through time. Most MCLs will, as a consequence, include multiple types of resources including First Peoples sites on both sides of the waterline, shipwrecks both lost and scuttled, perceptions of the water's surface, surf spots, navigational aids, places where Paul Bunyan dragged his toe, and myriad other resources. This is a strength in that it represents many different uses all linked by place and environment, illustrating how different cultures interacted with the same environment and how those interactions built on one another. However, this also means that you might have structures, buildings, archaeological sites, districts, and TCPs all overlapping in the same landscape. Each of these property types has different thresholds for integrity, which could make it difficult to determine the integrity of the landscape as a whole.

I would argue that the entire landscape should all be held to the archaeological standard of integrity. The landscape is not likely to look as it did during its period of significance. It is not even likely to have a single period of significance. The landscape is not frozen in time, it cannot be. It is not strictly cultural like a building. It is part of nature and nature changes. It is an archaeological landscape in that it has developed through time. It has gone through what archaeologists call site formation processes—the natural and cultural processes that transform a lived location into an archaeological site. Pierce Lewis (1979) has called landscape our unwitting biography. It is a biography that has been written and erased and written again. Much of it will be erased again, but by preserving a few pages, even if the ink is a bit smudged and the pages thin, we have a better chance of knowing our ancestors on their own terms.

Suggestions

Do not get caught up in jargon. MCL is a useful term, but if it is not helpful in a given situation don't feel compelled to use it. If you can call an MCL a "district" or a "TCP," and that makes it easier to designate and manage a place, then do that. It may also be easier to simply focus on the term "landscape." "Cultural" and "Landscape" are redundant terms. All landscapes are the product of human intervention and perception and are therefore cultural. If there are no people involved, no culture involved, that is simply the environment. "Maritime" defines the type of landscape. The marine environment brings specific considerations, such as frictionlessness and the scale of maritime transportation, but all landscapes have their peculiarities without requiring a special term. If the term "landscape" allows easy communication across agencies, specialties, and regions, then use that term. Conversely, the term "MCL", or the more generic "cultural landscape approach" described by Brad Barr (2013), might be useful for those places that are an uncomfortable mix of TCP, archaeology, structures, buildings, and districts; important places that cross-cut our usual way of dealing with properties. I particularly like the cultural landscape approach, because it is an approach, an active way of managing resources, which is how I view MCLs.

It is also worthwhile considering our goals. If the goal is education and interpretation, National Heritage Areas, Marine Sanctuaries, and National Parks are good models that could encompass most of the places discussed during the symposium. If more broad-based management and protection is the goal then we are in NRHP territory. For the NRHP to work for landscapes, manageable boundaries will need to be established and managers will need to have conversations about defining integrity and significance. I am less concerned about significance than integrity. I believe that landscapes lend themselves to strong arguments under Criteria A and D. As Michael Russo suggested, the consideration of landscapes might require a shift away from how the regulations are ordinarily practiced and a reevaluation of what the regulations actually say. Ole Varner mentioned the National Environmental Protection Act (NEPA) during the Legal Considerations Panel, and I agree that it may be helpful to learn from the NEPA process. NEPA takes the stance that the environment is important and defines "environment" broadly. The air you breathe and the places that feed your soul are both part of the environment. NEPA integrates the

cultural and natural environments and calls for serious consultation as part of the scoping process. The fact that we are using current paradigms to preserve heritage for the future makes consultation essential. Consultation is the only way for the process to remain responsive to the needs of people whose heritage it purports to protect. In addition to NEPA, John Jensen, Susan Dolan, and Brinnen Carter have suggested other useful guidance such as the NRHP Rural Landscapes Bulletin.

My final suggestion is to consider Landscape Characterization as practiced by Historic England (Historic England 2016; Turner and Fairclough 2007). Rather than preserve a resource in an ossified moment, Characterization determines what defines the character of a landscape through consultation and study, and then engages the public to protect that character. In the process, it determines what must be preserved, what can be lost, and what can change as long as it maintains its character (i.e. what can be managed). This scheme respects that culture and nature change; it preserves the vibrancy of a place by allowing it to change, breathe and live, rather than making it a museum piece. In some ways it is also easier to institute and manage because it allows for change. For example, if use by traditional fishing people is important to a community and landscape, Characterization would argue that the population should be encouraged to keep fishing and that the fish population should be managed, but that the means of fishing should be allowed to change. The act of fishing is important to the character of the place, but the specific technologies have changed and will continue to change. Since MCLs tend to cover large areas, this approach may make their application more palatable for both residents and managers. For residents, Characterization replaces telling them what they cannot do with asking them to keep doing what they are doing.

Thank you for considering these comments. I am very much looking forward to seeing where federal, tribal, and state agencies take the idea of MCL. Its application and use are only limited by our ingenuity.

References

Barr, Bradley. "Understanding and managing marine protected areas through integrated ecosystem based management within maritime cultural landscapes: Moving from theory to practice." *Ocean and Coastal Management* 84 (2013):184-192.

Lewis, Pierce. "Axioms for Reading the Landscape." In *The Interpretation of Ordinary Landscapes*. D.W. Meinig, ed. Oxford University Press, New York, 1979. 11-32.

Turner, Sam and Graham Fairclough. "Common Culture: The Archaeology of Landscape Character in Europe." In *Envisioning Landscape: Situations and Standpoints in Archaeology and Heritage*. Dan Hicks, Laura McAtackney, and Graham Fairclough, eds. Routledge, New York, 2007. 120-145.

Westerdahl, Christer. "The Maritime Cultural Landscape." *International Journal of Nautical Archaeology* 21.1 (1992): 5-14.

Split Rock Light Station, Town of Beaver Bay, Lake County, Minnesota. Built in 1909-1910 as part of a concerted effort to upgrade the Great Lakes navigation system, the Split Rock Light Station served the ports of Two Harbors and Duluth-Superior. From these ports, tons of iron ore were shipped to eastern industrial states and grain was shipped throughout the Great Lakes.The light station and associated buildings were designated a National Historic Landmark in 2011. Photo by John N. Vogel, October 2007; courtesy of the National Historic Landmarks Program.

10. Summary: Maritime Cultural Landscape Workshop

Background and Overview

The Maritime Cultural Landscape (MCL) Symposium organizers convened a working session the day following the Symposium presentations. It was facilitated by Alan Levy, whose firm Goaltrac specializes in meeting facilitation. His follow-up report contributed to this summary.

The purpose of this workshop session was to provide guidance on key "next steps" in consideration of MCLs within the overarching context of the potential to offer opportunities to preserve these places through recognition and listing in the National Register. The intent of the symposium organizers was to share information and perspectives about MCLs through presentations and discussion at the Symposium sessions, and task the workshop participants with assimilating the information from these presentations and discussions to help identify a possible path forward for more formal consideration of MCLs within the process of listing "properties" in the National Register. The discussions at the Workshop were focused on five key topics:

- Summarizing MCL Concepts and Definitions applicable to the National Register
- Applying the National Register Criteria to MCL Significance
- Defining MCL Districts, Sites, and Boundaries
- Developing Integrity Requirements for MCLs
- Creating Documentation Standards for MCLs

This working session was conducted over approximately five hours, and engaged speakers and participants in the Symposium who represented a broad spectrum of Federal, state, and tribal agencies and other institutions with familiarity and expertise with regard to MCLs—and more generally cultural landscapes—and the National Register process, objectives, and its effective implementation. This summary of the discussions is provided to foster continued discussion of the potential recognition of MCLs by the National Register, and in this regard, to assist in identifying issues and concerns that require additional thought and deliberation to achieve some consensus regarding these questions:

- Should the National Register more formally recognize MCLs as a property category?
- If so, what issues and concerns must be addressed and resolved to advance consideration of this recognition of MCLs by the National Register?

This Workshop Summary has been prepared by the Symposium organizers, and represents what is believed to be an accurate assimilation of the discussions conducted at the Workshop within the context of the workshop goals as stated above. Not all comments captured by the Workshop facilitator have been fully and completely recounted in this summary, but have been considered and integrated, where relevant, into the findings reported here. The summarized listing of comments made and captured by the facilitator, as provided to the Symposium organizers, has been included at the end of this summary to provide interested readers with an opportunity to see the original comments made by all participants in the Workshop session.

MCL Concepts/Definitions applicable to the National Register

As one comment succinctly suggests, MCL may be "easy to understand as a concept," but "very difficult to put into operations." Clearly, developing a robust and consensus-based definition of MCL, within the National Register context, is a critically important next step, as well as defining what the key elements of that landscape might be (e.g. "Objects … sites … navigation corridors … commercial points of access … connections … exchanges … pathways … structures.") It was mentioned that there is precedent for recognizing some forms of cultural landscapes in the National Register, but

this is still a work in progress, in large part, through the ongoing discussions of the National Register Landscape Initiative. Particularly with regard to MCLs, the definition of "maritime" seems to be an outstanding challenge, especially related to the potential inclusion of both coastal lands and adjacent waters. Resolving how MCL relates to other "cultural landscapes," "evocative landscapes," and "tribal cultural landscapes," among others, may offer some insights and guidance for the recognition of MCLs. Workshop participants generally seemed to acknowledge the idea that MCL approaches would provide some opportunities to embrace a more "holistic approach" to preservation of coastal lands and waters, that MCLs should be viewed as a way to better account for and address the human/environment connection in our preservation efforts, might offer opportunities for broader interagency collaboration, should be multicultural and encompass the full history of the landscape, and include tangible and intangible values. Workshop participants also recommended that whatever concepts and definitions that might be put forward to address these perspectives should be made available to the broader community of interest and affected agencies for their input and recommendations.

Applying the National Register Criteria to MCL Significance

Workshop participants offering comments on this topic seemed to consistently suggest that, while still lacking a consensus definition of "maritime," the current National Register significance criteria could be applied to MCLs. The encompassing nature of MCLs should, as one commenter suggested, be "beyond shipwrecks," and some linkage might be developed, through targeted interpretation, to use current "site" and "district" property types as a way to recognize these, cumulatively, as MCLs within a defined place identified as an MCL. However, specific guidance would be needed to operationalize this recognition within the National Register framework, and the development of an overarching MCL Bulletin was suggested.

Defining MCL Districts, Sites, Boundaries

MCL boundaries seem to be another issue that requires further discussion and analysis, and the boundary delineation seems to be consistently linked to the significance of the landscape across cultures and through time. Landscapes can be identified at multiple geographic scales, and may be influenced by "natural features affecting human activity and human activities changing the natural environment." Here again, comments reflect the essential need for guidance, recommending the possible development of an MCL Bulletin.

Developing Integrity Requirements for MCLs

Input from the workshop participants was more difficult to interpret for this topic, beyond that more discussion is required to effectively ascertain what "integrity" means with regard to MCLs. The present aspects of integrity in the National Register guidance seem to not "fit" well with the idea of MCLs, beyond perhaps "setting" and "feeling," which may also be challenging to define and implement for maritime landscapes.[1] While a comment suggested that MCL "landscapes are archaeological … that is the integrity that should apply," archaeological resources and values are but one element—albeit an important one—of MCLs and perhaps this suggests that more robustly defining what constitutes an MCL might help to clarify other aspects of MCLs beyond archaeology. Again, comments allude to the preference for MCLs to be expressed across cultures and the full sweep of time. Clearly, this is another topic that could be discussed and deliberated through the development of guidance and/or a bulletin on MCLs.

Creating Documenting Standards for MCLs

This was another topic of discussion at the Workshop where there was clear preference expressed by numerous commenters that documentation standards be developed as part of the needed guidance, and specifically as part of the drafting of any National Register Bulletin for MCLs. Also present in this discussion is the need to address multicultural and full sweep of time perspectives, particularly

1 Editor's note: The National Register considers historic integrity to be the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's prehistoric or historic period. Historic integrity is the composite of seven qualities: location, design, setting, materials, workmanship, feeling, and association. (*How to Complete the National Register Registration Form*, page 4).

effectively integrating local and traditional ecological knowledge and ethnography with regard to identifying and characterizing MCLs. The National Environmental Policy Act (NEPA) was mentioned a number of times in the comments as providing a potentially "good framework" for documentation standards (and possibly process). The participants from the Bureau of Ocean Energy Management offered a very comprehensive list of challenges and recommendations for documentation standards, including the suggestion that others (e.g. Canada, New Zealand, Australia, UNESCO World Heritage, IUCN) have addressed this topic and their work should be looked at for models of guidance. A number of these comments also address tribal and indigenous engagement in the preparation of any MCL guidance and MCL nominations submitted to the National Register for consideration. Tribes should be enlisted to write relevant sections of the documentation, and should be well represented in any MCL process (and those who opt not to participate also are given opportunities to offer their perspectives). These BOEM comments should be thoroughly and carefully considered if and when guidance, and/or a bulletin, is developed.

Conclusion and General Observations from the Workshop Session

While considerable progress was made in the MCL Symposium and Workshop in raising awareness of MCLs, as well as in identifying the challenges they bring, some common themes were highlighted in the Workshop session that may offer the guidance sought for determining "next steps."

- A consensus-based definition of MCL needs to be developed. The community of practice that came together for this meeting was clearly uncertain what MCL meant, in tangible and clear terms, or perhaps many came to the Workshop with some definition that others may not have fully embraced.

- Any definition and description of what is meant by MCL should meet National Register criteria for significance and integrity, but more attention needs to be directed at adapting, tailoring, or expanding understanding of the current criteria to make them relevant to MCLs. Clearly articulating "integrity" standards may be the greater challenge than significance.

- MCLs should be multicultural and encompass the full sweep of time. Broad engagement with all cultures should be a part of any characterization of an MCL. All voices should be heard, and all perspectives given consideration. Any process descriptions and documentation standards developed for guidance should embrace this requirement.

- Numerous times during the workshop, in nearly all discussion topics addressed, the idea of developing guidance, and potentially a National Register Bulletin on MCLs was recommended. The engagement essential to the development of such guidance would offer a framework for addressing and resolving the suite of issues and concerns identified in the Workshop, and the draft products developed would offer some tangible and clearly articulated proposals that could be subjected to broader review and comment by the various communities of practice that would be interested in and affected by such a step forward.

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Recommended Reading for Participants in the Maritime Cultural Landscape Workshop

October 16, 2015

Aberg, Alan and Carenza Lewis, 2001. The Rising Tide: Archaeology and Coastal Landscapes. Oxbow Books, Oxford.

Anschuetz, Kurt F. "Introducing a Landscape Approach for Evaluating Communities' Traditional Senses of Time and Place"

Anschuetz, Kurt F. (1,4), Richard H. Wilshusen (2) and Cherie L. Scheick (3). "An Archaeology of Landscapes: Perspectives and Directions" in An Archaeology of Landscapes: Perspectives and Directions" in *Journal of Archaeological Research*, Vol. 9, No. 2, 2001.

Barr, Brad, 2013. Understanding and managing marine protected areas through integrating ecosystem based management within maritime cultural landscapes: Moving from theory to practice. Ocean & Coastal Management 84:184-192.

Benjamin, Jonathan, Clive Bonsall, Catriona Pickard, and Anders Fischer, 2011. *Submerged Prehistory*. Oxbow Books, Oxford.

Christie, Jessica Joyce, 2009. *Landscapes of Origin in the Americas: Creation Narratives Linking Ancient Places and Present Communities*. University of Alabama Press, Tuscaloosa.

Delgado, James, Tomás Mendizábal, Frederick Hanselmann, and Dominque Rissolo, 2016. *The Maritime Landscape of the Isthmus of Panamá*. University of Florida Press, Gainesville.

Fairclough, Graham, 2006. "Large Scale, Long Duration and Broad Perceptions: Scale Issues in Historic Landscape Characterisation" in *Confronting Scale in Archaeology, Issues of Theory and Practice*, Gary Lock and Brian Molyneaux, eds., 203-215. Springer, New York.

Ford, Ben, 2011. *The Archaeology of Maritime Landscapes*. Springer Science & Business Media, New York.

Hoyt, Joseph; James P. Delgado; Bradley Barr; Bruce Terrell; and Valerie Grussing. *"Graveyard of the Atlantic": An Overview of North Carolina's Maritime Cultural Landscape*, NOAA, September 2014.

Jensen, John, Mather, Roderick, and Gray, Jeff, 2011. Viewing the Future through the Lens of Maritime Cultural Landscapes. *Sanctuary Watch*. pp. 2-3.

Jordan, Brian, 2011. Recommendations for Integrated management Using a Cultural Landscape Approach in the National MPA System. Marine Protected Areas Federal Advisory Committee.

Meinig, D.W. 1979. "The Beholding Eye, Ten Versions of the Same Scene," in *The Interpretation of Ordinary Landscapes*. Oxford University Press, New York.

Marine Protected Areas Federal Advisory Committee, 2011. *Recommendations for Integrated Management Using a Cultural Landscape Approach in the National MPA System*.

McErlean, Thomas, Rosemary McConkey, and Wes Forsythe, 2003. *Strangford Lough: An Archaeological Survey of the Maritime Cultural Landscape*. Northern Ireland Archaeological Monographs No. 6, Blackstaff Press, Belfast.

Parker, A. J., 2001. "Maritime Landscapes" in *Landscapes* 2(1):22-41.

Rönnby, Johan, 2007. "Maritime Durées: Long-Term Structure in a Coastal Landscape" *Journal of Maritime Archaeology* 2(2):65-82.

Stilgoe, John R., 1996. *Alongshore*. Yale University Press, New Haven.

Vrana, K., and G. Vander Stoep, 2003. "The Maritime Cultural Landscape of the Thunder Bay National Marine Sanctuary and Underwater Preserve" in: J. D. Spirek and D. A. Scott- Ireton (Eds.), *Submerged Cultural Resource Management: Preserving and Interpreting Our Sunken Maritime Heritage*. Kluwer Academic/ Plenum Press, New York, NY, pp. 17-28.

Westerdahl, Christer, 1992. "The Maritime Cultural Landscape" in *The International Journal of Nautical Archaeology* 21.1: 5-14.

Westerdahl, Christer. "The Maritime Cultural Landscape: On the concept of the traditional zones of transport geography." Accessed at https://www.abc.se/~pa/publ/cult-land.htm on September 29, 2015.

Westerdahl, Christer, 2011. "The Maritime Cultural Landscape" in *Oxford Handbook of Maritime Archaeology*, Alexis Catsambis, Ben Ford, and Donny Hamilton, eds, 733-762. Oxford University Press, New York.

National Register Bulletins *Nominating Historic Vessels and Shipwrecks to the National Register of Historic Places* (https://www.nps.gov/nr/publications/bulletins/nrb20/); *Guidelines for Evaluating and Documenting Historic Aids to Navigation; Guidelines for Evaluating and Documenting Rural Historic Landscapes* (https://www.nps.gov/nr/publications/bulletins/nrb34/); and *How to Complete the National Register Registration Form* may be useful. These can be found on the National Register website (www.nps.gov/nr/). Information on the National Register Landscape Initiative (https://www.nps.gov/nr/publications/guidance/NRLI/index.htm), including the webinar on maritime cultural landscapes, can also be found on the National Register website.

Asan Bay Overlook, War in the Pacific National Historical Park, Guam; photo courtesy of NPS.