

UNDERWATER NATURALIST

Summer 2016

Vol. 31

No. 1

A Smart Ocean Plan



And Why We Need One

The Nine Designated Ocean Planning Regions.



On the cover: Illustration by Ray Troll. For more about Ray Troll and his artwork please turn to page 51.

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This issue of the Underwater Naturalist is funded in part by the Gordon and Betty Moore Foundation.

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End of Summer Party

Friday, September 9

6:30 - 11:30pm

North Beach, Sandy Hook

Join us for this very special evening on the beach, under the stars to benefit the **American Littoral Society** and the **Sandy Hook Foundation** as we work together to care for Sandy Hook and our coast.

6:30 pm

Cocktail reception featuring Lusty Lobster raw bar and passed hors d'oeuvres

8:00 pm

Lobster tail dinner, Bahrs clam chowder, grilled buffet and specialty salads by the Whistling Onion, assorted desserts

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From the Executive Director

It's getting crowded on the ocean.

Though it runs counter to our perception of the sea as endless, its limits are becoming more evident each day. Demands to use ocean space and resources are increasing from wind farm developers, aquaculture, sand mining and fossil fuel exploration.

This is not good news for the ocean, and marine life. Each of these "uses" carries with it potentially significant impacts to the health of ocean ecosystems. Whether it's using seismic testing to look for oil and gas deposits, building large numbers of structures in the ocean, or dredging thousands of cubic yards of sand from essential fish habitat, ocean development carries the same possible environmental downsides as land development.

The lessons of poor environmental protection on land are often no further away than our own communities whose roads, driveways and parking lots funnel polluted water into bays, estuaries and, eventually, the sea.

Ocean planning, explored in this issue of the Underwater Naturalist, is a strategic response to the ocean threats of the twenty-first century. Armed with newly developed science about important ecological areas and their interrelationships, ocean planning holds the potential to get us out ahead of the "gold rush" for ocean resources. Like zoning for our land-side communities, it offers a process to assess the implications of new demands and shape a vision for our ocean's future. This can be done through enforceable approaches that should protect both the marine ecosystem and traditional uses like fishing and recreation.

It's a new approach for a new century and the growing challenge of protecting the vast bodies of water that play a critical role in sustaining life on this planet. However, robust participation by those of us who care for the coast is required to ensure that the planning process functions properly.



The American Littoral Society actively supports the effort to make this new approach work for both people and the ocean. We hope this issue of the UN will inform, educate and encourage you to do the same.

Tim Dillingham

A Vision For Our Ocean

By Sarah Winter Whelan



Everyone needs a healthy ocean. Everyone deserves to take their children to the beach for the first time to stare in awe at the pounding waves, to laugh at the seals and birds frolicking in the surf, and to find a sand dollar wedged in clean sand. We also need sustainable fishing communities, healthy bays and estuaries, and resilient coastlines.

We are connected to the ocean. Our country is a maritime nation and we have long looked to the ocean and our coastlines for our sustenance and our livelihoods. To this day we directly depend on the health of our ocean and coastal resources for our economic, recreational and spiritual opportunities.

This connection has real value. The Mid-Atlantic ocean economy alone contributed \$47 billion to the national GDP in 2012, and generates close to 700,000 full and part-time jobs.

The number of ways we use the ocean is also rapidly expanding, potentially threatening the health of the very resources on which we rely. Shipping traffic is increasing, plans for offshore energy projects are quickly becoming a reality, and competition for space is becoming contentious. State and federal agencies regularly make important decisions that impact the health of our oceans and coasts. They may take sand resources from popular recreational fishing areas that

provide great habitats for fish or they may lease offshore space to wind energy companies that could damage important ecological areas.

Given our connection to and reliance on the ocean and the threats that they now face, the public should have a say in how these vital resources are managed and protected. Our federal and state governments are charged with this responsibility on the behalf of the public. Federal and state agencies make decisions based on all kinds of laws and regulations, such as how many fish can be caught, the route ships must take, what wildlife and habitats to protect, what pollutants to bar from entering our water systems, and how to ensure our national security. All of these decisions impact us, and we should have real, substantive input into these decisions.

The time for that input has come.

The National Stewardship Policy for the Ocean, Our Coasts, and the Great Lakes also known as The National Ocean Policy is a plan for how the government can collaboratively work from one premise: that it must protect, maintain and restore our ocean, coastal and Great Lakes resources to ensure these resources are healthy, sustainable and viable for all. It also calls on the federal government to work with its state and tribal counterparts through regional

collaborations and to consider the will of the people when making decisions regarding regional ocean issues and activities.

The National Ocean Policy's genesis lies in a decade of analysis and community input from all sides of the political landscape. In 2000, two bipartisan blue ribbon commissions - the congressionally initiated U.S. Commission on Ocean Policy and the independent Pew Oceans Commission - were established to undertake an overdue review of the nation's ocean policies.

Up to that point, 27 federal agencies and offices were charged with implementing more than 140 laws and regulations focused on ocean and coastal management, and conservation. It was clear that approach to ocean governance had become piecemeal, fractured and complex.

At the heart of the work by the Commission is the call for a united, comprehensive national ocean policy. Each set of Commissioners, drawn from agencies, industry, science and conservation, understood the need for reform of ocean governance. In their words, "reform needs to start now, while it is still possible to reverse distressing declines, seize exciting opportunities, and sustain the oceans and their valuable assets for future generations."

President Obama shared their sense of urgency and, only five months into his first term, charged

the federal agencies and offices to create detailed recommendations on what a national ocean policy should look like if we were going to protect, maintain and restore the ocean, our coasts and Great Lakes. This body, the Interagency Ocean Policy Task Force (Task Force), spent a year reaching out to the public, local and regional leaders, ocean industries, and the scientific community to shape a set of final recommendations.

Then, on April 20, 2010, British Petroleum's Deepwater Horizon drilling rig exploded and sank, killing eleven people and ultimately spilling almost 5 million barrels of oil into the Gulf of Mexico. The entire nation watched for 87 days as government and industry worked to halt the oil flowing from the sea floor. Unfortunately, it will take many years to understand the long-term toll on marine life, coastal communities and the Gulf's ocean economy.

A mere four days after the well was finally capped, on July 19,

Opening Spread: The sun shoots through the clouds over the Atlantic Ocean. Smart Ocean planning would ensure that ocean users would not ignore the future of a sustainable ocean. Photo by Pim Van Hemmen / American Littoral Society
Next Page: Commercial fishermen prepare for the salmon season in St. Paul Harbor, Alaska. Smart ocean planning would find a way to protect fishing grounds while allowing other uses. Photo by James Brooks



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2010, President Obama, invoking the Deepwater Horizon disaster, established the first ever National Stewardship Policy for the Ocean, Our Coasts and Great Lakes. In creating what we now refer to as the National Ocean Policy, President Obama said:

“The Deepwater Horizon oil spill in the Gulf of Mexico and resulting environmental crisis is a stark reminder of how vulnerable our marine environments are, and how much communities and the Nation rely on healthy and resilient oceans and coastal ecosystems.”

The President adopted all of the Task Force’s Final Recommendations, which established both the Policy and the National Ocean Council, made up of the federal entities charged with ocean and coastal management decision-making.

While the Policy was a bold first step, policies are only as strong as their implementation. To guide implementation, the Task Force created the “National Priority Objectives.” These nine priority objectives provide a bridge between the policy and specific actions (see opposite page). The National Ocean Council developed an Implementation Plan that detailed how the National Ocean Policy’s objectives can improve the ocean economy; safety and security; and ocean and coastal resiliency, by supporting local action and science

and information. The Plan identified 213 specific and measurable actions, performance measures, gaps and needs in science and technology.

It is through the National Ocean Policy’s 213 actions that the promise of the Policy translates into real “on the water” action to ensure healthy oceans. For example, federal agencies have since come together to proactively protect important wetlands (see Jenna Valente’s article on page 28).

The National Ocean Policy also created a framework for coastal and marine spatial planning, using sound science to analyze current and anticipated uses of our ocean, coastal, and Great Lakes areas. The Final Recommendations divided our coastal and ocean space into nine planning regions (see the inside front cover for a map), so federal agencies, state governments and federally recognized Tribal nations could develop regional spatial plans. This allows them to create a vision for a region’s ocean and coastal space, but also to decide how those decision-making bodies, along with industry leaders, scientists and conservationists, would actually work to ensure healthy ecosystems, sustainable uses and good government decisions.

The National Ocean Policy is now six years old and has: an active National Ocean Council; follow through on the Implementation Plan’s 213 actions; two coastal and

The National Ocean Policy’s Priority Objectives

Overarching Approaches – “How We Do Business”

- **Ecosystem-Based Management:** Adopt ecosystem-based management as a foundational principle for comprehensive management of the ocean, our coasts, and the Great Lakes.
- **Coastal and Marine Spatial Planning:** Implement comprehensive, integrated, ecosystem based coastal and marine spatial planning and management in the United States.
- **Inform Decisions and Improve Understanding:** Increase knowledge to continually inform and improve management and policy decisions and the capacity to respond to change and challenges. Better educate the public through formal and informal programs about the ocean, our coasts, and the Great Lakes.
- **Coordinate and Support:** Better coordinate and support federal, state, tribal, local, and regional management of the ocean, our coasts, and the Great Lakes. Improve coordination and integration across the federal government and, as appropriate, engage with the international community.

Areas of Special Emphasis

- **Resiliency and Adaptation to Climate Change and Ocean Acidification:** Strengthen resiliency of coastal communities and marine and Great Lakes environments and their abilities to adapt to climate change impacts and ocean acidification.
- **Regional Ecosystem Protection and Restoration:** Establish and implement an integrated ecosystem protection and restoration strategy that is science-based and aligns conservation and restoration goals at the federal, state, tribal, local, and regional levels.
- **Water Quality and Sustainable Practices on Land:** Enhance water quality in the ocean, along our coasts, and in the Great Lakes by promoting and implementing sustainable practices on land.
- **Changing Conditions in the Arctic:** Address environmental stewardship needs in the Arctic Ocean and adjacent coastal areas in the face of climate-induced and other environmental changes.
- **Ocean, Coastal, and Great Lakes Observations, Mapping, and Infrastructure:** Strengthen and integrate federal and non-federal ocean observing systems, sensors, data collection platforms, data management, and mapping capabilities into a national system, and integrate that system into international observation efforts.



marine spatial plans that are months away from completion; improved data development for good decision making, and begun preparing our nation for the impacts of climate change and ocean acidification.

The National Ocean Policy effort has made great strides to ensure that our nation will have a healthy ocean, coasts and Great Lakes so that the public can continue to receive the economic, recreational and spiritual benefits we derive from them.

It shows much promise, if fully and thoughtfully implemented.

Sarah Winter Whalen is the Ocean Policy Program Director for the American Littoral Society. You can read more about Sarah on page 58.

Previous Page: A blue heron searches for food in the wetlands of Green Harbor, MA. A smart ocean plan would include conservation, protection and restoration of wetlands. Photo By Pim Van Hemmen / American Littoral Society

This Page: Beach lovers crowd onto a beach at the Jersey Shore. On the Atlantic Coast, tourism is a multi-billion dollar industry that could be irreparably damaged by an oil spill or other man-made environmental disaster. Smart ocean planning would protect ocean based economies. Photo by Andrew Mills/ Andrew Mills Digital Media



Not Too Late for the Ocean

By David Helvarg



“Seventy percent of the world is covered by ocean, the other 30 percent is optioned by developers,” the late Dery Bennett told a historical society meeting in Highlands, New Jersey back at the turn of this century.

I was working on my first ocean book ‘Blue Frontier’ and Dery was an ex-Navy diver and journalist turned Executive Director of the American Littoral Society. When I met him earlier that day, while steaming clams that he’d raked up from recently cleaned up local tidal waters, I knew he’d be in my book.

He was 68, a gangly six-foot-three, more gristle than fat with curly grey hair and eyes that flowed from mournful to mirthful depending on the light.

He had a fun, energetic way of engaging with people and a steely commitment to the protection of the coast and ocean.

After praising the local crabs and shellfish to the history buffs, he went on to recount the heroic, Homeric multi-year journey of the American eel that migrated up the Atlantic from the Sargasso sea to New Jersey’s rivers, where it would grow to impressive size and then head back out to sea. He condemned the over-greedy baby eel or ‘elver’ fishermen, and the dams and sea walls that blocked these magnificent snaky looking fish from completing their natural cycle.

He also had a deep aversion to

seawalls generally.

“If you want to make a beach disappear, build jetties and seawalls,” he warned.

Speaking to the historical society, Dery said: “Here we have sea-level rise and land subsidence going on at the same time. Geologists say it doesn’t matter which, your feet are still going to get wet.”

New Jersey got wet, and many lives were lost and many more disrupted when Super-storm Sandy came ashore in 2012.

For at least 30 years the best-available science has projected one to three feet of sea level rise by the end of the 21st century. But studies from 2016 have revised that figure closer to six feet. In fact many of the cascading threats to our living seas - such as industrial overfishing, loss of critical coastal and offshore habitat and ocean warming, are happening faster than anyone was predicting when Dery Bennett was addressing that history meeting in 2000.

Even as I write this, the world is experiencing its third global coral bleaching event in twenty years. This spring, 93 percent of Australia’s Great Barrier Reef was experiencing some level of warm water bleaching that, if it persists, can kill coral.

Phytoplankton, the base of the oceanic food web and generator of more than half the oxygen we breathe, has seen a 40 percent decline since the mid-20th century, according

to reports in the science journal Nature and elsewhere. Human generated carbon dioxide, converted to carbonic acid in seawater is also shifting the chemical balance of the ocean in ways that make it harder for shell-forming creatures from corals to crabs, and even certain planktons to survive.

At the same time the U.N.’s Food and Agriculture Organization estimates 85 percent of edible marine wildlife, mostly finfish, are fully exploited, over-exploited or depleted as we continue to catch fish faster than they can reproduce.

Still I’m more frustrated than despairing because we know what the solutions are – if you stop killing fish they tend to grow back – stop producing 100 million metric tons of disposable plastic every year and you’ll reduce the flow rate of oceanic pollution. New York City’s recent vote to charge 5 cents for every plastic bag used in food markets could have a measurable impact on local waste reduction.

Solutions can, and usually are, grown from the bottom up. A rapid transition from offshore oil to offshore wind will help us end our fossil fuel addiction, plus no wind spill ever destroyed a beach or a bayou.

The No. 1 action I suggest in my book, “50 Ways to Save the Ocean” is, “Go to the beach.” Because you’re more likely to protect the things that you love.

One very practical approach for protecting our public seas is to help coordinate the growing number of saltwater stakeholders operating on and offshore.

President Obama took a first step in this direction in 2010 shortly after the BP oil disaster when he established a National Ocean Policy. Its aim is to coordinate federal efforts to eliminate agency conflicts and redundancy while working with traditional and emerging users of our public seas, coasts and Great Lakes.

The policy, now being moved forward at a regional level, is meant to embrace local, state, tribal and other initiatives. The end goal is to ensure healthy seas and reduce user conflicts allowing coastal communities and economies to thrive.

Former Coast Guard Commandant Admiral Thad Allen (ret.), who worked hard to promote this policy, told me it’s like, “putting urban planning into the water

Opening Spread: A surfer rides a massive wave off Manasquan Inlet in New Jersey right before Hurricane Sandy. Smart ocean planning incorporates the needs of non-consumptive recreational users of the oceans. Photo by Andrew Mills/Andrew Mills Digital Media

Next Page: An offshore wind turbine is constructed off the coast of the United Kingdom. Smart ocean planning would ensure that offshore wind farms would be built where they do not interfere with other ocean users like whales, fishermen, and others. Photo by Charles Hodge Photography and Video Production



column.” A good example took place off Boston where, realizing commercial shipping lanes were overlapping with endangered right-whale feeding grounds, the Coast Guard moved the shipping lanes and reduced fatal whale strikes without impacting port operations.

There are many more examples where cooperative efforts have helped protect and restore the other 71 percent of our blue planet. The next President and Congress need to expand our ocean policy, and local officials must address our seaside problems.

Of course, since fish can't vote, that's a good argument for expanded “seaweed” (marine grassroots) activism such as the Littoral Society's.

President Obama reversed his own plan to open up the Atlantic coast to new oil drilling this spring in response to massive citizen protest up and down the coast.

Seaweed activists can grow solutions faster than the problems when we mobilize in the millions to vote for the coast and make the day-to-day decisions in our lives about our energy use, food, transportation and other choices that impact the seas around us.

The good news I discovered while researching '50 Ways to Save the Ocean' is that when you do good for the ocean it tends to do good for you and for your health, pocketbook or spiritual sense of well being.

After all, who wouldn't want to work for a healthy coast and ocean?

Like the author Isak Dinesen said, “The cure for anything is saltwater – sweat, tears or the sea.”

David Helvarg is an author and Executive Director of Blue Frontier (www.bluefront.org), an ocean conservation group. His latest book, 'The Golden Shore – California's Love Affair with the Sea' will be out in paperback this fall.

Managing the Mid-Atlantic Ocean

By Lyndie Hice-Dunton



The Mid-Atlantic Ocean is a busy place.

There are few better places to illustrate this than standing near the American Littoral Society's headquarters Sandy Hook, NJ.

On any given day you can see Coast Guard vessels, US Army Corps of Engineers dredges, fishing boats, Navy ships, ferries, tugs, freighters and tankers headed in and out of busy New York Harbor, as well as surfers, beachcombers, bird watchers, recreational fishermen and others enjoying the coast.

And that's just on the surface.

Below the water, the New York and New Jersey area is a hub of underwater cables, important fishing grounds, and major highways for migrating marine life.

As our demands on the ocean increase, our need to protect and conserve the important places becomes more and more essential. In the Mid-Atlantic, we have taken the first steps to make that happen.

Even before the National Ocean Policy was established in 2010, the Mid-Atlantic region had begun to work together at the state level.

In 2009, the Governors of New York, New Jersey, Delaware,

Opening Spread: Container ships and a tug and barge maneuver for space in the ocean. Smart ocean planning would ensure that maritime routes and other industrial uses of the ocean do not conflict with one another or the ocean's natural resources. Photo by Kees Torn

Maryland, and Virginia signed the Mid-Atlantic Governors' Agreement on Ocean Conservation, which established the Mid-Atlantic Regional Council on the Ocean (MARCO).

This partnership decided to address four shared regional priorities: climate change adaptation, marine habitats, renewable energy, and water quality.

At its core, MARCO uses regional ocean planning principles to address these four priorities.

The 2010 Presidential Executive Order establishing the National Ocean Policy (NOP) called for the creation of Regional Planning Bodies (RPBs) to lead regional planning efforts among state, Federal, tribal, and Fishery Management Council representatives.

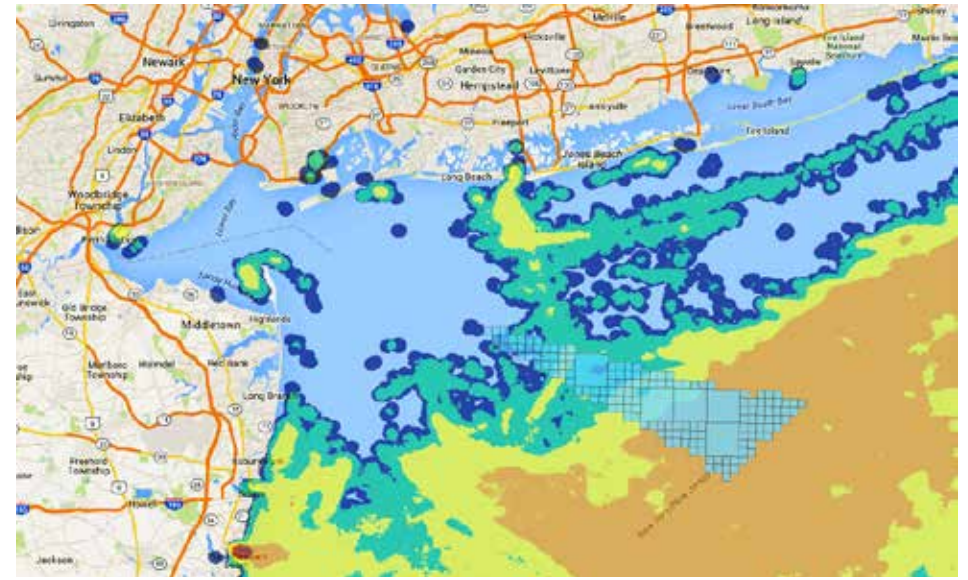
The Mid-Atlantic RPB was formally established in 2013.

Since then, agencies and stakeholders - including the American Littoral Society - have been engaged in this process.

Now, in June 2016, we will see the release of the first Ocean Action Plan in our region, and the second of its kind in the country (the Northeast was the first to release their plan on May 25, 2016).

Ocean planning is not always easy to describe, but we certainly face issues in the Mid-Atlantic that would benefit from proper planning.

At the forefront are ongoing decisions about offshore wind development.



On the MARCO data portal it is possible to overlay various ocean uses to see if there are potential conflicts. In this particular image, the light blue triangle depicts the proposed BOEM New York Wind Energy Area (NY WEA). The orange area indicates where there is very active commercial scallop fishing as recorded by the National Marine Fisheries Service Vessel Monitoring System (VMS). Orange, yellow, green and blue progressively show lower scallop fishing activity. The MARCO data portal can be found at: portal.midatlanticocean.org.

The American Littoral Society supports offshore wind, particularly as an alternative to oil or gas development, but the society also believes that these Mid-Atlantic offshore wind farms need to be properly sited. It would be inappropriate to place wind farms on marine habitat that is critical to the health of the ocean, in shipping lanes, on whale migration routes or in the path of migratory birds.

If we're going to build offshore wind farms, everyone with a stake in the ocean must have a seat at the table, from our fishing communities to the Coast Guard, to tribes and cable layers. That would allow us to

identify areas that would not be a good fit for offshore wind while also identifying others that would be.

Every Mid-Atlantic state from New York to Virginia already has at least one area in Federal waters outside the three nautical miles state boundary that is designated as either a wind energy area or wind lease area through the Department of the Interior's Bureau of Ocean Energy Management (BOEM).

Many of these sites have already been leased, although construction likely will not begin for a year or more as agencies and developers move through the approval process. In New Jersey, more than 344,000

acres have been leased and New York plans to auction off 80,000 acres.

The New York area has received some attention because the proposed area overlaps with important fishing grounds.

This is a prime example of where ocean planning would have been a useful tool.

One of the great things to come out of the regional planning efforts in the Northeast and Mid-Atlantic are its data portals.

The Mid-Atlantic data portal is maintained by staff from Monmouth University's Urban Coast Institute, Rutgers University's Edward J. Bloustein School and Center for Remote Sensing and Spatial Analysis, The Nature Conservancy, MARCO, and other partners.

It has state-of-the-art mapping and visualization tools and is a key component of the planning efforts in the Mid-Atlantic region.

This portal is available to the public. Anyone can visit it (portal.midatlanticocean.org) and see what kind of data is currently available. This adds transparency to the decision making process.

For example, you can pull up the wind energy area off the coast of New York, add some of the commercial fishing data and clearly see how there are conflicts.

But that does not mean there is no hope for wind energy in New York. With proper ocean planning and engaged stakeholders, like the

fishing community and the offshore wind industry, there can be ways for both industries to coexist.

In Virginia, BOEM, the Virginia Department of Mines, Minerals, and Energy, and the Virginia Coastal Zone Management Program have developed a collaborative process to work with recreational and commercial fishing communities. They've developed fine-scaled maps of fishing areas and created other tools to identify potential conflicts and increase communication between the various groups.

This should lead to strong policies to protect those areas.

As conservationists, we want regional ocean planning to go beyond improved communication and conflict mitigation. We need to take real steps to conserve places that we know are important in our ocean ecosystems.

The nature of the Mid-Atlantic and its diverse ecosystems make it home to a wealth of marine life.

We have highly migratory fish, mammals, and birds, like tuna, whales and osprey; we have unique habitats like the Hudson Canyon (the largest known ocean canyon off the East Coast of the United States) and we have a dynamic ocean system influenced by the Gulf Stream.

All of them touch our waters, atmosphere, and coasts.

It is important that we protect these places as our demands on the ocean increase. We believe that smart regional ocean planning can help make that happen.

It has taken several years to get Mid-Atlantic ocean planning to this point, but this is only the first step on a long road toward fully collaborative ocean conservation and management. By engaging in this process, we hope to do our part to ensure a healthy ocean ecosystem in the future.

We would like you to join us in this effort.

For more information on The American Littoral Society's Mid-Atlantic ocean planning work and upcoming public engagement opportunities please visit:

midatlanticoceanplanning.org

Lyndie Hice-Dunton is the ocean planning manager for the American Littoral Society.

You can read more about Lyndie on page 59.

Important upcoming dates:

- **Late June 2016: Release of Mid-Atlantic Ocean Action Plan by the Mid-Atlantic RPB**
- **July 11, 2016 @ 11am-1pm: Public webinar introducing the Mid Atlantic Plan hosted by the RPB. Details TBD**
- **Mid-Atlantic Ocean Action Plan Public Listening Sessions: (for full details see midatlanticocean.org/event-calendar/)**
 - **July 12, 2016 @ 6-8pm: Virginia Aquarium & Marine Science Center, Virginia Beach, VA**
 - **July 14, 2016 @ 6-8pm: Monmouth University, West Long Branch, NJ**
 - **July 19, 2016 @ 6-8pm: Ocean Pines Branch, Worcester County Library, Berlin, MD**
 - **July 20, 2016 @ 6-8pm: The Virden Retreat Center- University of Delaware, Lewes, DE**
 - **July 27, 2016 @ 6-8pm: Suffolk County Community College, Selden, NY**



A New Approach to West Coast Ocean Planning

By John Hansen

Implementation of the U.S. National Ocean Policy has begun for the West Coast region, with the formation and launch of a Regional Planning Body (RPB) in early 2015. The West Coast RPB has brought together governmental co-managers spanning an extensive coastal area stretching from Canada to Mexico, and shaped a dialog between tribal, state and federal partners to inform planning for existing and future ocean uses that has never before taken place.

The West Coast is one of nine regions identified around the United States through President Obama's Executive Order creating a federal National Ocean Policy.

The West Coast region includes over 1200 miles of coastline and is home to over 40 million residents. Within the region there are numerous active federal agencies, the three states of California, Oregon and Washington, and over 130 federally-recognized tribal governments.

Since initiating organization of the West Coast RPB in 2012 and 2013, effort has focused on engaging this wide range of governments to shape an effective approach addressing this large geography and vast array of ocean uses.

Opening Spread: A Humpback whale calf swims in the ocean. In planning our use of the ocean, it is not just the life on the surface, but also the life beneath the ocean's surface that we need to consider. Photo by Florian Graner

Early efforts of initiating engagement around the West Coast RPB began with separate parallel outreach with federal agencies, state leads on ocean policy and marine planning, and interested tribal governments in the region. These early conversations focused on capturing existing efforts around marine planning and ocean policy, especially within state and tribal governments, and ensuring effective leveraging of ongoing activities while identifying common priorities for ocean planning.

Ocean planning has been underway in various forms in all three West Coast states in recent years. Examples include Oregon's Territorial Sea Plan, California's implementation of its state Marine Life Protection Act, and Washington State's law explicitly calling for state marine spatial planning.

All of these activities have produced marine planning products or are in the process of doing so, and early on it was recognized that RPB efforts would need to build around these products rather than try to replicate them.

Effective engagement of federally-recognized tribal governments in the region was a critical starting point for determining whether the RPB should be formed, and if so, on what its efforts might be focused. An initial request was sent from the National Ocean Council to all federally-recognized

tribes in the region asking for their interest in a dialog about possible formation of a West Coast RPB. Responses were received from roughly forty tribes, and that list was used as the basis for a standalone tribal assessment that was carried out by a private consulting firm between 2012 and 2014, with additional support from NOAA and the Udall Foundation. The assessment used in-person meetings with all interested tribes to ensure capturing existing management efforts, while also identifying potential priority planning issues and governance considerations. This assessment served to provide a basis for potential tribal government participation with the RPB.

Over the course of 2014, these separate Federal, State and Tribal conversations were carried out to ensure that the potential members of the RPB were fully briefed on the options for engagement provided by the National Ocean Policy and the opportunity to form an RPB. In September of that year, these conversations merged and for the first time, as representatives of federally recognized tribes, the three West Coast states, and roughly a dozen federal agencies from the region held their first remote meeting by telephone. While the first call of the group focused mostly on introductions and basic process-focused tasks, having roughly fifty representatives from such a wide

range of co-managing governments connecting with one another was an exceptional occurrence for the West Coast.

The group continued with monthly calls by phone through the end of 2014, and then gathered for their first in-person meeting in January 2015 in Portland, OR. Co-located with the West Coast Ocean Summit meeting organized by the West Coast Governors Alliance on Ocean Health, prospective RPB members gathered for a half-day meeting to discuss options for more formally initiating their efforts. The early portion of the meeting focused on sharing updates from national-level efforts and RPBs in other regions, then highlighting existing planning and management activities along the West Coast. The meeting concluded with an opportunity for all government representatives in attendance to state whether they believed a West Coast RPB should be formed. There was unanimous consensus that it should.

As the first task in launching the RPB, the group agreed that a charter document would need to be drafted outlining the roles, responsibilities and procedures for participating in the group. The approach to the charter was to be based on effectively representing the wide range of government entities involved in the RPB, while also addressing the scale of the West Coast region and integrating a flexible approach to

engagement around current and future marine planning.

The group began with an initial version of the charter in spring 2015, and over the course of a year reviewed and provided input on five separate drafts of the document until agreeing to a final ‘approval’ version in February 2016. Key components of the charter include procedures for membership and participation, consensus-building and decision-making, and defining an approach to region-wide coordination and sub-regional marine planning teams. While federal agencies are directed to engage in the RPB process by the National Ocean Policy, participation by state and federally-recognized tribal governments is voluntary and there is no deadline to sign onto the charter.

A key component of the charter and the approach undertaken by the West Coast RPB is the option to establish “sub-regional planning teams” to leverage existing and future marine planning activities at a manageable scale. While the RPB members recognize the critical importance of connectivity throughout the full California Current Large Marine Ecosystem, initiating efforts around existing governance at tribal and state levels provides a more direct link to RPB member efforts. Any planning products produced by sub-regional efforts would be brought to the full RPB for review and approval, and then sent to the National Ocean

Council for official adoption. While this approach is flexible and entirely voluntary, the RPB will likely pursue eventually having sub-regional plans that cover the entire region, which would be harmonized to provide a single region-wide plan for the West Coast. In addition, there may be planning issues that are inherently region-wide in nature, and those would be addressed by the full RPB in terms of planning approaches and potential planning products. Once initiated, sub-regional efforts would be aimed at building on the work of RPB members while also engaging all relevant stakeholders and entities (industry, NGOs, academia, etc.) to ensure an effective collaborative approach to planning.

For next steps in the RPB’s development, key tasks will include:

Approving the RPB Charter

– Participation in the RPB will be formalized by approval and signature of the RPB charter, which was finalized in February 2016. The National Ocean Policy calls on all federal agencies to engage in RPB activities if initiated, but participation by states and federally-recognized tribes is voluntary.

Establishing Sub-regions – As discussed above, engaging at the sub-regional level will be the primary mechanism for the West Coast RPB to leverage current and future marine planning activities, especially at state and tribal government levels. The RPB members will discuss options

for defining sub-regions and pursue consensus on how members would like to form sub-regional planning teams, including geographic scope, topical focus areas, and timing.

Defining Regional

Coordination & Support – While much of the planning effort will be focused on sub-regional scales, the full West Coast RPB will continue to support ongoing region-wide coordination and communication among RPB members and stakeholders. Key components of define these activities will be an RPB work plan, initiation of an ocean assessment, and an outreach strategy.

Ensure Data Coordination & Development – A core component of the RPB’s efforts is effective ocean and coastal data coordination and development in support of planning throughout the region. The West Coast RPB has partnered with the West Coast Ocean Data Portal (portal.westcoastoseans.org) as its primary mechanism for data-related support, with early efforts focused on effectively leveraging the Portal’s existing catalogs and human network to maximize integration with RPB activities at various scales.

Over the course of 2016, the RPB will focus on making progress on the tasks above, while also planning for the transition beyond the federal election in November. While a change in administration will likely impact national-level policy on oceans and coasts in some way, the

RPB will work to tailor its approach to the priorities of governmental co-managers and stakeholders on the West Coast. This tailoring will be aimed at making the near-term work of the RPB effective, while also setting the stage for long-term success that aligns with current and emerging uses of the ocean specific to the West Coast.

The West Coast RPB has worked hard over the last two-plus years to organize federal, state and tribal co-managers in the region in a way that’s never been done before. Leveraging the opportunity provided by the U.S. National Ocean Policy and the commitment of federal government agencies to implement it, state and tribal partners are engaged in a new innovative dialog to address the most pressing current and emerging uses of our oceans. Moving forward, the RPB will work closely with regional stakeholders across all sectors to ensure it is capturing input from throughout the West Coast. The ultimate goal of the RPB is to continue to build and strengthen these partnerships in a way that will result in the most effective planning and management possible for the health of our oceans and coastal communities.

For more information, visit www.westcoastmarineplanning.org or contact West Coast RPB Coordinator John Hansen at john@westcoastmarineplanning.org.



From Wetlands Science to Ocean Policy

By Jenna Valente



The National Ocean Policy seeks to promote better coordination among agencies. To see a good example of how this might work, agencies could start by looking at the Interagency Coastal Wetlands Workgroup (ICWW).

Water is the essential, life-giving resource that we all depend on for survival, and according to the World Economic Forum, water crises are the single greatest risk that the world faces today. Our need for clean water is a vital link connecting humans and wildlife to the planet. From the Flint, Michigan water crisis to major oil spills, we have all seen the tragedies that can occur when we do not act as responsible stewards of our precious Water systems.

Wetlands - or areas like bogs, marshes or swamps - are not only where water meets soil, but they also serve as natural sponges that filter out harmful pollutants and purify

water. These areas are some of the most productive ecosystems in the world and are essential, yet fragile, habitat for many species of marine and terrestrial plants and animals. Wetlands are dynamic protectors of coastal communities and stand as the first line of defense against major storms, flooding and coastal erosion.

Despite the valuable services wetlands provide, we are witnessing their decline at an alarming rate. This has led federal agencies like the Council on Environmental Quality (CEQ), Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA), U.S. Army Corps of Engineers (USACE) and United States Department of Agriculture (USDA) to collaborate and increase monitoring and protection of these areas.

In the 1980s and about every

decade since, the USFWS has produced reports on the status of wetlands in the U.S. The first report analyzed data from the 1950s to 1970s and found that the lower 48 states were losing almost 500,000-acres of wetlands each year.

The subsequent report covered the mid-1970s to mid-1980s and showed a decrease in the amount of wetlands lost. This was mostly credited to the passage of the 1972 Clean Water Act and partly due to the Wetland Conservation Provisions of the 1985 Farm Bill. This trend of decreased wetland loss progressed into the 1990s and early 2000s, when one report stated the lower 48 states were actually gaining wetlands each year. This reversal gave scientists pause and motivated them to take a closer look at the data.

That report spurred the formation of the ICWW, chaired by the EPA and comprised of more than a dozen representatives from six federal agencies.

“We were shaking our heads saying, that [wetlands gain] is not what we are seeing on the coastal parts of the country,” said Susan-Marie Stedman, Wetlands Scientist with NOAA’s National Marine Fisheries Service. “So, we partnered with the USFWS to resample all the data for just coastal watersheds.”

After the resampling process the data still showed the nation was gaining wetlands from 1998 to 2004, but the gains were all being made in

the interior of the lower 48 where farmland was being converted to wetland status. However, it revealed that coastal wetlands were still being lost at a rate of 60,000 acres per year – principally in the South Atlantic and parts of the Gulf Coast.

When the NOP plan was being drawn up, the ICWW aided in the development of specific, wetlands focused action items for the NOP. “While the strategic plan for the National Ocean Policy was being developed, the workgroup was already looking at ways to improve and tweak existing programs to increase synergy among agencies,” explained Stedman. “The action item we wrote for the NOP implementation plan was that we would conduct pilot studies for watersheds to get at the underlying factors of wetland loss,” she continued. “That is what I and the rest of the workgroup have been working on for the last two years.”

Currently, the workgroup sees the need for more coastal wetland restoration and further research to better understand what is happening in our nation’s wetlands. The ICWW is addressing the lack of

Opening Spread: The Nanticoke River shows wetlands just north of Nanticoke Wildlife Management Area in Wicomico County, Md. Photo by Matt Rath/ Chesapeake Bay Program

Facing page: A view of the wetlands on Hooper’s Island in Maryland. Photo by Chesapeake Bay Program.

current restoration efforts in coastal watersheds and is also trying to get agencies to distinguish between the types of wetland restoration in which they are engaged. Some agencies improve wetland function through cleanup, while others increase acreage by bringing back wetlands that were lost to drying out or development.

“If we are losing wetland acres to development like houses, shopping centers and roads and we are compensating for that loss through rehabilitation, then our net is a loss of wetland acres and we are losing wetland function,” Stedman added. “If you are not keeping track of that, then you don’t know what you are actually getting back for acres.”

Coastal watersheds make up close to 40 percent of the wetlands in the lower 48 states and they represent most of the losses. Currently, only about 10 to 15 percent of the acres gained through wetland restoration are in coastal regions. This is because agencies attempting to restore wetlands in coastal areas have access to a limited pool of federal dollars – they try to maximize those funds through resource sharing. Unfortunately, much of the coastal watershed restoration is not replacing lost acres of wetlands, because most of the restoration taking place is in the form of rehabilitation rather than reestablishment.

The workgroup is trying

to reduce the loss of coastal wetlands by recommending that partnerships be formed with the states. Although, this process is still in its development phase, Stedman notes that it has already fostered important partnerships between state agencies and the U.S. Forest Service.

“We are not done, but this study, and drafting this set of recommendations, has generated some really interesting and important data that has initiated some really important partnerships,” Stedman concluded.

The NOP calls for federal agency relationship building, coordination and collaboration to address key ocean challenges. It provides states and communities greater input in federal operations, saves taxpayer dollars and promotes economic growth.

The establishment and actions of the ICWW is an example of federal agencies working together and setting in motion a culture of collaboration and resource sharing. It is an example of how federal agencies already collaborate on a smaller scale that could be duplicated on a larger level with the NOP.

Jenna Valente is the Healthy Oceans Coalition Coordinator for the American Littoral Society. You can read more about Jenna on page 59.

Five Ocean Policy Myths

Myth #1: *The National Ocean Policy is an attempt to create a new massive layer of government bureaucracy that will delay ocean investment and keep ocean users out of broad swaths of ocean space.*

Truth #1: The National Ocean Policy directs federal agencies to collaborate. There will be no ‘massive bureaucracy’ created. The policy uses existing laws.

Myth #2: *Special interest groups have a large say in the development of the National Ocean Policy – with little to no public input.*

Truth #2: The National Ocean Policy was created after years of reaching out to recreational groups, communities, conservationists, academics and decision-makers. The National Ocean Council continues this outreach today and keeps an open line of communication with environmental groups, ocean users, and other stakeholders.

Myth #3: *The policy is being developed in a way that views humans as trespassers in nature, instead of part of nature. The NOP seeks to preserve ecosystems over conservation and sustainable use of natural resources.*

Truth #3: The National Ocean Policy and the regional ocean plans recognize the full array of interactions, including humans, rather than considering single issues in isolation.

Myth #4: *Recreational fishing could be thrown into the mix right along with commercial fishing, oil drilling, wind farms and other uses that the National Ocean Council (NOC) and regional planning bodies will consider as they plot out how public waters will be used.*

Truth #4: Wildlife, recreational fishing, commercial fishers, offshore energy developers, and other uses are all being considered in the development of ocean plans and implementation of the National Ocean Policy. It’s important to include all ocean uses as we plan longterm sustainable ocean use. That does not mean these uses will be excluded or limited.

Myth #5: *The National Ocean Policy creates uncertainty in the management of fisheries.*

Truth #5: The National Ocean Policy does not change any of the existing management structure for how our federal and state fisheries are managed.

A woman with long dark hair, wearing a dark patterned jacket and a colorful fringed scarf, is crouching in a marshy area next to a body of water. She is smiling and looking towards the camera. The background shows a calm body of water, some reeds, and a white house in the distance under a clear blue sky.

The Tribal Perspective

Respecting Traditional Knowledge To Create A Sustainable Ocean

By Kelsey Leonard

Tribal Nations across the United States have a rich maritime history and ancestral connection to the oceans. It is a connection that sustains our cultural, spiritual, and political existence.

We are the first stewards and have a responsibility to protect the oceans for future generations. The ocean is one of our relations in the web of life. Like a wise grandparent, our oceans are the embodiment of a living repository of our shared water history with each ebb and flow of the tides. Our ancestral relationship with the oceans has existed since time immemorial and is sustained through our cultural and ceremonial practices including fishing, harvesting, canoe journeys, song, dance, and more.

Our vast traditional knowledge is, for the first time, being called upon to inform broader national and Regional Ocean planning efforts. This unprecedented partnership with Tribal Nations for Regional Ocean planning is a testament to tribal sovereignty but also an important step in enhancing federal trust responsibilities and relationships between tribes and the United States.

Historical and contemporary laws have denied Indigenous Peoples and Tribal Nations access to the ocean, denying us traditional uses.

America's history is filled with forced removals of Indigenous Peoples from our ancestral coastal territories. Forced inland and then

prohibited by settler laws from harvesting ocean resources or landing canoes on beaches has left a tumultuous legacy for both the settler and Indigenous communities.

Today, many Indigenous communities face contested legal terrain to be able to access beaches their ancestors have harvested on since time immemorial, maintain aboriginal fishing practices, and manage ocean resources with autonomy.

The National Ocean Policy, created through an executive order by President Obama, is a marked shift in ocean planning. For the first time it actively engages Tribal Nations in regional planning with a process that supports equitable decision-making. The Regional Planning Body framework recognizes that Tribes are Nations with inherent sovereignty and rights to self-determination with a government-to-government relationship with the United States. There are currently 567 federally recognized tribes across the United States, with numerous additional state recognized tribes and Indigenous communities whose voices are vital to planning for our oceans and protecting them for future generations.

Critical to the regional ocean planning process has been recognition of inherent tribal sovereignty. Tribes on the planning bodies participate in ocean planning as Nations, not stakeholders, and

have equal roles and responsibilities in building consensus with state, federal, and fisheries management councils.

Oftentimes, the government-to-government relationship has not been honored when planning ocean uses.

Atlantic Tribal Nations were the first to welcome European settlers to these shores. Indigenous Peoples are woven into the fabric of American maritime history and innovation as evidenced by our success as whalers and shipwreck rescuers, to the proliferation of our unique fishing nets and aquaculture cultivation.

We shared our knowledge of the water and marine life with those we welcomed to our coasts and with each new generation our paths to ocean sustainability became more intertwined.

Despite the laws and genocidal practices that denied our access to the oceans and removed many Indigenous Peoples from our ancestral territories – We Are Still Here.

Tribal Nations have maintained their roles and responsibilities as stewards of the ocean. By protecting our cultural, spiritual, and political ties to ocean resources it has helped us preserve our societies, and our survival.

In many coastal Indigenous communities, centuries have passed without tribes being consulted about the management of ocean resources integral to our survival. For too long

the federal government, states, tribes, and fisheries management councils have been operating within their own silos. The National Ocean Policy aims to disrupt that behavior by encouraging collaboration.

For the first time, Tribal Nations have a seat at the table comparable to the states and the federal government. They have also been engaged in ocean planning efforts from the beginning, rather than only being solicited after the fact for “stakeholder feedback.” This marks a much needed and much appreciated shift in Regional Ocean planning. It respects tribal sovereignty and the role traditional knowledge has in combatting some of today's most difficult ocean planning issues, especially climate change.

Indigenous Peoples are the world's first climate refugees. Many Tribal Nations live in their ancestral territories along the coast, which have seen irreversible damage and rising sea levels attributed to climate change. Our nations are facing extreme environmental crises as we try and maintain our ancestral homelands and waters. We have already seen the relocation of Indigenous Peoples from islands in the Pacific, Alaska, Washington, and Louisiana.

Superstorms, such as Hurricane Sandy, crippled Tribal Nations along the Atlantic Coast causing power outages, storm surge, shoreline erosion, and structural damage.

Opening Spread: Kelsey Leonard of the Shinnecock Nation looks over the waters of the Shinnecock Indian Reservation on the Eastern tip of Long Island, NY. Photo by Shinnecock Indian Reservation

The storm was one of the deadliest and most destructive hurricanes in U.S. history, but it brought a call to climate consciousness for many Tribal Nations along the Atlantic coast. As Shinnecoeks, Hurricane Sandy set us on a path of climate change adaptation. As a nation, situated on the eastern shores of Long Island, NY, we could no longer ignore the immediate threat knocking at our door.

We are not alone.

Across the world, Indigenous Peoples, our land and our waters are threatened due to climate change. We are the miner's canary and what befalls us will set the course for irreversible environmental damage. Therefore, as tribes, and as sovereign nations, our need to engage in ocean governance and marine planning cannot be understated. Our participation in Regional Ocean planning is critical to the success of the National Ocean Policy.

Engagement of Tribal Nations in the Regional Planning Bodies has taken on different forms across the various regions. In part, this is because of the variance in concentration of tribes in each region. Coordination becomes more challenging when the number of sovereign nations choosing to participate in the process is much higher than in other regions. For example, the West Coast RPB has 130 federally-recognized tribal governments, whereas the Mid-

Atlantic has only eight federally-recognized and 21 state-recognized tribal governments.

The National Ocean Council recognizes the important role Tribal Nations play in the ocean planning process, both in sharing our traditional knowledge and advocating for our respective cultural and economic needs in the context of the Ocean Action Plans (OAPs). However, the challenge has been how to meaningfully engage Tribal Nations in the process and provide participatory pathways that recognize tribal sovereignty, provide equitable decision-making power, and support tribes with limited resource planning capacity.

In the Mid-Atlantic, listening sessions were convened for tribal leaders to provide their perspectives on the regional ocean planning process. These engagement efforts were developed through a cooperative partnership of the Mid-Atlantic Regional Council on the Ocean (MARCO) and the Shinnecock Indian Nation to advance opportunities for the engagement of tribes in the region.

In August of 2015 MARCO convened listening sessions in New York and Virginia for tribal leaders in the Mid-Atlantic to learn about the planning process, share information, and explore interest in regional planning body participation from tribes. Participants included members of federally-recognized

tribes, state-recognized tribes and tribes with a relationship with a state government in the Mid-Atlantic region.

Further tribal engagement efforts in the Mid-Atlantic include the development of tribal coastal spatial data for inclusion on the MARCO Data Portal and resources for valuing Indigenous traditional knowledge in ocean planning. Meaningful and effective engagement of Tribal Nations in the ocean planning process is a first step towards reconciliation in recognition of the thousands of years of traditional knowledge that give Indigenous Peoples a unique perspective that must be incorporated in regional ocean planning.

The effort to engage Tribal Nations in the regional ocean planning process is markedly different from past endeavors in that Tribal Nations are determining how, when, where, and why to participate. We determine the capture of traditional knowledge; collection and use of data; our role as Regional Planning Body entities; and how we shape the ocean planning process to be reflective of our tribal values and laws.

The Shinnecock Indian Nation through its participation on the Mid-Atlantic RPB has successfully advocated for the Mid-Atlantic Ocean Action Plan to value traditional ecological knowledge as a science that informs Regional

Ocean planning. The RPB process has also enabled greater coordination among states, tribes, federal agencies, and fisheries management councils with regard to our traditional ocean uses as inherent tribal rights. The RPBs provide Tribal Nations a forum to better communicate our unique tribal values and Indigenous marine-based cultures to state and federal governments to enhance Regional Ocean planning.

In the future, Tribal Nations are hopeful that the RPBs will be a permanent fixture for the development and implementation of national ocean policies. Ocean planning processes, such as the RPBs, which respect tribal sovereignty and meaningfully engage Tribal Nations and Indigenous communities and value traditional knowledge, have begun a process of reconciliation that hopefully can be maintained and enhanced for future generations.

We share the ocean, a living repository and provider for our existence. Therefore, our challenge is to continue to build relationships of mutual understanding so that we may protect our oceans for generations to come.

Kelsey Leonard serves as the Tribal Co-Lead for the Mid-Atlantic Regional Planning Body on behalf of the Shinnecock Indian Nation.

Voices for the Ocean

The Underwater Naturalist asked a variety of ocean experts to explain why they believe ocean planning is important. Here is what they had to say:

“Responsible stewardship of our oceans, coasts, and Great Lakes is critical as we try to address our Nation’s pressing ocean issues, such as harmful algal blooms, ocean acidification, and illegal, unregulated, and unreported fishing and seafood fraud.”

--Beth Kerttula, Director of the National Ocean Council.

“All New Englanders have a connection to the Northern Atlantic, and our coasts and open waters have defined our identity, livelihoods, and sense of community for centuries. It is truly a gift to be a salty region, but while populations continue to rise and human presence on the ocean will only continue to increase, now, more than ever, we must sustain our iconic marine life and habitats as well as they have sustained us. The National Ocean Policy, and ensuing Northeast Ocean Plan, will usher in better decision-making, based upon the best available science, ensuring that conservation efforts will be effective and well-informed for years to come. Everyone wins.”

--Aimee Bushman, Ocean Planning Outreach Manager, Conservation Law Foundation

“We typically imagine that the principle connection between life on land and the ocean is the shore, but it is in fact the atmosphere. The oceans produce roughly seventy percent of the oxygen we breathe and absorbs about half the excess carbon dioxide humans produce. So, every living thing on planet earth has a deep and abiding interest in proper ocean stewardship, as it is necessary to our collective survival.”

--Dr. Patrick Hossay, Associate Professor of Sustainability and Coordinator of Sustainability Studies, Stockton University.

“Coastal fishermen have depended on ocean fisheries for centuries. We have already felt the strain on our livelihoods as inshore waters have become more crowded with other user groups. Many of the future uses of our oceans and near shore waters have the potential for hindering or endangering our ability to safely harvest seafood. Smart ocean planning offers a chance for informed decisions to be made about the future of our ocean, and fishermen’s voices are an important part of that process.”

--Captain Chris Ludford, Pleasure House Oysters, Virginia Beach, VA.

“With ocean planning in place, hopefully...

Regulatory agencies will start to comprehensively include and involve the people on the water, making their living from fishing when managing stock assessments of fish. Trip reports, personal accounts and fishermen and fisherwomen’s knowledge are just as important as four trawl surveys per year to assess a fish population.”

--Andrea Tomlinson, General Manager, New Hampshire Community Seafood

“Ocean planning is about balancing the needs of those who use the ocean with the needs of the ocean itself to maintain a healthy, sustainable ocean ecosystem for future generations. We, the people who enjoy the shores and beaches, the people who make a living on the oceans, and certainly the Navy that operates in the ocean to protect our national interests, all have a stake in ocean planning. The ocean planning process facilitates the communication, coordination, and collaboration that needs to take place between government, industry, and the public to sustain the ocean for future generations.”

--Joe Atangan, U.S. Fleet Forces Command, U.S. Navy, Physical Scientist.

“The first Mid -Atlantic Regional Ocean Action Plan has the potential to serve as a vital tool in better informing governmental processes that oversee human activity and protection of natural resources in the ocean with sound science and information. Having grown up at the Jersey shore, it is important to me as an individual, as well as a practitioner, that we collectively plan for and take action to maintain a healthy ocean.”

-- Elizabeth Semple, Manager, Office of Coastal and Land Use Planning, NJDEP

“From a recreational fishing perspective, ocean planning is ideal to ensure an eco-system approach can be executed. In addition to managing the actual gamefish, the forage species that support the gamefish are also of paramount concern. For example, the menhaden is a staple food source for many game species such as striped bass, bluefish, sharks and tuna. By bringing together all parties, effective ocean planning can help ensure that both the forage and gamefish are reflected in policy and program decision making”

-- John LoGioco, Atlantic Tuna Project founder, www.savethebluefin.com

“The National Ocean Policy is critical to our ability to help coordinate federal agencies that respond to important ocean health issues and plan for our future. This includes making sure we maintain healthy ecosystems and conserve our marine resources for future generations while also allowing for traditional uses such as commercial fishing, shipping and recreation. Only by planning can we balance these vital interests in ways that are realistic and fair.”

--Sen. Kevin Ranker, D-Orcas Island, Washington State and an advisor to President Barack Obama’s National Ocean Council.

“As fishermen we are completely dependent on a healthy ocean. By participating in marine planning we ensure that decisions are made with our interests and the interests of future generations of fishermen in mind, not just the interests of new developments.”

--Jim McIsaac, Coordinator, British Columbia Commercial Fishing Caucus



A Very Fishy Guy

The Fin Art of Ray Troll

Fish first began showing up in Ray Troll's artwork back in his undergraduate college days at Bethany College in Lindsborg, Kansas.

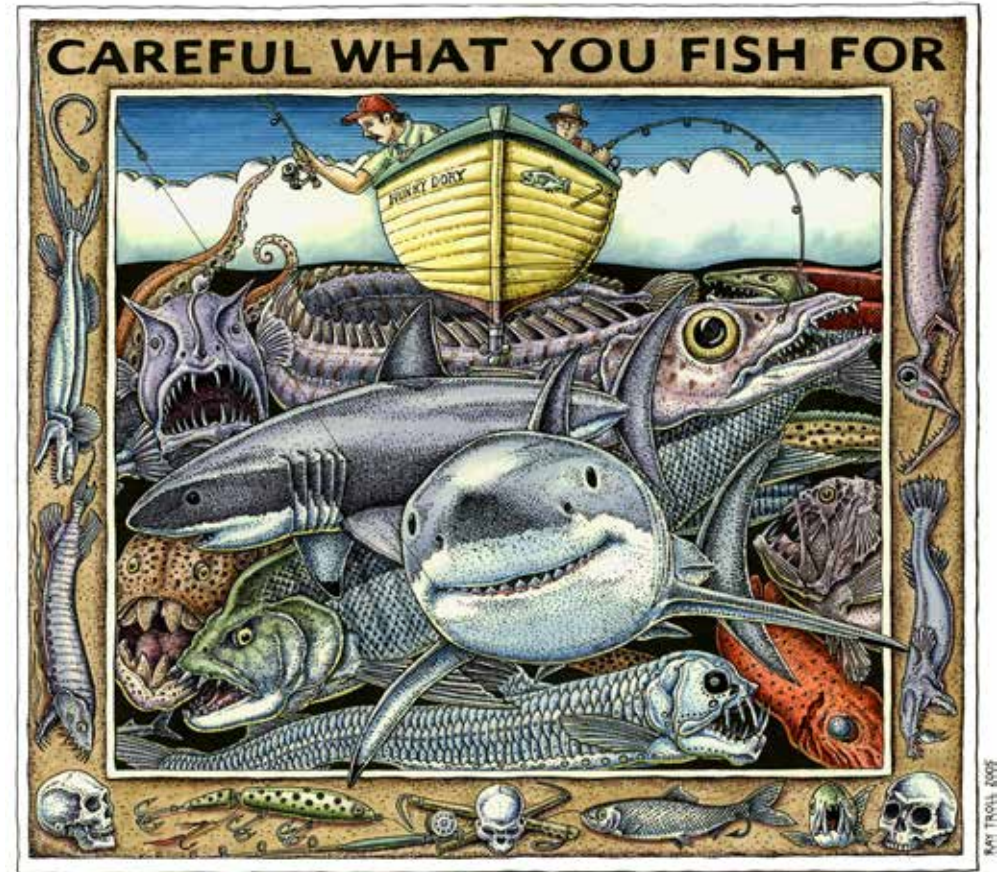
After getting his Master of Fine Arts Degree from Washington State University in 1981, Ray migrated north to Alaska to help his sister run a fish store. While working as a fishmonger, fish became so deeply embedded in Ray's psyche, that as he put it "he ended up with a career."

Over the past 35 years his artwork has been seen on posters and T-shirts, in books and in numerous museum shows, including one that will be at the Museum of the



BLUES IN THE KEY OF SEA





Earth in Ithaca New York in the summer of 2017. Besides painting, Ray also makes music and he says he and his bandmates, the Ratfish Wranglers, make the “music of the fishes.” With his tongue deeply embedded in his cheek, he adds, “it’s very fishy music.”

He is still based in Ketchikan, Alaska, but the Corning NY, native also spent part of his youth in Puerto Rico as an Air Force brat where he first developed his love for the ocean. He continues to travel for his work and currently Troll is working with his paleontologist

friend Dr. Kirk Johnson on a Guggenheim Fellowship funded book about west coast fossils, which is a follow-up to their book about Rocky Mountain fossils.

Asked why so much of his work is about the ocean, Ray says: “The big wide ocean is never ending, and it’s where we all came from. It covers three fourths of the world’s surface so it’s really Planet Ocean, not Planet Earth.”

More of Ray’s work, T-shirts, cards, posters and books are for sale on his website www.raytroll.com

Calendar of Events

- Saturday, July 9, 10 a.m.-1 p.m.** -- Shorebirds and Terrapins of Jamaica Bay, Jamaica Bay, NY
- Monday, July 11** -- Public webinar introducing the Mid-Atlantic Ocean Action Plan, ONLINE
- Tuesday, July 12 6-8 p.m.** -- Ocean Action Plan Virginia Listening Session, Virginia Aquarium & Marine Science Center, Virginia Beach, VA
- Thursday, July 14 6-8 p.m.** -- Ocean Action Plan New Jersey Listening Session, Monmouth University, West Long Branch, NJ
- Saturday, July 16, 7 p.m.** -- Film One Festival, 7pm, Atlantic Highlands Marina, NJ
- Wednesday, July 20 6-8 p.m.** -- Ocean Action Plan Delaware Listening Session, University of Delaware, Lewes, DE
- Wednesday, July 27 6-8 p.m.** -- Ocean Action Plan New York Listening Session, Suffolk County Community College, Selden, NY
- Sunday, July 31, 10 a.m.-1 p.m.** -- Ft. Tilden Hike, Jamaica Bay, NY
- Saturday, Aug. 6** -- IGFA Tagging Presentation, Kids Day, Reel Seat, Brielle, NJ
- Wednesday, Aug. 10** -- IGFA Kids Day Tagging Trip, Point Pleasant, NJ
- Thursday, Aug. 11** - Sunday, August 14 - Cape Ann Whale Watch, Cape Ann, MA
- Saturday, Aug. 20** -- Annual Fluke Tagging Trip, Atlantic Highlands Municipal Harbor, Atlantic Highlands, NJ
- Saturday, Aug. 20** -- 11th Annual Jamaica Bay Shorebird Festival, Jamaica Bay, NY
- Sunday, Aug. 21** -- Floyd Bennett Field Hike, Jamaica Bay, NY
- Wednesday, Aug. 24** -- Sunset Seining, Sandy Hook, NJ
- Saturday, Aug. 27** -- Shore Birds and Wild Edibles: Sandy Hook, NJ
- Sunday, Aug. 28** -- Fall Migration Bird Walk, Jamaica Bay, NY
- Friday, Sept. 9** -- End of Summer Fundraising Gala, Sandy Hook, NJ
- Saturday and Sunday, Sept. 17 – 18** -- Zero Waste Arts Festival, Sandy Hook, NJ
- Saturday, Sept. 17** -- Annual NY State Coastal Cleanup, NY
- Thursday, Sept. 22** -- Fall Equinox Walk, Sandy Hook, NJ
- Friday, Sept. 23 and Saturday, Sept. 24** -- Sandy Hook Bio Blitz, Sandy Hook, NJ
- Saturday, Sept. 24, 4-7 p.m.** -- Jamaica Bay Sunset Ecology Cruise, Jamaica Bay, NY
- Sunday, Sept. 25** -- Red Bank Guinness and Oyster Fest, Red Bank, NJ
- Sunday, Oct. 16** -- Jamaica Bay Shoreline Cleanup, Jamaica Bay, NY
- Friday, Oct. 28** -- Spooky Walk, Sandy Hook, NJ
- Thursday, Nov. 10** -- Sunday, November 13, Assateague Island, VA
- Saturday, Nov. 19** -- Surf Fishing Clinic, Sandy Hook, NJ
- Wednesday, Dec. 7, 2 p.m.** -- Holiday Party, Sandy Hook, NJ
- Saturday, Dec. 10 (tentative)** -- Northeast Chapter Holiday Party, Jamaica Bay, NY

Help us fight for Smart Ocean Policy Join the American Littoral Society

At the American Littoral Society, conserving the ocean and coast is our fundamental mission. We want a National Ocean Policy that will protect life in the water and on the land. Join us to help care for our vibrant coastal communities, our productive marine economies, and the awe-inspiring beauty of our oceans. Mail in this membership form or go to: <http://www.littoralsociety.org>

As a Society member you will receive a subscription to our bi-annual publications — the **Underwater Naturalist** magazine and the **Littorally Speaking** printed newsletter — as well as our monthly E-newsletter.

Membership also entitles you to receive:

- Discounts on select field trips and events
- A ticket to the Society's Members Day and Annual Meeting in June.



I WANT TO HELP CARE FOR THE COAST

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 \$250 - Advocate
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The American Littoral Society promotes the study and conservation of marine life and habitat, protects the coast from harm, and empowers others to do the same. Caring for the coast since 1961.

Meet The Team



SARAH WINTER

As the Society's Ocean Policy Program Director, Sarah works to translate the U.S. National Ocean

Policy into how the U.S. manages and protects the ocean, our coasts, and the Great Lakes. Sarah leads the Healthy Oceans Coalition, a network of small and large conservation organizations around the country working to support full implementation of National Ocean Policy. Sarah also leads the Society's work to create a smart ocean plan for better decision-making around the Mid-Atlantic region's important ocean and coastal resources.

Sarah is a Midwest native who fell in love with the ocean at an early age. In her search for the perfect way to protect the ocean, Sarah spent four years at the University of South Carolina where she received her Bachelors in Marine Science. Her journey then took her to Vermont where she earned her Juris Doctorate and Masters in the Studies of Environmental Law from Vermont Law School. For over ten years now as a lawyer and policy advocate, Sarah has worked to educate and engage our decision makers, elected officials and ocean lovers on the importance of protecting the ocean, our coasts and the Great Lakes.

Sarah lives in Boston with her husband and two children, Colin and Imogen. However, before trading rain for snow, Sarah called Portland, Oregon home for eight years.



LYNDIE HICE-DUNTON

Lyndie joined the American Littoral Society in

November 2015 as the Mid-Atlantic Ocean Planning Manager. Her work focuses on regional ocean policy and planning and she works closely with other environmental non-profits for integrated coastal management and marine conservation. Lyndie has over a decade of experience in marine science and policy focusing on fisheries ecology, coastal resiliency, and coastal resource management.

Prior to joining the society, she served as the Research Coordinator and Senior Scientist for the Delaware National Estuarine Research Reserve and Delaware Coastal Programs in the Department of Natural Resources and Environmental Control.

Lyndie has a B.S. in Marine Science from Eckerd College in St. Petersburg, Florida and a Ph.D. in Marine and Atmospheric Sciences from Stony Brook University in Long Island.

She lives near the Jersey Shore with her husband, an assistant professor in the Marine Environmental Biology and Policy Program at Monmouth University, and their two young children.



JENNA VALENTE

Jenna joined the American Littoral Society's Boston

office as the Healthy Oceans Coalition Coordinator in 2015. Previously she worked at the Chesapeake Research Consortium. Jenna completed her Executive Master of Natural Resources from Virginia Tech in 2015 and also has her Bachelors in Communication and Journalism from the University of Maine.

A passion for conservation and appreciation for the natural world was engrained in Jenna at a young age. Her father was in the Coast Guard, which meant she always had the fortune of living near the ocean or other large body of water. She spent the first half of her life moving between and traversing the awe-inspiring terrains of Hawaii, Washington State, and Maine.

Jenna's favorite thing about the ocean is the sheer power of it all. She is often wonderstruck by its ability to lull us to sleep and melt away all of our cares as we listen to waves lapping against the shore or, on the flip side, be a terrifying, life-claiming entity, if you are caught in the wrong place in the wrong weather conditions. Such a powerful life force deserves to be treated with all the respect in the world.



Saved by the Sea: A Love Story with Fish

by David Helvarg
Reviewed by Jenna Valente, American Littoral Society Healthy Oceans Coalition Coordinator

David Helvarg takes us on a heart-wrenching journey of love, loss, and self-discovery in his book, *Saved by the Sea: A Love Story with Fish*. The tale opens a peephole for the reader to glance into some of Helvarg's most personal and formative quests as a war correspondent, surfer, paramour, and ocean advocate. This eye-opening account intertwines some of the world's harshest realities such as losing loved ones, insurmountable climate challenges, and the atrocities of war with dry humor so blunt it's humbling.

Helvarg began his career as a freelance journalist before becoming a war correspondent, covering conflicts in Northern Ireland and Central America, a calling that turned into an award-winning journalism career. In addition to writing for major publications like *The New York Times*, *Los Angeles Times*, *Smithsonian*, and *Popular Science*, he has produced more than 40 documentaries for the Discovery Channel and PBS, among other networks. In his free time, he enjoys surfing, scuba diving, and spending time on, in, and near the ocean. Helvarg is a licensed private investigator and president

of the Blue Frontier Campaign, a Washington, D.C.-based nonprofit that focuses on ocean and coastal conservation. *Saved by the Sea* is his seventh of eight published books, including *The War Against the Greens*, *Blue Frontier*, *50 Ways to Save the Ocean*, and *Rescue Warriors*.

Woven throughout the book is a narrative thread that ebbs and flows between the peaks and valleys in Helvarg's personal life and career. Despite the sea of change that we call life, the tale reminds us that the ocean remains a constant source of refuge, solace, and inspiration for humans and wildlife alike. It's a precious resource that demands respect for its capacity to sustain life as we know it on Earth. Covering 70 percent of Earth's surface, we truly inhabit a blue planet and *Saved by the Sea* is an eloquent reminder that, if there is no blue, there is no green – no grass, trees, other vital plant life, or money.

The oceans are a precious resource that have been drastically underrepresented and overexploited throughout the years, an ongoing battle that Helvarg, his colleagues, and other environmental organizations have been fighting for generations. Upon completion of this book, readers will feel nothing short of respect for Helvarg's compassion and dedication to speaking up for those without a voice, and inspired to champion "God's blue marble."



Station 119 From Lifesaving To Marine Research

By Dr. Kenneth W. Able
Reviewed by Jeff Dement, American Littoral Society Fish Tagging Director

Dr. Ken Able is a Rutgers University professor of fisheries science, and currently the Director of the Rutgers University Marine Field Station (RUMFS) in Tuckerton, NJ. Station 119, situated at the confluence of Great Bay, the mouth of the Mullica River, and across from Little Egg Inlet, NJ, was perfectly positioned to serve as part of the network of U.S. Lifesaving Service Stations (precursor to the U.S. Coast Guard). Presently it serves as a Rutgers University field station for estuarine and coastal research and thus Station 119 is also Ken Able's office.

In the first sections of this book, Dr. Able describes the construction and early history of Station 119. Through coastal storms, shifting sand bars, disappearing coastal islands, the opening and closing of inlets, fires, and the subsequent abandonment of the building by the U.S. Coast Guard. The re-birth of Station 119 begins on January 28, 1972, when Rutgers University assumed a 30-year lease for custody of the building, agreeing to pay the U.S. Coast Guard the substantial sum of \$1.00 per year. In 2002, Rutgers University assumed full ownership and responsibility for the station.

Aside from Station 119 history, the book also delves into some of New Jersey's early years of coastal/marine

research, including the oyster research projects of Julius and Thunlow Nelson. Other early studies given treatment by Dr. Able are: site and thermal studies centering on the Oyster Creek Nuclear Generating Station construction in 1964, Environmental Impact Statement (EIS) studies for the proposed Atlantic Generation Station (a proposed floating nuclear power plant) off of Little Egg Inlet, NJ, and extensive studies concerning New Jersey's artificial reefs.

Recent RUMFS (Station 119) marine studies include; the LEO-15 module (Long-term Ecosystem Observatory), located 3 NM East of Little Egg Inlet at the Beach Haven Ridge, which provided data in regards to offshore wind energy proposals as well as many other studies, the remotely operated, Remus (Remote Environmental Monitoring Unit), the RUMFS COOL Room (Coastal Ocean Observation Laboratory), the formation of the JCNERR (Jacques Cousteau National Estuarine Research Reserve), and the RUMFS Acoustic fish tagging/hydrophone "Striper Tracker" program. Other studies conducted at RUMFS over the years have focused on: Phragmites Reed, Eel Grass, Lobsters, crabs, bay scallops, Killifishes, Dolphins; otters, bridge trap, and net surveys.

Throughout the book the author supplies the reader with many photographic field notes that offer unique insights into the daily life of researchers at RUMFS. We wholeheartedly recommend this book for your library.

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The American Littoral Society promotes the study and conservation of marine life and habitat, defends the coast from harm, and empowers others to do the same.

*Caring for
the Coast
Since 1961*

The Underwater Naturalist welcomes contributions from its members, the scientific community and readers-at-large. To submit an article, a letter to the editor, or to propose a story for publication, please contact Dave Hawkins at dave@littoralsociety.org.

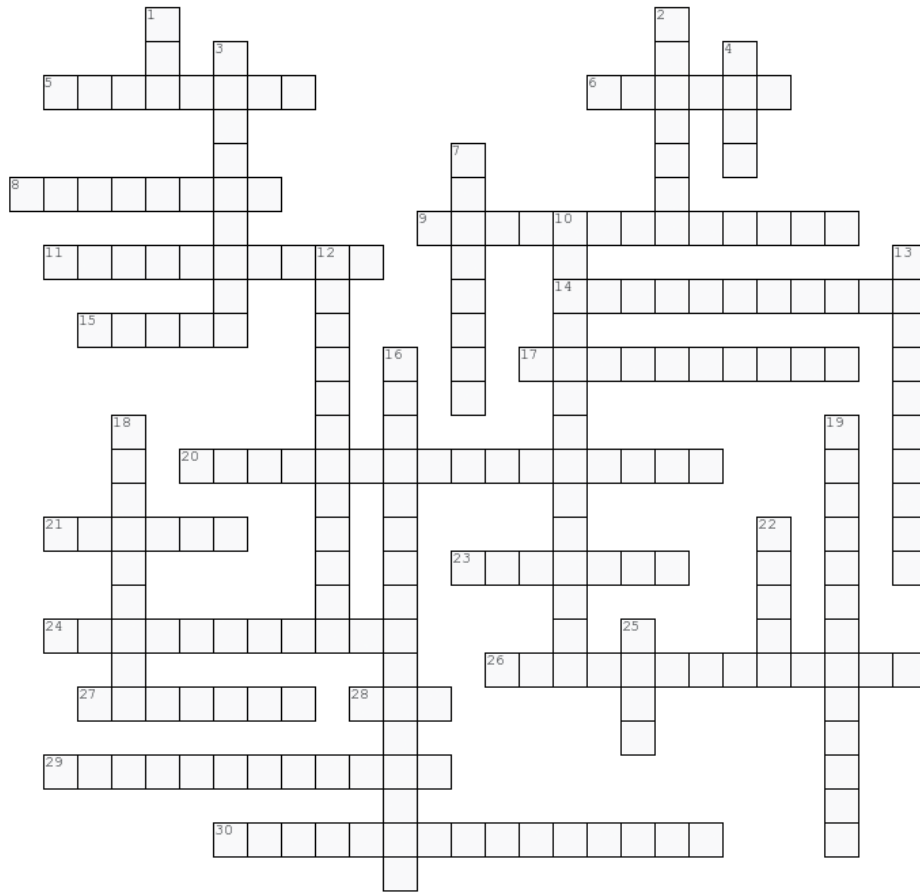
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The Ocean Crossword

Complete the crossword below



Across

5. endangered atlantic anadromous fish
6. earth's smallest ocean
8. common mid-atlantic whale
9. important refuge for many marine species
11. valuable mid-atlantic commercial fishery
14. careful and responsible management for future benefit
15. deep ocean zone, generally beyond 3,000 meters
17. the study of water depth and seafloor relief
20. used for half of all communications between nations
21. a whale's leap out of the water
23. the ear bone of a fish, used to determine its age
24. anyone who has an interest in the outcome of a project
26. algae in the first level of the ocean's food chain
27. life in the upper waters of the seas
28. acronym for economic seazone extending 3 to 200 miles from the coast
29. america's maritime enforcement agency
30. famous oceanographer

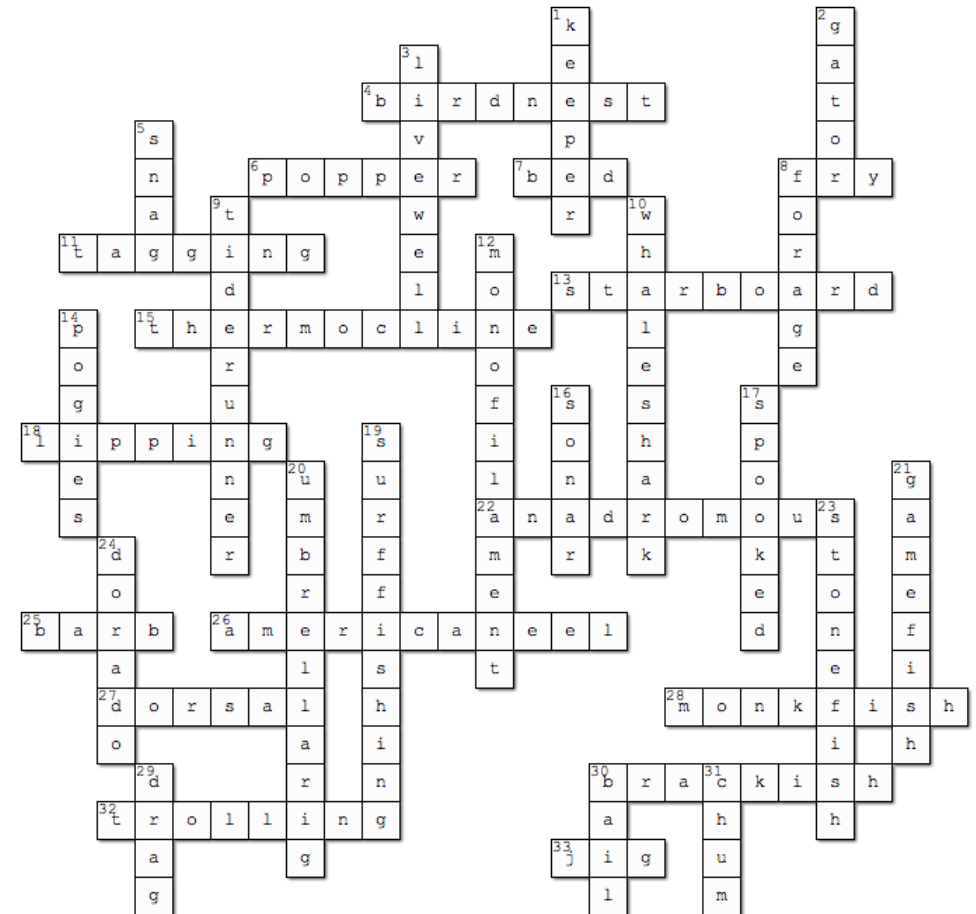
Down

1. Submerged mound of sand on ocean floor
2. earth's largest ocean
3. the whale, dolphin and porpoise family
4. largest source of protein consumed by humans
7. Removal of sediment from tidal or subtidal bottom
10. ultimate goal of ocean planning
12. form of renewable energy off the coast
13. extremely high or low tide
16. earth's largest living structure
18. largest animal on earth
19. deepest point on earth
22. A narrow, elongated engineered structure perpendicular to the beach
25. US agency charged with managing energy in the ocean

The solution to this crossword will appear in the next Underwater Naturalist

The Littoral Crossword

Solution for Winter 2015 crossword puzzle.





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