



SPECIAL  
PHOTO  
ISSUE

# NEWSWAVE

FROM THE U.S. DEPARTMENT OF THE INTERIOR:  
OCEANS, COASTS AND GREAT LAKES

Visual perspectives

Summer 2016





## Happy 100th Birthday, National Park Service!

Our ocean and coastal parks are places to explore and reflect on how we fit into local and historical cultures and powerful physical landscapes. Go ahead, immerse yourself.



Front cover (clockwise from top left): The view from the top of Fort Jefferson at Dry Tortugas National Park in South Florida. Photo credit: Alan Cressler, USGS; Secretary of the Interior Sally Jewell joins biologist Vinny Turner in collecting marsh elevation data at Sachuest Point National Wildlife Refuge, RI. Photo credit: Keith Shannon, USFWS; Ice fishing in the Great Lakes, WI. Photo credit: Matthew C. Perry, USFWS; Fishing at Patuxent National Wildlife Refuge, MD. Photo credit: Robert Pos, USFWS; Shorebirds and shadows at the San Diego National Wildlife Refuge, CA. Photo credit: Lisa Cox, USFWS. Interior is committed to harnessing renewable wind energy as part of the Nation's energy portfolio. Photo credit: BOEM.

This page, top: Wild horses visit a camping area on Assateague Island National Seashore, MD. Photo credit: Ann Tihansky, USGS. Shore fishing on Cape Hatteras National Seashore, NC. Photo credit: Ann Tihansky, USGS. Dusk settles over the Jupiter Inlet Lighthouse Outstanding Natural Area, on the Atlantic coast of Florida. Photo Credit: Peter De Witt, BLM; Waves along Point Reyes National Seashore, CA. Photo credit: David Restivo, NPS.



This page (clockwise from top left): Tidepools at Yaquina Head Outstanding Natural Area, OR. Photo credit: Bob Wick, BLM; Tombstones at Baker Island Acadia National Park, ME. Photo credit: NPS; Park Rangers in the rigging of *Balclutha*, the 1886 square rigger at the San Francisco Maritime National Historical Park. Photo credit: NPS; An American avocet (*Recuvirostira americana*) chick eyes a brine fly for a snack at San Diego Bay National Wildlife Refuge, CA. Photo credit: K.S. Goodenough; Refugees visit Cabrillo National Monument tide pools in CA. Photo credit: Jason Rogalski.



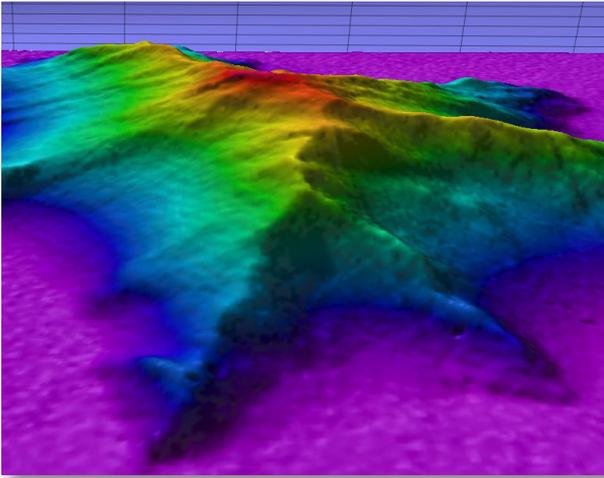
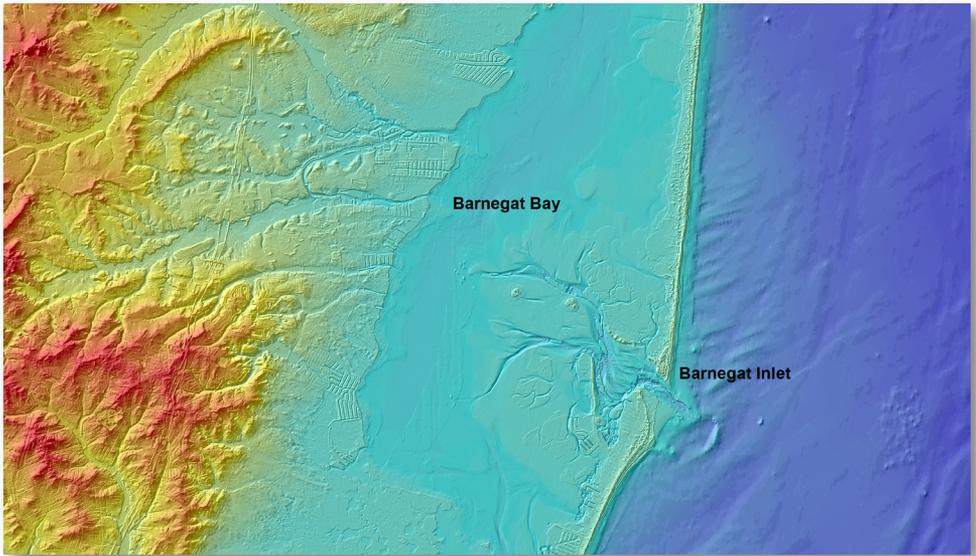
From icy bays to tropical shallow waters, from coral reefs to wide, sandy beaches and submarine kelp forests, as we protect our coastal and ocean landscapes we also preserve ourselves.



Clockwise from top left: Johns Hopkins Glacier, west arm of Glacier Bay National Park, Alaska. Photo credit: Amanda Kelley with the *Deepwater Exploration of Glacier Bay National Park Expedition*. A Park Ranger dives through the kelp forests of Channel Islands National Park, CA. Photo credit: Brett Seymour; A solitary red mangrove, *Rhizophora mangle*, stands in shallow waters of Everglades National Park, FL. Photo credit: Alan Cressler, USGS; Haystack Rock, part of Oregon Islands National Wildlife Refuge, OR. Photo credit: Ann Tihansky, USGS; The coral species *Acropora palmata* forms a reef structure in Biscayne National Park, FL. Photo credit: Brett Seymour, NPS.



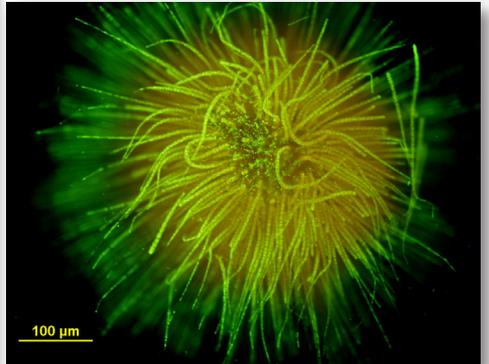
Through scientific advancements, exploring, and charting unknown areas, we inform our future planning strategies.



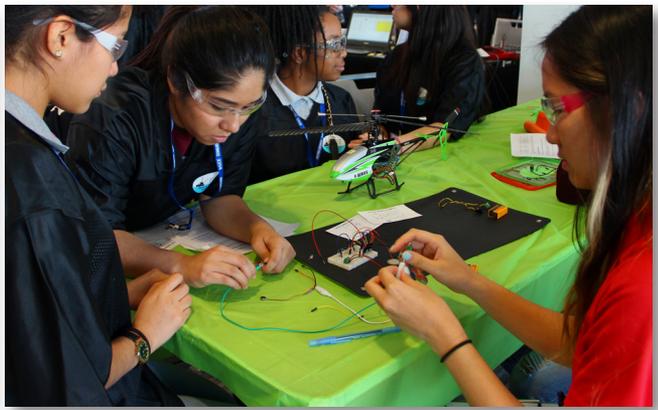
**New maps** - Coastal storms can severely alter the topography and ecosystems along heavily populated coastal regions. Top-Seamless integrated elevation data for both land and submerged areas in Barnegat Bay, NJ are fundamental to coastal planning of the northeastern U.S. Atlantic coast.

See this image and others: [https://lta.cr.usgs.gov/coned\\_tbdem](https://lta.cr.usgs.gov/coned_tbdem) Bottom left: A new bathymetric image of an unnamed seamount created during a joint expedition that explored largely unknown deep-sea ecosystems. Bottom right: A decorated warbonnet fish was one of many species the expedition team documented during the *Deepwater Exploration of Glacier Bay National Park* in Alaska in March 2016.

This page (clockwise from top): Image credit: USGS CoNED Applications Project. Photo credit: Deepwater Exploration of Glacier Bay National Park expedition and UCONN-NURTEC; Image credit: *Our Deepwater Backyard: Exploring Atlantic Canyons and Seamounts 2014*.



This page (clockwise from top left): Educating youth in Biscayne National Park, FL is an important mission for the National Park Service. Photo credit: Brett Seymour, NPS; USGS scientists are monitoring the recovery of the Elwha River estuary in Washington state after the dams were removed. Photo credit: Michelle Briggs; Harmful algal blooms threaten water supplies and ecosystem health. This microscopic image of *Gloetrichia echinulata*, a planktonic freshwater cyanobacterium, is illuminated with epifluorescent dye. Photo credit: Barry Rosen, USGS; Wreckage from World War II in shallow waters of the American Memorial Park in Saipan. Photo credit: Brett Seymour, NPS. An assortment of Arctic benthic organisms collected for study from Hanna Shoal in the Chuckchi Sea. Photo credit: Heather Crowley, BOEM.



## Explore, Learn, Volunteer

Clockwise from top left—

A family outing at an iconic coastal landscape like BLM's Yaquina Head Outstanding Natural Area, OR. Students in Texas compete in the first High School Offshore and Technology Stars Challenge competition, learning about careers in science and engineering. Surfing at Cape Cod National Seashore, MA. Volunteers from Colorado University-Boulder spent their Alternative Spring Break enhancing coastal environments at Tijuana Slough National Wildlife Refuge, CA by removing invasive weeds and planting native species.



Photo credits: (clockwise from top left): Bob Wick, BLM; Tiffany Gray, BSEE; EandJFilmCrew; Lisa Cox, USFWS.