Coast Lines

2007

Coastlines is an annual publication of the Massachusetts Office of Coastal Zone Management. We welcome comments, suggestions, and requests. If you have any, feel free to contact us at (617) 626-1212.

Commonwealth of Massachusetts
Deval L. Patrick, Governor
Timothy P. Murray, Lieutenant Governor

Executive Office of Energy and Evironmental Affairs
Ian A. Bowles, Secretary

Massachusetts Office of Coastal Zone Management
Bruce K. Carlisle, Acting Director
251 Causeway Street, Suite 800
Boston, MA 02114
(617) 626-1200

CZM Information Line.....(617) 626-1212
CZM Home Page.....www.mass.gov/czm

CZM Regional Offices
North Shore.....(978) 281-3972
Boston Harbor.....(617) 626-1200
South Shore.....(781) 545-8026 x209
Cape Cod & Islands.....(508) 362-1760
South Coastal.....(508) 291-3625 x20

Editor/Designer Arden Miller
Assistant Editor Peter J. Hanlon
Communications Director Anne Donovan
Cover Photo Rob Kipp (www.bird-photos.com)
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In Memory of Susan Snow-Cotter

As someone who has worked at the Massachusetts Office of Coastal Zone Management (CZM) since 1999, and been involved with *Coastlines* for as long, I have to say that this edition has been the most satisfying, and the most difficult one, to work on. The topic—coastal recreation—is very exciting to me personally. And while working on it, I felt very lucky, even honored, to have such interesting, creative co-workers who truly practice and preach their love for coastal Massachusetts. For those who contributed pieces, on everything from collecting sea shells to fly fishing, I think it was especially challenging to convey the passion they feel for their hobby which, in many cases, is very connected to their career choices and to who they are both in and out of work. Corny as it sounds, these articles come from their experiences, and their hearts. Their hobbies are not just hobbies, and their jobs are not just jobs. They live and love the coast for its beauty and the way it connects them to the environment, and to others. And when it comes to a love of coastal environments, and sharing their hobbies and findings, our Director Susan Snow-Cotter really stood out. She loved to go to the coast to camp, hike, and swim. She lived in sniffing distance of the ocean. She took the commuter boat to work. She crewed in the Hingham Harbor. She and her husband owned a lobster boat.

For those who were lucky enough to work with Susan, we will forever remember her ocean-inspired jewelry and clothing choices (she loved shades of blue and purple, and had earrings and necklaces with bits of sea glass and shells), as well as the vintage "Pollution Testing" kit for kids that sat on a shelf in her office amidst ocean-related maps and artwork, and photos of her family.

Before Susan died, before she was even aware that she had Inflammatory Breast Cancer, she had worked on an introduction to this edition, which we are including on the right. Susan lived her life doing the things she loved, and her job—the connections she made to people through her work—was one of her loves. She kept working up until the very end, and never failed to share a laugh and ask others how they were doing. Sometimes I think I still hear her laugh (it was very distinct and often contagious). We hope that Susan's last piece for *Coastlines*—based on the importance of balance and teamwork, two principles she embodied throughout her career—gives you a glimpse into her life and legacy, and all that she meant to us here at CZM.

Arden Miller
Editor, *Coastlines*

Susan was 45 and healthy when she was struck with Inflammatory Breast Cancer (IBC), a rare and aggressive disease. Although she was diagnosed quickly, many are not because IBC symptoms are more similar to a skin infection than breast cancer. In her memory, please take a moment to familiarize yourself and your loved ones with this silent killer through this web-based information: www.komotv.com/ibc, www.ibcresearch.org, www.ibchelp.org, and www.cancer.gov/cancertopics/factsheet/Sites-Types/IBC.

On the Water. . .

It's 6:30 a.m. From my rowing shell, I see the sun's first rays sparkle on the waves as I look out to the Harbor Islands and the Boston skyline. The fresh smell of salt air is more invigorating than a cup of coffee. With my fellow rowers around me, the feeling of being part of a team while sharing the special magic of the sea is undeniable. This is why from April through October, two days a week, you can find me at rowing practice in Hingham Harbor before I go to work at the Massachusetts Office of Coastal Zone Management (CZM).

Managing the coast, like rowing, requires both balance and teamwork. In a shell, pull too hard in one direction and you'll end up in the harbor (not a pleasant prospect at 6:00 a.m. with a water temperature of 50 degrees!). At CZM, pull too hard in one direction and you lose the perspective needed to balance environmental protection with wise coastal development. So whether the issue is wind farms in ocean waters or residential development along an eroding coast, CZM welcomes all parties and their opposing viewpoints to work together toward fair, balanced solutions. We consistently take into account what is good for the environment—present and future—while understanding the needs of people who live along, enjoy, and prosper from the sea.

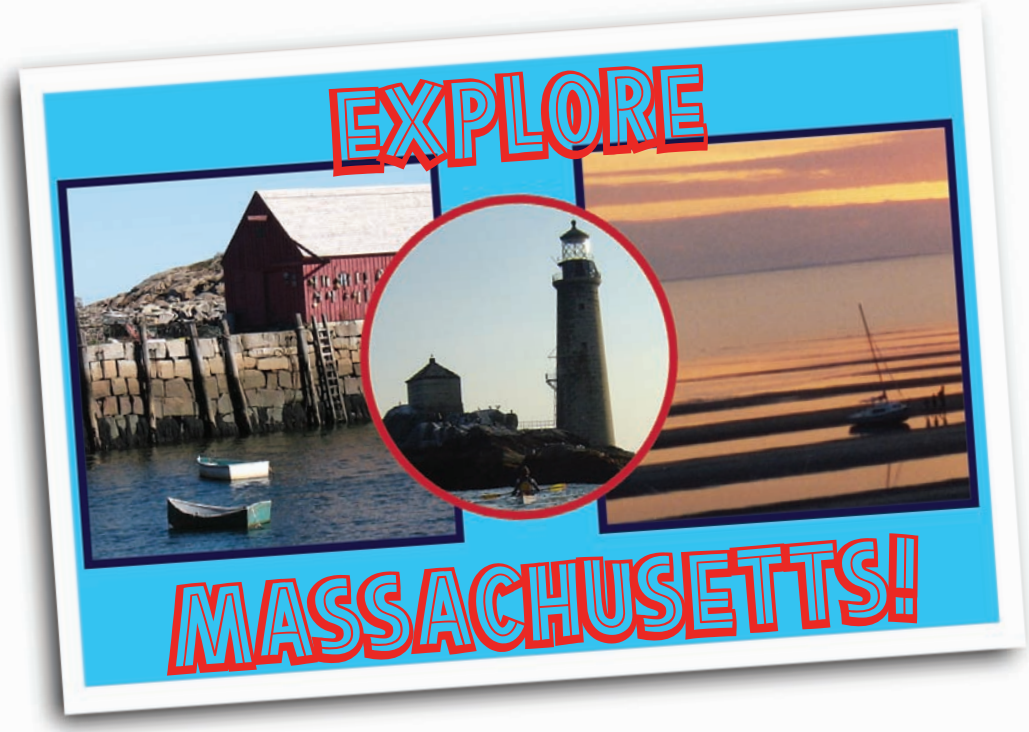
This edition of *Coastlines* celebrates our connection to the coast by focusing on recreation. Many of the talented people on my staff have written articles on their favorite coastal activities—surfing, fly fishing, bird watching, beach combing, and beyond—along with "getting started" tips for all ages and levels of interest.

And whether you want to swim, sun, picnic, or paddle, if the coast is involved, we can help you get there. Through photos and maps, our full-color (and fun!) *Coast Guide* (mass.gov/czm/coastguide/index.htm) and Online Viewer of Coastal Access Sites (maps.massgis.state.ma.us/czm_access_locator/viewer.htm) show the way to many interesting places to explore along the shore.

From improving water quality to planning for vibrant and viable harbors to protecting coastal property from storm damage, CZM helps the communities and citizens of the Commonwealth build their future around coastal resources. And since each of us at CZM has our own personal connection to the coast, working here is a true privilege. Thanks for your support, and please don't hesitate to contact us with how we can better help you to enjoy and protect the Commonwealth's coastal zone.

Susan Snow-Cotter (1961-2006)
Former Director, Massachusetts Office of Coastal Zone Management

Photo: Lindsey Buchleitner



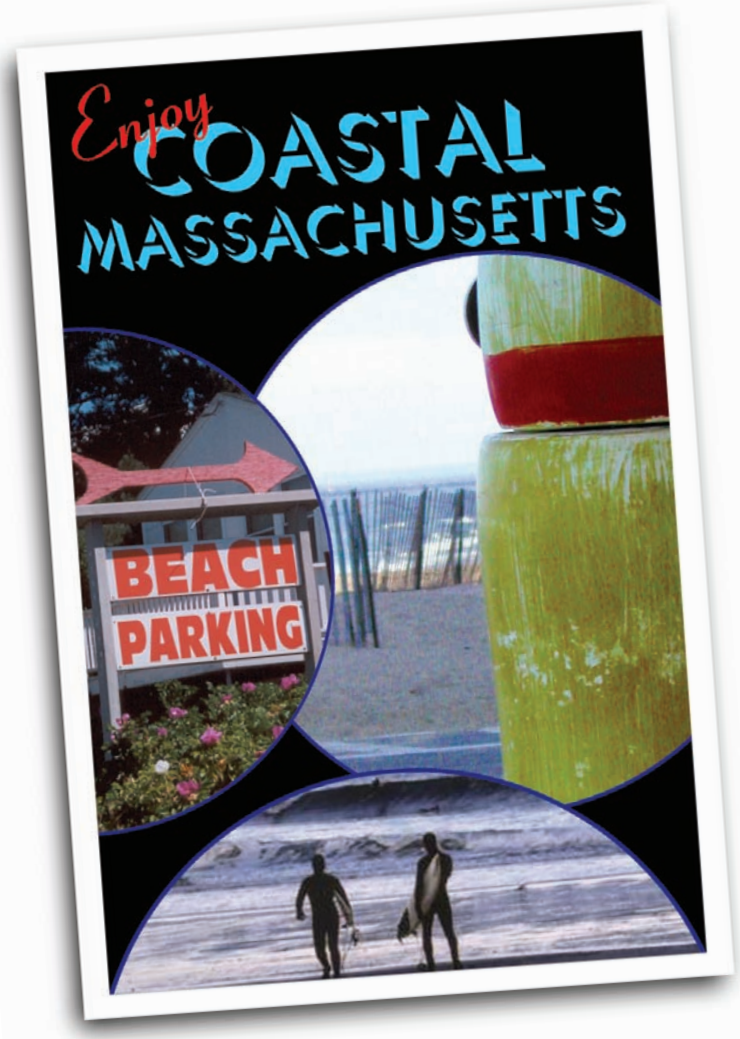
Explore the coast of Massachusetts!

The Bay State has more than 1,500 miles of coastline and there is something for just about everyone. Hike or bike along spectacular shorelines, replenish your lost calories with ice cream or fresh seafood (always tastes better when eaten overlooking the Atlantic), catch your own dinner, catch a wave, ride off into the sunset, or just enjoy an ocean view while sitting back and thinking about all the more strenuous things you could be doing...

Fine Print: Offer good May 27 - September 3. (That's Memorial Day through Labor Day... of course, it's New England, so give or take a month on either end. Unless you're one of the true New Englanders who considers 40 degrees to be warm. Then you'll have many months to enjoy outdoor coastal activities.) Sunglasses and coolers optional, sunscreen highly recommended.

AN ICE CREAM WITH A VIEW AT SALISBURY BEACH

Photos Inside Postcard: Claire Enterline, Todd Callahan, and Steve Mague; **Marblehead Harbor:** Robb Kipp; **Baby with Frisbee:** CZM archives; **Ice Cream (Salisbury):** Jennifer Romanski



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DON'T FORGET YOUR SANDALS AND SUNSCREEN!

Photos Inside Postcard (clockwise): Arden Miller, Jennifer Romanski, Brandy M.M. Wilbur; **Flip Flops:** Arden Miller

Coastal Recreation:
More than Fun in the Sun

By Ian A. Bowles, Secretary of Energy and Environmental Affairs

SOMETIMES IT IS ALL ABOUT FUN IN THE SUN! HUNDREDS FLOCK TO THE ANNUAL SAND-SCULPTURE COMPETITION AT CRANE BEACH.

When you think about today's pressing coastal and ocean management issues—from offshore wind farms to red tide—beach blankets, picnic lunches, outboard motors, and sunscreen probably don't come to mind. So, it might seem strange that we are focusing on recreation in this edition of *Coastlines*. But the fact is that shore-side fun (whether in the sun, rain, or snow) is fundamental to quality of life and economic well-being in the Bay State.

To better understand the economic impact that the coast and ocean have on the Commonwealth's economy, the Massachusetts Office of Coastal Zone Management (CZM) commissioned a study by the University of Massachusetts Donahue Institute. Released in June of 2006, ***An Assessment of the Coastal and Marine Economies of Massachusetts*** found that the Coastal Tourism and Recreation sector of our economy employs more than 119,000 people, with annual wages of almost $2.34 billion. These jobs—from seaside resort managers to bait & tackle vendors—also create what economists call "secondary employment." (To provide goods and services for these 119,000 people and their families, the Massachusetts economy employs additional teachers, healthcare workers, supermarket employees, etc.) When secondary employment is considered, the total value of the Coastal Tourism and Recreation sector was estimated at $8.7 billion in 2004.

These estimates are based on figures from all of the 7,640 food, entertainment and recreation, and accommodations establishments found in Massachusetts coastal communities. While this study did not distinguish businesses that depend on the coast and/or are part of coastal tourism trade from the recreation/tourism businesses that just happen to be in the coastal zone (e.g., a bowling alley), the figures demonstrate this sector is extremely important to the Massachusetts economy.

As for quality of life, anyone who has strolled along a sandy beach, enjoyed a whale watch tour, or cast in the surf for a striper knows that the coast is priceless. As residents of the Bay State, we are all within hours of some of the finest beaches in the country. And for those looking for seaside activities *sans* the sand, Massachusetts is renowned for its bustling ports with shopping and fresh seafood, quiet marshlands with world-class bird watching, rocky tide pools teaming with up-close sea life, and boat ramps and marinas to help you get out on the water. As a native or a visitor, if you've enjoyed any of these experiences, you know that the coast is an integral part of life in Massachusetts—a place where we can relax, have fun, and connect with the outdoors.

Photo: K. McMahon, The Trustees of Reservations

"...anyone who has strolled along a sandy beach, enjoyed a whale watch tour, or cast in the surf for a striper knows that the coast is priceless..."

Pass the napkins—In Massachusetts coastal restaurants, snack shacks, and pubs employ nearly 90,000 people and account for almost $1.5 billion in annual wages.

At the Executive Office of Energy and Environmental Affairs (EOEEA), protecting and promoting the coast figure prominently in our mission. Here are some of the ways that EOEEA and its departments and offices actively support coastal recreation in the Commonwealth:

- The Department of Conservation and Recreation manages the state's 26 ocean beaches—from the 3.8-miles of sandy shoreline at Salisbury Beach State Reservation—to America's oldest public beach at Revere Beach Reservation—to the 22-acre urban oasis of Castle Island in South Boston—to Horseneck Beach State Reservation in Westport where ocean beach and estuary habitat combine to create one of the premier birding locations in New England.

- Through the Waterways Licensing Program, the Department of Environmental Protection promotes public use of the area between high and low tide by preserving pedestrian access for the historically essential activities of fishing, fowling (i.e., bird hunting), and navigation; promoting public use and enjoyment of the waterfront; and preserving working waterfronts that support commercial fishing, shipping, marinas, and other activities that depend on waterfront access.

- The Department of Fish & Game's (DFG) Division of Marine Fisheries, in addition to regulating both commercial and recreational fishing to maintain stock levels, produces the annual ***Massachusetts Saltwater Sport Fishing Guide*** to highlight the state's recreational coastal fishing opportunities, and holds the Massachusetts Saltwater Fishing Derby. See www.mass.gov/dfwele/dmf/recreationalfishing/rec.htm for details.

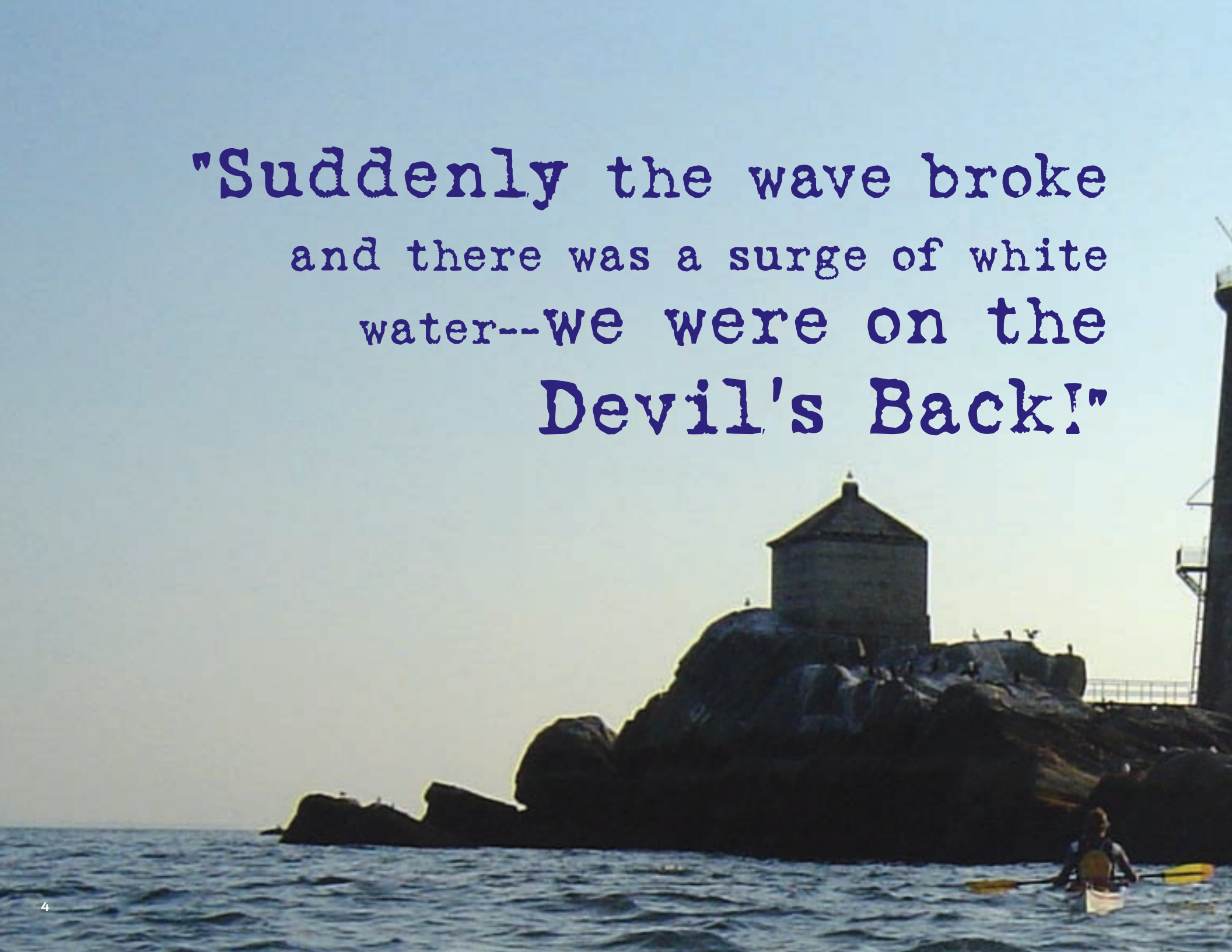
- The DFG's Office of Fishing and Boating Access maintains information on more than 40 coastal boat access and fishing sites (see www.mass.gov/dfwele/pab/index.htm), and publishes ***Public Access to the Waters of Massachusetts***.

- Through its coastal access program, the Massachusetts Office of Coastal Zone Management (with help from the Massachusetts Geographic Information System) published ***Massachusetts Coast Guide to Boston & the North Shore***, available in print and online, and maintains the Online Locator of Coastal Public Access sites. See www.mass.gov/czm for links to this and additional information on our coast.

All of us at EOEEA take our responsibility to protect, preserve, and promote these public resources very seriously—and we are proud to see our efforts pay off every time you enjoy a day at the beach.

Set your alarm; the early bird gets to see the sunrise!

Photo: Andrew Rockefeller


"Suddenly the wave broke
and there was a surge of white
water--we were on the
Devil's Back!"

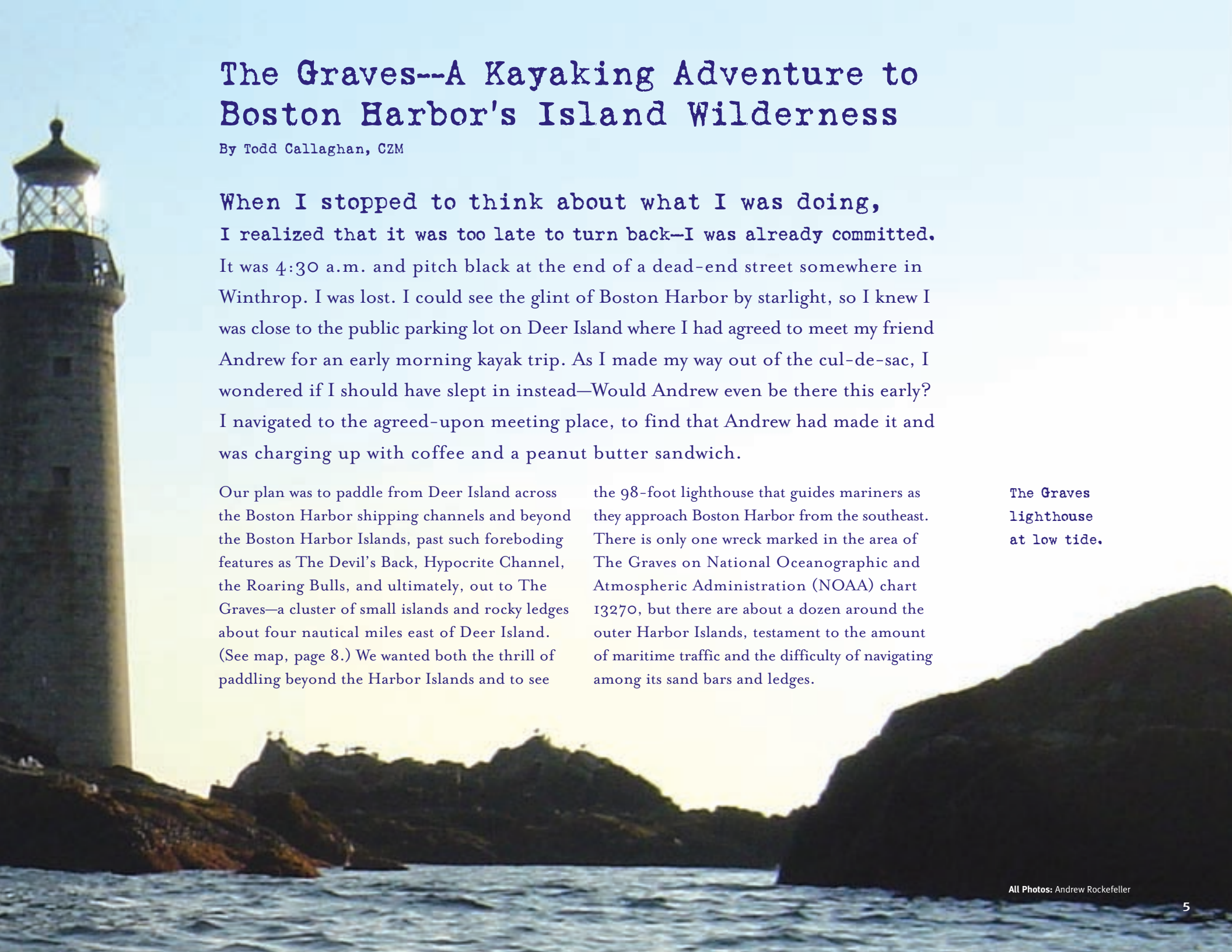
The Graves--A Kayaking Adventure to Boston Harbor's Island Wilderness

By Todd Callaghan, CZM

When I stopped to think about what I was doing, I realized that it was too late to turn back—I was already committed.

It was 4:30 a.m. and pitch black at the end of a dead-end street somewhere in Winthrop. I was lost. I could see the glint of Boston Harbor by starlight, so I knew I was close to the public parking lot on Deer Island where I had agreed to meet my friend Andrew for an early morning kayak trip. As I made my way out of the cul-de-sac, I wondered if I should have slept in instead—Would Andrew even be there this early? I navigated to the agreed-upon meeting place, to find that Andrew had made it and was charging up with coffee and a peanut butter sandwich.

Our plan was to paddle from Deer Island across the Boston Harbor shipping channels and beyond the Boston Harbor Islands, past such foreboding features as The Devil's Back, Hypocrite Channel, the Roaring Bulls, and ultimately, out to The Graves—a cluster of small islands and rocky ledges about four nautical miles east of Deer Island. (See map, page 8.) We wanted both the thrill of paddling beyond the Harbor Islands and to see the 98-foot lighthouse that guides mariners as they approach Boston Harbor from the southeast. There is only one wreck marked in the area of The Graves on National Oceanographic and Atmospheric Administration (NOAA) chart 13270, but there are about a dozen around the outer Harbor Islands, testament to the amount of maritime traffic and the difficulty of navigating among its sand bars and ledges.



The Graves lighthouse at low tide.

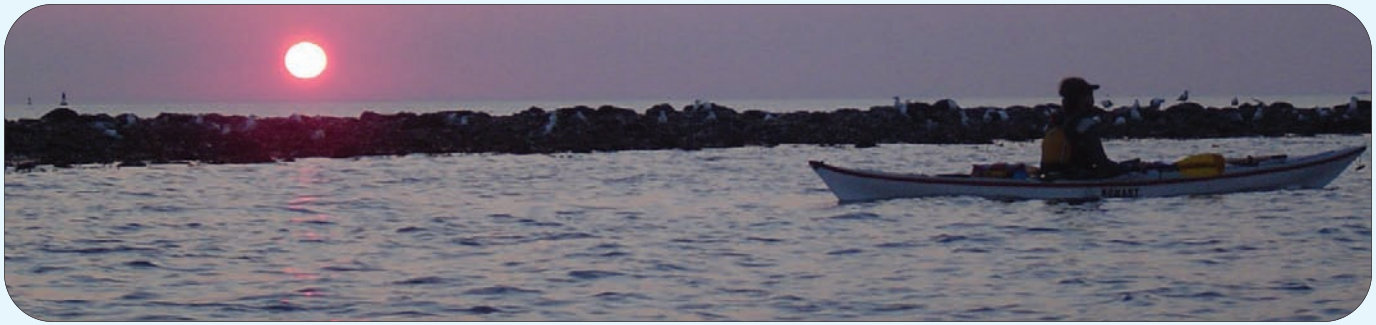
All Photos: Andrew Rockefeller

The Graves held an allure for us since the summer of 2004, when we kayaked to Boston Harbor Light on Little Brewster Island and walked up the spiraling steps to see its Fresnel lens. Having seen The Graves in the distance had only raised more questions for us. What does the lighthouse look like up close? How long would it take to paddle out there? Were the waves big? What would happen if we got swallowed in fog?

It was now almost 5 a.m. and the sky was just starting to lighten. Andrew and I walked along the public access way and across the cobbles to the beach. The ocean was mostly glass, with just a few ripples from the westerly gusts that topped the dunes. We could see the flashing red lights that demarcated North Channel like a runway. Beyond that, we could see the double white flash of The Graves lighthouse.

View of the Boston Harbor Lighthouse keeper's house on Little Brewster Island. Second order Fresnel Lens dates from 1859.

We had intentionally chosen such an early hour because we wanted to avoid the abundant boat traffic into and out of Boston Harbor. During weekends and prime times, the number of tankers, ferries, and lobster boats can be overwhelming. Choosing this early morning weekday time seemed the safest bet. Since I was on vacation, I wasn't feeling rushed, but we did keep an eye on the clock since Andrew was due at the Hancock Tower for an 11 a.m. work meeting.We pulled on our wetsuits and loaded our boats with the requisite safety gear: first aid kit, waterproof "spray tops," a shirt and fleece stowed in a dry bag, charts, small-craft NAV-AID (a flexible, transparent compass), extra paddles, a paddle float and water pump for self rescue, water, and peanut butter sandwiches. We fixed our charts to our decks, checked our deck compasses against each other, and paddled out into the rising sun.



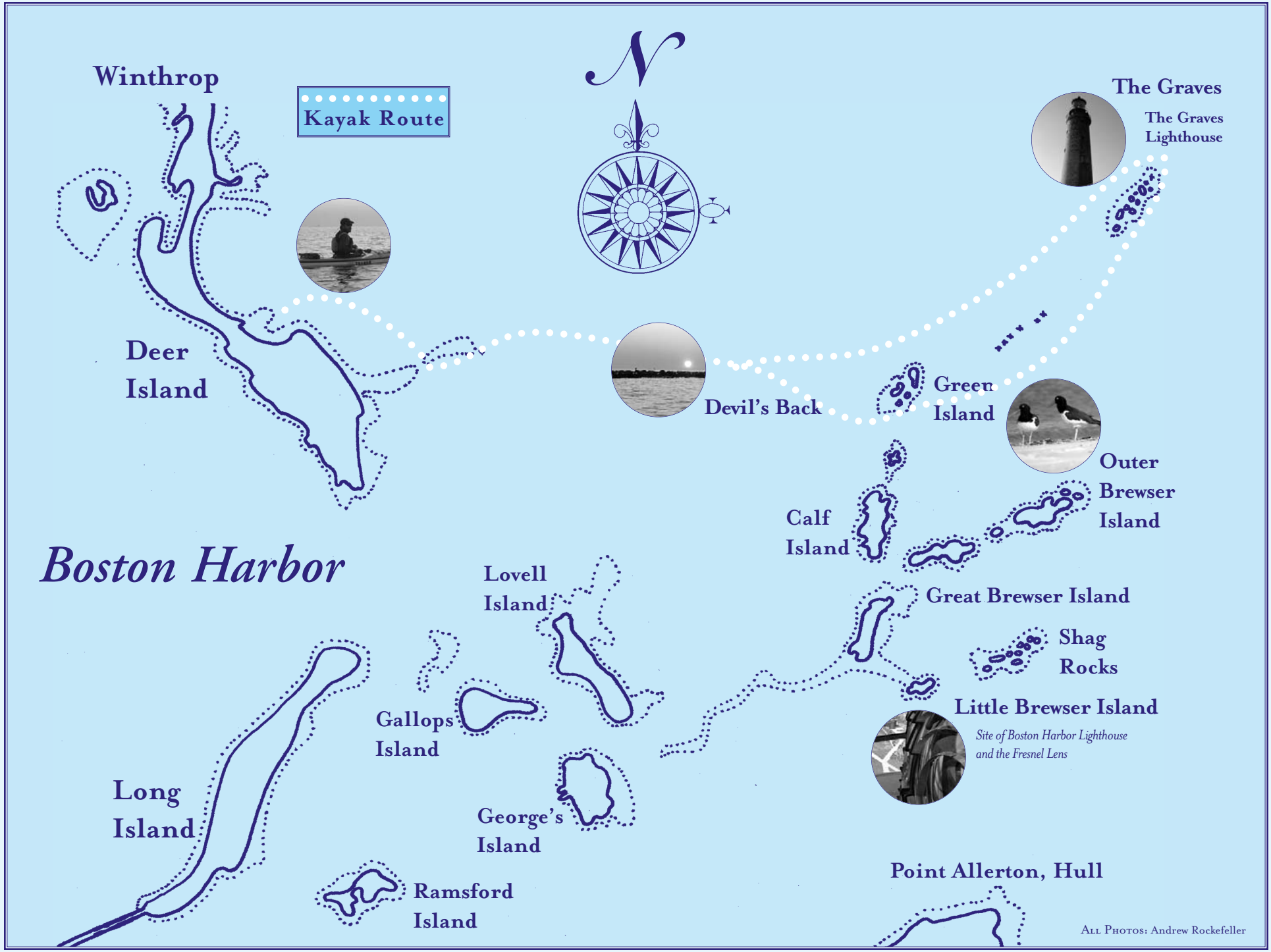
Sunrise over "The Faun" off of Deer Island.

In less than a mile we reached an exposed cobble bar known as the Great Faun and got our bearings for our course. While our planned route was obvious on our charts, islands and navigation aids look very different at sea level, so we made sure to identify a point that was close to us and paddled toward it, all the while evaluating the current and waves, and scoping out potential hazards. Rather than consider our charted course a fixed entity, we considered it more of a theme—a general way to connect the dots from the shore to The Graves—and were open to safety and curiosity-related changes along the way. The tide was ebbing and moving at a considerable rate, so we were going to begin to paddle directly across North Channel at a 90 degree angle and let the outgoing tide ferry us to the other side of the channel to the flashing navigational buoy about half a mile downstream of us. We were amazed at how quickly the current pulled us out toward sea. Most of the shipping channel is kept at a depth of 40-45 feet, and the surrounding depth is 20-35 feet, so the water really moves through the channel. Once we reached the buoy known as "green number 5" on the chart, we headed for buoy number 6 at the edge of South Channel.

The author paddling his kayak past the ledges surrounding The Graves.

We made our way as quickly as we could, because we knew the increase in sunlight would bring an increase in traffic and it had now been light for close to an hour. As we got to the edge of the channel, I noticed what appeared to be a gull standing on the water. A small wave drew the water away from the gull's feet and I could see that it was standing on a ledge. Suddenly the wave broke and there was a surge of white water—we were on the Devil's Back! Luckily, our kayaks were able to slide over the submerged rocks unscathed, but one could imagine the past damages done to deeper-draft vessels, earning this ledge its demonic moniker.

As we paddled through Hypocrite Channel between Green and Calf Islands, we saw a number of Ruddy Turnstones, a type of sandpiper, on their migration from the Arctic to the southern United States and South America. We then passed the Roaring Bulls, several large rocks that explode in a spray of seawater when exposed to an open ocean surge, but right now were not living up to their name. Around 7:30 a.m. we reached The Graves. It was only two hours after low tide, so many of the ledges fringing the islets were exposed and rose up above us 10 to 15 feet. Waves surged but did not prevent us from cutting between the rock towers and poking into the little inlets for a closer look. The lighthouse itself looked to be in pretty good shape considering the poundings it must take during nor'easter storms. It was similar to Halfway Light in Casco Bay, but there were not as many seals. In fact there were no seals. This made me think about great white sharks and the reported siting of one eating a seal off of Chatham during the summer. I hoped this wasn't why there were no seals to see, but realized there was nothing I could do about it either way, so I continued paddling. After making our way around the very eastern-most rock in the ledge, with all of its swirling and surging water giving us the feeling of being really exposed and alone out there, we decided to ride the tide back to Winthrop. In the distance we could just make out the 100-foot, egg-shaped digesters at the Massachusetts Water Resource Authority Deer Island treatment plant, five miles away. And somewhere beyond that was the hazy Boston skyline with its pronounced glassy towers. "Aren't



All Photos: Andrew Rockefeller

you supposed to be in a meeting up there?" I asked, pointing toward the Boston skyline. "Not for another three hours," Andrew said with a bit of a smile, both of us knowing he had never intended to make it.

On our way back, we landed on Green Island and saw more Ruddy Turnstones and a reclusive American Oystercatcher, amid the usual cacophony of gulls. The small pebbles on the beach and their constant rolling were perfect for burnishing sea glass, and I stooped to pick up a few pieces for the collection I keep on my desk at work. The remains of a wrecked barge emerged from the ocean like a giant rust-colored crocodile. We paddled over the submerged section to see what might be inside, because in other areas I had seen wrecks serve as planting beds for eelgrass. This one was covered in kelp—even seemed to be a little haven for the kelp, but there was no eelgrass to be found. As we had anticipated, the wind had picked up considerably in the three hours that we had been paddling. We both had noticed that the marine forecast had called for 15-20 knot winds later in the day, so we wanted to be closer to shore before the weather realized its full potential. Luckily, we had planned our trip to coincide with the tides so we were now riding the incoming tide back to Deer Island. When we were just off of the beach, we turned to see a large tanker exiting the harbor. There were also many smaller boats moving between their favorite fishing spots and the occasional commuter ferry racing to get commuters wherever they were going on time.

By 9:30 a.m. we were back on shore and decided to take a swim after we had loaded our boats back on our cars. The public lot was now full and people were walking, running, and rollerblading around Deer Island. We saw another kayaker (with his fishing gear) and a few beachgoers. Our trip had been adventurous and successful, but most of all safe, due to our planning and preparation. We had avoided being a nuisance to the working boats by crossing the channels when there was the least amount of traffic, and in the quickest way possible. We had planned for the increasing wind and the swift currents and were able to make it back to the beach in a reasonable time.

As we bobbed in the refreshing water, I looked in the direction of the Hancock Tower, "Shouldn't you be heading to your meeting now?" I asked Andrew. Smiling, he answered, "I'll read the memo tomorrow."

Getting Started *By Todd Callaghan, CZM*

If you don't have your own kayak, you can rent kayaks from a number of outfitters. For an extensive list, go to www.gopaddle.com/html/massachusetts.html. Many of these outfitters offer lessons and tours and will allow you to "demo" their fleet of boats onsite if you are interested in buying.

Once you've rented a boat or if you have your own, the Boston Sea Kayak Club lists many of the small craft launch areas in the Boston region at www.bskc.org/putins.htm. You can also use CZM's ***Coast Guide*** (www.mass.gov/czm/coastguide/index.htm) or CZM's Online Locator of Public Access Sites (www.maps.massgis.state.ma.us/czm_access_locator/viewer.htm) to help plan your trip. The Boston Harbor Islands Park has a website with useful information about what islands are accessible at www. bostonislands.com/visithome.html.

Please remember to never leave the beach without a personal flotation device (PFD or life preserver)! There are a number of other pieces of safety equipment you should have if paddling out into the ocean, including a whistle, chart, compass, VHF radio, paddle float, extra paddle, and pump. You should also know and practice rescue techniques in case you or your partner fall out of the kayak. And lastly, know the marine forecast for your area (www.erh.noaa.gov/box/marine2.shtml).

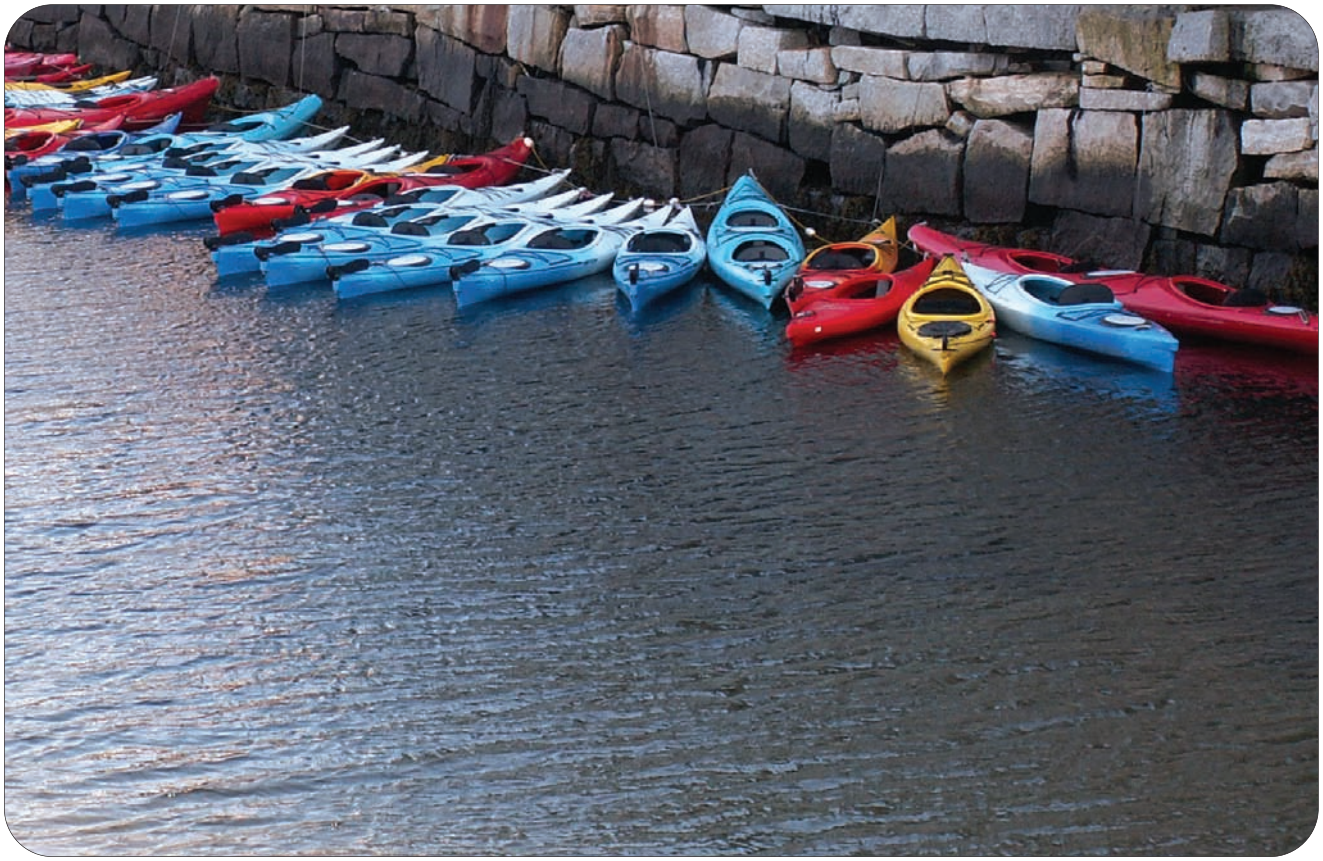
The most successful and safest ocean kayak trips result from a good deal of planning. The ocean is a highly dynamic environment that is to be respected and, at times, feared. That said, ocean kayaking can be safe and exciting form of recreation with the appropriate planning, gear, and respect.

Kayakers Guide to the Great Marsh

By Peter Hanlon, Massachusetts Bays Program

So here you are with your kayak strapped safely to the top of your car, wetsuit and lifejacket resting in the back seat, and a whole afternoon to glide along the breeze-dimpled surface of the bay. Where are you headed, though, dedicated kayaker? Isn't that same old put-in getting old? If you're interested in exploring the upper North Shore of Massachusetts, get out of the car, head to your computer, and visit **www.8tb.org/kayak.htm** to use the new Kayakers Guide to the Great Marsh.

Checking out the Kayakers Guide to the Great Marsh will give you a few ideas on where to take these babies!



The Eight Towns and the Bay Committee, dedicated to the protection of the coastal waters and watersheds on the upper North Shore of Massachusetts, created this kayaking resource to highlight the hundreds of creeks and rivers that traverse the Great Marsh. The Great Marsh is the largest continuous stretch of salt marsh in New England, incorporating 25,000 acres and extending from Cape Ann to New Hampshire. The network of waterways, beaches, parks, and wildlife refuges in the Great Marsh make it an outstanding destination to enjoy boating, fishing, bird watching, hiking, and beach activities.

The Kayakers Guide is an online, interactive map that will steer you to some of the more prominent creeks and rivers in the Great Marsh. Three different map icons indicate access points, water trails, and cultural/historic sites. Information contained in the guide is detailed and exhaustive, including: photographs of access sites, parking areas, water trails, scenic vistas, and other important features; road maps indicating put-in locations; general information on the boating hazards that may be encountered at the access point or on a water trail; vehicle parking availability; site access conditions; best access sites for individual water trails; web links; and more.

Okay, enough computer time...go hit the water!

 Photo: Victor Mastone

The Secret Life of Shellers

By Andrea Cooper, CZM

It always starts so innocently—a walk on the beach during a lovely sunny day, stooping to pick up a shell, taking it home and later discovering its visual and textural beauty. Then slowly, over time, that one act leads to a joyful passion—a passion bordering on obsession that, in my case, has lasted more than 30 years.

All Photos: Andrea Cooper

It's shelling, and it's more than a recreational activity when I am at the beach—it's my meditation, my "de-stressing," my connection with a bounty of gifts from the natural world. Collecting seashells, each one more beautiful and unusual than the next, ever changing as they go from salt water wet to dry to aged. Colors, shapes, designs, smooth or rough to the touch, large and small—shells are treasures and always worth the hunt.

Of course it doesn't hurt that while you are shelling, you are walking on one of the Earth's most beautiful environments, the beach of an ocean, gulf, or a bay, surrounded by an array of shore birds, sea-salted breezes, warm sun, blue sky, and an occasional seal, dolphin, or whale! But the true sheller, while enjoying the atmosphere, is on a mission. And it's never a fruitless hunt because even the broken pieces can glow with incredible colors and seemingly painted designs. Shells allow you to take the sea home with you in your pocket or pail.

Shells are like people. They are diverse and each has its own beauty and uniqueness. The new shells, abandoned by the snails and sea creatures, lay on the beach looking vibrant and sensuous. The older more seasoned shells sit there with character and history and you just know they have some great stories to tell.

One such story reveals itself, and sheds light on an entire culture, in Southern Florida. More than 2,000 years ago, a prehistoric Native American tribe known as the Calusa inhabited this area. Unlike other Native American tribes, they did not make any pottery items. Instead, they used shells for tools, utensils, jewelry, and ornaments for their shrines. They even made spears out of shells, and used them successfully for fishing and hunting.

The Calusa discarded shells in heaps, and eventually the shells, mixing with clay in the substrate, became islands, such as Mound Key in Estero Bay, Florida. This 125-acre island was created more than 2,000 years ago and believed to be the center town of their kingdom where their leader, Chief Carlos, lived. The kingdom was comprised of an extensive network of shell islands that totaled into the hundreds, some rising 30 feet above the water of the bay. The Spanish explorers discovered the tribe in 1513, which lead to their demise in the late 1700s. Environmentalists and conservation groups protect many of these remaining shell mounds and shell collectors like me view them with awe and fascination.

"...the true sheller, while enjoying the atmosphere, is on a mission..."

In the Northeast, the sand dollar, scallop, soft-shell clam, blue mussel, ocean quahog, periwinkle, razor clam, channeled whelk, limpet, and jingle shell are just some of our regional treasures. When placed in a glass vase, a bowl, or alone on a mantel, these bits of natural bling can make dramatic household objects d'art and provide you with wonderful memories every time they catch your eye.

Of course it's important to remember that beyond being pretty souvenirs of the seashore, shells are home to many edible sea creatures and this outer shell protects them from the elements. Long valued for their tasty protein, the soft-shell clam is an economically important shellfishery that supports many communities in Massachusetts. For harvesters, distributors, processors, and restaurant owners and diners, clams are a vital part of life. If you haven't eaten fried fresh clams, then stop reading and go directly to a coastal clam shack! (My favorite is the Clam Box in Ipswich, 30 miles north of Boston.)

At my son and daughter-in-law's beach-themed wedding reception, each table centerpiece was a glass bowl filled with the shells that my husband and I collected over many years. As I watched the newlyweds dance, I gazed at the bowls and remembered the warmth of the sun and the feel of the sand on my feet as we collected those gems. I also remembered the first time our son "introduced" his wife to his family's shelling obsession, which she quickly embraced!

A friend, who owns a condo in Southwest Florida, told me that my shells actually improved the health of one of her renters. Since it is one of my favorite gifts, my shell treasures in large baskets adorn her condo, and remind her of why she lives near the Gulf of Mexico. When her tenant from England was staying for three months, he became ill and was confined to bed. The gentleman and his wife spent many hours taking each shell out of the basket and carefully examining their character and grace. He later remarked that those shells made him feel like he was walking on a sunny beach and reminded him of the simple pleasures that bring joy to life.

So next time you are walking on the beach and pick up a captivating shell, think of its fascinating role in our history, economy, health, cuisine, and decorative arts. But remember I warned you. Shelling is a habit that will become an absorbing obsession.

Getting Started *By Andrea Cooper, CZM*

- The very best time to go shelling is at low tide. Tide times are in the newspaper, or available online. Personally, I like to get there before low tide and be there when it's "dead low."
- No live shellfish EVER, please! Let's let them enjoy their beautiful houses in peace.
- Always take a pail or bag. You think your pocket or hand will hold them, but you're wrong.
- Purchase a shell book or borrow one at the library. This is especially important if you have children. They love being able to identify their shells! One of my personal favorites is: ***Peterson First Guide to Shells of North America*** (paperback) by Roger Tory Peterson.
- Shells (such as clams) make excellent soap dishes, ring holders, jewelry, and other beautiful and useful items.
- Don't glue them into those touristy silly creatures you see in gift shops. They hate that. Trust me, they told me.

Some of the author's favorite shells rest in a ceramic bowl on her coffee table, reminding her of the beautiful beaches in Massachusetts, and Florida, where she collected them.

So You Found an Old Ship's Timbers on the Beach...

By Victor Mastone, CZM

SHIPS, the Shoreline Heritage Identification Partnerships Strategy, was created to document the historical environment along the Bay State's shoreline to ensure that historical and archaeological properties are not lost through neglect, or inadvertently destroyed. The program is a collaborative effort of the Massachusetts Board of Underwater Archaeological Resources (BUAR) with local historical societies and museums, such as the Newburyport Maritime Society.

Remains of the schooner Ada K. Damon *on Crane Beach in Ipswich. If you ever come across boat remains, even if it's been your life-long dream to dig them up, please don't! Contact the professionals (info in box, left).*

It is estimated that more than 3,000 vessels have wrecked off the Massachusetts coast over the past four centuries. If they get buried in sediments, remains of these vessels can be very well preserved. However, natural movements and man-made alterations to the sea floor can uncover and disturb these sites, causing ancient timbers and other artifacts to then be washed ashore.

Why are they important?

Timbers and other materials found on the beach can be important because they can:

- Help uncover the location of shipwrecks offshore.
- Give clues as to the type of vessels that were operating off the coast, and help identify areas that were particularly dangerous to sailors.
- Provide information about the construction of older vessels.

Why should I report any timber or other remains I find?

Archaeological remains are often fragile and can be damaged by seemingly harmless activities. Wood, for example, at first sight seems firm and solid. However, timber is often waterlogged, and the water actually provides much of the wood's strength. As soon as the wood starts to dry, it can split and begin to disintegrate. Once the process has started, it cannot be reversed, so it is important to document the find as soon as possible after its discovery.

What should I do if I think I have found a ship's timber or other archaeological objects?

If possible, leave the object where it is. Only move it if it seems likely to be washed away by the tide. If it is partially buried, do not attempt to dig it up. Please report your find to either the BUAR or a partner organization (see below). You will be asked for a brief description of the object, its location, and your contact information so that you can be kept informed.

What will happen to the timber or other archaeological objects?

The object will be examined by Coast Watcher volunteers and/or the staff of the BUAR. The information will be placed in the inventory database where it will be available for future research. If you believe you found an old ship's timbers or other archaeological remains, please report your find to either a partner organization or directly to the BUAR.

CONTACTS

Victor Mastone
Director, Board of Underwater Archaeological Resources, CZM
251 Causeway Street, Suite 800, Boston, MA 02114-2136
T: 617-626-1141 • **F:** 617-626-1240 • **E-mail:** victor.mastone@state.ma.us

Caroleann McPherson
Curator, Newburyport Maritime Society
25 Water Street, Newburyport, MA 01950
T: 978-462-8681 • **F:** 978-462-8740
E-mail: cmcpherson@themaritimesociety.org

Photo: Victor Mastone

Sailing Away

30 Years of Shallow Waters, Sandy Shores, and Summer Breezes on Cape Cod Bay

By Steve Mague, CZM

I started sailing Cape Cod Bay when I was 11 years old. My cousin, a Navy officer stationed in Davisville, Rhode Island, used to come up to Eastham several weekends a month and began to teach me the basics of sailing on his 19-foot sloop. While we'd usually leave from Rock Harbor, the destinations varied from the Brewster flats to Wellfleet Harbor to Billingsgate Island. From the first sail, I still recall the noise and chaos associated with getting under way, followed by the comparative silence and feeling of power as the boat began to surge forward in response to wind and helm. More than 30 years later, this familiar sensation welcomes me at the beginning of each new sail.

When I was 13, my parents bought me my own boat, a 12-foot O'Day Widgeon that I still have. My first sail in the Widgeon was on a blustery day in early May, where the waters of the Bay alternated between light blue and dark green as the cumulus clouds scudded overhead. As the winds built, my expedition ended suddenly as I capsized and was towed in. Despite this somewhat ignominious beginning, I continued to set out each weekend to a variety of destinations around the Bay, chosen, of course, after careful reflection of likely wind conditions.

Through the years, ideal sailing wind (or not) the bay always offers something new to see with each sail. Sometimes it's breaking schools of bluefish or stripers, terns and gulls squawking and screeching as they dip for the sand eels being driven to the surface. Other times, it's a great leatherback turtle, head out of the water like a periscope, or an ungainly ocean sunfish breaking the surface with a dorsal fin that, to the uninformed, conjuring up images of *Jaws*. Occasionally, a school of Atlantic whiteside dolphin can be seen cutting through the water with amazing speed and dexterity. Less frequent sightings include the annual September visitations of basking sharks (in excess of 20 feet) or the 40-foot finback whale—both real attention-grabbers in a 12-foot sailboat.

In addition to its marine life, the shores of Cape Cod Bay provides ample opportunity for exploration. From the Great Marsh in Barnstable Harbor, to the Brewster and

All Photos: Debbie Lee

Eastham flats, to Jeremy's Point (the prominent barrier spit that forms the westerly limit of Wellfleet Harbor), and Great and Griffin Islands (former islands that are now connected) that extend the Cape Cod National Seashore west into the bay, there is no lack of things to investigate. Anchoring in a sheltered spot (winds in the summer are predominately sou'west,) the bay's islands are a great place to stretch the legs and have a picnic. Billingsgate Island, once the home of a small fishing village that's now covered at high water, is a spot of interest. Depending on the tide, one can see the remains of a former lighthouse (built in 1858) and, at low water, the original breakwater is still visible.

Today, much of my summers are still spent sailing on Cape Cod Bay. Although I've moved up slightly to an O'Day 20 and sailed to Cuttyhunk, the Vineyard, and the south side of the Cape, the familiar sights and experiences never seem to get boring. With each sail a new sea, reflecting the wind and weather conditions of the day, is waiting. Moored in Wellfleet Harbor during the week, this centerboard sloop, while not fast, takes full advantage of the shallow waters of the Bay and its 10-foot tidal range. With the increased size and a cabin, I now enjoy the same experiences with my wife, Dirkje, who early in our relationship vowed not to be a sailing widow. A book, a promise to stop at Billingsgate or another destination for shell and artifact collecting, and a picnic lunch in tow, and we're off to spend another day sailing and exploring. Occasionally, we even spend the night anchored in Barnstable Harbor.

Recently our sailing experiences have expanded to include our 7-year old nephew, Brendan, who lives in Sandwich. Previously, although showing some interest, sailing took a back seat to other outdoor activities like Little League, soccer, lacrosse, fishing, and playing on the beach with other kids. This past summer, however, Brendan's shown more interest in sailing and accompanied us on several of our day trips. Despite standing only a little over 4 feet tall, and having to crane his neck to see over the cabin, he exhibited great focus in steering the boat for extended periods of time. As we sailed, he would ask us questions about how the boat moved through the water, fascinated that the sail functioned more like the lift associated with an airplane wing the closer we sailed to the wind, grasping the function of the centerboard, and even showing a genuine understanding of the preliminary concepts of coastal piloting.

Getting Started *By Steve McKenna, CZM*

Sailing requires mastering some basic skills, and these are most easily acquired through sailing lessons or some type of formal instruction. A good way to find out about options available in your area is to contact your local harbormaster. Many towns have community sailing programs that offer group lessons for a variety of skill levels, from beginner to experienced. Other entities offering sailing lessons include local sailing centers, yacht clubs, and school sailing programs. Another option is to hire a sailing professional for private lessons.

When possible, it is best to begin sailing in small, simple boats. This allows the basic skills, such as boat handling, sail trim, and terminology to be mastered more easily than in larger, more complex boats. Once the basic skills are learned and practiced, then a wide variety of sailing opportunities exist. Many sailors get involved in racing. For those who like competition, this is an enjoyable way to expand your knowledge and experience. Others prefer to pursue "cruising" sailing activities. Check out your local marinas and sailing centers for crewing opportunities. Usually there are plenty of boats looking for crew members to help compete in local sailing events.

As we sail, his questions move from the techniques of sailing and navigation to the types of marine life around us and the nature of the abutting shores. Often incisive, and sometimes difficult to answer, they show a real desire to understand Cape Cod Bay. With the knowledge that my old Widgeon will some day be his, I marvel at the timeless and compelling power of the Bay, and wonder if his interests will continue. The same qualities of the Bay that have so intrigued me over the years remain, and sailing—an activity that is enhanced by specific local knowledge—provides an opportunity to foster that interest in him.

Billingsgate Island and the old target ship, the Liberty ship *James Longstreet*—once landmarks visible from over 3 miles away—can now only be seen at low tide. In many places, the shoreline has retreated significantly, causing beaches to vanish at high tide. And during the past 20 years, the boating population has increased to the point where empty summer horizons are distant memories. But schools of bluefish and stripers accompanied by a hungry entourage of screaming terns and gulls still feed in the rich waters. Dolphins, blackfish, sunfish, basking sharks, seals, and the occasional whale still return in the late summer. Brilliant sunsets continue to flourish over the waters of Cape Cod Bay, lending credence to the words of that great philosopher Yogi Berra who observed, "The more things change, the more they stay the same."

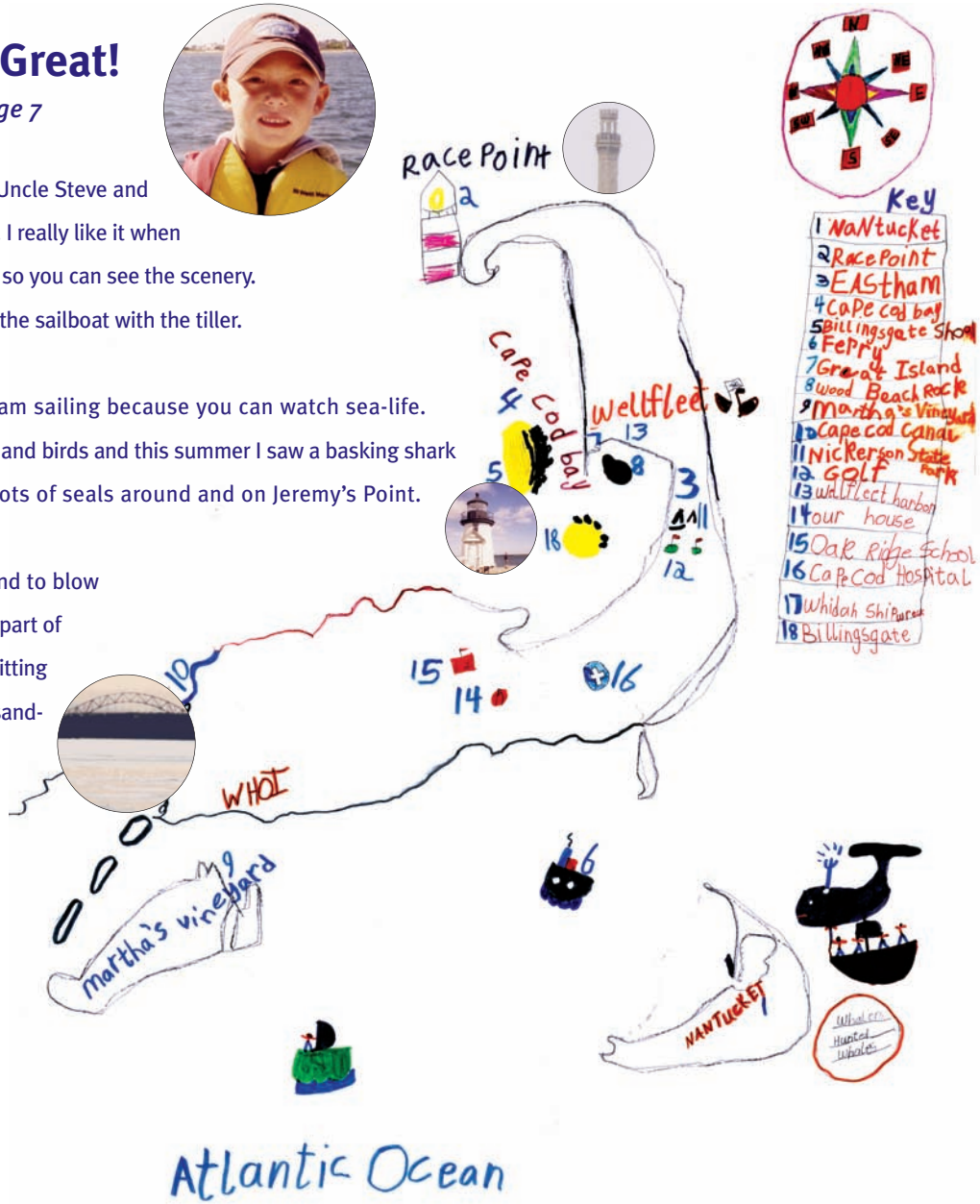
Sailing Is Great!

By Brendan Lee, age 7

I like to sail with my Uncle Steve and Auntie D in Cape Cod. I really like it when the sailboats go slow so you can see the scenery. It is also fun steering the sailboat with the tiller.

I feel happy when I am sailing because you can watch sea-life. There are always fish and birds and this summer I saw a basking shark (25 feet long!) and lots of seals around and on Jeremy's Point.

I like just enough wind to blow the boat. My favorite part of the boat is the bow, sitting there and eating my sandwich. Sometimes I get to eat lollipops on the boat. I like being on the sailboat with my Uncle Steve and Auntie D. Sailing is great!



CAPE COD AND THE BAY

as drawn by Brendan Lee

50 Fathoms Under the Sea

By Marcie B. Bilinski

I first began scuba diving in the early 1970s, after having worked summer jobs as a lifeguard throughout my high school years. The early days of my scuba diving consisted of 10 weekly classes held at the local YMCA. The lessons involved both physical and mental skill development. At the completion of the course, I had to pass both a written exam and a series of four open-water dives to perform the basic set of required underwater skills. After successfully passing these, I received what is known as a basic open water c-card (certification card). That coveted c-card provided me with the ability to dive practically anywhere there's water—from a swimming pool to the ocean and all points in between, including quarries, lakes, rivers, and springs. My experience level, combined with site accessibility, conditions, and interests determined where I went next.

Background: Close up of a shipwreck. Snails and other sea life have made the sunken vessel their home.

All Photos Courtesy of: Marcie Bilinski

Getting Started *By David Trubey, BUAR*

Scuba diving requires a basic open water certification from a recognized professional organization such as PADI (Professional Association of Diving Instructors) or NAUI (National Association of Underwater Instructors). Courses cost on average about $400-$600, but don't let this fact dissuade you—they are well worth the money. Not only will you learn the skills to dive safely, but you will likely leave the class with some new friends and a network of potential dive buddies.

If you are like most New Englanders and have been hibernating for the winter, it's a good idea to get back in shape before starting your course. Being relaxed and confident in your physical condition will help you in the water.

Most courses are taught through dive shops, which provide scuba gear such as regulators and tanks. However, some shops may require you to provide your own mask, boots, and snorkel, as these items are considered personal gear. Also, some local YMCAs and adult education programs offer PADI and NAUI dive courses at a lower price.

Once you learn the basic skills in the controlled environment of the swimming pool, you will be ready and excited to get to the open ocean! If you are not ready to purchase your own gear, most dive shops rent equipment by the day. Remember to always dive with a responsible buddy and check with the local town officials for any special regulations or safety tips for the area.

Marcie, many leagues under the sea, with her 250 lbs. of diving gear. Don't try this without a scuba license!

And I sure went next and next and next and next...

I continued my training to become a dive master and instructor and used these certifications to work on dive charters and as an instructor in Jamaica and in Puerto Rico. I went on dive vacations to as many locations within the United States and around the world as I could.

After exploring my first shipwreck, the wreck of the *R.M.S. Rhone* in the British Virgin Islands, and watching a lot of Sea Hunt episodes on television, the history and mystery of it all drove my desire even more. From that point on I was hooked forever, so I went on to further my skills with more training and finally entered the extreme realm of technical wreck and cave diving. This opened up the world of diving in depths much greater than the basic and/or advanced open-water certification of 130 feet. I took classes in mixed gas and decompression theory and survival training to be certain I was aware of self-responsibility and capable of risk management in an overhead environment (i.e., any environment where a diver does not have direct access to the surface). I have since been to depths in the open ocean in excess of 300 feet off the coast of California, as well as underground for periods as long as 3 hours exploring the underwater caves of the Mexican Yucatan. I have visited the nuclear fleet of shipwrecks in Bikini Atoll and the J-class submarines off the coast of Australia.

While there once was a time when I could not imagine venturing well beyond the 60-foot depth limit of my first c-card—and my mother prefers not to imagine it to this day—now, I can't imagine ever not diving. The longing to see the wonders within the waterways of the Earth beckoned to me and by learning to scuba dive, I got to experience a new and beautiful world rarely visited by humans. To this day, I find the underwater world both wild and magnificent, and a peaceful realm of mysterious serenity.

Since the early 1990s I have been uncovering bits of underwater history by exploring shipwrecks. Overhead environment wreck diving is my passion, and therefore compels me to continue visiting shipwrecks in our own Massachusetts coastal zone, such as the *Baleen*. (See *The Workhorse of the Harbor*, page 56.) It is truly spectacular to be able to witness the unexpected convergence of nature and history, and I hope to be doing it for another 30 years.

Riding Waves to Environmental Consciousness

By Anthony R. Wilbur, CZM

Surfing, like many obsessions, requires a level of secrecy.

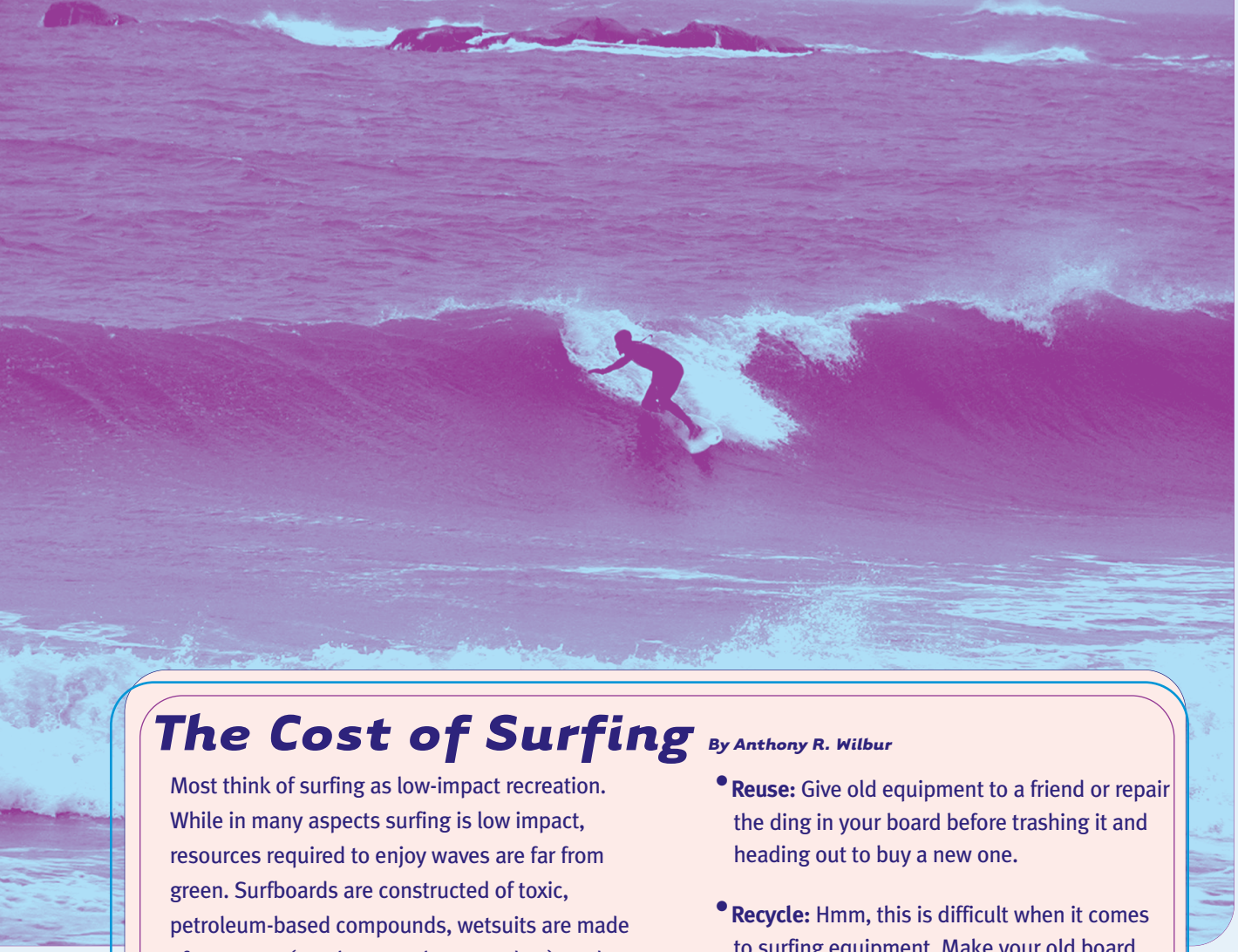
Similar to legendary fishing holes that only the old timers know, surfing has many "secret spots." Given that I believe secrets should be cherished and not publicized, this article is not going to explain where or when to surf. I will tell you that surfing in Massachusetts requires dedication and strong will. There are certainly those (rare) summer days when surfing is easy—conditions align with a nice swell, warm water, and great weather. These sessions leave core and seasonal surfers alike in a state of elation. But more common are extended periods of no waves, or swell accompanied by gales, bitterly cold water, and "ice cream headaches." However, with experience and patience, surfers from the Commonwealth's South Coast, Cape Cod, the Islands, South Shore, and North Shore can score incredible waves.

Surfing means different things to different people. Surfing is a summer activity to some. For others, surfing is a lifestyle. People become truly committed to surfing, almost addicted—watching weather patterns, fixating on the last, current, and next swell, and "jonesing" for the chance to experience the thrill of capturing energy in the ocean at a particular moment in time. When riding a wave, you are alone in this often busy world.

I sometimes forget about the beauty of surfing and dwell on the not-so positive aspects (crowds and bad attitudes in the lineup). Then an experience leads me back to why surfing is a big part of my life. For example, I headed to the beach last summer hoping to catch a few small, clean waves on a pleasant mid-week evening. There was a decent peak and no one out, except for one other guy. I was psyched and paddled out. The waves were not memorable—although the sandbar was setting up a nice wave breaking left and right—but the situation was special. The other guy out was actually a young teen from the Berkshire Mountains in western Massachusetts. This kid was excited beyond belief to be on vacation at the beach with his Pop. He wanted to try surfing and scored a board for the week. He kept his distance (I'm told I tend to look mean in the water) and was struggling, but trying hard, to get a wave. I waved him over to the peak I was surfing and started chatting and giving him a few tips. He was timid on the waves, a

Passing on a few pointers—and maybe some environmental wisdom—after a long surf session.

Photo: L. Day



feeling that anyone who has tried to paddle into any size wave can understand. Over the next hour or so, he became more confident and aggressive. He finally stood up on a little peak, slid down the face and rode to the beach. I heard his Pop cheer from the beach. His expression was indescribable—it was as if he just won the lottery or found a new way of life! His energy and stoke was a hands-down reminder of why I surf, and this moment no doubt changed his perspective on the ocean environment.

For me and many surfers, surfing is more than the experience of catching waves—surfing is enlightening. Surfers observe the ocean and are aware of subtle changes in the coastal environment. Surfers watch the changes in weather, oceanographic conditions, coastal processes, and environmental quality. After the summer crowds wane, surfers remain throughout the year to keep a vigilant eye on not only the waves, but on the coast. Surfers are environmental stewards.

Human activities continue to impact the coast—from failing septic systems and stormwater flows to poorly planned coastal construction. Unfortunately, I encounter coastal pollution and see less-than-ideal shoreline development while surfing. Government agencies responsible for managing coastal resources, such as the Massachusetts Office of Coastal Zone Management, are often hindered by the lack of frequent observations to guide decision making. Surfers, many of

Photo: Eric Rydbeck

The Cost of Surfing

By Anthony R. Wilbur

Most think of surfing as low-impact recreation. While in many aspects surfing is low impact, resources required to enjoy waves are far from green. Surfboards are constructed of toxic, petroleum-based compounds, wetsuits are made of neoprene (another petroleum product), and transportation releases greenhouse gases but is a necessary evil to get to the waves. There is a movement to lessen the footprint of surfing on the environment. Until there are practical sustainable manufacturing practices, remember the 3Rs:

- **Reduce:** Maximize the life of non-renewable resources. Take care of your equipment. You don't need a new surfboard or wetsuit every year. Buy a used board. Walk, bike, or share a ride to the beach.
- **Reuse:** Give old equipment to a friend or repair the ding in your board before trashing it and heading out to buy a new one.
- **Recycle:** Hmm, this is difficult when it comes to surfing equipment. Make your old board into art, a table, signpost, or mailbox. Use your imagination to send fewer boards to the landfill. Finding a way to recycle surfboards and wetsuits would be a great step toward reducing the impact associated with surfing.

These may seem like simple ideas, but making individual efforts to lessen your footprint on the coastal environment will help to save resources as the surfing industry works toward sustainability.

When riding a wave, you are alone in this often busy world.

whom have played in Massachusetts waters for a lifetime, have the potential to provide frequent and long-term observations that can support efforts to better understand, and subsequently better manage, our coastal resources, including surf spots. The occasional visitor can also assist by increasing personal understanding of coastal issues and sharing this knowledge.

There are successful national and international groups (e.g., Surfrider Foundation, www.surfrider.org) and regional programs, such as land trusts, working to protect our coastal environment. While many surfers participate in environmental initiatives, many others do not and are unaware of how their behavior influences the Earth, coast, and waves we treasure. More diligence and participation in conservation efforts are important—being aware and involved is part of the big picture of being a surfer.

Stewardship is a lifetime commitment. Long-term perspectives are not only important for environmental issues but also surfing. Enjoying the moment, while looking to the future, is an ethic of the surf lifestyle. There will be another set, another swell, another peak to split, another session to share with a kid out for the first time, another time to purely enjoy the ocean and waves—and there is always another opportunity to protect our Earth. Inspire others with the joy for nature and increased environmental consciousness that you obtain through surfing. The kid from the landlocked town in western Massachusetts hopefully entered this lifestyle of environmental awareness that summer evening.

So, next time you binge on a good session and you're walking around in a buzz with tired shoulders and arms, a dazed smile and saltwater-induced red eyes, remember to give back to the ocean that brings you so much pleasure. Simple tasks like picking up trash (which is most likely recyclable) on your way back up the beach, supporting environmental organizations, and participating in the often complex and bureaucratic decision-making process will help protect the coast for future generations of surfers and non-surfers alike. Increase awareness! Share the waves!

Getting Started *By Anthony R. Wilbur, CZM*

As the kid from western Massachusetts found out, learning how to surf in Massachusetts takes a lot of time and effort. To start off, borrow or buy a used board and get yourself to the beach. Waves are inconsistent along the Massachusetts coast, so it'll take time to find rideable surf. While you're beginning to learn to surf you'll want to find small, crumbling waves. As a beginner, the most important thing is to learn how to paddle your board effectively and to get comfortable in the ocean. Paddle as much as possible and be responsible—don't go out in dangerous conditions and show respect to other surfers in crowded lineups. If you don't mind a LOT of trial and error, you might just end up hooked.

Photo: Brandy M.M. Wilbur

Hooked On

CASTING CALL
Wading fly fishermen ply their trades on an incoming tide, hoping for the right cast, and the right bite. Having the right gear is essential, too!

Casting Call: Jason Karas;
All Other Photos: Keith Brauneis

Fly Fishing

By Bruce Carlisle, CZM

For me it began around 1986, when my then-girlfriend's dad gave me my first fly rod—a two-piece, 5 weight, all-purpose trout rod—and taught me to how to cast it off a boardwalk bridge stretching over a river in Michigan's Upper Peninsula. The basic fly rod casting motion is a back-and-forth pendulum where the rod moves back-and-forth from 10 o'clock to 2 o'clock. The helpful metaphor here is that 12 o'clock is where your casting arm is extended straight up to the sky, and 3 o'clock is your casting arm extended straight out from you, parallel to the water. It's all rhythm and timing and once you get it, you "get it." You let more line out with each successive "false" cast, building momentum, and on the final cast, your arm comes forward and with a well-timed release the fly line shoots out in front of you, gradually unfurling from a tight arc until the fly lands quietly on the water.

REEL LIFE
All that fly casting pays off in the form of a big beautiful striper for dinner!

Parlez Vous Fly Fishing?

Biminy twist - A really cool-looking knot typically used to attach the fly line to backing that's impossible to tie.

Blitz - A fantastic fish feeding frenzy.

Double haul - A method of fly casting where you pull (or haul) on the fly line on both the backward and forward false casts to increase line speed and distance of the cast.

Roll cast - A cast used when there's limited room for a back cast. The rod is snapped forward quickly, causing the line to uncurl or roll out in front of you.

Sight cast - A method of stalking fish where the angler wades shallow water and casts to fish seen prowling the flats.

Stripping - Manually retrieving the fly line (no reel is used) by pulling back lengths of the fly line either with one hand (the other holds the fly rod) or two (with the fly rod tucked under the elbow).

Skunked - When all you have to show for your day on the water is a sunburn.

Surface popper - A buoyant fly or lure that makes a sputtering sound when retrieved, usually to attract hungry blues.

[1] Estimate from the 2006 Outdoor Industry Foundation Outdoor Recreation Participation Study; see www.outdoorindustryfoundation.org/resources.research.participation.html.

[2] Depending on where you fish, and who you believe, a "slam" is when you catch three different species--typically a striper, a bluefish, and a tunoid, such as a bonito or false albacore--in one outing.

You really "get it" when you catch and land a fish on the fly. Fly-fishing tackle—from the rod, to the leader (or tippet), to the flies—is lighter than conventional recreational fishing gear, and because you retrieve the line by hand (a process known as stripping), when you feel the fish take your fly, you really feel it. It's a sensory thing: the fly line is the medium by which you feel the fish, and maybe because there is such a direct connection, that progression of feelings—from the initial adrenaline rush, to the challenge of the fight, to the anticipation of seeing the creature at the end of your line—seems to be more magnified, more visceral than fishing with conventional tackle. After landing that first fish, if you're anything like the 4 million other fly fishermen currently estimated to be plying their avocations in the Northeast[1], you're done. Hooked.

There are stages of this affliction, and I've heard it put this way: as a beginner, you just want to catch fish, any fish. Then you get the hang of things, and, feeling more comfortable with your gear, fly selections, and general sense of locations and time to fish, you just want to catch lots of fish. After that, you move to the industrial revolution stage of fly fishing, a phase highly correlated with an expansion of skills (e.g., mastering the double hall, the roll cast, and the bimini knot), an expansion of indispensable gear (e.g., two reels; one with an intermediate and one with a fast-sinking line), and an expansion of questionable gear (e.g., "But honey, I really need this 10-foot Zodiac...oh and a new 4-stroke engine to push it..." [see *An Afternoon with Uncle Albert,* page 30]). During this phase, your desire is primarily twofold: to catch a big fish and to catch different species (ideally several in the same outing[2]). The last stage of the fly-fishing progression is the seasoned angler phase. How or when you get there is variable, but I think you'll know when you've arrived. You've caught the monsters; you've gotten the slams. Now you're traveling farther and longer in pursuit of new species, as well as familiar species in new settings. Perhaps the key trait of this last stage is that you now spend more time giving advice than asking for it. I wouldn't know; I'm not there. Yet.

Of course, this whole "stages of fly fishing" thing is a gross generalization. Some may ring true, but most any fisherman—fly rodder or beach chunker—will tell you: "Any fish is better than no fish." The skunk stinks: it is to be avoided at all costs.

The move from freshwater fly fishing to salt water for me was simply a matter of logistics: from metro-Boston (where I lived for 20 years), the shortest distance to reliable fishing was the coast. Add to that the fact that I grew up spending parts of every summer since early childhood avidly surf casting from beaches in coastal Massachusetts, and the result was inevitable. So, after my introduction to the basics, and some reasonably successful outings on trout streams in Michigan, Vermont, and New York, I took my new found skills seaward! In 1988, outfitted with a 9-foot, 9 weight rod, a reel with a 9 weight, intermediate, weight-forward line, and a handful of flies, I began to fly fish in salt water. The progress was slow, but steady. Honestly, I don't even remember my first fish on the saltwater fly rod. It was early in my endeavors, though. Definitely not the first time out, maybe not the second, but very soon thereafter, because it became very clear to me that this new thing—this brave new world of fishing—was eminently do-able. That first fish may have been the striper that exploded on a surface popper (i.e., a buoyant fly that makes a sputtering sound when retrieved) one spectacular flat, calm morning while casting and walking the ocean-facing beaches of Plum Island. Or it may have been a voracious bluefish close to shore during a blitz (i.e., a fish feeding frenzy) off Popponessett. While I can't place this important milestone, I can recall some other particularly memorable ones.

There was the time in July of 1992, when the blues were blitzing off the southeast side of Great Point, Nantucket. The fish were within surf-casting range, but they were not coming into fly-casting range. So my brother and I teamed up. I took all the hooks off of an old wooden orange Gibbs Polaris Popper and snapped it to a leader on the surf-casting rod. My brother tied an orange foam popper fly (with wire leader, of course…those blues have nasty teeth) on the fly rod. I began to cast to the blitzing blues with the surf-caster and—being blues—when they took notice, they would follow the surface popper inshore, pounding it, taking it, dropping it, and pounding it again and again. The trick here was for my brother to time the fly cast so that as the lure and following fish approached fly-casting range, he would drop the fly right on top of the lure, and I would simultaneously stop reeling. It took maybe 10 or 15 tries, but we nailed it. And when a pissed-off bluefish decides to run, your fly reel sings!

And there was my first keeper.[3] It was a very early morning in June, after a long walk to the end of Snow's Point in Orleans (some of the best fishing spots are the hardest to reach). I had been casting for an hour, working up

[3] A "**keeper**" is a fish of the minimum legal size to take (keep). For the last several years in Massachusetts, the legal limit for striped bass has been 28 inches, measured from tip of snout to end of tail. For an excellent profile of the striped bass, see: www.mass.gov/dfwele/dmf/recreationalfishing/stripedbass.htm#profile.

and back the shoreline, with nothing more than a schoolie[4] to show for it. The scenery was incredible—a veritable coastal layer cake. Directly in front of me was the swift-moving water of Nauset inlet, above that the greens and yellows of the salt marsh, then the thin ribbon of the sandy dunes, topped by the glint of the Atlantic, and culminating with the wide morning sky painted a water color wash from orange to blue—all shrouded in patchy grey fog. A lobster boat cruised by close to shore and just as I was cursing the wake and disruption—WHAM—my line went tight and for a brief second I thought I had gotten hung up on a submerged boulder. But then the line started to peel off my reel, and I knew I was into a big fish. It didn't take off with a sudden burst or "run" like some past stripers and bluefish had, but it fought a slow, stubbornly determined fight. Four or five times I had the fish to within 15 or 20 feet of the shore, and each time it would hasten off, with an unhurried but deliberate retreat for deeper water. When finally I pulled it up onto the safety of the sandy slope and reached to extract the deceiver from its gaping mouth, my hands were shaking. Laying my fly rod next to the fish and using a mark I had made on my rod, I estimated the fish to be about 36 inches. I debated the fate of this guy for a short while—all of the stripers I had caught up to this point had been returned to the water. I was on the verge of doing the same—I had the fish in the water with its lower jaw grasped firmly in my hand-when I unflinchingly decided that the time had come to enjoy some fresh striped bass for a dinner. Or two. (See page 31 for recipe.)

[4] **"Schoolie"** is a generic term for a small fish, used in part because of the tendency for younger age classes to feed in groups. The term is commonly used to describe any fish that is smaller than legal "keeper" size.

There was also a particularly spectacular day flats fishing on Monomoy. Akin to the more famous flats fishing of the tropics, where anglers "sight cast" to bonefish and other species in very shallow waters, the same experience can be had in our home waters of the Northeast. As incoming tides flood the wide expanses of intertidal sandy flats, stripers (and sometimes blues) will leave the refuge of deeper water and swim onto the shallow flats. Traveling solo or in groups of twos or threes (the bigger fish are more solitary), these fish will feed opportunistically on crabs and other invertebrates on the bottom, or silversides and sandlance in the water column, but instead of being in an active prey mode, their behavior on the flats is perhaps more aptly described as a lethargic cruise. One of the best known destinations in Massachusetts for sight casting on the flats is the vast flats surrounding the Monomoy islands off Chatham. From the Monomoy National Refuge or The Outermost Marina, you can catch a ride on a skiff that will drop you at South Beach or North Monomoy Island. From there, it's up to you—there's miles and miles of flats to the west of South Beach and to the north and west of North Monomoy.

As I set off from the South Beach drop-off, I had my eye out for an area that was close to some of the deeper inter- and sub-tidal channels that mosaic the system. The weather was cooperating; the forecast was for mostly sunny skies and winds 5-10 knots from the southwest, ideal for this type of fishing. It's all visual; you're looking for the subtlest clues—changes in color or movement that reveal a potential target—and clouds and wind are not simpatico. As the sun slowly climbed the sky, I walked and walked and walked, wading through the mostly knee-deep water that was gradually filling the sandy flats. After 30 minutes, I came to an area that looked particularly promising near some darker, deeper water, so I slowed my wading walk, and really focused. With the motion of the water, the small changes in depth and sand color, and the ripples on the surface from breezes, it was all very vague and aqueous, and it was too easy to be fooled into seeing things that weren't really there. The dark shape off to the right: was that a fish or pile of seaweed? The suspect visions were all acquitted when I clearly made out a striper moving across my path not more than 20 feet from me. I was so woefully unprepared for this moment of action that by the time I fumbled two false casts the fish had bolted off in a flash. It quickly became clear that if there was to be any chance at getting a real shot at one of these fish, I was going to have to really focus, be totally prepared, and cast quickly and accurately.

After several minutes, my eye caught another moving dark patch. I immediately started false casting, and while the cast was unwinding line from the stripping basket, I was tuning in on the object, gathering as much information as I could in a split second—its distance, direction, and speed—and then adjusting my cast, I dropped the fly about 12 feet away. To compensate for the mediocre cast, I made three quick, long strips, bringing the fly into the path of the moving fish. Slowing my retrieve, I gave it a couple short twitches. The striper slowed and turned towards the fly. My heart raced. A short pause and then a short strip. The striper pumped its tail, and I watched in disbelief as it opened its mouth and sucked in my fly. The exhilaration of that first flats fish played out more than a dozen times that day, as the fish came in great numbers and showed a real enthusiasm for the fly I was using. At one point, I had a harbor seal come onto the flats from the nearby channel to give short chase to a fish on my line. As rewarding as the fishing was, so too was the gratification I had after two other anglers independently approach me to inquire what I was doing that they were not. I attributed it to seeing the fish well, letting the fly sink after the cast, a short "twitchy" strip, and the small, chartreuse-and-white, epoxy-head deceiver I had been using…that, and a healthy dose of beginner's luck!

GOT BAIT?
Lightweight flies come in all shapes and sizes.

Retrieving the line by hand (below) is the fly-fishing way.

I could go on with my fly-fishing recollections, but you get the idea. Every trip out is an experience in and of itself. Even if the Bay gives up only a single schoolie, every trip has the promise, the potential, to be one of those epic days—to become engrained forever into your memory, a part of your psyche. And that's why I'm hooked.

Getting Started *By Jay Baker, CZM*

Fly fishing can be peaceful, exhilarating, and immensely frustrating all in the same night. Watching as 20 yards of fly line silently uncurls into glassy water is a gratifying thing, but getting to that point can be difficult. There's a steep learning curve associated with fly fishing. You have to be prepared to catch fewer fish for a while, and spend a few more dollars than the bait fisherman, but the feel of the fish on the end of a fly rod is incomparable.

The best way to get started is to join a fly-fishing school or venture out with a pro. Most fly-fishing retailers have guides that work out of their shops, and in most cases, they'll provide you with all the gear you need. You can also sign up for some fly-fishing seminars on-line like Jack Gartside's Fishing Classes (www.jackgartside.com) or Cape Cod Outfitters Saltwater Fly Fishing Schools (www.capecodoutfitters.com).

Short of signing up for these somewhat pricey lessons, there are a variety of videos and books to help you get started. Lou Tabory's book *Inshore Fly Fishing* is a must have for anglers of all experience levels who fish the waters of New England. Of course, if you go this route, you'll need to gear up at a fishing outfitter. Avoid buying gear online if you're just getting started. The amount of equipment and choices can be overwhelming, and a sales person can help you keep things simple at the start.

Once you're geared up, it's all about practice, and you don't need to be on the water to get started. Substitute a piece of tin foil for a fly and head down to the local baseball diamond. Once you can throw the fly 20 feet or so without nicking your hand or catching the back of your neck, it's time to graduate to a Chartreuse Deceiver and coastal waters.

Good luck.

An Afternoon with Uncle Albert

By Jay Baker, CZM

Behold the 9.8 horsepower of *Uncle Albert!*

It's not much to look at, or sit in really. About 8 feet long, leaky, and unevenly faded by decades in the sun—it's my version of a power boat—a rubber raft that washed up on a Nantucket beach some time during the Reagan Administration. After rescuing the raft from my father-in-law's garage, I pumped it up, checked for holes, and dropped it in a pond to check its "seaworthiness." I christened the raft "*Uncle Albert*" for no other reason than it sounds about as odd as the boat looks. *Uncle Albert* has a plywood deck fitted together in three pieces, a wooden stern to which I have painstakingly mounted a cup holder, and two splintered oars that are clearly original to the raft. With its undersized 9.8 horsepower motor, it's a little short on giddy-up, but it gets around okay and it floats. In fact, *Uncle Albert* is pretty much all I need in a power boat.

What *Uncle Albert* lacks in speed and appearance, he makes up for in function. Drawing a mere four inches of water, I can take it just about anywhere wet—sand and shoals, mussel bars—no problem. If I do run aground (and I do), I hop out and drag it to deeper waters-the snakehead fish* of power boats. Pretty much anywhere a canoe or kayak can launch, I can drop in old *Uncle Albert*. Can you do that *Mr. Boston Whaler*, *Mr. Sea U Later II*? I don't think so.

A raft like *Uncle Albert* won't win you any prestige. I would not recommend launching it at one of the larger deep-water boat ramps on a sunny Saturday afternoon. Children may laugh and call it a "starter yacht" or ask which mooring your "big boy boat" is on. "Someday, you'll have a real rig," their fathers will say, invoking the testosterone-laden term of endearment reserved for a much larger vessel. And yes, Captain Obvious, *Uncle Albert* probably was once a dinghy. But how long did it take you to hook that twin engine leviathan to the back of your Suburban? Can you take that ocean liner out after work on an outgoing tide? Can you smell the salt air with all that exhaust in your face? Again, I think not.

On one of the aforementioned sunny Saturday afternoons, I put *Uncle Albert* in at the Joppa Flats boat ramp at the mouth of the Merrimack River. If you've been to Joppa Flats, you know that you have about two hours on either side of high tide to do anything requiring water, and the rest of the time its acres of mud flats that only a dirty little clam could love. On this particular day, I was armed only with my fly rod and some SPF 30. I put in soon after high tide, leaving me just a little time to poke around for bass and bluefish as the water began to drain from the flats.

I soon spotted a flotilla of, you guessed it, Boston Whalers, in deeper waters. They were packed tightly around a flock of diving terns, a clear sign that there were fish feeding near the surface. As I moved closer I could make out a number of fly rods lashing at the air as they guided their line to breaking fish, while still others were bent in an arc as fish jerked and pulled their flies to deeper water. A few gratified anglers bent over their stainless steel rails to release small (but fun) "schoolie" bass.

I moved within sneering distance of this seemingly exclusive club, wondering how I might squeeze into the middle of the pack when "WHAM!" a big striper smacked the water in the distance, getting my attention and the attention of my fellow anglers. Faster than you can say "Grady White," 10-and-a-half boats turned in the direction of the tail slap, creeping up on the center of the fading ripples and listening for further direction. There it is: WHAM! And the fish gives away its location and course. We all alter our approach accordingly…but wait a second, what's that fellas? Is that a mussel bar I see just below the

*Snakehead fish (*Channa argus*): A voracious predatory fish introduced from southeast Asia to North America via the aquarium trade. The snakehead has the rumored ability to slither over land to more desirable waters, altering natural ecosystems wherever it becomes established. Less credible sources, such as the 2004 feature film, *Frankenfish*, suggest that the snakehead is also a threat to humans, especially heavily armed scientists trapped on a houseboat in a Louisiana bayou.

All Photos: Jay Baker

BASS STEAKS ON THE GRILLE By Matthew Lee

-**Bass steaks** with skin still on (cut fish through the middle)
-**olive oil**
-**Italian seasoning** (or any assortment of spices you like)
-**Ritz Crackers**

Slice steaks about 1 inch thick and cover with olive oil on both sides (this prevents the bottom from burning). Add the seasoning (to taste) on the top. Sprinkle with Ritz Crackers. Cook until fish flakes (about 8 minutes).

A small break in the seawall marks the entrance to Joppa Flats.

surface? Looks like it could be a little hairy for a larger vessel, even for the shallow draft of the Whaler. We're all creeping up on shallow waters that are getting shallower by the second, as the falling tide sucks seaward through the mouth of the Merrimack. I continue to advance as my depth challenged counterparts begin to back off.

You can see by now where this little vignette is going, and I won't bore you with the self-indulgent details. But what followed was truly a fantastic struggle between man and beast. With an artful cast, I dropped a Clauser Minnow inches in from of the cruising fish. Initiating a battle that would echo on…

Ahem. Where was I? As the fleet of boat captains looked on, confined to deeper waters, I boated the fish, a 33-inch striped bass, and slowly motored back to the Joppa Flats ramp.

I like to imagine a group of admiring anglers tracing my slow route back to the boat ramp and wishing aloud for a boat like *Uncle Albert*. On reaching the ramp, I propped up the motor and dragged the raft to dry pavement, a few feet above the waterline. As I loaded the fish into a long vacant cooler I'd retrieved from the back of my car, I earned the attention of a few kayakers coming in for the day. As I lifted the fish again, as if to reposition it in the cooler, one of them called out "Hey, that's a pretty nice fish." Another looked back over the shallow water as the mud flats started to emerge and offered, "That's a handy little rig." And with that, the brief but exceptional day on the water came to a gratifying end.

So you might be thinking, "There's no way that guy would choose to have a little rubber raft over a real power boat." Well, you'd be absolutely right. But for now, *Uncle Albert* will do just fine. When he finally is retired (probably very soon), I'll think of him fondly as I strain to winch my Boston Whaler up a crowded boat ramp on a Saturday afternoon.

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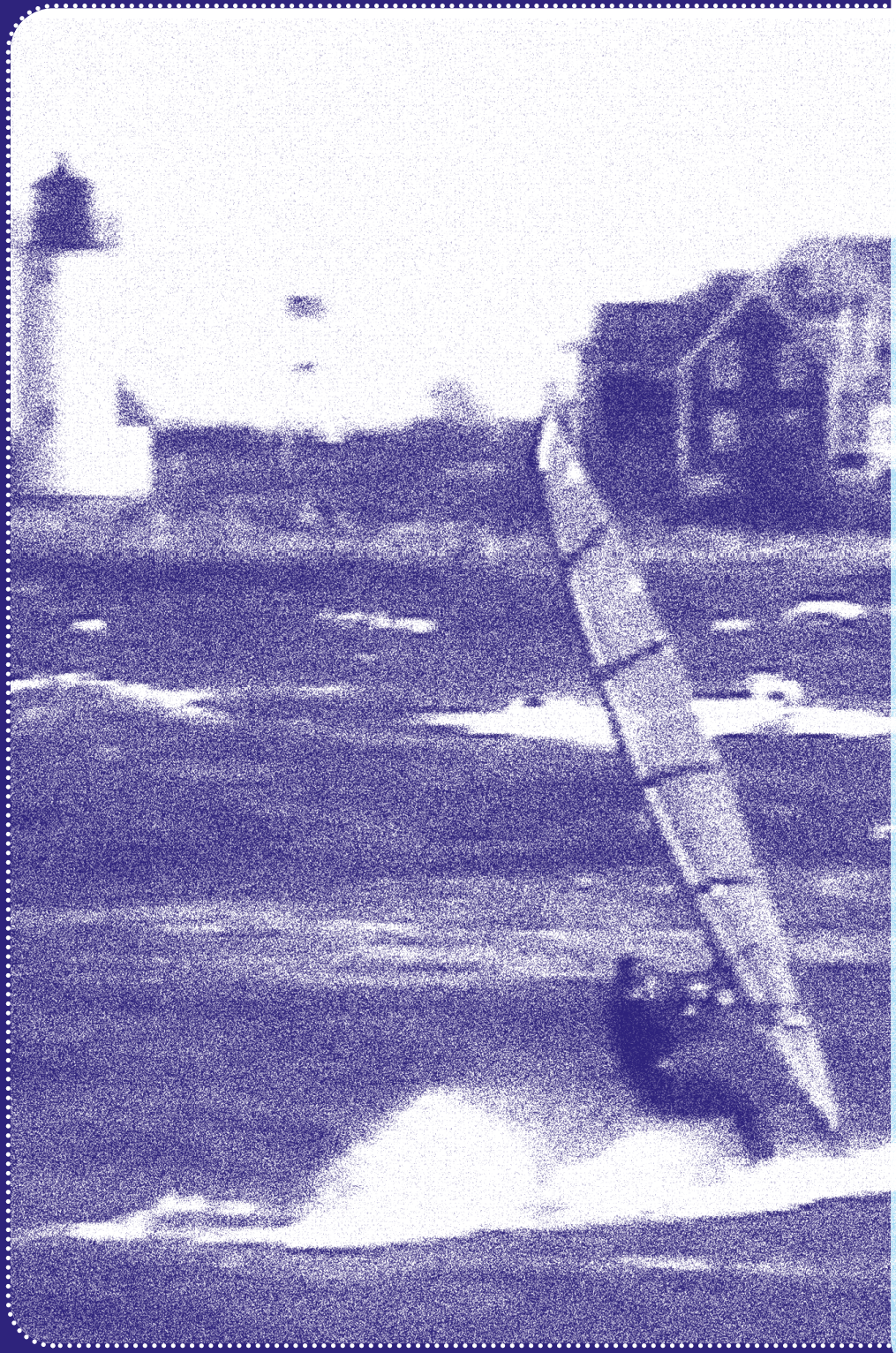


A Windsurfing Lexicon

5.0 Sail Day - A good day of wind; 18-22 knots; 5.0 refers to the size of the sail.

Beachstarting - Jumping on the board from shallow water with sail and mast already vertical.

Chop - Small waves.

Getting into the foot straps (on the board) - Exactly that, usually the last step when learning to sail; it helps to establish control and direction.

Hooking in - Getting your harness hooked into the harness lines on the boom, thereby using your weight rather than arms to hold the sail.

Hydroplane (planing) - When the board skims across the top of the water due to great speed.

Jibing - Changing direction and shifting the sail to the other side of the board by turning the tail of the board through the wind.

Juicy - Super windy; generally 25 knots or more with abundant white caps.

Longboard - An “old school” board that is extremely long and heavy, usually with a centerboard.

Nukin' - Nuclear wind; 35+ knots and the tops of white caps are blown off by the wind.

Rig - (noun) Mast, boom, mast-base, sail: essentially all of the equipment that attaches to the top of the board; (verb) the act of assembling and fitting the sail, mast, boom, etc. to the windsurfing board.

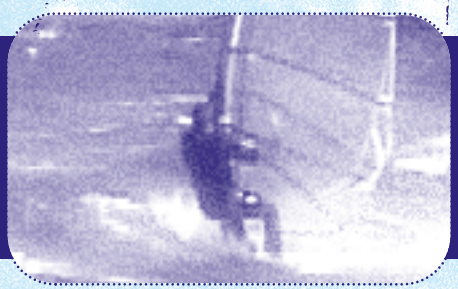
Shredding - Going FAST.

Slogging - When you are underpowered, going painfully slow, and the board sinks into the water.

Uphauling - Pulling the sail out of the water with a line (rope) that is tethered to where the boom meets the mast.

Waterstarting - Positioning yourself so that the wind pulls you and the sail up onto the board from the water.

It's Blowin' a Smoky Sou'Wester: Time to Rig!



By Betsy Rickards, CZM

It was a characteristically windy day in May of 1998 in the San Francisco Bay Area and I was standing on the shore of Coyote Point, an inlet of San Francisco Bay. Bracing myself against the 30-knot breeze, I listened to the rapid slapping noise of boards skimming across the water, while, one by one, windsurfers would sail full speed toward the beach, quickly carve a jibe, snap the sail, and fly off again into the distance.

I got a glimpse of my husband's rig, one of the many bright-colored sails on the water, creating an impressive wake and occasionally catching air on the intermittent chop. I saw men and women of all shapes and sizes, hooking into their harness straps, leaning back, and enjoying the ride. "Why aren't I out there?" I wondered to myself. I had been watching my husband windsurf throughout the year, traveling with him and all the requisite gear to various destinations around the San Francisco Bay area, watching his excitement build as we arrived at each wind-blown shore. Sometimes the shore was so wind blown that I found it more comfortable to watch from inside the car. It was during one of those car-bound moments that I decided I wasn't going to sit around and watch all the fun; I was going to learn how to windsurf.

Re-learn, actually. As a child growing up on Cape Cod, learning how to windsurf on the relic longboard was a given. My brothers and I spent countless back-breaking hours hauling up the sail, teetering for a few moments, only to fall backwards into the water and have the mast come crashing onto our heads. I didn't find it fun. So, I gave it up. My brothers, on the other hand, stuck with it. Soon they were using shorter boards, and flashier sails, and were water-starting rather than uphauling the sail. My husband, in his parallel world, obviously stuck with it too. A decade later, he was really good. And, I realized I wanted to be that good.

I started taking lessons from a Bay Area windsurfing outfit. It's amazing how a lesson from a professional with the right equipment can make a big difference. I emphasize lesson from a professional, because lessons from a spouse or significant other are a bad idea, even if said person considers him or her self a professional. Take it from me (and my brothers' spouses)—it's not worth the potential marital strife.

All Photos: Betsy Rickards

With these experienced professionals rooting me on and instilling me with confidence, I put a little more effort into uphauling that darn sail. I found that the sail wasn't quite as difficult to pull up; over the years equipment had come a long way in being more light, flexible, efficient, and fast. I managed to actually "sail" the board without much injury to my back and head. I will still caution new sailors that the learning curve can be rather steep in terms of the enjoyment factor. Carrying around big clunky boards, hunching over and pulling up the sail by a line, balancing oneself on a pathetically slow moving board, and most importantly, swallowing one's pride and looking like an amateur out on the water in a 0-5 knot breeze, are activities that require a lot of patience, vigor, and humble pie. The time and effort, not to mention willingness to look like a fool, does pay off, however, when you find yourself not just knowing, but living the lingo—beachstarting, waterstarting, hooking into the harness lines, and getting into the foot straps (see *A Windsurfer's Lexicon* page 32). Jibing on a short board has its own learning curve, the pinnacle of which I haven't yet reached. It will probably take me years, but that is the beauty (and challenge) of the sport.

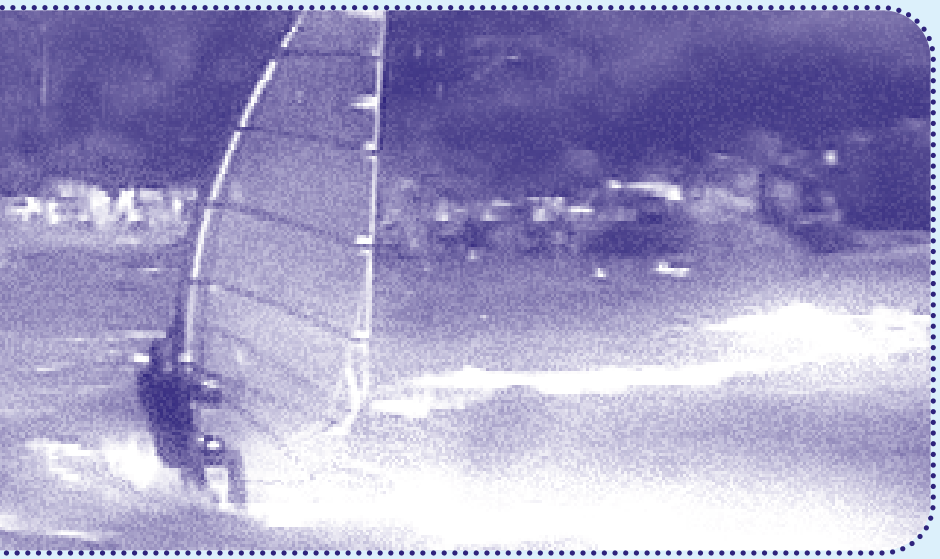
"Some say windsurfing is a dying sport, taken over by personal watercrafts and power boats, or ahem... kite-boarding. I say, there will always be people crazy enough to overcome the learning curve, the quantity of gear, and the elements to fulfill the windsurfing cause."

There is always something new to learn, or a technique to perfect, or crazier conditions in which to sail, making boredom an unlikely factor.

When you do finally "get it," you will no doubt feel that adrenaline rush when you suddenly find yourself hydroplaning across the water, efficiently harnessing the almighty power of the wind and ocean. Akin to that feeling of accomplishment you might get after a hard day out on the ski slopes, a few hours out on the water will give you that same triumphant buzz. And when the equipment's been put away, the thrill of reliving the day's sail and talking shop with other windsurfers is often just as energizing. Windsurfers love to talk about how juicy it was out on the water, what size sail they went out on, whether they were shredding it or slogging, and of course, what hot new gear needs to be purchased. These discussions are nearly a requirement if you are to be a regular within the windsurfing community.

Perhaps I am biased, but Cape Cod is still my preferred location for sailing in Massachusetts. The Nantucket Sound and Cape

Cod Bay waters are warmer, provide a steady wind, have less current, and the beaches tend to be a bit sandier for launching. Fortunately, no matter where you and your gear go, you don't have to worry about user conflicts over the beaches and the waters, because a really good wind (known as a 5.0 sail day)—and the sandblast that comes with it—isn't conducive to other beach and water activities. In addition, most of the prime windsurfing days happen to be in the spring and fall, when temperatures are low enough to trigger hibernation for most beachgoers.



*Chances are good this particular windsurfer knows how to **jibe**,✿ even while it's **nukin'**.✿*

✿See Lexicon, page 32.

Some say windsurfing is a dying sport, taken over by personal watercrafts and power boats, or ahem...kite-boarding. I say, there will always be people crazy enough to overcome the learning curve, the quantity of gear, and the elements to fulfill the windsurfing cause. And it's not too late to try. So, grab your wetsuit and your gusto, leave your pride behind, and get started! I hope to see you out on the water.

Getting Started *By Betsy Rickards, CZM*

Start by going to your local windsurfing shop and ask about lessons and equipment. Lessons are usually a package deal, with the professional and the gear provided at a set place and time.

Once you feel somewhat comfortable on your own, you can start by renting or even purchasing cheap used gear from a shop. You can also find some great deals through swaps or online. Start with the basics: a stable floaty board (one that doesn't sink under your weight), a small-size sail, a mast and base, a boom, and an uphaul line (or a harness if you are competent with water-starting). Don't forget that these New England waters tend to get a little chilly, so you might want to invest in a good wetsuit. Once you have gone pro, you will then need a quiver of sails, a bevy of boards, and a whole collection of fins. But you can worry about that later.

There are a number of windsurfing outfits that provide lessons, gear, accessories, and repairs in Boston and the Boston area. Check the yellow pages or do an online search to find one that meets your needs.

Good beginner launching sites will vary depending on wind, currents, and tides—always check the forecast or talk to your local shop before heading out. A few noteworthy sites are:

Cape Cod - Kalmus Beach in Hyannis; Old Silver Beach and Chapoquoit Beach on Buzzards Bay in North Falmouth; Chapin and Corporation Beaches in Dennis on Cape Cod Bay; West Dennis Beach on Nantucket Sound; Pleasant Bay in Orleans and Chatham.

North Shore - Niles Beach in Gloucester; Nahant Beach in Nahant; Devereux Beach in Marblehead.

South Shore - Powder Point in Duxbury.

A good online resource packed with information on gear, lessons, wind reports and forecasts, launching spots, and travel destinations is **iwindsurf.com**.

Take a Peep!

Birding the Massachusetts Coast

By Jan Smith, Massachusetts Bays Program

I started birding in Massachusetts when I was 11. I can't pinpoint exactly what it was that got me started—probably a combination of going to summer camp at a Massachusetts Audubon sanctuary, trying to complete work for a scouting merit badge on birds, and discovering in the process that I lived near to a coastal migrant trap where spring migrants from the tropics regularly landed in large numbers. For two years running, I plagued my parents for a pair of binoculars for Christmas before they finally relented. I had long since discarded my hula hoop and they feared that birding was just another fad. Little did any of us know that it would become a lifelong obsession.

Be it hobby or obsession, coastal Massachusetts has year-round opportunities for finding birds, which has contributed to the increasing popularity of this hobby.

Be it hobby or obsession, coastal Massachusetts has year-round opportunities for finding birds, which has contributed to the increasing popularity of this hobby. The spring and fall migrations of landbirds (i.e., birds that can perch) offer exciting chances for seeing a large number of species at almost any coastal location. Shorebird migration during the summer and early fall can be spectacular, especially in Newburyport Harbor and on Monomoy in Cape Cod, two internationally designated shorebird migration spots. Late fall and winter duck and seabird migrations also offer large numbers at times of the year when landbirds are scarce. For some "birders," it comes close to being a sport! Massachusetts Audubon Society even hosts a competition on a Sunday in late January that they call the "Superbowl" of birding to see who can see the most species in the area around Newburyport.

What makes the coastal areas so special? For arriving birds, particularly in the spring, it is the first bit of land that they see after a long migration during which they may have drifted out over the ocean because of upper level winds. The shore offers them a place to stop and rest and maybe eat a little before moving on. For other birds, the coast is the last bit of land where they can fatten up before migrating over the water.

Spring warbler migration is perhaps the most exciting event of the year for many birders. There are close to 30 possible species that can be seen in Massachusetts, and the majority are colorful. Most warblers spend the winter in the tropics and migrate back to Massachusetts in May, nearly always at night. After a long night of flying, they descend to look for land. Since they frequently overshoot their destination despite their internal navigation systems, they often have to head back, landing in large numbers on the nearest bit of land. That is why, in spring, when weather conditions are right (i.e., usually a warm southwest wind during the night that gets interrupted by a rain shower close to dawn), locations like Plum Island in

These birders can identify all of the birds on these pages. Are you up to the challenge?

[*From left to right: Black-Crowned Night-Heron, Least Tern, Scissor-Tailed Flycatcher, Tree Swallow, Towhee, Northern Flicker, Goldfinch, and Baltimore Oriole*]

All Bird Photos: Rob Kipp **www.bird-photos.com**

Newburyport, various points on Cape Ann, Marblehead Neck, Nahant, and even Provincetown can host large numbers of new arrivals. Similarly, in the fall, birds fly from their inland nesting areas, ride the northwest winds, and stop on the coast for one last feed before migrating onwards. In some cases, such as the Blackpoll Warbler, the trip will take them directly to the tropics. Any coastal thicket can serve as a layover spot before that flight.

More often than not, shore birds migrate up the Mississippi Valley in spring to their Arctic nesting grounds. Then, starting in late June, they begin their fall migration along the East Coast, which often takes them as far as the southern tip of South America. The prevailing northwest winds are a great aid in migration, so many arrive to fatten up along the tidal flats for a few weeks. They congregate in such large numbers in the Newburyport area and around Monomoy on Cape Cod that these sites have received international designation as areas important for shorebirds. Monomoy is a National Wildlife Refuge so access is limited, particularly during the nesting season, but the adjacent South Beach is open to pedestrians year round (except for small closures areas for breeding Piping Plovers—a state and federally protected species).

[*From top to bottom: Dunlin, Warbling Vireo, Common Tern*]

During late fall and winter nor'easters, when most people would rather be indoors sitting by the fire, birders often venture out to key spots along the coast hoping for a glimpse of seabirds, such as puffins, razorbills, and various seaducks. Andrew's Point in Rockport and First Encounter Beach in Eastham, as well as Race Point in Provincetown, are among the key look out points. Most of this viewing is done while sitting in a vehicle, often while struggling to find an angle that allows you to peer out an open window without getting too wet. The number of seabirds is often exciting. In the past I have seen thousands of Dovekies streaming in a nor'easter—particularly exciting as numbers like this have not been seen since 1976. A Sabine's Gull (an unusual Arctic gull that breeds in Alaska and other places with a high latitude, and winters near the tropics) sighting two years ago was an exciting find.

For some birders, it is rewarding to feed birds during the winter when the ones that stay around are most often stressed for food. There is a large choice of bird feeders and bird food to choose from, as well as heating coils that can ensure the availability of unfrozen water to drink. And this can all be enjoyed from the comfort inside one's home with a warm drink.

Enthusiasts have benefited greatly from advances in technology. Birders communicate their findings to others through an online service that allows others to show up often within minutes of a rare sighting. Cell phones allow more direct contacts. New field guides and new audio recordings have been a great help in advancing learning. So, whether you want to participate in the "Superbowl" of birding, or just learn about what's in your backyard, Massachusetts is full of opportunities.

[*From top to bottom: Young Great Horned Owl; Piping Plover*]

[*Catbird*]

[*Great Egret*]

[*Blackburnian Warbler*]

[*Green Heron*]

Getting Started *By Jan Smith, CZM*

As with any other hobby or sport, nothing beats first-hand experience. With birding, a good pair of binoculars helps, too. Massachusetts Audubon Society offers many activities for beginners to learn birds, as do a number of regional bird clubs. As an online resource, nothing beats www.massbird.org, which connects you not only to up-to-the-second bird sightings in Massachusetts, but also has a vast array of links to a wide variety of organizations, and answers to any question about birds or bird feeding that you could possibly have.

Birders can go out in any weather, at any time of year, in search of something exciting to see, although heavy rain, wind, and snow or fog can make it challenging. An easier way to see a variety of bird species is to set up a bird feeder, stock it well, and see what shows up. Years of experience has given us good information on where best to go to look for birds and what best to do if you want to attract specific birds to your property. The basic equipment that anyone needs to start is a pair of binoculars and a bird book. There are many sources of information for how to choose the best binoculars for your price range, and there are many field guides to choose from, including some specifically targeted for beginners, and some for experts.

So, starting is easy! Get out there and look and see what you find! The exciting thing is that you can really get pleasure from watching and learning about the common species and still have a chance of finding something rare.

[*Young Mallard*]

The Ibis's Watch

By Dawn Paul, New England Aquarium & Author of *Still River* [www.corvidpress.com]

The birds—glossy ibises—glided overhead, ink black against the early evening sky. They flew fast, out to a small, low island. The island is just off the coast of Magnolia, Massachusetts, close enough that we could see white specks we knew to be gulls, rising and settling among the rocks around its edge.

Photo: Ben Johnson

We had gathered just before dusk in the parking lot of the Coolidge Reservation and walked across the Ocean Lawn with our picnic baskets. There were about a dozen us, out on a July evening on an Audubon Society outing billed as "Dinner with the Herons." But the night offered us ibises instead.

The ibises looked like nothing of New England—their slim necks too fragile for a rugged coast, the graceful downward curve of their long bills too exotic. We knew them, even in the near-dark, by the way they carried their heads, slightly raised as though looking forward, taking no heed of anything below.

We sat on a granite outcrop high above the water. The ibises flew in from the west and northwest, from salt marshes and freshwater wetlands. They flew straight, necks outstretched, slender legs trailing behind, supple as reeds. They became aware of us, of our eyes locked upon them, and veered sharply then flew straight again. They flew low over the water, showed black for a moment against the rocks, then disappeared into the island itself.

Every night, from April into late summer, they make this flight. The island is called Kettle Island, though no one knows how it came to have that name. A woman whose family once owned the island says that long ago it was connected to the mainland via a stony spit that now extends from its northwest side. Early colonists drove their cattle across the narrow spit at low tide and pastured them there safe from marauders.

Now the island is completely cut off from the mainland. It has no fresh water except small pools left behind by storms. The island is bound by tough, spiny shrubs and poison ivy. Ibises, herons, and egrets roost there, safe from coyotes and foxes. Their nests and young are safe from weasels, raccoons, and skunks. Even the gulls keep their distance, perhaps deterred by the thick brush. Occasionally, a Great Horned Owl or hawk or even a young eagle might drop down. But for the most part, Kettle Island is a safe place, one of last remaining safe places for wading birds to roost for the night.

The birds that fly out each evening—Glossy Ibises, Little Blue Herons, Great egrets, Snowy Egrets, Little Green Herons, Great Blue Herons—seem rare, though some of them are quite numerous these days. It is their beauty that is rare. There are few things left in this world as beautiful as the birds that fly by us in the gathering dusk to sleep on Kettle Island.

As night comes on, a breeze springs up, and we pull tight the collars of our jackets and sweaters. More Glossy Ibises fly over, still veering off, leery of the watchers below. Though we are harmless, rooted to the rock, our necks bent back like wind-pruned trees. We begin to drift across the lawn behind us, still looking at the sky, grateful at having shared a small part of lives as daily yet intricate as our own.

If you go:

You can view Kettle Island and the flights of ibises and herons from Coolidge Reservation, *a Trustees of Reservations property in Manchester-by-the-Sea. Park in The Trustees' parking lot on Summer Street (Route 127) and walk along a wooded path to the magnificent Ocean Lawn and rocky headlands at the sea's edge. Kettle Island, one of the most important heron rookeries in Massachusetts, is owned by the Massachusetts Audubon Society.*

Sunbathing * * *

By Arden Miller, CZM

WHILE "SUNBATHING" ISN'T AS ACTIVE A VERB AS SAY "KAYAKING" OR "SAILING," IT DOES REQUIRE SOME EXERTION OF ENERGY—AND IT'S AS GOOD A REASON AS ANY TO GO TO THE BEACH.

Goose Rocks Beach, circa 1970—me (right) and my brother, covered in Sea&Ski, on a summer's beach-weather day.

Someone told me that the air near the beach is charged with negative ions that naturally make humans feel grounded. And what better way to feel grounded than to literally be grounded? As in lying on a beach, listening to the surf sounds, and absorbing a little Vitamin D.

Before I knew the meaning of ozone or global warming—back when deodorant came in a Freon-infested can and Al Gore had not yet begun his political career—having a tan was equated with looking healthy. And for many, myself included, the beach is synonymous with summertime. As a child, portions of most summers were spent on the coast of Maine. Sea&Ski was the suntan lotion of choice and, if I could find some, I'm sure the scent would bring back the feeling of sand under my toes and Herring Gulls squawking overhead at Goose Rocks Beach in Maine. In those pre-teen days, I spent most of my beach time in the water—swimming or floating until I was tired, then finding a piece of rockweed on the way to the shore, and pretending it was a dragon's tail as I dragged it behind me.

During my teens, I graduated to *Bain de Soleil* ("...for the Saint Tropez tan...") suntan oil with an SPF of maybe 4, and overlooked how the orange tint would stain my towel because I loved the way it smelled. In those days, I spent less time in the water, and more time just relaxing on my orange-tinted towel. The ultimate summer afternoon for me was a cloudless one, spent at the beach with my portable radio.

Now, in my older, wiser, sun-damage aware years, I am covered from head to toe with Coppertone SFP 15 when I go to the beach. I love the whole process of settling into the sand—arranging the towel so it's facing towards the sun *just so*, securing its edges with shoes, the radio, and the cooler. Once settled, people watching is exercise enough. (Best done in the company of others—*"What a cute suit!" "Wow—someone loves their 'Sun-In'..." "I didn't know they made Speedos that small..."*) There is something universal about "going to the beach"—regardless of age or place, or sunscreen preference, the union of sun, sand, and water spells out summertime like nothing else can.

BIKING COASTAL TRAILS

As Budget and Grants Manager for the Massachusetts Office of Coastal Zone Management (CZM), most of my work days are filled with numbers and reports, a job that doesn't get me out of the office very often. To counterbalance all the time I spend indoors at my desk, in my spare time I'm an avid cyclist. During the 6 years that I've been cycling, I've found some great coastal routes. The rides detailed in this article don't require any special type of bike—road, mountain, or hybrid will all do the job!—and they will take you through the towns of Amesbury, Newburyport, Newbury, Rowley, and Ipswich along the Powow and Merrimack Rivers and long stretches of the Great Marsh, and by parks and reservations, including Deer Island, Parker River National Wildlife Refuge, and Crane Beach.

All Photos: Chris Garby

Break for the birds at the Parker River National Wildlife Refuge! Serious birders may want to bring their binoculars.

Amesbury/Newburyport - Parker River National Wildlife Refuge

Total approximate mileage roundtrip: 21 miles

Best suited for: beginners, families

Please note: The section between the Powow Bikeway & downtown Newburyport can be tricky so please take extra caution crossing Route 110 and the area around Chain Bridge in Newburyport.

Head's up! No, wait...down! A bridge over the Powow River bikeway in Amesbury.

This trip begins on the Powow Riverwalk & Bikeway in Amesbury, directly adjacent to the Water Street Municipal Parking area (free parking). This 1.3-mile paved trail follows the route of the old Boston & Maine Railroad, connecting Amesbury's historic Market Square to the Carriagetown Marketplace. Starting across from the parking lot, the trail follows the Powow River, a tributary of the Merrimack River, and briefly winds around some local businesses.

After 1.3 miles, take a right at the first road crossing and use extreme caution when crossing Route 110. You are now on Rocky Hill Road and you want to go straight for 0.2 miles and then take a left onto Main Street in Amesbury. Ride for about a mile until the first stop sign, then take a right and follow this over Chain Bridge into Newburyport. One feature to note, immediately before the bridge on the left is Deer Island, a small park and salt marsh. Use caution when crossing Chain Bridge (in fact it's best to walk your bike over the bridge on the sidewalk). Take a left at the tricky four-way intersection onto Merrimac Street and follow this for about 2 miles into the center of Newburyport. This is a great chance to stop for a coffee or a snack.

From the center of Newburyport, follow State Street from Market Square up to Route 1A and take a left. There is a designated bike lane on 1A, follow this for about 1 mile and take a left on Rolfes Lane. Follow this to the end and take a left onto the Plum Island Turnpike and travel approximately 2 miles, crossing a steel-grated bridge (I recommend walking your bike over this) to Plum Island.

The road to Plum Island has a designated bike lane, making travel safer for bikers. Take the first right onto Sunset Drive and travel 0.5 miles to the refuge entrance. Parker River is, in my opinion, an excellent place to bike—definitely one of the highlights of this trip. Bring your binoculars along as the Refuge is a great place to see an array of wildlife (especially birds) in a variety of habitats. There is an entrance fee so check the Refuge's website at www.fws.gov/northeast/parkerriver for all the details. The route is flat, fast, and paved for 3.5 miles

One of the many winding creeks in the Great Marsh.

to the Wildcat Observation Area Parking Lot. When making this trip, be aware that on days when the winds kicks up, bike travel time can increase. After the Observation Area, I would only recommend the last 3 miles for travel via mountain bike. From here, you can return to Amesbury the way you came, or-if you're looking for a longer ride—continue on to Ipswich.

Newbury/Rowley/Ipswich - Crane Beach

Total approximate mileage roundtrip from Parker River National Wildlife Refuge to Crane Beach: 35 miles

Best suited for: more experienced riders

From the entrance station at the Refuge, roll out back to the Plum Island Turnpike and, after 2.5 miles, take a left onto Ocean Avenue. A half mile or so will bring you to Route 1A—take a left here at the lights. Route 1A is a great bike route that winds through the picturesque North Shore towns of Newbury, Rowley, and Ipswich, crossing over the Rowley River and past long stretches of the Great Marsh (which just happens to be the largest salt marsh in New England and home to a variety of bird and plant life).

Travel along 1A south (eventually 1A south/133 East) for 10.5 miles, enjoying the scenic views of salt marshes and Plum Island Sound, eventually making your way into the town of Ipswich. Continue on 1A south through the center of Ipswich, bearing right shortly after crossing over Choate Bridge (said to be the oldest stone arch bridge in America, it was repaired after the spring storms of 2006).

Roll 'em out - The start of the Powow River Bikeway.

Getting Started *By Christopher Garby, CZM*

Bike maps/guides

- Rubel Maps, PO Box 401035, Cambridge, MA 02140: **www.rubelmaps.com**
- *Coastal Trails Coalition Guidebook: Coastal Trails: 10 Self-Guided Trails for Hiking, Biking, and Paddling:* **www.coastaltrails.org**
- MassBike: Massachusetts Bicycle Coalition - A great resource and advocacy group for cycling in Massachusetts: **www.massbike.org**

Park and Reservation Websites

- Parker River National Wildlife Refuge: **www.fws.gov/northeast/parkerriver**
- The Trustees of the Reservation (Crane Beach, Hamlin Reservation): **www.thetrustees.org**
- Coastal Trails Coalition: **www.coastaltrails.org**

Safety Guidelines - "Rules of the Road"

- Ride single file, on the right with traffic.
- Give a clear signal when passing.
- Obey all traffic signals and signs.
- Always wear a helmet.
- Make a quick check of your bike before you go:
  - Tires inflated properly? - Most flats can be avoided by inflating your tires properly.
  - Wheels spin freely and true?
  - Brakes work?
- Have the necessary repair tools:
  - Allen Wrenches—usually in a set.
  - Tube repair kit or replacement tube.
  - Air pump and/or CO_2 container.
  - Small chain tool.

The Powow Riverwalk & Bikeway Project map showing different bike trails at the visitor center's entrance.

After 0.4 miles, take a quick left onto Argilla Road—you are now on the way to Crane Beach. You can pedal the 4.6 miles directly to the beach, or take advantage of a couple of stops along the way. Just after mile 1.9 on Argilla Road, you'll pass Hamlin Reservation on your left. Run by The Trustees of Reservations, entrance is free and there is a one mile loop trail for hiking and mountain biking. At 2.3 miles you will pass an apple orchard on the right—a great place to stop for break, especially when apples are in season! And now, fortified with fruit (if you're lucky), you're just a couple of miles from the beach. (Please be aware that there is an entrance fee at Crane Beach—see www.thetrustees.org/pages/294_crane_beach.cfm for fees, restrictions, and other information.) Return the way you came to Parker River National Wildlife Refuge.

*We're not saying you **should** bring your fishing pole on your bike, just that you **could**... (View outside of the Crane Beach entrance).*

I biked these routes in September of 2006 and was reminded of everything I love about cycling along the coast—cool autumn days and flat, fast stretches of road bordered by great ocean views.

These routes are a small portion of the great riding found on the Massachusetts seacoast—so get out and explore!

Relaxing

No Water Needed: Fun Under the Sun

By Arden Miller, CZM

Want the sea, sun, and sand, or some combination thereof, without getting wet? In addition to the multitude of recreational activities available along and within the Atlantic Ocean, the Massachusetts coast is host to a number of activities that don't involve breaking a sweat (well, unless it's really hot out), or donning a bathing suit. So, for those who like to keep their feet firmly planted on *terra firma*, or for those looking to stay dry while experiencing some outdoor coastal activities, you're in luck…

During the spring, several coastal towns pay homage to their fishing roots with "Blessing of the Fleet" celebrations. Born of the Portuguese and Italian traditions dating back to the 1500s, a special Mass is given to Saint Peter, patron saint of fishermen, and fishing boats are decorated and blessed to garner protection from storms, and ensure the safe return of their captain and crew. And, what better way to thank St. Peter for his past powers and celebrate the sea's bounty than to have an outdoor festival for fishermen, their families, friends, and well wishers?

Since the 1920s, Gloucester has been home to the St. Peter's Fiesta. Held in June, the celebration and blessing extends over several days and includes a well-attended and nationally known homegrown tradition called the Greasy Pole Event. Call them brave, call them crazy, call them both, but each year more contestants clamor for the chance to attempt to capture a flag placed at the end of a greased telephone pole that hangs horizontally over the harbor. There is a lot of yelling and clapping and, yes, people do fall off the pole and into the harbor regularly! Watching this event in the early evening, when the sun's still strong in the sky, surrounded by traditional Italian foods, outdoor music, warm weather, and cold drinks spells the beginning of summer for many residents and visitors.

No greased poles, but no less festive, is the annual Portuguese Festival that takes place in Provincetown. Modeled after Gloucester's celebration, this event has been luring locals and visitors with the delicious smells of Portuguese foods since 1947. After the Mass to Saint Peter is given, a procession of fishermen

Activity Ideas *By Arden Miller, CZM*

Blessing of the Fleet

New Bedford: Held annually on the Fourth of July weekend
More info: Chamber of Commerce (508) 999-5231

Provincetown: June 2-24
www.provincetownportuguesefestival.com

Gloucester: June 2-July 1
www.stpetersfiesta.org

Fourth of July Celebrations

Most coastal towns with a harbor in Massachusetts host a fireworks display on or around July 4. Check with the Chamber of Commerce in the town you're interested in for specifics.

Castles (and more) Made of Sand

Beverly has an annual Labor Day "end of summer" sandcastle contest
(978) 922-2934
www.beverlyfarms.org/calendar/month.php

Ispwich The nationally renowned "Sandblast!" is held every August on Crane Beach (photo, right).
(978) 356-4351 (events posted quarterly)
www.thetrustees.org/pages/123_events_search.cfm

Mashpee South Cape Beach held annually in July
(508) 477-0792
www.ci.mashpee.ma.us/pages/mashpeeMA_leisure/spring/events

Nantucket Jetties Beach August 18, 2007
www.nantucketchamber.org

Winthrop "Sandcastle Festival & Family Day" at Yirrell Beach (617) 846-9898

and their families carry banners with their boat's name to MacMillan Pier. The often lavishly decorated boats await them in the pier and are blessed. And then it's time to sample traditional Portuguese dishes including kale soup and linguissa while watching traditional Portuguese music and dance performances.

If greasy Portuguese sausage and greased poles aren't your thing, Rockport has a Midsummer Fest where residents of Scandinavian descent dress in native costume and perform live music and maypole dancing. Food and fresh fruit are available, and the event, which begins at noon on June 20, is free.

And, if you can't get enough of coastal Massachusetts, and like the word "free," grab your favourite English ale and toast America's independence from England at any number of coastal spots. Start times and volume of explosives vary, but on the Fourth of July from Ipswich to

HAVING A (SAND) BLAST
AT THE ANNUAL TRUSTEES OF RESERVATIONS SAND CASTLE COMPETITION

BLAST OFF! 4TH OF JULY FIRE WORKS OVER GLOUCESTER HARBOR.

Salem, Nahant to Hingham, Plymouth to Provincetown, the night sky lights up with fireworks more colorful than the British Army's Red Coats.

And down at ground level, there's plenty more to see. Massachusetts is host to a number of sand castle competitions (amateurs and spectators welcome!). While "sand castle" doesn't adequately describe all of the entries—depending on the year, you might see everything from an 8-foot gargoyle to a recreation of the Pirates of the Caribbean set—there are plenty of sculptures to make you realize these aren't your childhood sand sculptures. Or…are they?

While the professionals gathered at Revere Beach in 2006 to compete for $10,000 in prize money, there were a number of coastal towns that hosted sand castle competitions for the non-professionals. Many have annual sand castle contests that are open to the public, for both participation and viewing. And view them while you can, for come high tide, it's time to say good-bye.

Sandblast Photo: K. McMahon, The Trustees of Reservations; **4th of July in Gloucester:** NOAA

Seaside Sitting & Eating

By Peter Hanlon,
Massachusetts Bays Program

Man, you people are busy—sailing and fishing and playing water polo or whatever it is you do at the beach. The coast doesn't always demand your sweat and energy. Please, come have a seat. Enjoy a sandwich. Doesn't that feel nice? Sometimes the magical combination of sitting and eating outside (or "picnicking") is the best way to appreciate the ocean. Practice your looking skills on a bench at a rocky point with a ham-on-rye and a friend. You'll be amazed how *"Hmm, lots of seagulls on that island..."* becomes an acceptable conversation starter...

A few suggested destinations:

Halibut Point, Rockport - A state park that encompasses an old granite quarry at the very tip of Cape Ann. Enjoy several short trails that lead to rocky ledges, offering uninterrupted views of the coast from Crane Beach up through the New Hampshire seacoast. Look east and consider how beyond the horizon is Portugal, where a serving of *arroz de marisco* could be ordered. Wouldn't a delicious seafood and rice meal complement this spectacular view? Mmm.

Fort Sewall, Marblehead - An historic fort that offers spectacular views of Marblehead Harbor and the islands of Salem Sound. One can sit on a bench or spread a blanket out on the grassy field where continental soldiers once enjoyed some hearty stews. Perhaps you could splurge and bring a cup of delectable New England-style clam chowder? Yes, sir.

Stephens Field, Plymouth - Located near Plymouth Center and right next to Plymouth Harbor, Stephens Field provides the picnic benches, seasonal farmers market, and little league baseball. Still harbor waters to the east, abundant American history to the north, a delicious hot dog in hand, and little Timmy hitting one out of the park—my God, I love a picnic.

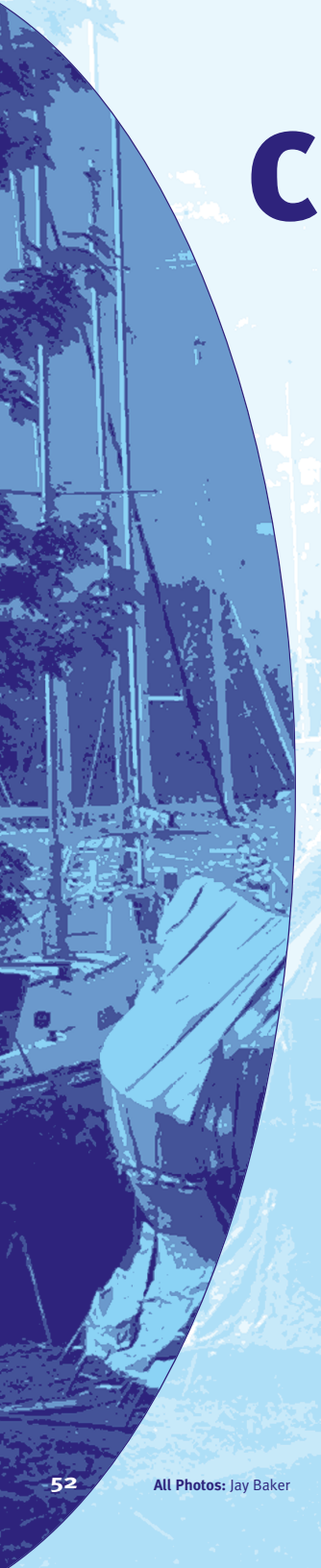
Demarest Lloyd State Park, Dartmouth - Surround yourself with marsh, 1,800 feet of sandy beach perfection, and warm, shallow Buzzards Bay water as you take a seat on the rambling hills of beach grass. Look around and marvel at the number of egrets, herons, and terns as they hunt for small fish in the salt marsh. Glad you remembered to pack that leftover striper and couscous? You bet.

These are just four possible locations where you can savor the sights and sounds of the sea while sitting and eating. But the possibilities for exploration are endless—all you need is a sandwich (or soup in an insulated container, unless you'd rather a simple cheese and cracker snack... of course a lightly-seasoned chicken with salad can be a real hit) and a seat (benches are good, as is just sitting on the ground, but be sure to bring a blanket because you wouldn't want to get grass stains, and don't forget a cushion if you plan on sitting on rocks). So get out there!

Photo (left): Cathleen Carr; **Photo (right):** CZM Archives

Ebb & Flow

Photo: Claire Enterline



Clean Boating in the Commonwealth

By Robin Lacey, CZM

What could be better than boating on a hot summer day?

Whether you're sailing a catboat across Pleasant Bay, casting for blues from a Whaler off Race Point, or exploring the Great Marsh on a small skiff, boating not only frees you from the traffic and crowded beaches, it connects you with our natural environment. Clean water—free of debris, pathogens, and pollutants—and healthy coastal habitats are important to the best possible boating in the Bay State.

It All Adds Up

So many routine activities—like driving the car, fertilizing the lawn, even walking the family dog—can leave behind contaminants that are washed into rivers, streams, and oceans when it rains. "Nonpoint source pollution" is the technical term for this runoff contamination. The combined impacts of these countless small sources add up to significant pollution problems. In fact, with the tremendous advances in reducing industrial discharges, improving sewage treatment, and reducing other "point" sources of pollution, nonpoint source pollution is now the number one pollution problem affecting U.S. coastal waters.

While most of this pollution comes from the land, boating and boat maintenance can also introduce a number of harmful pollutants to coastal waters. For example, paints, solvents, oil and gasoline, and other hazardous materials generated through boat operation and maintenance can be toxic to humans and marine life. In addition, sewage released by boaters contains bacteria that can make people sick and contaminate shellfish resources.

To avoid the release of these pollutants to the water please:

- **Use Safe Fueling Practices** - Always use an absorbent cloth or pad when fueling to catch small drips. Avoid spills and do not top off your tank. Fill portable tanks on shore. Notify the marina or the Coast Guard if you cause a spill—it's the law-(800) 424-8802.
- **Keep Engines Well-Maintained** - Proper maintenance prevents leaks, keeps the engine clean, and allows you to spot oil and gas leaks more easily. Dispose of used oil properly.
- **Use Bilge Socks** - Keep an oil-absorbent pad in your bilge. Monitor and change regularly. Never discharge your untreated bilge water directly into coastal waters.
- **Use Pumpouts** - Properly disposing of boat sewage at a pumpout station keeps coastal water clean. For a list of pumpouts in Massachusetts, call the nearest marina or harbormaster, or contact CZM at (617) 626-1200. When docked, use shoreside restrooms.
- **Observe NDAs** - Discharge of treated or untreated sewage in the Commonwealth's No Discharge Areas (NDA) is not allowed. Contact CZM for the locations of NDAs in Massachusetts.
- **Don't Clean Boat Bottoms in the Water** - Boat paints contain harmful components including metals, solvents, and dies, which may be released to the water during cleaning. Never clean your boat bottom when it is in the water, and take precautions to prevent paint residue from washing into coastal waters.

All Photos: Jay Baker

- **Use Less Toxic Cleaning Products** - When you need to use detergents, always use those that are biodegradable. (Even biodegradable soaps and detergents contain substances that can be harmful to marine life, so use all soaps and cleaners sparingly-a little extra "elbow grease" can go a long way!)
- **Keep Trash Out of the Water** - Do not toss trash overboard-store it securely onboard and dispose of it when you return to land. Take particular care to properly dispose of nylon fishing line. In the water, it can entangle fish, wildlife, swimmers, and boat propellers.
- **Buy a Clean Outboard** - Today's 4-stroke and Direct Fuel Injection 2-stroke outboard engines are substantially cleaner than traditional engines, reducing fuel costs for the boater and protecting the environment.

"Tread Lightly" on the Sea

Boats allow people to explore areas where improper boating practices can cause environmental harm. Operating a vessel in shallow waters, for example, can do severe damage to eelgrass beds, which are the nursing grounds for many important fish species. Because eelgrass is hidden just below the surface, boat propellers can tear up and uproot the plants. This is of particular concern since eelgrass habitat has dramatically decreased statewide. Boat traffic can also impact salt marshes, which provide flood control and critical habitat for fish, migratory birds, and other wildlife. Because salt marshes naturally form in low-energy environments away from wave action, they are particularly susceptible to erosion from waves created by boat wakes.

To avoid physical impacts to the coastal habitats, please remember to:

- **Observe "No Wake" Zones** - Lower speeds are required for a reason—for safety and to protect sensitive shorelines.
- **Avoid Boating in Shallow Waters** - Be aware of the environmental damage caused by boating in shallow waters, particularly to eelgrass. If you can't avoid eelgrass beds, then go slow!

Stop the Invasion!

Help prevent your boat from becoming an invasive species carrier. Invasive species are non-native plants and animals that negatively impact aquatic ecosystems and related activities—including boating. Invasive plants, like water chestnut (*Trapa natans*) and Codium (*Codium fragile*), can grow so densely that they make waterbodies less attractive for boating, fishing, and swimming. Introduced animals such as the invasive sea squirt, *Didemnum*, can dramatically alter coastal habitats.

Fortunately, these relatively small changes can have big benefits in stopping the spread of invasive species:

- **Discard Plants** - Remove plant debris from your boat when you take it out of the water. Dispose of plant debris in the trash.
- **Check the Hull** - Inspect your hull and remove any attached organisms.
- **Keep that Bait** - Never release unused bait into the water.

Clean Boating for All

These are only a sampling of the important things that boaters can do to protect the environment. The small, extra efforts and expenses required to practice clean boating will help preserve a healthy and safe boating environment for now and the future of recreational boating. Enjoy!

Resources

Massachusetts Pumpouts -
www.mass.gov/czm/potoc.htm (updated annually).

No Discharge Areas in Massachusetts - www.mass.gov/czm/nda.htm.

Environmentally Friendly Boat Engines -
www.mass.gov/czm/boatenginesfs.htm.

CZM's Boat and Beach Web Page - www.mass.gov/czm/boatandbeach.htm.

CZM's Aquatic Invasive Species Program Website -
www.mass.gov/czm/invasives/index.htm.

Marinas of the Merrimack River (far left, above right) in Newburyport, Massachusetts.

Adaptive Management for Impacts to Eelgrass Habitat in Gloucester Harbor

By Anthony R. Wilbur and Kathryn Glenn, CZM, and Brandy M.M. Wilbur, MIT Sea Grant

The city of Gloucester's wastewater improvement project involved the dredging of approximately a half acre of eelgrass habitat in Gloucester Harbor to locate a viable combined sewer overflow (CSO) through Pavilion Beach. While the CSO construction will improve water quality in Gloucester Harbor, the intentional removal of eelgrass habitat was a concern. Eelgrass, *Zostera marina*, is an underwater marine plant that creates one of the most valuable shallow water habitats in Massachusetts. Eelgrass habitat supports an abundant diversity of marine life, stabilizes seafloor sediments and adjacent shorelines, helps maintain water quality, and is a critical component of the marine food web. However, the population of eelgrass is severely diminished from historic levels, and continues to steadily decline throughout its range along the Atlantic coast, including Massachusetts waters.

Art or eelgrass? A lone blade of eelgrass (background) practices the dead man's float underwater.

The Massachusetts Office of Coastal Zone Management (CZM) partnered with the Massachusetts Institute of Technology (MIT) Sea Grant College Program, city of Gloucester, Gloucester Maritime Heritage Center, Massachusetts Division of Marine Fisheries (DMF), and U.S. Environmental Protection Agency to develop a creative response to the planned impacts to the eelgrass bed. The goal of this initiative was to save eelgrass in the project area and raise awareness of eelgrass habitat. Partners combined their resources and expertise to:

(1) Facilitate ongoing eelgrass restoration in Boston Harbor.

(2) Study and develop methodology to store eelgrass for future restoration.

(3) Support local research and education programs.

(4) Develop interpretative information on eelgrass habitat and the CSO project.

Two community events were organized to harvest plants in the area that was to be impacted by the CSO project, both of which required substantial coordination between project partners and volunteers.

First, in early August 2006, approximately 8,000 eelgrass shoots were harvested from Pavilion Beach to supplement DMF's ongoing restoration program in Boston Harbor. Eelgrass shoots are typically collected from "donor" beds to transplant to Boston Harbor. Transplanting plants from Pavilion Beach eliminated the need for harvesting at the donor bed for this restoration effort and saved eelgrass from Gloucester that would have ultimately been destroyed. The Gloucester project involved a team of divers harvesting eelgrass in the CSO project impact area and transferring the eelgrass to shore, where it was then sorted and counted by volunteers in preparation for transportation to Boston Harbor. DMF divers planted the eelgrass in Boston Harbor the following day.

The second event was organized with the goal of creating an eelgrass bank at the Gloucester Maritime Heritage Center (GMHC). To create this new eelgrass bank, project partners researched methods to store and grow eelgrass and constructed infrastructure to maintain the plants. Engineers and scientists worked together on design and logistics of a hydroponic (no substrate) raft system and a flow-through outdoor tank to hold eelgrass shoots. (See photo, far right.)

The raft and tank systems were populated with an additional 8,000 shoots harvested from the CSO project impact area at the end of September, 2006. Eelgrass was weaved into the raft, which was secured between two piers, and planted in the tank at GMHC. Interpretative information was developed to explain the project and is displayed at GMHC and Pavilion Beach to continuously educate the interested public about eelgrass habitat.

Photo: Brandy M.M. Wilbur

The hands-on experience for students and citizens provided real-life application of science and resource management and demonstrated the value of eelgrass habitat to the ocean environment. Students identified creatures found in eelgrass during the field events and continue to help the project by researching the ecology of eelgrass in recirculating aquarium systems within their classrooms.

Survival and growth of eelgrass are being monitored in the tank and raft by scientists from collaborating agencies. Eelgrass that survives the winter in these experimental systems will be transplanted back to the impacted area at Pavilion Beach and to other potential restoration sites in the Annisquam River. This study will help determine the feasibility of creating an eelgrass bank. Maintaining the eelgrass bank offers the opportunity to restore eelgrass habitat at Pavilion Beach with eelgrass harvested before the CSO dredging, ultimately saving this valuable resource that otherwise would be removed from Gloucester Harbor.

This project has been successful thanks to the collaboration of many partners and active public involvement. Students and teachers from regional schools, government (city, state, and federal) and non-government organization staff, and volunteers all played valuable roles. The activity on Pavilion Beach also attracted the attention of bystanders and the local newspaper, the *Gloucester Times*. By teaming up to save the eelgrass at Pavilion Beach, project partners demonstrated the advantage of creative, adaptive, and cooperative efforts to manage coastal resources. The interest to protect this important plant unified all of the partners. Impacts to eelgrass, particularly direct removal, are typically avoided because of the dire population status and ecological value of eelgrass. While much work is needed to save and restore eelgrass in Massachusetts, partners realized the opportunity to turn a less than ideal situation into a valuable lesson in environmental education and resource management.

For more information...

Pavilion Beach, Gloucester
www.gloucestertimes.com/local/local_story_199064415
www.gloucestertimes.com/local/local_story_271094024

DMF's Boston Harbor Eelgrass Restoration Project
www.mass.gov/dfwele/dmf/programsandprojects/hubline/eelgrass.htm

MIT Sea Grant's Eelgrass Stewardship Project
seagrantdev.mit.edu/eelgrass

City of Gloucester
www.ci.gloucester.ma.us

From left to right:

Volunteers carry eelgrass that will be used in the transplant.

Sorting and bundling the Pavilion Beach eelgrass harvest.

The eelgrass was transported to divers via boat.

Underwater view of the raft. Kinda like a Chia Pet base for eelgrass.

Photos of Volunteers in Action: Kathryn Glenn; **Underwater Eelgrass:** Eddie Baker

THE **WORKHORSE** OF THE WATERWAYS

By Marcie B. Bilinski

Since 2002, Marcie B. Bilinski has served as one of two representatives from the sport diving community on the Massachusetts Board of Underwater Archaeological Resources. She is an avid technical diver who logs more than 200 dives annually in the waters of Massachusetts and is a true shipwreck enthusiast.

Tugboat, right, typical of the type used during the heyday of the Baleen. *For more than 200 years, tugboats have been an important part of maritime history, and a steady presence in Boston Harbor. Today, experienced divers can explore the* Baleen *170 feet below the harbor's surface.*

As you stroll along the waterfront or go cruising out in the harbor, it is certainly an ordinary, every day occurrence to spot a tugboat somewhere within your sights. However, it is not so ordinary to experience the adventure one has while exploring a tugboat resting 170 feet below the surface.

Whether it is a harbor, coastal, or ocean-going tug, maneuvering skills are the mainstay of these vessels, which abound in Massachusetts waters. Towing, pushing, or steering the many barges and ships entering and exiting the Bay State's ports is how tugs earn their keep.

Tugboats are quite strong for their size, which is why they have become known as the workhorse of the waterways. Today, diesel engines provide their power—though in earlier times, steam engines did the job. For safety purposes, the engines in tugboats, often the same as those used in railroad engines, have duplicates of each critical part built in for redundancy. The most common seagoing tugboat is a "standard type" that tows its payload on a hawser (i.e., a heavy-duty wire or fiber rope). There are also "notch tugs," which are secured in a notch at the stern of a specially designed barge. Additionally, there are "integrated units" in which the tugboat is locked together with specially designed vessels.

Regardless of their type, tugboats have always been commonplace above the surface in Boston Harbor. And, thanks to divers discovering the *Baleen* in 1994, visiting tugboats below the surface is now possible, too. Today the *Baleen* rests 170 feet beneath the surface, well beyond the "recreational" limits of scuba (130 feet is the maximum depth recognized by the customary certifying agencies), but nonetheless, she is one of my favorites to visit and I'd like to share the journey with you.

It has been said that if you can dive in New England you can dive anywhere in the world, and a good

day of scuba diving in the Boston Harbor area is any day you come back alive. I prefer to think of a good day in this area as any day with calm seas and good visibility. However, more common are days spent in rough seas "Braille" diving; in other words, very little to no visibility so all we can do is feel our way along the wreck.

One day last fall, our four-person team set out to explore the *Baleen*. It was a great day by scuba-diving standards. The day was warm and sunny, and the seas were calm like glass. There was virtually no current and the visibility was about 40 feet, which is above average for the Boston Harbor area. After gearing up topside in our long johns, dry suits, hoods, gloves, and boots to protect against the warm 38-degree temperatures, we then donned the rest of our equipment. It would be an understatement to say that technical diving in the deeper waters is an equipment-intensive sport. We rely on double-steel tanks on our backs, decompression bottles under our arms, lights, regulators, buoyancy-control devices, masks, fins, computers, and other redundant equipment too excessive to mention. Imagine all this just to make possible a view of the water-world below. Entering the water wearing close to 200 extra pounds provides a respite from hauling our heavy gear as we become weightless below the surface. We slowly descend our anchor line to the wreck site, and being such a great day, the *Baleen* begins to take shape as we near 130 feet. We land on the wheelhouse at 150 feet, double check that the anchor line from our boat above is securely attached to the shipwreck, and then off we go to explore the splendor and times gone by as it comes to life in front of us.

The *Baleen*, built in 1923, was first named the *John E. Meyer*, a 102-foot long steel hull tugboat with a 23-foot beam. She was an innovative vessel for her time, built with a triple expansion steam engine and also equipped with a steam powered towing winch on the stern. After more than 40 years of service in the fresh water of the Great Lakes for numerous owners, she was sold again. This time it was in the late 1960s, and after some rebuild work, she was put into service off the coast of Florida. As she changed owners she also changed names until in 1969 she was given her final name, *Baleen*. After being sold for the last time, she was put back into service towing barges between New York and various New England ports.

On October 29, 1975, she left New York towing an oil barge. The next day, about 2 miles off the coast of Cape Cod, a fire broke out on the *Baleen*. After the crew unsuccessfully tried to extinguish the fire, they finally had to abandon ship. Fortunately, the Coast Guard was able to rescue the entire crew and there was no loss of life. The fire was finally extinguished the following day and the slow job of towing her to Boston began. Unfortunately, while under tow in the early morning hours on November 1, 1975, she started taking on more water, riding lower and lower until she finally gave up and sank to her watery grave where she lies today.

Today, the *Baleen* rests intact and upright with just a slight starboard list. Over the years she has amassed a whole forest of strikingly beautiful anemones depicting every color of the rainbow. Although quite a bit of silt has accumulated over the years, the wreck can be penetrated in the wheelhouse and engine room. Entrapment in monofilament and gillnets left behind by fishing vessels enjoying the bounty on this man-made habitat are a serious danger to divers, aside from the apparent dangers of wreck penetration and decompression diving. But when you behold the

sight of the *Baleen*, glimmering in the water through the ambient light on a good day, it becomes quite the extraordinary experience.

Non-divers can also see the nostalgia of tugboat history right in Boston's backyard. The *Luna*, a National Historic Landmark, resides on the east side of Commonwealth Pier in South Boston and depicts some more of our local tugboat history. Designed in 1930 by the naval architecture firm John G. Alden Company, the *Luna* was the first of her class built for commercial use. She was a classic wooden-hulled tugboat, more than 90 feet in length, and one of the last of her kind built. She worked out of Boston Harbor for Boston Tow Boat Company from 1930 to 1971. The *Luna* was built with a diesel-electric drive system, which was innovative as it allowed the *Luna* to tow or push barges with great ease in maneuverability. The *Luna* became both an office and a residence after retiring in 1971, but sank in the Charles River in 1992 where she remained for more than a year before being raised and restored. Tours are now available and can be arranged through the Luna Preservation Society volunteers. For further information call (617) 282-1941 or visit the tug's website at www.tugboatluna.org.

Everything, including the kitchen sink (top), and a flounder (left), is 170 feet under Boston Harbor's surface on the sunken remains of the Baleen.

Marcie, in 250 lbs. of diving gear,prepares to explore the Baleen.

Photos Courtesy of: Marcie Bilinski

Science

Codium Up, Eelgrass Down: Invasives Impact Buzzards Bay

By Dr. Joe Costa, Buzzards Bay Program

During the winter and spring of 2006, Wareham town officials and residents noticed an alarming accumulation of the green algae commonly called dead man's fingers at Little Harbor Beach on Great Neck. The alga, whose scientific name is *Codium fragile*, is an introduced species that was first reported on the eastern coast of the United States in New York in 1957. By 1961, it had spread to Buzzards Bays, Massachusetts (scientists believe it is primarily transported from site to site on the hulls of ships) and has been found in abundance offshore of the Little Harbor Beach area for at least the past 20 years.

Codium fragile is anything but fragile. This robust, sponge-like alga, often grows in bushy shapes about two-feet wide and can crowd out and shade other plants and algae. The disruption to native plant life is bad enough on its own, but worse yet, at least to those who rely on shellfish for their livelihood, *Codium* kills shellfish. By growing on shells, *Codium* causes the shellfish to be smothered (it is sometimes nicknamed the oyster thief) or pulled from the bottom and washed ashore. Whelks, slipper shells, and bay scallops attached to *Codium* are commonly found along the shore of Buzzards Bay. The accumulation of dead shellfish in *Codium* wrack (i.e., the piles of seaweed and other vegetation brought ashore by waves and tides) is one of the main reasons why this beach wrack smells stronger and attracts more flies than the native eelgrass beach wrack.

The Wareham *Codium* problem persisted through the spring and summer of 2006. Wareham Department of Public Works (DPW) Director, Mark Gifford, reported that the dense wrack was a nuisance to both beachgoers and the DPW, which has had to haul away truckload after truckload of the odious decomposing *Codium*. One resident complained that after a 10-day hiatus of the DPW cleaning the beach in July, the *Codium* wrack had accumulated up to two feet in thickness, and beachgoers had to clear paths through the stranded *Codium* to access the water.

The accumulation of *Codium* on Little Harbor Beach was really just the tip of the iceberg of some broader problems facing upper Buzzards Bay. While there was a dramatic accumulation of *Codium* in 2006, the continued loss of eelgrass in northern Buzzards Bay began nearly 20 years ago.

Eelgrass beds are an important habitat and nursery for fish, crustaceans, shellfish, and birds. Between the 1960s to mid-1980s, eelgrass was abundant and widespread in Wareham's waters. (Buzzards Bay was the site of the first systematic survey of eelgrass distribution in Massachusetts; and you can view these maps at www.buzzardsbay.org/eelgrass.htm). In fact, the amount of eelgrass washing ashore in the 1980s prompted the town of Wareham to purchase a vehicle to clean beach wrack off Little Harbor Beach during the summer beach season. This south-facing beach sits in a funnel of land facing the prevailing southwest summer winds, and is a place where beach wrack naturally gravitates.

However, within a decade, the town hardly needed to clean eelgrass wrack off the beach. At the time, the change seemed a mystery. But looking back, the reason for this change is now clear—most of the eelgrass in Wareham's water had died off. The Massachusetts Department of Environmental Protection (MassDEP) later documented this loss when they began a statewide survey of eelgrass cover using aerial photographs taken in 1996.

Eelgrass Loss and Coastal Eutrophication

It is well documented that excessive nitrogen loading (i.e., large amounts of nitrogen introduced into the environment primarily through fertilizers and fossil-fuel burning) is one of the most common causes of eelgrass loss in coastal waters. Inorganic nitrogen promotes excessive algal growth in the water and on the seafloor, decreasing water transparency in a process called eutrophication, which shades out eelgrass. In some areas, declines

...the scope of the pollution problem in Wareham's waters became evident when the Buzzards Bay National Estuary Program (NEP) began nitrogen-loading assessments and the citizen group, The Coalition for Buzzards Bay, documented fair-to-poor water quality throughout Wareham's three large river systems...

There's more where that came from... Mere hours after the Codium *wrack had been cleaned off of Little Harbor Beach on Great Neck, more* Codium *washes up on the shore.*

may be exacerbated when sediment is resuspended from boat activity, or from localized outbreaks of disease.

The initial observations of eelgrass loss off Great Neck in the 1990s was perplexing because this was an area of supposedly cleaner "offshore" waters where eutrophication losses were generally not observed. However, the scope of the pollution problem in Wareham's waters became evident when the Buzzards Bay National Estuary Program (NEP) began nitrogen-loading assessments and the citizen group, The Coalition for Buzzards Bay, documented fair-to-poor water quality throughout Wareham's three large river systems (the Weweantic, Wankinko, and Agawam). These river watersheds are impacted by many sources of nitrogen including the Wareham sewage treatment facility, numerous septic systems, and extensive cranberry bogs. It was then that researchers began to realize a possible cause for the widespread water quality decline offshore.

In February 2006, MassDEP released its eelgrass maps for Buzzards Bay based on mid-June 2001 aerial photographs and additional field surveys. These surveys, and other aerial images that the Buzzards Bay NEP has examined, confirm the persistent loss of eelgrass in Wareham. What likely occurred is that eelgrass was growing close to the maximum depth that it could grow off Great Neck, given existing water clarity. In such a situation, even small declines in water quality and transparency can cause large losses of eelgrass.

These events, however, do not explain why *Codium* was so abundant in 2006. The waters off Great Neck were a good habitat for both *Codium* and eelgrass. *Codium* needs less light than eelgrass to grow. It also grows well in nutrient-enriched waters, but, unlike eelgrass, it must attach to a hard substrate. It happens that the shoals off Great Neck have few large rocks, but they do have many gravels, stacks of slipper shell snails, and other shellfish. *Codium* attaches to all of these, but when it grows too large for these lightweight supports, it pulls off the bottom and washes ashore.

In the summer of 2005, because of heavy summer rains, The Coalition for Buzzards Bay recorded some of the worst water quality in their program's 14-year history. It is possible that the heavy rains increased nutrient levels in the waters of Great Neck, which may have boosted *Codium* production and contributed to the massive accumulation washing ashore. Heavy spring and summer rains during 2006 may have further exacerbated the problem.

All Photos: Dr. Joe Costa

Silver Lining, and More Questions

In 1998, based in part on the Buzzards Bay NEP nitrogen loading findings and recommendations, the U.S. Environmental Protection Agency (EPA) required tertiary treatment to remove nitrogen at the Wareham wastewater facility. While treating this discharge alone would not fully restore water quality in the estuary, the upgrade of the facility was expected to result in measurable improvements in water quality in the Wareham River. The Town of Wareham completed the facility upgrade in late 2005 and it came online in the spring of 2006. The EPA permit requires that the facility discharge no more than four parts per million (ppm) total nitrogen during marine algae's fastest growing season of March to October (down from an estimated 15 to 20 ppm total nitrogen). For the 2006 season, the facility discharged an average of 3.2 ppm.

This sewage facility upgrade, together with the ongoing expansion of sewering in Wareham villages, such as Rose Point and Swifts Beach, are expected to improve water quality in the next few years. Improvements could continue as another 800 coastal homes are tied in over the next two or three years. Experiences elsewhere give reason to be optimistic. When the City of New Bedford upgraded its wastewater facility in the 1990s and fixed failing Combined Sewer Overflows, within five years there was a great expansion of eelgrass in the outer harbor and in Clarks Cove. Elsewhere in the United States, wastewater facility upgrades have often been associated with recovery of seagrasses. If the summer of 2007 has an average rainfall, it is possible that eelgrass populations may begin recovering in Wareham's waters. *Codium*, on the other hand, is here to stay—although the unanswered scientific question remains as to whether recovered eelgrass beds would help exclude *Codium* from Wareham's subtidal real estate.

Codium fragile *is actually rather hardy.*

Above: Little Harbor Beach area is littered with lots of it, and has been wracked with this problem since the late 1980s.

Left: The enemy up close.

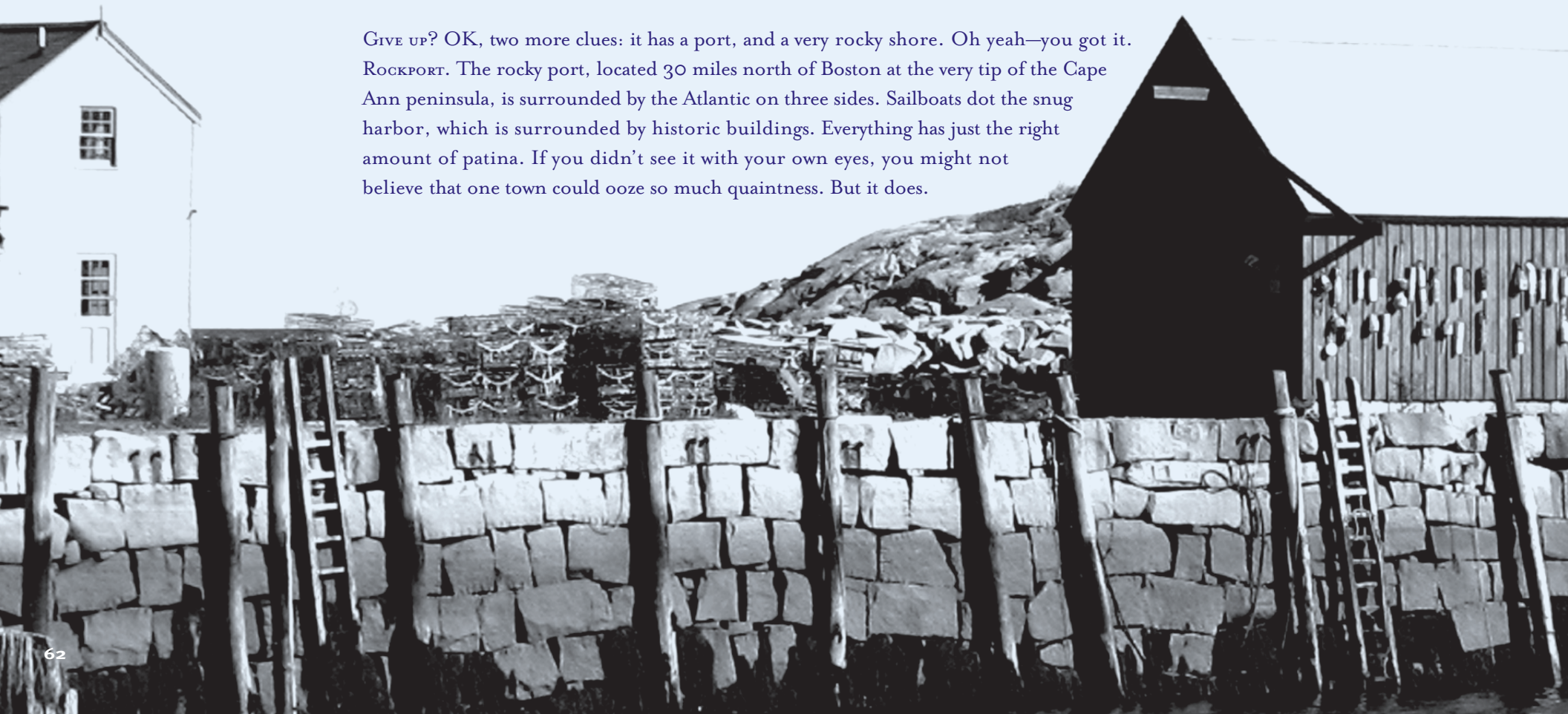
Focus on Coastal Towns:

What's Rocky and Quaint and Painted All Over?

By Arden Miller, CZM

Winslow Homer painted there. Mermaids, *staring Cher, Winnona Ryder, and Christina Ricci, was filmed there. And it's rumored that the remaining band members of the Grateful Dead summer there. It's perhaps best known for its spectacular views and special light—a light of such magical quality that many artists and would-be artists have vacationed or settled there in hopes of capturing it in their art. And this place has inspired a lot of art. In fact, the red fishing shack on Bearskin Point is believed to be one of the most painted buildings in the world! (For more on the red shack, see Not That Quaint Little Shack Again? page 63.) And the oldest continuously active artist colony in America calls this place home.*

Give up? OK, two more clues: it has a port, and a very rocky shore. Oh yeah—you got it. Rockport. The rocky port, located 30 miles north of Boston at the very tip of the Cape Ann peninsula, is surrounded by the Atlantic on three sides. Sailboats dot the snug harbor, which is surrounded by historic buildings. Everything has just the right amount of patina. If you didn't see it with your own eyes, you might not believe that one town could ooze so much quaintness. But it does.



Not that Quaint Little Fishing Shack Again?

By Arden Miller, CZM

According to Rockport Sketch Book author John L. Cooley, illustrator, painter, printmaker, and etcher Lester Hornby (1882-1956) spent winters teaching art in Paris, and summers teaching art in Rockport. Time and time again, when told to paint or sketch an inanimate object, his students chose the red fishing shack at the end of Bradly Wharf. At some point, after seeing hundreds of renderings of the shack, his saturation point was reached. The unsuspecting student presented his drawing of the popular building only to be met with an incredulous "What? Motif Number 1 again??"

Motif Number 1, as a moniker for the post-Civil War building, stuck and when the building all but disappeared in the wake of the Blizzard of '78, some wished it to stay away forever. But those with "No more Motif No. 1!" bumper stickers were overruled, and the oft-depicted structure was rebuilt. Motif No. 1 (the second), now a long-established icon whose replica won first prize in the American Legion Convention parade held in Chicago in 1933, even came to represent the entire state of Massachusetts for the U.S. Postal Service's "Greetings from America" series in 2002.

Love it or hate it, it's here to stay. See it for yourself—sketchpad and camera optional.

All Photos: Claire Enterline; **Stamp:** Courtesy of the U.S. Postal Service, copyright 2002

Like many Massachusetts coastal towns, Rockport was a fishing village before it became a painter's dry-brush dream. Thanks to its solid granite foundation and proximity to tier one fishing grounds, a dock was built in the early 1700s and mariners from all over the world have been taking advantage of it ever since. Also adding to the early economic development of Rockport were the granite quarries—the first in the states—and the timber industry (pine, in particular, was used for shipbuilding). Rockport was settled with a potpourri of people throughout the 1800s. Fins and Swedes with stone-working expertise migrated to the area to work with the granite, while others—notably the French, Italian, and German—made a living by fishing and foresting.

Located directly next to Gloucester, and long thought of as a less-inhabited area of Gloucester, it wasn't until 1840 that Rockport became a separate town. Today, it has a distinct identity as a residential town that approximately 7,000 lobstermen, fishermen, artists and those who love them—or are married to them—call home. And, whether or not you ever come to call it home, it's at least worth a visit.

Even if you're not a fan of cute New England towns and gorgeous light, there's a lot to do and see in Rockport. When it comes to recreation, Rockport packs a lot into its 17.6 miles of land and sea. There are beaches for swimming, sailing, and kayaking (for the sporty types) and deep-sea fishing tours on charter boats for those who want to try to catch their dinner, and plenty of restaurants for those who don't.

One of the unique things about Rockport, besides the much acclaimed light, is that it remains a working port.

Even under a sky full of clouds, Rockport's magical light manages to shine through.

Amateur and professional photographers will be impressed by the number of Kodak moments to capture. There's of course the aforementioned "Motif No. 1," as well as Straitsmouth Island Lighthouse, the beach, the harbor, sea-weathered boats and houses, and, on a clear day at Halibut Point, views of Mount Agamenticus in Maine, and the Isles of Shoals.

And when you've had enough of nature, there's plenty to see in town. There's a house made entirely of paper known by its oh-so-literal name, The Paper House, the historic Sewall-Scripture House (which contains a large collection of paintings done by deceased Cape Ann artists), and the Rockport Art Association's two historical buildings containing seven art galleries. If that's not enough art for you, there are 20+ art galleries in town—art for show and for sale. And, when you need the kind of quick pick-me-up that only pure sugar can give you, step into Tuck's Candy—a Main Street staple since 1929 with enough homemade truffles, peanut butter cups, candy bark, toffees, and chocolates to make Veruca Salt salivate.

If candy isn't enough to sustain you, there are local restaurants to suit most tastes (especially if fresh seafood is your taste). Of note to those who like historic buildings, Rockport is home to Cape Ann's only grand hotel and, historic hotel buff or not, you can dine in their Grand Café, which sits a mere 50 yards from the ocean. And a mere three quarters of a mile out in the ocean, the historic twin lighthouses of Thacher Island stand 160 feet above the sea—tours and binoculars optional.

Paper houses, granite ledges, magic light, historic lighthouses, candy, lobster, and views for days—if any of this sounds interesting to you, Rockport could be your perfect daycation.

Things to do and see...

General

www.rockportusa.com
Lots of general information, and links to other Rockport-related activities and attractions.

Art, Food, & History

Grand Café at Emerson Inn by the Sea One Cathedral Avenue
(978) 546-9500
www.emersoninnbythesea.com

The Paper House
52 Pigeon Hill Street
www.paperhouserockport.com

Rockport Art Association
12 Main Street
www.rockportartassn.org

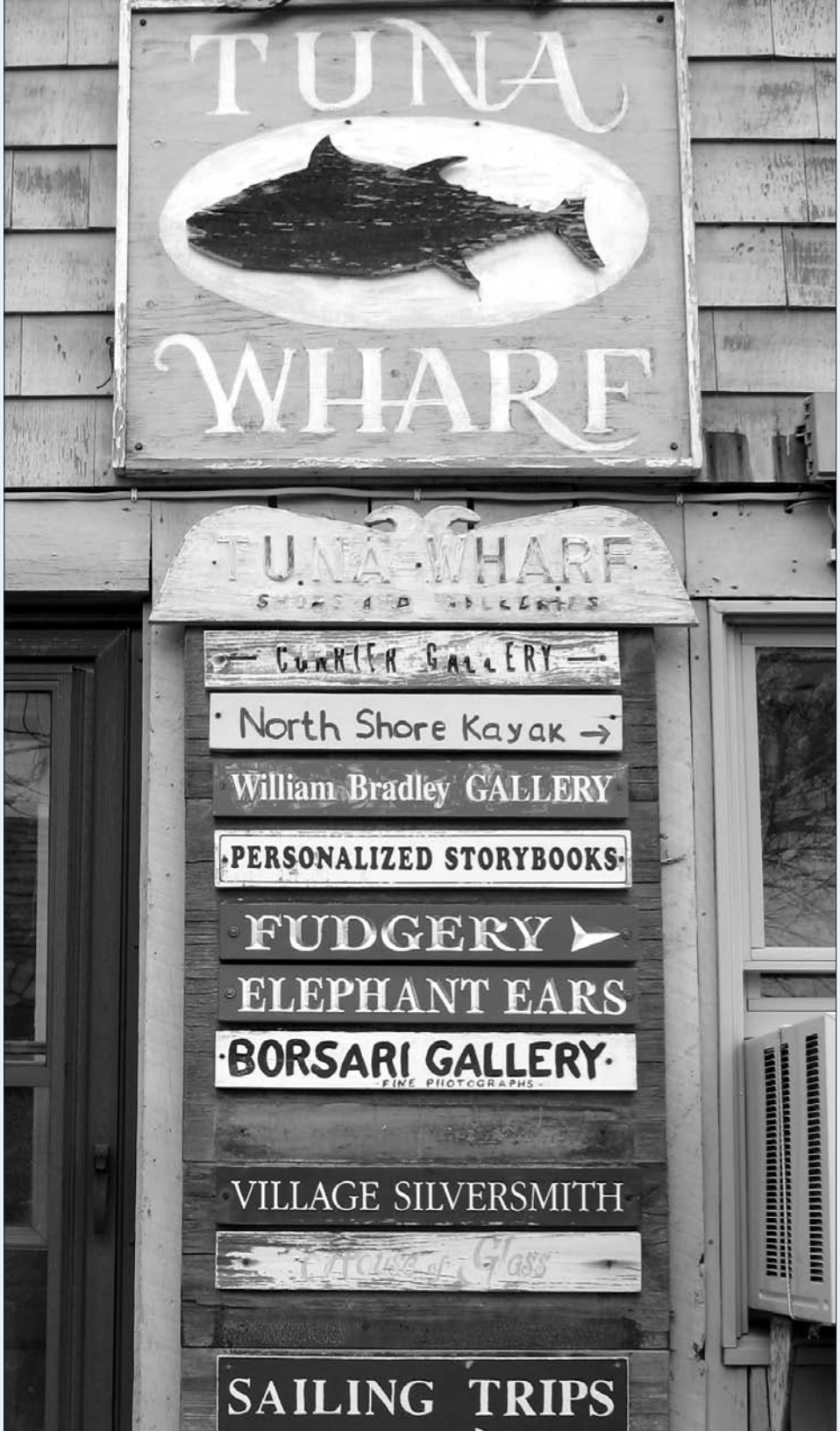
Sewall-Scripture House
40 King Street
www.sandybayhistorical.org

Ice cream, art, historic houses, museums, fresh seafood, a picturesque harbor, homemade fudge, and coastal recreational opportunities galore—Rockport's truly got something for just about everyone.

Recreation & Outdoor Interests

Halibut State Park
Gott Avenue
www.mass.gov/dcr/parks/northeast/halb.htm

Thacher Island
www.thacherisland.org



Here's Stormy

By Peter Hanlon, Massachusetts Bays Program

A recent survey indicated that only 22 percent of Americans know that runoff from streets, lawns, farms, etc. is the most significant source of pollution in the country.* That's not good. To bridge this knowledge gap a few concerned organizations hired a 15-foot tall inflatable yellow duck named Stormy. This is his story.

*National Environmental Education & Training Foundation (NEETF)

Okay, so this story is a little bigger than big Stormy. A creative outreach campaign was launched in the summer of 2006 called *"Think Again. Think Blue."* to let people know about the runoff pollution problem, in particular runoff that enters Massachusetts waterways though stormwater systems. Those grated openings on local roads do not lead to sewers where water is cleaned of pollutants, rather the vast majority are entrances to a system of pipes that lead directly to the nearest waterbody. That means that any pollutants on the ground, from dripping auto oil to cigarette butts to dog waste to fertilizer, are whisked away by rainfall to a stormwater system and, from there, they head straight to nearby rivers, beaches, and bays without being treated.

But back to the ducks. Stormwater pollution is a complex and elusive problem, so staff from the Massachusetts Bays Program (MBP) and Massachusetts Bays Estuary Association (MBEA) took note of a successful stormwater education program called Think Blue San Diego. The San Diego program used witty messages targeted to specific audiences and behaviors, and extensive surveys found that their

THINK AGAIN. THINK BLUE.

This plastic duck is more than just a pretty blow up doll; Stormy is part of an outreach program that is educating people about stormwater runoff, and how to best deal with pollution.

Photo: Peter J. Hanlon

Think Again. Think Blue. *These ads are part of the Think Blue Coalition's outreach campaign. If you think they're funny, try taking the online quiz.* **(www.ThinkBlueMA.org)**

strategy was making an impact. Particularly effective was a television public service announcement called "Fowl Water" that showed oil drippings, cigarettes, and pet waste on the ground turning into little rubber ducks. The ducks then flowed into storm drains where they joined dozens, and then thousands, of other rubber ducks gushing out of an outfall pipe on the beach to illustrate the cumulative effects of stormwater pollution. The MBP and MBEA were smitten with the idea of creating an entire campaign based around the ducks and, along with an advisory group called the Think Blue Coalition (representing more than 25 different Massachusetts organizations, agencies, and businesses), created a series of messages and materials using the duck as a central theme.

In a little more than a year and a half, the campaign has:

- *Conducted an extensive telephone survey among residents of the Massachusetts Bays watershed to better understand the target audience.*
- *Developed three unique ads focusing on pet waste, cigarette litter, and fertilizer use.*
- *Placed the three ads on 18 MBTA subway station platforms.*
- *Customized the "Fowl Water" television spot (created by San Diego) for Massachusetts.*
- *Developed an interactive website (www.ThinkBlueMA.org) with more in-depth information about stormwater pollution, what individuals can do to help, and opportunities to view campaign materials such as the ads and public service announcement.*
- *Created an interactive exhibit for community events with Think Blue materials and promotional items and games for kids.*

The highlight of the Think Blue exhibit is the 15-foot tall inflatable duck, Stormy, who never fails to attract hordes of curious children and adults wherever he goes. Over the course of several events during the summer of 2006, Stormy attracted approximately 10,000 people to the Think Blue exhibit to learn about the causes of and solutions to stormwater pollution. Not bad for a duck.

Ask Joe

By Arden Miller, CZM

Since 1980, Joe has been involved in a variety of coastal issues through his work at the Massachusetts Office of Coastal Zone Management (CZM). In addition, he serves as the liaison between the Executive Office of Energy and Environmental Affairs (EOEEA) and the Massachusetts Emergency Management Agency (MEMA). To escape these weighty responsibilities, he spends most of his free time sailing, scuba diving, and generally enjoying life in coastal Massachusetts.

Of all the coastal recreation activities you do in and around Massachusetts, which is your favorite?

I'd have to say sailing. When I'm on my sailboat, I can fish or scuba dive off the boat, or just relax. One of my favorite things to do on a nice Sunday is pick up the Boston Globe and some Chinese food. My wife and I will sometimes spend the whole day just reading the paper on the boat. I'm very spoiled—I have two moorings, one by Winter Island, and one by Misery Island in Salem, which is better known as "cocktail cove." Nice place to watch the other boats go by and see the sun set. Very relaxing.

With increased numbers of people taking up ocean-related hobbies, is there enough space for everyone?

Yes—it's all a matter of timing. I mean, if you want a prime parking spot at the beach on July 4, or you're trying to dock in a popular port on a busy summer weekend, you may be disappointed. But, if you want to take a beach walk in the middle of December, chances are good that you'll have the whole beach to yourself.

What's the most extreme weather situation you've ever experienced while sailing?

Well, I wasn't sailing exactly. I was relaxing in cocktail cove in the late afternoon of June 27, 2003, with my wife when my MEMA pager went off, warning of a severe storm in Essex County. We started tying everything up when, less than 10 minutes later, we saw lightning strike nearby and felt 50 mile-per-hour winds. There was a power boat that was moored next to us and it was thrashing back and forth, coming dangerously close to hitting our boat. We were hunkered down, helpless, praying as the boat swished back and forth. It was all over in less than 15 minutes. But it was a very scary 15 minutes.

Any advice for people thinking of visiting the Massachusetts coast?

Come! No matter what you like to do, you're likely to find something that interests you. There are plenty of places to go boating, fishing, and swimming. And lots of places to walk along the beach and look for sea glass, or watch the sun set. It sounds like a cliché, but there really is something for everyone here.

AN ELABORATE ENTRY FROM SANDBLAST 2006.

Special thanks to the professional photographers who let us use their photos:

Lindsey Buchlietner (photo of Susan Snow-Cotter, page i) **www.lindseybuchleitner.com**

Rob Kipp (cover, lighthouse above, and bird photos on pages 36-40) **www.bird-photos.com**

K. McMahon/The Trustees of Reservations (all "Sandblast" photos)

FOR MORE ON COASTAL MASSACHUSETTS ACTIVITIES:

www.mass.gov/czm/boatandbeach.htm

www.mass.gov/czm/coastguide/index.htm

www.mass.gov/dcr/forparks.htm

www.mass.gov/dfwele/dfw/dfwrec.htm

www.massvacation.com

www.masstraveljournal.com/fun/beach.html

www.bostonharborwalk.com/thingstodo