



Friends of Taunton Bay

Newsletter

No. 38

Keeping an eye on the bay

Fall 2009

Discover Taunton Bay Summer Camp for Children

By Beverly Johnston

Summer Family & Children's Project Director

A first time-ever four day environmental camp was held July 27- July 30, 2009 at the Taunton Bay Education Center for children in grades K- 6 who live or summer in the Taunton Bay area. Two days were for students in grades kindergarten through third and two days were for students in grades four through six. The purpose of the camp was to give our local children, the future stewards of the Bay, hands-on experiences with the flora and fauna of the area in a fun, yet educational, way. The program was funded by a

grant from the Maine Community Foundation which also supported much-appreciated and well-used new materials purchased for the children's area.

Each day, a touch tank was provided which was well-received by all of the campers. Monday's program included a lively session on the seaweeds of Taunton Bay along with music and dance provided by Carl Karush of Hancock and Maine Coast Sea Vegetables. The staff followed this up with a seaweed print art project. We thank Shep Erhart for providing a variety of sea vegetable products for our campers.

Tuesday's session was an introduction, for the older students, to the horseshoe crabs that are



Summer Camp Children and Staff learn about seals from MERI's Martha Bell. No, that's not a live seal at TBEC.



Photo by Beverly Johnston

Five summer campers "armed" with touch tank starfish.

found in Taunton Bay, followed by an art session with Jane Snider, artist and local teacher, from Milbridge. The students did a torn paper art activity and began the painting of an ocean scene on hen clam shells as well as doing some research on the flora and fauna found in the touch tank.

Wednesday, all students were invited to attend the MERI program on seals and whales presented by Martha Bell and helpers. All of the campers got to participate in some real hands-on activities about seal blubber, handle whale baleen, and measure the length of a variety of whales found in Maine ocean waters. This was followed up by a seal art activity and the completion of previous art projects. A mural for the TBEC was created and will be matted and framed by Ms. Snider and presented to the center soon.

Thursday was our final camp day, and Beth Bisson of the Maine Sea Grant program from the University of Maine helped our older students do a shore search for invasive plant species and also to identify as many live sea species as possible. The students returned to the center for further exploration with microscopes and identification books. It was an outstanding day and experience for these children, as were all of the special events provided our campers.

Many thanks must be given to the dedicated

volunteers who assisted with this program, especially Joanne Brown, who helped set up for the camp (and the family events) and provided her science expertise to our campers. The camp would not have been as successful without the help of Mary Turner, Irene Obermann, Johanna Bazzolo and Sylvia Gillette. Special thanks to Heath and Lee Hudson for providing the touch tank creatures, as well. Doug Kimmel deserves praise for his grant-writing skills and support of this project.

We were delighted with the enthusiastic participation of our campers, parents, and volunteers alike. Participation grew as the week went on with camper numbers varying from 7-14. We were pleased to have a number of home-schooled children participate, as well. It was surely a success for the Taunton Bay Education Center.



Photo by Steve Perrin

Spring Ice Break-up in Taunton Bay from Steve Perrin's talk on The Seasons of Taunton Bay.

Family Fun Events at Taunton Bay Education Center

By Beverly Johnston

Two Family Fun Events were held at the Taunton Bay Education Center this summer. The first, held on Saturday, June 27, introduced the newly set-up Children's Area funded by a grant from Maine Community Foundation. Though sparsely attended, the outdoor touch tank provided by Heath Hudson was a big hit with the children and adults who attended. An arts and crafts table enabled young and old to create charming woven paper fish or to use one's own imagina-

tion to create a unique one-of-a-kind remembrance of the event. Outdoors, Frank Dorsey displayed a kayak, a canoe and a dinghy and demonstrated knot-tying to the attendees. Refreshments were enjoyed by all.

On Saturday, July 25, a second Family Fun Event was held in conjunction with the Hancock Woman's Club Chicken Barbecue and the Hancock Historical Society's Open House. Nearly 50 people attended and enjoyed the live owls from Birdsacre and presentation by their handler, Grayson Richmond. Again, a touch tank of local sea creatures and sea weed varieties was widely used and Frank Dorsey again displayed boats and knot-tying with much success. The arts and crafts area had material for making a choice of owl puppets and there were puzzles, videos, and ocean computer games for our younger visitors. Refreshments were provided. Many positive comments were heard and appreciated. It was a wonderfully successful day.

2009 Eelgrass Overflight

By Steve Perrin

Finally, a beautiful day with no rain, clear blue skies, and no wind! And best of all, low tide at 9:00 a.m. I'd been waiting a month to get in the air to photograph eelgrass beds in Taunton Bay, and had had to cancel every flight I'd scheduled due to bad weather. On the morning of Thursday, July 9, my luck turned. Eric Vroom, my pilot with Maine Coastal Flight Center, and I took off from Hancock County Airport at 08:40 and were over Tidal Falls ten minutes later. In the next fifteen minutes I took 126 photos, and we were back on the runway half-an-hour after takeoff, annual mission accomplished.

My flight plan included making eight loops around areas where I've been keeping track of eelgrass growth since 1992. Because the cost of flight time has risen over the years from \$60 to \$280 an hour, I skipped a loop this time to stay within budget. The pilot makes each loop in a clockwise direction to keep me on the inside of the turn with the window open, my camera pointed down. On this flight we circled, (1) what I call "the basin" between the bridge and the falls, (2) Burying Island Ledge, (3) Egypt Bay, (4) the upper bay (Creasy Cove to Julius Darling Point), (5) Round Island, (6) Hog Bay, and (7) the flats



Photo by Steve Perrin

In Egypt Bay, eelgrass meadows are forming on both sides of the drainage channel of Egypt Stream.

west of Hatch Point.

What I saw was eelgrass beds making a steady recovery in several areas of the bay after the ninety percent dieback in 2001. From the air, Egypt Bay now looks like an eelgrass meadow on both sides of the channel. Hog Bay is sprouting with eelgrass along the course of the fresh water flowing into it from Card Mill Stream and Johnnys Brook. Eelgrass on the flats west of Hatch Point is recovering, but is still less dense than it was in the 1990s.

The flats along the Hancock shore of Taunton River, and those east and west of Burying Island have not recovered the lush growth they had prior to the dieback event. In fact, they are essentially barren with a few small clumps of eelgrass here and there. In 2005, mussel harvesters washed their hand-harvested mussels on the flats between Burying Island and Burying Island Ledge, essentially seeding the flats, which may partially account for the dearth of eelgrass in that area. Eelgrass and blue mussels often seem to share the same habitat; I am not sure what factors govern their relative abundance. Historically, aerial photos show that in certain places where eelgrass was once dominant, blue mussels subsequently moved in and took over while the eelgrass declined or disappeared.

I am sure, however, that salinity is an important factor governing the relative abundance of eelgrass in Taunton Bay. In years with ample fresh water input, eelgrass tends to thrive; in

years of extreme drought, eelgrass dies back. Annual precipitation has been on the increase since the drought years of the 1930s, and eelgrass growth has recovered accordingly. Aerial photos show it peaking in 1973, the year of maximum snowmelt since records have been kept, and declining in 2001, year of least rainfall in 111 years.

We all know 2009 has been spectacularly wet in late spring and early summer. The more fresh water input to the bay, the lower the salinity. Low salinity stresses the organism responsible for eelgrass dieback disease. So the ups and downs of eelgrass meadows in the bay inversely reflect the downs and ups of that organism, and behind that, the ups and downs of fresh water input to the bay.

Additional factors affecting eelgrass growth include nutrients (particularly nitrogen), cloud cover, water temperature, water clarity, and water depth. The balance among these factors complicates the picture. Greater cloud cover reduces photosynthesis necessary for eelgrass growth, and may be likely to correlate with both increased rainfall and decreased water clarity (due to particulate matter washed into the bay). Time of year is also an important factor because when these factors appear in the growth cycle will have varying impacts on the spread and density of eelgrass beds.

Keeping track of all of such factors is beyond my limited abilities, so I settle for the expedient of taking one flight a year for aerial photography, which gives a rough idea of how eelgrass is faring overall in response to the many factors potentially affecting its growth in different parts of the bay. Since the future is always uncertain, I have to settle for a sense of how eelgrass has met the many challenges it has faced since my previous flight. Hindsight is the best I can do. Which rules out preventive care, but at least lets me keep track of annual trends as they become evident through comparison of aerial photos of the same eelgrass beds from one year to the next.

For now, I can report that the dieback of 2001 is being transformed into a comeback in several areas, and that no drought is in sight, which from an eelgrass perspective is good news. And from a habitat perspective is good news for flounders, cod, crabs, Canada geese, black ducks, and the



Photo by Steve Perrin

A slide from the Winter section of Steve Perrin's presentation on The Seasons of Taunton Bay.

many other estuarine creatures that find food and/or shelter in the eelgrass forests of Taunton Bay.

Annual Meeting

By Lois Johnson

At our Annual Meeting, July 9, 2009, Frank Dorsey was re-elected vice-president and Doug Kimmel was re-elected treasurer, each for a two-year term. Confirmed as members of the Executive Committee in addition to the officers were Mary Turner (new), Lee Hudson, Sheila Karlson, Steve Perrin, and Steve Sjoberg.

Doug Kimmel reported on the planned and ongoing activities of the Taunton Bay Education Center (TBEC). Steve Perrin described his ongoing Friday evening lecture series at TBEC.

Ron Schwizer, one of the founding members of Friends of Taunton Bay, thanked outgoing membership chair and newsletter editor Sheila Karlson for her years of service. His thanks were followed by members' applause.

After the business meeting, Jon Lewis of the Department of Marine Resources presented an underwater video of Taunton Bay which delighted the audience with the richness of kelps, seaweeds and critters he videoed in the channel south of Burying Island.

Friday Talks at Taunton Bay Education Center

By Steve Perrin

On six Friday's in July and August, naturalist-photographer Steve Perrin presented ten differ-



Photo by Sue Campbell

Eagle on Butler Point, one of the parents of two eaglets this year.

ent slide shows at Taunton Bay Education Center in Hancock. Thematically, the PowerPoint presentations focused mainly on local wildlife, including shorebirds, harbor seals, horseshoe crabs, ducks and geese, American bald eagles, and great blue herons. Perrin also included presentations on the seasons of Taunton Bay, year-to-year eelgrass variability, and evidence of accelerating shoreline erosion and sea-level rise.

Taken together, the six programs showed Taunton Bay's diverse habitat areas to be a collective haven for wildlife through the tides and the seasons. Within that haven, horseshoe crabs stand out as persisting at the northern edge of their global range by concentrating their mating and foraging activities into six months, then hibernating in the mud for the colder half of the year; semi-palmated sandpipers distinguish themselves by flying nonstop to South America on the calories they dig from the mud of Hog Bay; harbor seals are notable for birthing their pups on one ledge in the spring, then progressing farther into the bay to enjoy the haul outs and fare offered by shallower waters, doubly heated by sunlight and warm flats; in winter, a variety of ducks arrive from Canada to feed on the delicacy of local blue mussels; five nesting pairs of bald eagles prove that the local food web is amply productive to sustain five families at the top; and the colony of great blue herons on Burying Island from 1959 to 1999, though gone for ten years, animated the shoreline and living memory by converting marine morsels into magnificent feeding and flying machines.

Author of four illustrated books about the wild side of Mount Desert Island and Acadia National Park, Perrin currently lives in Bar Harbor. He spent much of winter 2007-2008 digitizing slides and photos he has taken of wildlife in Taunton Bay over the past 25 years, then organizing them into PowerPoint presentations. A former president of Friends of Taunton Bay, he represents conservation interests on the Taunton Bay Advisory Group established to make recommendations to the Commissioner of Marine Resources concerning stewardship issues and harvesting of marine resources in Taunton Bay. His mother was born and raised in North Sullivan, and introduced Steve and his brothers to the bay in 1937. As a direct result, he has devoted his soul to depicting nature through words and photographs. Steve currently blogs about human consciousness as the medium of such activities. He can be reached at onmymynd@gmail.com.

NOAA Visits Taunton Bay Twice

By Frank Dorsey

Taunton Bay had two sets of visitors from the National Oceanic and Atmospheric Administration between September 12 and 16. The first group, from 42°N Films was making a video on horseshoe crabs under contract to NOAA. It consisted of Kate Raisz, the director and producer, one naturalist, and two diving videographers. Kate has twenty years of experience in broadcast television. Her credits include National Geographic Television, the Discovery Channel, PBS, The History Channel and Animal Planet. 42°N Films produces broadcast documentaries on natural history, science, and public affairs. Their credits include Sea Stories for National Geographic Television, All Bird TV for Animal Planet, and Anyplace Wild for PBS. 42°N Films has also made short films for educational and non-profit institutions, including the New England Aquarium and Bread for the World.

The crew was taken to dive around Buckskin Island in upper Taunton Bay by Mike Briggs, who has a nearby oyster aquaculture lease. Mike donated the time on his Carolina skiff. Kate reports they "managed to see a dozen horseshoe

crabs and film two." The group knew where to look because of Friends of Taunton Bay's and DMR's prior two-year sonar tracking of horseshoe crabs tagged on Shipyard Point. Kate will send Friends of Taunton Bay a copy of the horseshoe crab video for the Education Center.

The second set of NOAA staff and their Maine hosts were visiting several Downeast sites to evaluate multiple NOAA-funded programs in Maine. Primary among these was the Maine Coastal Management Program administered by the State Planning Office. Five state agencies work in cooperation with local governments, nonprofit organizations, private businesses, and the public to improve management of coastal resources. At the state level, the Coastal Program provides support to natural resource agencies to implement and enforce appropriate laws. At the local level, the Coastal Program assists communities with land use planning and provides funding and technical assistance for other local efforts.

The visitors toured Taunton Bay by boat starting at Hancock Marine's dock on the east side of Hancock Point, traversing Tidal Falls on a rising tide, passing Burying Island and then cruising on both the east side of Butler Point and west into Egypt Bay before returning through the Falls to Hancock. During the tour, Slade Moore, a contract ecologist to the Coastal Program, presented information on the Department of Marine Resources' Taunton Bay Advisory Group's efforts to foster sustainable fisheries in Taunton Bay. The Taunton Bay Advisory Group is a unique effort to employ local-scale, ecosystem-based management to the Taunton Bay estuary. Two members of the Taunton Bay Advisory Group, Lee Hudson and Frank Dorsey (both on the Friends of Taunton Bay Executive Committee) responded to visitors' questions about the Advisory Group. Along the way the visitors saw one bald eagle and numerous loons, cormorants and ospreys.

Following the boat tour, the group reassembled at the Hancock side of the Route 1 bridge to discuss a collaborative effort among the State's working Waterfront Program (partially funded by NOAA), the Town of Sullivan and the Frenchman Bay Conservancy (FBC) to purchase Gordon's Wharf for the Town. Gary Edwards,



Photo by Steve Perrin

New eelgrass growth reaching almost to Twin Islands near the head of Egypt Bay.

First Selectman of Sullivan, and Tom Sidar, Executive Director of FBC, made brief presentations about the project. The visitors looked across the water to the Wharf and examined the Schoodic By-way information plaques in the parking area before driving to Machias to visit other NOAA projects.

Some material for this article was adapted from the coastal management website:

<http://coastalmanagement.noaa.gov/mystate/me.html>

and from:

<http://www.legislative.noaa.gov/NIYS0107/NIYSME.doc>

for NOAA programs. See either for more information.

Taunton Bay Education Center A Busy Place

By Frank Dorsey

The Taunton Bay Education Center (TBEC) opened its 2009 summer program on Friday evening, June 26, with a lecture given by William Crain, author of Reclaiming Childhood. The talk about the natural development of children through free play and time in natural settings was well attended and copies of Dr. Crain's book are available for loan in the Center.

The Maine Community Foundation (MCF) provided a grant to fund environmental education programs at TBEC. MCF had visited the Center on Friday, May 18 and was favorably impressed by the facility and the proposed grant-funded activities. They encouraged the Center to seek wide publicity for its activities

In addition to the Family Fun Days, Summer Camp and Friday Lecture Series described elsewhere in the Newsletter, TBEC's space is host to a wintertime yoga class and is used by other organizations such as the Frenchman Bay Conservancy and the Monteux School for committee and board meetings.

TBEC also provided displays about Taunton Bay, horseshoe crabs and the timing of tides to Frenchman Bay Conservancy for its Tidal Falls exhibit space. A collaborative educational outreach program among these organizations and possibly others is in the planning stages.

Red Tide Closures on Coast Affect Taunton Bay

By Frank Dorsey

Alexandrium fundyense, the algae notorious for producing a toxin that accumulates in clams, mussels, and other shellfish, causes paralytic shellfish poisoning (PSP) in some humans who consume them. A red tide of these algae caused the State of Maine to close most of its coast to shell fishing at some point this spring and summer. The widespread closures, while not extending to the Taunton Bay estuary, did lead to an influx of out-of-area clambers working the flats in Taunton Bay. The mudflats in Hog Bay, Egypt Bay and other parts of upper Taunton Bay typically see at most five or six clambers per low tide. During the red tide closures elsewhere, it was not unusual to see ten clambers in Hog Bay alone. The numbers of clambers' skiffs and canoes on the shore and vehicles on Shipyard Point Road were significantly greater than usual through August.

The potential for over-harvesting clams and depleting the flats for the future was discussed at the Taunton Bay Advisory Group who suggested that the situation argued for a multi-town shellfish ordinance including at least the three towns surrounding Taunton Bay, Franklin, Hancock and Sullivan. At its July 21 meeting the Taunton Bay Advisory Group issued the following statement:

The Taunton Bay Advisory Group, consistent with its mission to advise the Maine Department of Marine Resources on the creation and implementation of a Comprehensive Marine Resource Management Plan for Taunton Bay that fosters

stewardship and promotes long-term ecosystem health, wishes to express its concern about possible over-harvesting of the clam resources in Taunton Bay.

We support the concept of clam harvest management in Taunton Bay through a multi-town ordinance.

Since then, a group of harvesters has developed a draft multi-town ordinance based on the State of Maine model ordinance. Potentially included towns are Ellsworth, Franklin, Hancock, Lamoine, Sorrento, Sullivan and Trenton. There will be meetings in late September and early October among the town selectmen, harvesters and Maine Department of Marine Resources to try to draft an ordinance acceptable to all parties. Currently, the group is trying to balance the need for money to support a shared shellfish warden with the desire of some towns to not require fees for recreational clam digging permits.

University of Maine Machias' Eelgrass Research in Taunton Bay

By Wendy Norden

With funding provided by the Davis Conservation Foundation, University of Maine Machias (UMM) scientists Wendy Norden and Doug McNaught have been working in collaboration with Friends of Taunton Bay on eelgrass research and restoration projects. Their work has been endorsed by the Taunton Bay Advisory Group because "Eelgrass and its relationship to water quality and the overall health of the Bay are high priorities."

Norden and McNaught have previously been involved with eelgrass restoration and research in both Narragansett Bay, Rhode Island, and San Francisco Bay, California, and are using techniques they developed to sample flora and fauna inside and outside eelgrass beds to "to characterize the ecosystem services (to fish and invertebrates) provided by eelgrass." Under their direction, two UMM students, Jake Berninger and Betsy Barber, installed larval collection devices in the Bay this past June and retrieved them in September. The devices offer several different porous and non-porous, rough and smooth sur-



Photo by Wendy Norton

Becky Barber holds a retrieved collection device showing algal and other marine life growth.

faces to which a variety of organisms can attach.

Wendy presented some basic eelgrass information and preliminary findings to FTB members on August 13. Some of the ongoing research discussed included:

- Characterization of several eelgrass beds from Taunton Bay to Machias
- Research into the relationships between blue mussel growth and eelgrass bed establishment and/or expansion
- Restoration technique research being done by Norden and McNaught in collaboration with the Mount Desert Island Biological Laboratory
- Marine invertebrate larval recruitment patterns inside and outside eelgrass beds
- Patterns of fish assemblages found inside and outside eelgrass beds

Their work is ongoing and some preliminary results will be available in December 2009.

Town of Sullivan to Purchase Gordon's Wharf

By Frank Dorsey

In a collaborative effort to provide public water access, the Town of Sullivan recently voted funds to execute a purchase and sale agreement to buy Gordon's Wharf. The full purchase price and other costs associated with the purchase will be met by a combination of town funds, \$100,000 from the Frenchman Bay Conservancy and possibly a grant from the Land for Maine's Future Fund (LMF). Selectman Gary

REMINDER:

Memberships for the 2009-2010 year are due. For more information, contact Steve Sjoberg at sjobergs@mitokine.com

or call him at (207) 422 6838

New Newsletter Crew

When long-time Newsletter editor Sheila Karlson retired following the Spring issue, three people were required to try to fill her shoes. Mary Beth Dorsey, until recently the children's librarian in Ellsworth, has agreed to be editor of the newsletter. Ashley Ehrlenbach Johnson has volunteered to do the layout. This is a busman's holiday for Ashley because her day job is layout for *The Ellsworth American*. Frank Dorsey, Vice President of Friends of Taunton Bay, has collected the articles and photographs.

Edwards and Tom Sidar, Executive Director of Frenchman Bay Conservancy were to meet in September with Jim Connors of the Maine Coastal Program to explore potential funding. The Maine Coastal Program works with local citizens and leaders to sustain working waterfronts by offering technical support, workshops and resources. Web pages at www.maine.gov/spo/coastal/ describe some of the local and state tools that can be used to preserve and enhance working waterfronts.

Horseshoe Crabs 2009

By Sue Schaller

Preliminary 2009 results from the Taunton Bay horseshoe crab study logged 876 observations this season, on 647 individual animals - 431 males and 216 females. Of these, 37% were alumni-horseshoes tagged in prior years that returned to spawn at Shipyard Point this season. Counts are lower on rainy days and June's weather this year probably accounts for the lower than usual number of observations.

Fewer of the animals tagged at the beginning of the study returned-only 6 from 2001 and 2

from 2002-and all were males. Three possible explanations are that 1) they die after 7-9 years as adults, 2) they have all moved out of Hog Bay, or 3) they are getting too big and molting out of the tagged shell. If animals are molting out of tagged shells, the management implications are significant since it indicates life spans exceed 20 years. They are already 9 to 11 years old when they reach breeding age.

Helping this year with the study were Shari LaTulippe, a regular since 2001, Henry Herrington, a student at the Maine School of Science and Mathematics- as the daily scribe, Phoebe Herrington, a student at the Bay School-- spotting and releasing animals,

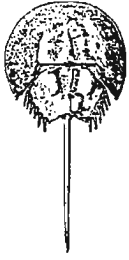
Shari's husband Chris Wiebusch, a Park Service Ranger at Acadia and Liz Solet, a writer and organic farmer-both of whom helped on short-handed days. Gary Blazon, of North Sullivan continues to provide computer assistance and help maintaining the long-term database.

This project depends on volunteer help to augment its modest budget. The U.S. Geological Survey contributed the cost of tags because they anticipate using the data to help to manage the Atlantic coast fishery. The Taunton Bay Advisory Group also uses the data to allocate harvest areas for mussels, kelp, scallops and sea urchins.



Photo by Steve Perrin

Deer on Taunton Bay Ice from Steve Perrin's presentation on The Seasons of Taunton Bay.



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Photo by Steve Perrin

A slide from Steve Perrin's presentation on Harbor Seals of Taunton Bay.