



## Belle Isle News

Newsletter of the Friends of Belle Isle Marsh

No. 19 March 1988

### SALT MARSH PLANTS

*These plants came over centuries  
to make the marshes green.  
Before recorded history  
most types were on the scene,*

*and then a few came later on  
when ships (sails down and furlled)  
dispersed the seeds in ballast mud  
in harbors 'round the world,*

*where those that settled by the shore  
and grew, despite the tide,  
were added to the floral mat  
of marshlands far and wide*

*now threatened by another trade  
of ships, and planes, in haste  
discharging oils in ports worldwide  
on top of urban waste,*

*as at Belle Isle, from industry  
and dumpers, who don't care  
that with pollution of our marsh  
it could become quite bare*

*of egret, snail and smelt amid  
a web of plants and creek  
which hold in rooted boundaries  
a habitat unique*

*and full of living things.  
If we now lose this web,  
the quality of many lives  
in varied ways will ebb.*

Esther Fich

### SEEDS, HARBORS AND HISTORY

Early European migrants to American shores included seeds as well as people. Some seeds were brought along on purpose, others by accident. Some fell out of packing hay onto fertile ground, sprouted, and thrived, often driving out native plants. The dandelion, for instance, may have invaded in this way. Other seeds came in ballast.

Many materials have been used as ship's ballast. The cobblestones in Nantucket streets came there from Europe as ballast. Another material used in the past was mud. Ship captains purchased baskets of mud in one port and dumped them in another port, or enroute, when cargo weight or sailing conditions changed. This mud carried seeds from harbor to harbor, taking root where conditions were favorable, usually on the upland, less saline edges of harbors.

In well-flooded salt marshes, where few plants can grow, most seeds arriving on the wind, on the feet or feathers of birds, in shipwreck packing hay, in ballast or in other ways, did not and do not take root. There, the plants that can tolerate tidal flooding have been constant for thousands of years. In recent times, however, our coastal wetlands have been slightly altered by seed invasion and greatly changed by human activity.

One salt marsh invader is the marsh mallow, whose seeds probably came from England by chance. Once established in

America and recognized by early settlers, its roots were used in making glue and marshmallow sweets.

Despite their rather constant plant make-up, our marshlands have greatly decreased in number and in size since colonial settlement began along the Atlantic. At first, the changes were small ones to accomodate rural transportation along bay and inlet. Then, as natural harbors turned into busy ports and commercial activities grew alongside, the adjoining wetlands were often filled, and the coastline was changed forever. Further changes were frequently made to accomodate expanding road networks, then railroad beds and bridges, and more recently, nearby airports. All of these events attracted more immigrants and contributed both to the population and to the pollution pressures now felt in harbor cities, such as Greater Boston.

In the midst of all this lies Belle Isle Marsh, a tranquil remnant of earlier vistas. Although somewhat smaller and poorer, it remains a true salt marsh, where the tides determine the plant and animal life, which, in turn, attract a rich and varied bird life. Today, we treasure this remnant.

Esther Fich



#### PHOTO CONTEST STILL ON

We are still accepting entries for the photo contest. Mail your best pictures to Barbara Bishop at our post office address. Winners will be announced and prizes awarded at the Annual Meeting in March.

#### A YEAR OF VISITOR SERVICES

It's January now. MDC employees have staffed Belle Isle Marsh for a full year. The year began with three staff members, Lisa Vernegaard, Chris Rodstrom, and Sarah Elkind, and no office. There is now an office (in a trailer off Bennington Street) and a phone (727-5350). And there is a new Site Supervisor, Robin Snyder, who joined the staff in late January, replacing Lisa Vernegaard. Robin comes to the MDC from the Appalachian Mountain Club in Gorham, New Hampshire, where she worked as assistant Education Director. She also brings with her extensive management and planning experience and an educational background in political science and environmental studies.

In 1987 the Belle Isle Park Staff offered 66 programs to a total of 1396 visitors in three categories: general public, community organizations, and school groups. The general programs included activities such as kite-making, and forums on water quality, community clean-ups, and mosquito control. Programs offered to community organizations were designed to help build a large and informed constituency in support of the marsh. School programs were specially designed to complement school curricula.

In addition to programs, visitors may have seen the displays posted on the park bulletin board. Eventually, we will develop a library of rotating displays. We have produced six fact sheets on mosquito control, bird migration, water pollution, mummichogs and sticklebacks, natural dyes, and one explaining what a salt marsh is. Any of these brochures or fact sheets can be mailed to you if you call the Belle Isle office (727-5350).

The support and enthusiasm of the community and of Friends of Belle Isle Marsh have been heartening and rewarding to us. We hope we can continue to offer local communities interesting programs that meet their needs.

Sarah Elkind  
Belle Isle Park Interpreter



WINTHROP SELECTMEN: DeLEO, LYONS, NOONAN

#### INTERVIEW: JOHN LYONS

*[John Lyons, the newest member of the Winthrop Board of Selectmen, was elected last June. Barbara Bishop of FBIM conducted the interview.]*

BB How did you first become interested in Belle Isle Marsh?

JL My experiences with the marsh go back to when I was a child. As a child growing up and a youth trying to find himself, I went to quiet places and Belle Isle Marsh behind the dump was quiet and peaceful. I think a lot of kids took the marsh for granted. It wasn't until the evolution of environmental protection that many people felt it was important.

BB Let's talk about the status of the Zoppo property.

JL I understand the [order] of conditions is just about [expired]. With the depression in the real estate market, and the total unwillingness of the public to see that property developed, it would behoove Mr. Zoppo . . . to seek alternative uses for the land.

BB What's the status of the legislation for buying the land?

JL The legislature appropriated \$50 million for open space acquisitions. Belle Isle Marsh rates near the top in land acquisition priorities, but we don't want to put a specific dollar figure in there. I think [people should] write letters to Commissioner Geary in support of his commitment to obtain the Zoppo property. Sometimes Winthrop gets lost in the shuffle. I would like to keep the Zoppo property on the front burner.

We're trying to incorporate the new cemetery in the plan to have walking trails [around the marsh]. First we must clean up the illegal dumping, oil tanks, and other debris. The MDC has the machinery and resources to take the debris out. The Town has met with MDC Commissioner Geary to coordinate our efforts.

BB What has the Town done to prevent further illegal dumping at the new cemetery site?

JL [We have] placed cement blocks on the road to prevent heavy trucks from entering. We're also planning to [raise the height of the fence], so if someone gets through they'll be seen -- it's more visible. We have one person who saw someone dumping illegally and has volunteered to be a witness in court. You are aware of the fine levied by the State against Mr. Bonacorso. [These actions] send the message that protection of the marsh is important.

#### SPRING HAWKS

Soon the hawks will start winging their way north. Join us on the following coordinated hawk-watch week-ends. The meeting place is the hill in the middle of Belle Isle Park. Dress warmly and bring binoculars and a lawnchair.

Saturday & Sunday, April 23-24  
Saturday & Sunday, April 30-May 1  
Saturday & Sunday, May 7-8

For more information, call the Belle Isle Hawk-watch Coordinator, Soheil Zende: 628-8990.

## BIRDFINDER

The bleak, snowy Sunday morning before Christmas was the setting for a sublime battle for supremacy. A young Peregrine Falcon chose Belle Isle Marsh for his personal hunting-ground. He staked out his territory, flying from tree to tree. However, a late-lingering harrier decided to go on a little hunt of his own.

Outraged, the falcon took off from his perch and dive-bombed the harrier; the hawk maneuvered quickly to challenge the attack. Each tried to knock the other out of the air. One on top, then the other. The battle continued out across the marsh until they disappeared from view into the fury of the storm.

Nature has some strange ways. Peregrine and harrier hunt different prey. The falcon hunts other birds; the harrier hunts small mammals. Their fights are strictly a matter of territory. I've seen gulls harass falcons, falcons pester hawks, hawks harass owls . . . and crows pester anything that flies --- owls, hawks, falcons, and even eagles. The crow shows no fear. But come spring, the crows get theirs. The Redwings send up swat teams to run off the egg-thieving crows. By the beginning of summer, a full-feathered crow is a rare sight.

A Northern Shrike was spotted for the first time in Belle Isle this winter. A small bird, about the size and color of a mockingbird, it migrates from the arctic to this part of the country in winter.

As exciting as it is to have a bird spotted on the marsh for the first time, I am bothered when regulars are not seen. There were no reports of Great Egrets on the fall migration; I have always seen at least two. And, so far this winter, Short-eared Owls have not been reported. I cannot help wondering why they did not return. Their absence is conspicuous.

What happens in the environment to effect a change in migratory patterns? I decided to go to the source for an answer.

There is a Red-tailed Hawk that winters in Saugus Marsh and along Mill Creek in



Chelsea. I caught up with him and asked why these owls did not return. This is what he said:

"Birds are the royalty of the sky. We rest in grassy fields and leafy trees. When these are gone, we become homeless -- homeless at the hand of humans. The great kingdoms of nature are being destroyed in the name of progress.

"Where will I go when the Saugus quarry is filled with condos? These are not homes for your homeless, nor are many others built on the edge of wilderness. They are buildings of destruction in the kingdom of greed.

"We keep the balance. If you abandon us, you abandon yourselves. We protest the only way we can: we simply do not return. We hope that someone will notice and ask why. Who will notice if we do not return?

"Wildlife sanctuaries are wonderful; but ask the American Indian how well he has adapted to the reservation. When we have gone, you will be homeless, living in luxury condominiums with only the view of other luxury condominiums; buildings, not homes.

"You have money, power and machinery, but your place in nature is no greater than ours. This is my answer to your question. This is my message."

Leo E. Rogers, Jr.

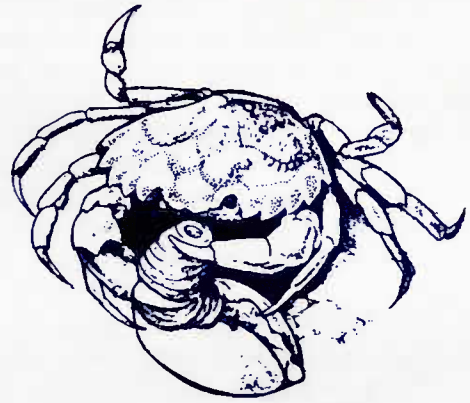
## THE GREEN CRAB

Estuarine environments, such as Belle Isle Inlet and Marsh, seem to be a stable haven for wildlife, but because of dramatic changes in salinity, temperature and dissolved oxygen, they can be very stressful for marine organisms. Frequently these areas also suffer from high levels of contaminants and chemicals due to human activity. Few species can adequately contend with these conditions, but one, the green crab (*Carcinus maenas*) actually thrives. Found in tidal creeks, tidal pools and rocky shorelines, *Carcinus* is a common species at Belle Isle. It is easily identified by its mottled green color and definitive carapace (or shell) with five bumps per side (see figure). It can grow to 85mm (3.5 inches) in carapace width.

The green crab is not native to our coast and probably arrived from Europe in the 1700's. It quickly spread to its current range, which extends from Virginia to Nova Scotia. Its success is due to its incredible resiliency and adaptation to life in the estuary.

The most difficult challenge for an organism in the estuary is to maintain a proper balance between water and salts. The internal fluids of any marine organism are very salty. When a spring thaw or periods of heavy showers dilute the salinity of the estuary, osmotic pressure causes the less salty water to rush into the higher salinity crab. Without a mechanism to combat this, the crab's internal organs would become waterlogged and the animal would actually drown. All crabs possess an organ, the green gland, which enables them to excrete huge amounts of water without losing any valuable salt. The green crab is probably the most adept crustacean at this process of osmoregulation.

Quite often temperature shifts dramatically in estuaries, but behavioral changes enable the green crab to survive. When water warms up quickly, the crab may seek shade or reduce its activity until nighttime. In winter, it seeks the safety of deeper water for several reasons: first the deeper water has a more constant temperature over the winter; secondly, deep ocean water never freezes, but an estuary, depending on its salinity, may; and thirdly, deep water is a safer place to be in a raging northeast storm.



GREEN CRAB EATING CLAM

Due to algal blooms and other biological activity, oxygen availability can vary widely in estuaries. At times of low dissolved oxygen concentrations, the green crab will increase its respiratory rate or actually the efficiency of its respiration. It can also lift its mouth above the surface of the water and breathe air for extended periods. As long as the crab remains damp it can live out of water for up to two weeks.

You may wonder why the green crab lives in an estuary if it is so stressful. The estuary can be an extremely productive area, making food abundant. *Carcinus* eats any organic matter it can get its claws into. The favorite food, by far, is the blue mussel. By feeling the size of the mussel with its claws the green crab can determine whether it is energetically favorable to open and eat. Like anyone else, the crab is looking for maximum yield with minimum effort. Mussel beds that are frequented by green crabs will usually have many large and small mussels, but few intermediate-sized ones. The smaller mussels do not provide enough nutrition, so they are passed over; and the large ones require too much energy to open, so they, too, are passed over.

The next time you are in the marsh and feel a little out of place, knee deep in mud, remember the little green crab and how well he and the other creatures are adapted to this environment.

Phil Colarusso

[The author is a graduate student in environmental science at UMass-Boston, and a resident of Winthrop.]

**ANNUAL MEETING: SUNDAY, MARCH 13**

Enjoy a golden opportunity to hear State Senator William Golden, co-founder and vice president of *Save the Harbor/Save the Bay*, a grass-roots organization dedicated to the clean-up of Boston Harbor. Also, there will be a raffle, special interest corners, socializing, and refreshments.

TIME: Sunday, March 13, 2PM  
PLACE: Our Lady of Lourdes Church Hall, 2 Endicott Avenue, Beachmont (Revere)

This meeting is free and open to the public.

**ANNUAL ELECTIONS**

The following have been nominated for the Board of Directors:

- President: John Kilmartin
- Vice President: Conal Foley
- Treasurer: Ann Lindsey

The election will be held at the Annual Meeting, and other nominations will be accepted from the floor.

**NEW MEMBERSHIP DUES**

The Board of Directors has voted an increase in two categories of membership dues:

- Family \$8 (was \$5)
- Individual \$5 (was \$3)
- Seniors & Youth \$1

To be valid, this increase must be ratified by members at the Annual Meeting. The old dues will remain in effect up to and including the day of the Annual Meeting. So hurry up and mail in the enclosed renewal. All donations welcome!

**CREDITS**

This newsletter is produced by Soheil Zende, with assistance from Esther Fich and Carlene Meeker. Marsh drawing by John Chaltas. Photo by Zelstar Studios, Winthrop.

**SPRING PROGRAMS AND FIELD TRIPS**

- Saturday, March 12 -- THE HONEST-TO-GOODNESS MARSH MUCK. Preregister.
- Saturday, March 26 -- MARSH TREK. A four hour walk around marsh boundaries.
- Saturday, April 16 -- NIGHT MARSH. 7 PM.
- Saturday, April 30 -- SLIDE SHOW: VISIONS OF BELLE ISLE MARSH. Winthrop Public Library, 2 Metcalf Square, Winthrop. Preregistration advised. (Rescheduled from January.)
- Saturday, May 7 -- LIFE ON A MARSH.
- Sunday, May 15 -- QUEST FOR FLIGHT. Co-sponsored with Massachusetts Audubon.
- Saturday, May 28 -- SEASONS OF A SALT MARSH: SPRING.
- Sunday, June 5 -- MYSTERY PROGRAM.
- Saturday, June 25 -- SPECIAL EVENT: SUMMER.

All programs begin at 1 PM and meet at Belle Isle Park parking lot on Bennington Street, East Boston, unless otherwise specified. For field trips wear warm clothes and waterproof shoes. Programs are free and open to the public.

For further information, call MDC Public Information at 727-5215 or 727-5350.

*Friends of Belle Isle Marsh*  
P. O. Box 575  
East Boston, MA 02128

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