



Belle Isle News



Newsletter of the Friends of Belle Isle Marsh

JUNE 1984

SPINELESS CREATURES: Invertebrates at Belle Isle Marsh

Have you ever wondered what makes those tiny mud trails on the surface of the mudflat? Or what squirts water out of the mud as the tide goes out? Invertebrates -- that's what! These abundant burrowers and foragers feed on detritus -- decomposing marsh plants -- and in turn serve as food for bottom-dwelling fish, birds, and some species of clams.

To identify and catalog these creatures at Belle Isle, Craig Jackson and I spent two days last year digging for and observing invertebrates. Here are some highlights of our inventory.

May 14, 1983

9:00 AM; Palermo Street, East Boston. Partly cloudy and cool. Killdeer, Glossy Ibis and Barn Swallows overhead. Greater Yellowlegs, Black Ducks, Snowy Egrets in the pond. It was quiet but for the T-train going by. Mosquitoes were there already.

Sitting on plastic milk crates we checked the banks of Belle Isle Inlet at low tide. We found Chink Snails, Ribbed Mussels and New England Mud Dog Whelks (or Mud

Snails). In a Spartina patens (salt marsh hay) plot on the upper banks of the inlet, we found seventeen Salt Marsh Snails under dried grasses. We also discovered some Red-eyed Amphipods, Isopods (which were not Vosnesensky's nor Kirchansky's nor Harford's Greedy Isopods, so they were most probably Sharp-tailed Isopods) and a few Gribbles.

2:00 PM; MDC Reservation, East Boston. We netted three or four Moon Jellyfish which apparently were brought in by the tides. There were also scattered Soft-shell Clams, and, much to our surprise and excitement, a Hydromedusa Jelly wandered across our path.

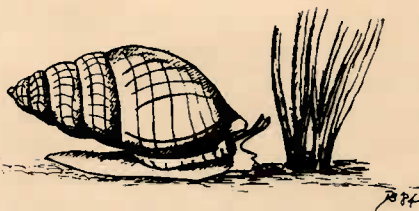
Hydromedusa [*Obelia* (sp.)]



June 5, 1983

9:30 AM; Morton Street, Winthrop. We found Mud Snails, Periwinkles, Ribbed Mussels, a few Moon Jellyfish and what looked like Sea Anemones. There were Soft-shell Clams squirting, and a small unidentified reddish worm about an inch long. We then saw a most unusual organism -- a small tube-shaped translucent creature expelling a grayish substance which looked like marsh mud from an aperture on top.

As the tide went out many holes appeared on the surface of the mud. Within a one-meter square of mudflat these holes



Mud Snail [*Nassarius* (sp.)]

lead us to 226 Soft-shell Clams, 33 Mud Snails, 14 Periwinkles, 1 Ribbed Mussel, 1 Amphipod and a two-inch long Horseshoe Crab digging itself into the mud. This juvenile appeared to indicate there was breeding going on in the marsh, and our find later of a 15 to 16 inch adult verified this supposition.

We also collected small snails that may have been Oval Marsh Snails or Swamp Hydrobias. Each time we tried to identify them, however, the wind came up, or we squashed the shells between our fingers, or dropped them among the grasses; therefore we decided to leave these off our inventory.

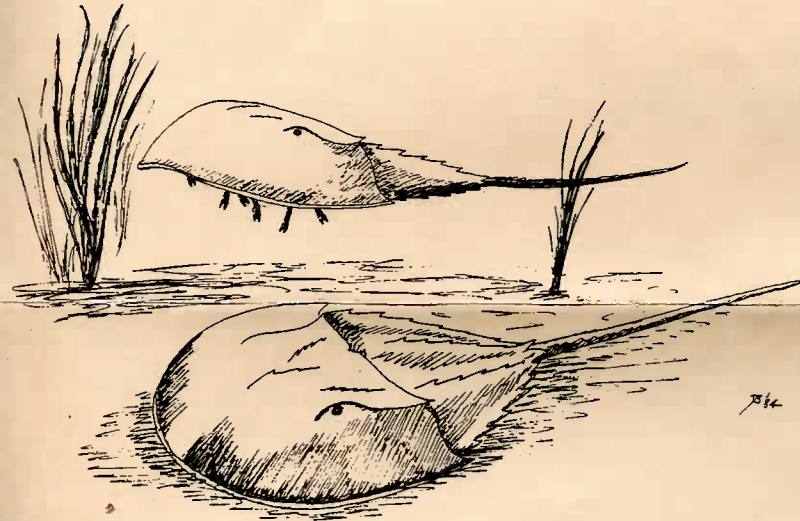
Conclusion

The presence of these invertebrates clearly indicates an important link in the intricately functioning food chain at Belle Isle Marsh. Simply outlined, the wading birds feed on fish, which feed on invertebrates and algae. These in turn feed at the very bottom of the food chain -- decomposing organic matter.

It is essential to the functioning of this food chain, and thus the life of the marsh itself, to have a high water quality to sustain the invertebrate life which we found in Belle Isle Marsh.

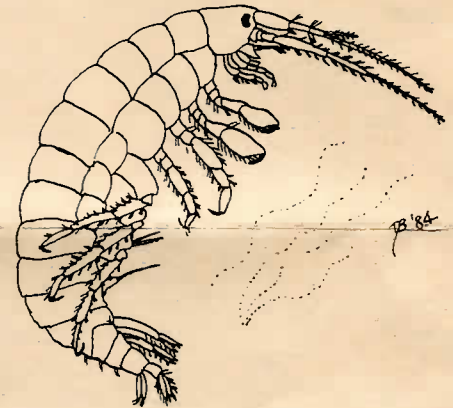
Barbara Gard

Horseshoe Crab [*Limulus polyphemus*]



INVERTEBRATE INVENTORY AT BELLE ISLE MARSH

Hydromedusa (*Obelia* species)
 Moon Jellyfish (*Aurelia aurita*)
 Sea Anemone
 Chink Snail (*Lacuna vincta*)
 Common Periwinkle (*Littorina littorea*)
 Mud Dog Whelk (*Ilyanassa obsoleta* or *Nassarius obsoletus*)
 Salt Marsh Snail (*Melampus bidentatus*)
 Ribbed Mussel (*Ischadium demissum* or *Modiolus demissus*)
 Soft-shell Clam (*Mya arenaria*)
 Horseshoe Crab (*Limulus polyphemus*)
 Sharp-tailed Isopod (*Idotea phosphorea*)
 Gribble or Scud (*Gammarus* species)
 Red-eyed Amphipod (*Ampithoe rubricata*)
 Common Prawn or Grass Shrimp (*Palaemonetes vulgaris*)
 Green Crab (*Carcinus maenas*)



Gribble [*Gammarus* (sp.)]

WE NEED YOUR SUPPORT!

Join Friends of Belle Isle Marsh. Annual membership fees:

Individual	\$3
Family	\$5
Seniors	\$1
Under 16	\$1

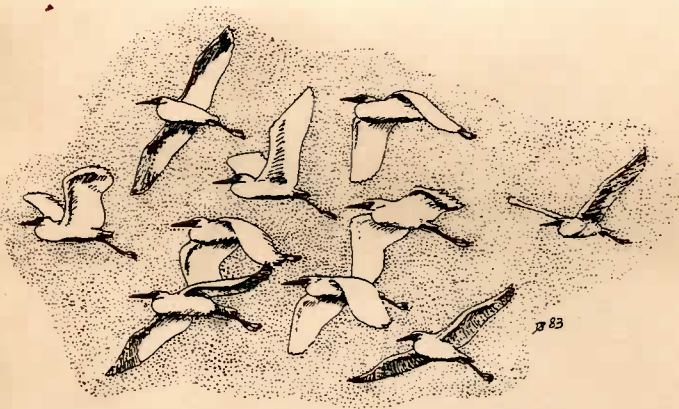
Belle Isle News is produced by Margarita Drozdoff, Pat Hickey, and Soheil Zendeh. Illustrations for this issue are by Denise Braunhardt.

We wish to thank Intelligent Designs for allowing us to use their computers and software in the production of this newsletter.

EARLY BIRDS

Three years ago, at dawn on an early September day, I watched my first mammoth heron flight at Belle Isle Marsh. I had expected perhaps fifty to a hundred birds to arrive from Boston Harbor, but instead almost two hundred and fifty came and landed in the pools before me. In that cold, clear dawn was born the notion of heron censuses at Belle Isle.

Publicizing the censuses and expecting folks to actually show up at dawn for the spectacle seemed at best quixotic. Eventually, however, the census dates appeared in the Boston Globe and the Phoenix. To my surprise perfect strangers started showing up at Belle Isle, binoculars and 'scopes in hand.



Snowy Egrets and a few other kinds of herons nest on the Boston Harbor islands each summer. These birds feed on the small fish, crabs, and crustaceans that live in shallow tidal pools or along the shore. If the tide is low in the early morning they disperse to likely looking spots throughout the harbor. But if high tide covers their harbor feeding areas, they must go to the upper reaches of marshes in search of food.

The herons that arrive at Belle Isle on high tide mornings often stay only an hour or two past sunrise. Others simply fly right overhead, heading for one of the other tidal wetlands still remaining in the Boston area, among them Chelsea Creek and Saugus Marsh.

Most of the herons which show up in April and May are busy with nesting activities on the islands. Once the young hatch around the end of May, both parents must provide large supplies of food for their new families. Throughout the summer, as the young learn to fly with the adults, the flocks at Belle Isle increase, peaking

around the first week of August. The largest number of herons seen at the marsh, however, is during the first ten days of September when the birds begin to mass together for the great migration southward.

The dawn heron-watch at Belle Isle is still in the realm of scientific inquiry, but it is fast becoming a cultural phenomenon. It's time now to drag out your alarm clocks. We are thoughtfully providing you with a timetable of high tide Sunday sunrises throughout the summer (see page 4). All you have to do is show up on Palermo Street in East Boston a half hour before sunrise and take in the show. Don't worry, you'll be back before breakfast: Your loved ones won't even miss you!

Soheil Zende

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SALES CREEK -- AGAIN!

During a violent storm on the night of March 29, Revere officials broke into the Bennington Street Pumping Station and forced it into operation, inundating Belle Isle Marsh with the waters of Sales Creek. In protest against this unauthorized action, letters were sent by the Winthrop Planning Board and Friends of Belle Isle Marsh to Secretary James Hoyte of the Executive Office of Environmental Affairs.

Secretary Hoyte, in a written response, emphasized his disapproval of the break-in and stated that Revere has been asked to pay for damages to the pumping station. In addition, he reconfirmed the conditions for station use -- that before any pumping is done, appropriate dredging be completed in order to lessen potential contamination of Belle Isle Marsh by Sales Creek waters.

According to Steve Lipman of the Department of Environmental Quality Engineering, an environmental impact study, currently being conducted by Camp, Dresser and McKee, will evaluate the impact on the Marsh of pumping during actual storm conditions. Upon completion of the study (expected in July or August, 1984) a public hearing will be held in Winthrop to discuss the study results.

Margarita Drozdoff

FIELD TRIP SCHEDULE

The following field trips have been scheduled to start at 2 PM. Please meet at the entrance to Belle Isle Marsh Reservation on Bennington Street, East Boston. Dress warmly and wear waterproof footwear.

- Sunday, June 10; VEGETATION
- Sunday, June 17
- Saturday, June 23
- Sunday, July 1; BUTTERFLIES & INSECTS
- Saturday, July 14;
- Sunday, July 29; HERONS
- Sunday, August 5
- Saturday, August 18; SHOREBIRDS
- Sunday, September 9

Field trips are free and open to the public. Please call the following trip leaders for further information.

David Desmond 324-7527
 Kermit Norris 567-2339
 Soheil Zendehe 628-8990

DATES FOR THE 1984 DAWN HERON CENSUSES

Date	High Tide	Sunrise
JUN 17	2:30	5:05
JUL 8	8:00	5:15
JUL 22	6:45	5:25
AUG 5	6:30	5:40
AUG 19	5:15	5:55
SEP 2	5:15	6:10
SEP 16	3:45	6:25
SEP 30	3:45	6:40
OCT 7	10:30	6:50
OCT 21	9:00	7:05

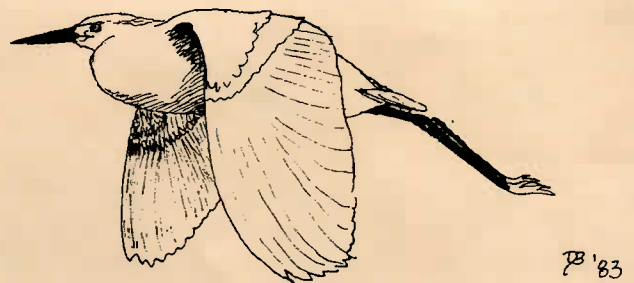
GET OUT YOUR CAMERA

The Belle Isle Photo Competition announced in our last newsletter is now underway. This contest is open to all amateur photographers. Photography gift certificates will be awarded for photos of Belle Isle Marsh in five categories: people; scenery; plants; animals; general category for those 15 and under.

Contestants may enter as many photos as they wish, but may only win once. Entries should be 3 x 5 prints in color or black-and-white; they must be received by October 1, 1984. Winners will be notified and prizes will be awarded at the fall Membership Meeting. All entries become the property of Friends of Belle Isle Marsh.

Mail your entries to:

FBIM Photo Competition
 380 Broadway
 Somerville, MA 02145



Friends of Belle Isle Marsh
 20 Palermo Street
 East Boston, MA 02128

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