



# Belle Isle News

Newsletter of the Friends of Belle Isle Marsh

Number 34 June 1992

## A Clean Attack

On Sunday, April 5, a three part attack on cleaning up Rosie's Pond and the berm area of the MDC reservation began. Part one of the attack involved volunteers who filled thirty five thirty pound litter bags with plastic, paper, glass, metal and oil cans. Brush, concrete, rubble, stones, bricks and wood were collected and piled along the reservation's edge for pickup and disposal on Monday. The volunteers also gathered tires, tire rims, engine parts, furniture, a



Cathy Garnett  
(right) and the  
Marsh-Mellow  
trailer

bathtub, car batteries, asphalt shingles and fiberglass.

On Monday, April 6, the TFord Company of Georgetown, with the assistance of specialized equipment from the Essex County Mosquito Control, moved on site to remove large concrete blocks and debris from the edges of Rosie's Pond. With a crane and a "Smalley," a specially designed low ground pressure tractor from England, large granite boulders, wood and concrete were hoisted out of the area. The "Smalley" can travel over salt-marsh grass and vegetation without damaging its productivity.

## A Brief History of the EPA Restoration Money

In 1990 \$100,000 of EPA fine money that was assigned to the Massachusetts Environmental Trust (MET) was allotted for restoration work at Belle Isle Marsh. Up to now the following use has been made of this money:

- \*Geology and hydrology studies were undertaken by the Army Corps of Engineers to determine if cutting the berm would increase tidal flow. (The berm in question is the long dike of dumped soil that prevents flooding of the *Phragmites* area next to the Park.) This was eventually deemed not feasible, but considerable technical data is now on hand for future reference.
- \*Massachusetts Audubon sponsored a study of plants and animals in the same area as the Army Corps study. A two part report on the Audubon study starts in this issue. (See "Bermed in at Belle Isle Marsh," page 3.)
- \*A major cleanup and installation of protective fence at Rosie's Pond was undertaken in mid-April. (See "A Clean Attack," this page.)

TFord Company also donated a special cart, the "Marsh Mellow," to Friends of Belle Isle for use in future cleanups.

Saturday, April 11, the date scheduled for the final attack, began with snow, sleet and rain. Twenty hearty volunteers showed up. Team leaders and volunteers were sent home by MDC; it was simply

(cont.)

## Clean Attack (cont.)

too cold, rainy and windy to work. The cleanup was rescheduled for Sunday, April 12.

On Sunday thirty volunteers began work in a light drizzle. This cool day turned out to be relatively fine for the cleanup. The week's efforts filled four thirty-cubic-yard dumpsters with twenty tons of debris; an additional 40 tons of concrete and construction material was removed by the "Smalley."

*Cathy Garnett*

*The author was hired by Appalachian Mountain Club to be project coordinator for this cleanup.*



*The "Smalley" in action*



*Is this man having fun?*

## Money Well Spent

The recent large-scale cleanup at Belle Isle Marsh Reservation was a tremendous success. The \$54,000 contributed by Massachusetts Environmental Trust (MET) to cover the cost of heavy equipment, waste disposal and fencing was of course a major factor. But it was the cooperative effort of the many groups and individuals involved which made this project not only successful but thoroughly enjoyable as well.

Most of us have heard horror stories of inept public agencies and unscrupulous contractors in battle with environmentalists. But not at this cleanup. Instead, the general contractor showed environmental sensitivity and creativity in work plans. He cooperated closely with MDC and the project coordinator, Cathy Garnett.

Through this private/public partnership the project  
*2 Belle Isle News June 1992*

had a major impact on Rosie's Pond and its surroundings. Tons of debris were removed including over 25 tons of concrete, 225 tires from the pond, truckloads of wood, and enormous amounts of litter. In addition 450 feet of fencing was erected to prevent further dumping here.

If you haven't been to Rosie's Pond for a while, I invite you to visit this greatly improved site.

*Karl Pastore, Supervisor*

## Acknowledgements

*Friends of Belle Isle Marsh wish to thank the following for their help during the Rosie's Pond cleanup:*

*Tom Ford and TFord Company of Georgetown, MA, general contractor.*

*Cathy Garnett and the Appalachian Mountain Club.*

*Essex County Mosquito Control for loan of their equipment (especially the "Smalley") and staff.*

*Tony LaCasse and the Boston University Students of the Youth Harbor Conservation Corps from Thompson Island/Outward Bound Education Center.*

*Metropolitan District Commission staff.*

*MBTA for allowing access to their property during the clean-up.*

*All the volunteers who came out on these cold rainy days.*

## Bermed in at Belle Isle Marsh

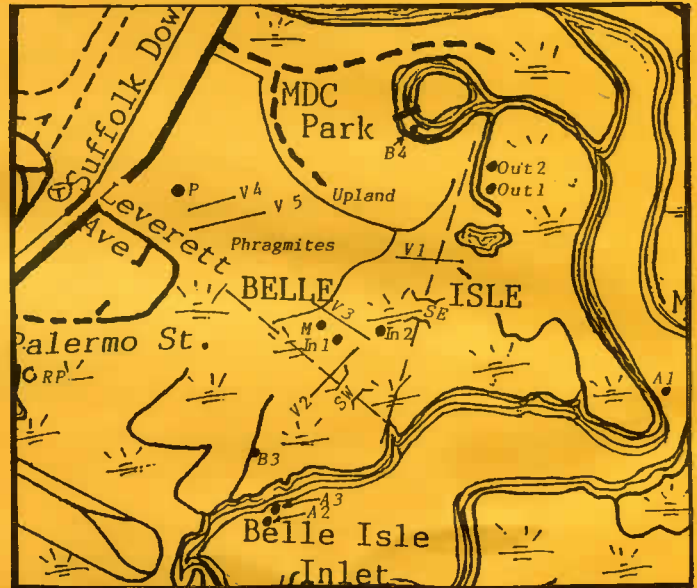
In 1990, the Massachusetts Environmental Trust (MET) funded an initiative to explore the restoration of a 25-acre section of Belle Isle Marsh enclosed by the artificial berm. (See accompanying map.) This berm, a low ridge varying in height from one to four feet, along with a layer of compacted dredge spoils spread behind it, limits tidal flushing of the area so that the natural salt-marsh vegetation (salt-marsh cordgrass and salt-marsh hay) now covers only about one third the area. The remaining cover is dominated by the giant reed, *Phragmites australis*, a grass that thrives in disturbed areas where the salt content of the water has been reduced because of restricted tidal flow. *Phragmites* grows aggressively, often completely eliminating other species of plants and forming dense stands that are considered of less value to wildlife than salt-marsh vegetation.

The Massachusetts Audubon Society was contracted by MET to carry out baseline biological inventory and monitoring of the impacted area prior to any restoration work. We focused primarily on the benthos (worms and other invertebrates that live in the mud), marsh vegetation, birds and fish. The goal was to provide a status report on important estuarine "indicator" organisms that live in and near the area affected by the berm and to set up a prealteration baseline for future monitoring efforts. This article will discuss our studies of the benthos and vegetation. (Birds, fish, and some overall observations will be

described in a later article.)

## Benthos

Maury Hall, our benthic expert for the project, identified two types of benthic communities at Belle Isle Marsh (see map for sampling stations). The first, found in natural channels within the marsh or in



Map of Belle Isle Marsh with sample sites indicated. Closed circles are benthic stations. Lines V1 to V5 are vegetation transects. The berm is represented by two dashed lines through which the SE and SW breaches are indicated.

man-made mosquito control ditches running from channels toward the berm, is similar to that found in

### Grasses, sedges, rushes

Salt marsh cordgrass (*Spartina alterniflora*)  
 Salt marsh hay (*Spartina patens*)  
 Giant reed (*Phragmites australis*)  
 Quackgrass (*Agropyron repens*)  
 Spike grass (*Distichlis spicata*)  
 Blackgrass (*Juncus gerardii*)  
 Creeping bent grass (*Agrostis stolonifera* var. *palustris*)  
 Alkali grass (*Puccinellia maritima*)  
 Kentucky blue grass (*Poa pratensis*)  
 Feathertop (*Calamagrostis epigeios*)  
 Switch grass (*Panicum virgatum*)

### Forbs (non-woody broad-leaved plants)

Marsh orach (*Atriplex patula*)  
 Slender glasswort (*Salicornia europaea*)  
 Dwarf glasswort (*Salicornia bigelovii*)  
 Sea blite (*Suaeda linearis*)  
 Sea lavender (*Limonium carolinianum*)  
 Seaside goldenrod (*Solidago sempervirens*)  
 Goldenrods (*Solidago* sp.)  
 Salt marsh sand spurry (*Spergularia marina*)  
 Small aster (*Aster vimineus*)  
 New York aster (*Aster nova-belgii*)  
 Annual salt marsh aster (*Aster subulatus*)  
 Bindweed (*Calystegia sepia*)  
 Purple loosestrife (*Lythrum salicaria*)  
 Sensitive fern (*Onoclea sensibilis*)  
 Horsetail (*Equisetum* sp.)

### Trees and shrubs

Grey birch (*Betula populifolia*)  
 Staghorn sumac (*Rhus typhina*)  
 Bayberry (*Myrica pennsylvanica*)  
 Cottonwood (*Populus deltoides*)  
 Trembling aspen (*Populus tremuloides*)  
 Hard hack (*Spiraea tomentosa*)  
 Rose (*Rosa* sp.)  
 Honeysuckle (*Lonicera* sp.)  
 Black cherry (*Prunus serotina*)  
 Apple (*Pyrus malus*)  
 Shadbush (*Amelanchier* sp.)  
 Willow (*Sali* sp.)

Salt marsh species occurring at Belle Isle, but not within the study area: *Triglochin maritima*

Plant species found within the bermed area at Belle Isle Marsh. Thanks to Bruce Sorrie of Massachusetts Natural Heritage and Endangered Species Program for aid and confirmation of plant identifications.

## Bermed in (cont.)

intertidal mudflats throughout Boston Harbor (stations A1-A3, B1-B3 on the map). The worms and other animals in these communities are intermediaries in the nearshore food chain, feeding on bacteria, algae, and detritus and being themselves consumed by birds and fish. The two most common types of worms (oligochaetes and a polychaete, *Streblospio benedictii*) accounted for between 89% and 93% of all individuals found at these stations. The sampling station at A3 also had large numbers of a tiny clam, the gem shell, *Gemma gemma*. This is a favorite food of bufflehead ducks.

The second type of community occurs in pannes within and outside the berm (In1-In2, Out1-Out2, M, RP, and P on the map). These have few animals and low diversity, not totally unexpected, since the habitat (fine-grained sediments amidst abundant decaying vegetation in salt pannes or hard-packed dredge spoil deposits) was far from ideal for traditional benthic communities. The area enclosed by the berm supported even fewer benthic animals than similar habitats outside the berm.

## Vegetation

The vegetation analysis was designed to describe the condition of the existing plant community in the study area and to set up a series of permanent transects to monitor long term changes resulting from any restoration activities. We placed particular emphasis on zones of transition between salt-marsh vegetation and *Phragmites* (see map for location of transects).

Pure salt-marsh vegetation typical of New England marshes, i.e., cordgrass, *Spartina alterniflora*, and salt-marsh hay, *S. patens*, dominates an area of roughly four acres in the southeast corner of the study area. To the northwest of this salt marsh zone is an area (about three acres) transitional between salt marsh and mixed marsh. There, *Phragmites* forms the "canopy" and is the most obvious plant, but salt-marsh species, especially salt-marsh hay and black grass, *Juncus gerardii*, dominate in terms of sheer numbers and cover. Another typical "understory" plant in this area is seaside goldenrod, *Solidago sempervirens*. Of particular note in the south part of

(cont. last page)



## The Children's Corner

Spring is here!

Come to Belle Isle Park and see, smell, and hear the season unfold. This is the time to look for ducks and their ducklings. You might want to bring along a copy of *Ducks Don't Get Wet* (reviewed below).

### Book Reviews

*Ducks Don't Get Wet*, by August Goldin, illustrated by Leonard Kessler; Crowell, New York 1989.

This delightful non-fiction book describes in simple detail the habits and behavior of ducks, which are plentiful in the Belle Isle area. It emphasizes the physical characteristics that prevent ducks from getting wet and includes a simple experiment to help children further understand this phenomenon. Simple water color illustrations depict a dozen or so common duck species.

*Wait Till the Moon Is Full*, by Magaret Wise Brown, illustrated by Garth Williams; Harper and Row, 1948.

This lovely story written by a famous children's author tells the tale of a little raccoon who is anxious to see the moon, know an owl, and find out how dark is dark. But his mother says he must "wait till the moon is full." Finally that special evening arrives!

Mary Mitchell



*Belle Isle News* is published four times per year by Friends of Belle Isle Marsh, a non-profit environmental activist organization dedicated to the protection and preservation of Belle Isle Marsh. We are staffed entirely by volunteers and funded only through generous contributions. Membership dues are \$8 (Family), \$5 (individual), and \$1 (Seniors and Youth under 16).

Each and every one of you is important to us. Thank you for your continued support.

This issue of *Belle Isle News* has been produced by Esther Fich and Soheil Zende. Clean-up photos by Paul David Mozell.

## President's Farewell

Five years ago, when I walked around the path at Belle Isle Park, I was amazed that something so beautiful existed in what seemed to me the heart of the city. That day I saw only the beauty of the marsh.

Today, however, I see Belle Isle with very different eyes: those of a public servant who spent three years picking up trash, mowing fields and offering educational programs to the public; those of an active Friend and member of the Board of Directors for the past year; and those of an individual drawn into the fold of friendship and mission which drives this wonderful group. With 20/20 hindsight, my first view would have hinted at the zealous efforts made to preserve that vacant land from development and to create a park for East Boston by people like Jim Falck, Edie DeAngelis, and all the friends who came later. Perhaps I would have also seen the camaraderie and support that the board members give each other in such generous helpings. I'm sure I would not have missed their dedication to their goal of preserving this marsh.

I didn't see it then but I do now.

In the larger scheme of things Belle Isle Marsh is a little place. But to the people of East Boston, Winthrop and Revere, it offers the world, and it delivers.

### Programs

Throughout the past year we have offered public programs. Last spring, despite a heavy rain, the Earth Day walk generated \$75 toward our environmental defense fund and programs budget. Kite Day in May was a huge success, thanks to the efforts of Ranger Karl and Mary Mitchell in accommodating over 100 children.

During the summer, many volunteers, including City Year and Northeastern students, helped Karl with cleanups and maintenance.

In the fall we had a series of canoe trips, masterminded by Karl. In September, Mary Mitchell and Eleanor Casey wowed us again with a beautifully organized Arts-in-the-Park Festival. In October, Ellen Koretz organized the Halloween spook trail and parade; almost 200 people attended.

### Fund Raising

In January, Barbara Gard and John Ribiero were the chefs at our super Spaghetti Dinner. It was financially successful and, more important, it was great fun.

New fund raising ideas this year included the Adopt-an-egg project, aimed at improving the tern-nesting facilities at Rosie's Pond. This was very successful at raising money, thanks to our brochure designed by Carlene Meeker. Unfortunately it was not a successful year for tern fledglings. Frank Pastore carved the tern decoys which have fooled even the most notorious bird-watchers. (The wonderfully supportive Pastores, besides lending us their son Karl, even donated lunch for the Halloween crew.)

Another successful fund raiser was the raffle of Richard King's oil painting of Belle Isle and the sale of postcard reproductions of it. We hope to continue this tradition of a year-long raffle of a donated piece of art depicting the marsh.

### Administration

We are overjoyed that Ranger Karl has remained at Belle Isle, despite the budget shortfalls in the Commonwealth. His new offices at the Eliot House (1 Eliot Circle, Revere) are a welcome improvement over the trailer at Bennington Street. We are happy to welcome his new supervisor, Jim Comeau, who replaces Marcy Beitel.

Sadly for us, long-time board member and vice president Katie Durham resigned in February. I am sorry to see her go, for her legal expertise and knowledge of wetlands regulations were invaluable. I wish her luck and entreat her not to be a stranger.

I thank the Friends of Belle Isle Marsh for their support and encouragement during my year as President. I have depended heavily on the energy and efforts of the Board of Directors, and everyone came through. I congratulate Barbara Gard on her election as the new President and know she will lead us with determination and energy. My congratulations also extend to Eleanor Casey, Vice President, to Esther Fich, secretary, and to Anne Lindsey for her additional term as treasurer.

Good luck to you all!

*Robin Snyder*



# Annual Meeting Report

The speaker at our March 8 Annual Meeting was Mr. Norman Smith, director of the Trailside Museum in Canton. His lively presentation and marvelous slides focused on avian raptors, particularly snowy owls at Logan Airport. He has been banding them there for 15 years.

Members were entertained by the Second Marshmuckers' Fashion Show and had the opportunity to elect new officers and board members. The whole event was, as usual, capped by refreshments and a social hour.



## Treasurer's Report

FBIM finances 3/1/91 through 2/29/92

### INCOME

Arts in Park	2,523.22	
Donations	861.57	
Dues	947.00	
FBIM T-shirt	110.00	
Misc	131.90	
Raffle	147.00	
Spaghetti Fest	940.00	
Tern Egg	290.00	
Marsh Trail Grant	500.00	
<b>Total income</b>	<b>\$6450.69</b>	<b>\$6450.69</b>

### EXPENSES

Arts in Park	1,779.08	
Halloween	137.57	
Misc	191.45	
Postage	462.80	
Postcards	278.00	
Printing	1,205.08	
Spaghetti Fest	551.50	
<b>Total expenses</b>	<b>\$4605.48</b>	<b>\$4605.48</b>
<b>Balance</b>		<b>\$1845.21</b>
<b>From 2/28/91</b>		<b>\$1030.57</b>
<b>Grand Total on hand 3/1/92</b>		<b>\$2875.78</b>

*Ann Lindsey, Treasurer*

### Board of Directors

#### Friends of Belle Isle Marsh

Barbara Gard (Somerville), *President*  
 Eleanor Casey (Winthrop), *Vice President*  
 Esther Fich (Winthrop), *Secretary*  
 Anne Lindsey (Marion), *Treasurer*

#### Members-at-Large:

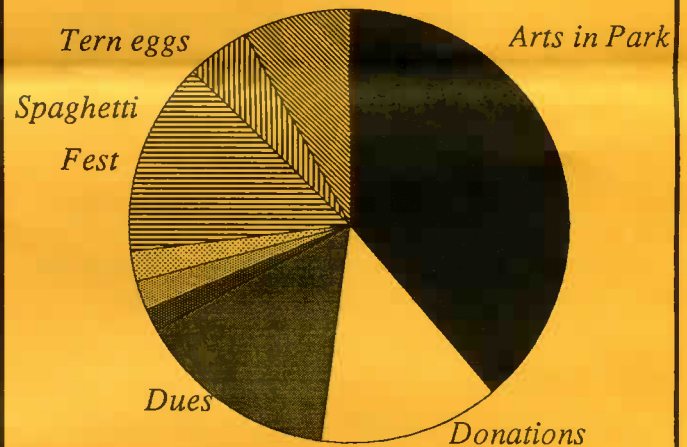
John Ribiero (East Boston)  
 Suzanne Ryan (Revere)  
 Carmen DiRuzza (East Boston)  
 Catherine Fay (Revere)

#### Committee Chairs:

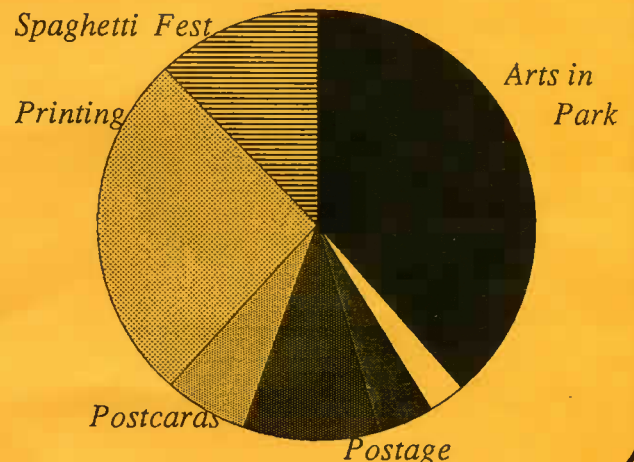
Mary Mitchell (Winthrop), *Fund-Raising*  
 Rose Corrado (East Boston), *Membership*  
 Barbara Bishop (Winthrop), *Publicity*  
 Sireen Reinstein (Winthrop) & Bob Andersen (Norfolk),

*Co-chairs, Education & Outdoor Programs*

*Income Pie*



*Spent on*



## Spring/Summer Field Trips

Sunday morning walks, 9 AM: Friends of Belle Isle Marsh lead a casual walk around the marsh every Sunday.

Sunday, June 14, 10 AM: *Wildflowers at Belle Isle Park.* We will learn to identify wildflowers using a "keying" system. We'll also show you how to make a plant press so you can start your own pressed plant collection.

Saturday, July 11, 10 AM to 1 PM: *Rumney Marsh Reservation walk.* Almost 1000 acres in size and located in Revere and Saugus, this newest MDC reservation is primarily a salt-marsh and estuarine environment, and has a wealth of plant and animal life. Please bring a snack. Call 727-5350 for meeting place.

Saturday, August 15, 10 AM: *Salt marsh plant identification.* Salt-marsh plants have developed unique adaptations to survive in salt water. We'll look at these adaptations and identify most of the plants commonly found in New England salt marshes. Please pre-register; limited to 10 participants.

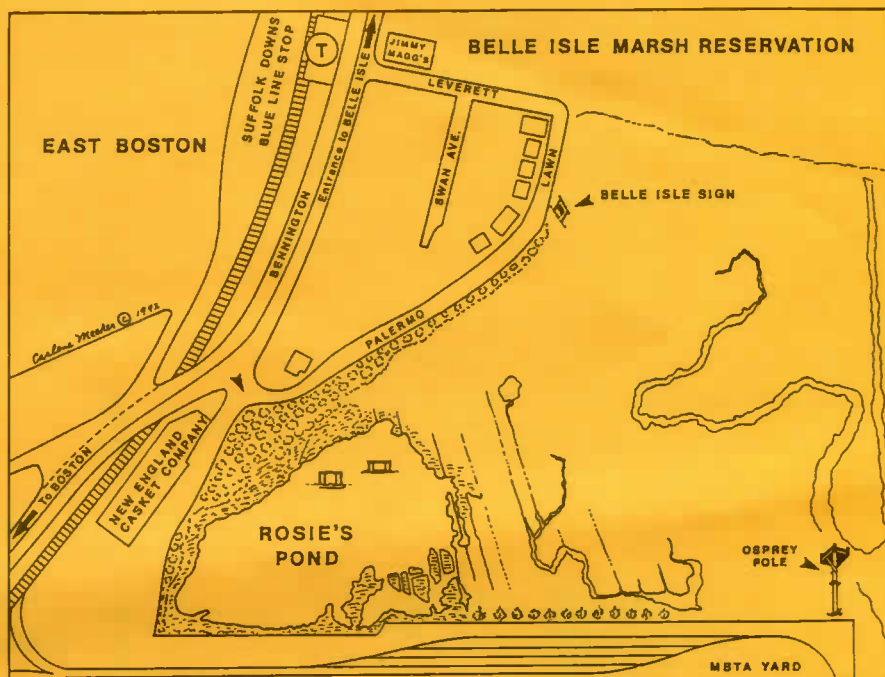
*Please wear waterproof footwear and bring warm clothes for all field trips. Meet at the main Belle Isle parking lot, across Bennington Street from Suffolk Downs MBTA Station. These programs are presented cooperatively by the MDC Reservations and Historic Sites Division and the Friends of Belle Isle Marsh. For more information or to pre-register please call 727-5350.*

## Photo Contest Winners

At the Annual Meeting 1991 Photo Contest winners were announced and the winning photos were displayed. Here are the winners and their categories:

- \*James Smigielski, (Winthrop): *Best entry.*
- \*Harold Reinstein, (Winthrop): *People.*
- \*Chris Crosby, (Winthrop): *Birds.*
- \*Louis Labadini, (East Boston): *Landscape.*

Prizes, courtesy of Hunt Drug of Melrose, New England's most unusual camera store, have been mailed to the winners.



Map by Carlene Meeker

### Rosie's Pond and vicinity

## 1992 Dawn Heron Censuses

*Meeting time: one-half hour before sunrise.*

<i>Dates (all Sundays)</i>	<i>Sunrise</i>	<i>High Tide</i>
June 7	4:08	3:45
June 21	4:07	3:00
July 5	4:13	2:30
July 19	4:24	1:45
Aug 9	4:45	8:15
Aug 23	4:59	6:00
Sept 6	5:14	6:45
Sept 20	5:29	4:45
Oct 4	5:44	5:15
Oct 18	6:00	3:30

This is the tenth consecutive year of Belle Isle heron censuses. Our focus has been primarily on counting the "southern herons" (snowy and great egrets and glossy ibis) as they come in to feed at the marsh. (Best when high tide occurs close to sunrise.)

To participate in this count, all you need to do is appear at Rosie's Pond (at Palermo Street, East Boston, right by the big wooden Belle Isle Reservation sign) a half-hour before sunrise on any of the days listed above. For more information, please call Soheil Zende, 863-2392.

## Bird Notes

The winter of '92 saw some changes of note at Belle Isle Marsh. Brant and Canada geese made themselves at home in the inner reaches of Sales and Belle Isle Creeks. Trading off space and tides, the birds moved between the marsh and the Suffolk Downs oval, giving Bennington Street motorists quite a sight at each tide change. The lack of heavy snows and prolonged freezing might explain their staying on, but what explains their moving closer to human activity?

Sales and Belle Isle Creeks hosted the usual buffleheads, mergansers, scaups, goldeneyes, black ducks and mallards. And, of course, snowy owls were seen by Leo on his evening watches throughout winter; he also regularly kept tabs on one or two short-eared owls and an occasional harrier or red-tailed hawk.

Northern mockingbirds, Nixon's warblers\*, and large numbers of crows kept the quiet uplands busy.

The down side has been the absence of our usual American kestrel throughout the winter months. But today (May 10) we saw a pair of kestrels. Her Highness perched in a tree at Marshhenge and Her Breadwinner hovered and successfully caught two voles for brunch. He delivered both morsels to Her Highness. Copulation followed . . .

The late winter and early spring arrival of red-winged blackbirds, followed by grackles, great blue herons, snowy egrets and glossy ibis prepare us for the full excitement of spring migration.

*Conal Foley*

Note\*: This is Leo's name for starlings.

## Hawk Notes

Hawks don't necessarily migrate on weekends. This spring there were five consecutive rainy weekends, and the jinx was not broken until May 2-3. There was a bald eagle sighting at Rosie's Pond in late April, and Conal reported another eagle over Winthrop on May 16. On May 2 there were 3 ospreys, 2 sharp-shinned hawks, a kestrel, a harrier, and a Cooper's hawk. On the third there was just one osprey and one sharpie. Observers on May 10 reported the two kestrels (mentioned by Conal above) and a sharpie or two.

*Soheil Zendeh*

## Bermed in (cont.)

this area is a small patch of *Calamagrostis epigeios*, a grass native to the Caspian Sea area and previously unknown in the Boston area.

Scattered throughout the study area are numerous pannes that are flooded only at extremely high spring tides. These unique habitats contain stunted cordgrass, two species of glassworts (*Salicornia europaea* and *S. bigelovii*), or algae.

The remainder of the study area is dominated by *Phragmites*. Drier areas within the *Phragmites* contain shrubs and trees typical of disturbed habitats: bayberry, staghorn sumac, aspens, cottonwoods, and grey birch. The wetter parts of the *Phragmites* marsh are very difficult to explore and so remain a mystery to us.

## Conclusion

The most critical question that we were not able to answer was the stability of the present boundary between *Phragmites* and the existing salt-marsh vegetation. Although most casual observers believe that *Phragmites* is gradually encroaching further onto the salt marsh, no conclusive evidence has been presented. Thus the need to actively manage *Phragmites* to prevent further encroachment on the true salt marsh is not clear.

*Robert Buchsbaum*

*The author is staff biologist at Massachusetts Audubon: North Shore.*



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