



# Belle Isle News

## Upcoming Events

### Bird Walks

1st and 3rd Saturdays of each month, 8-9:30am

*Meet at the Bennington St. main parking lot.*

### Kayaking

Saturday, August 24, 3:30-5:30pm

(rain date: Sunday, August 25, same time)

*To register: [tiny.url.com/Kayaking-Aug](http://tiny.url.com/Kayaking-Aug)*

### Harvest Festival 2024

Sunday, October 20 1-3pm

*Join us for our annual Harvest celebration with interactive activities and information for all ages.*

### Event updates on our website:

[www.friendsofbelleislemarsh.com/events/](http://www.friendsofbelleislemarsh.com/events/)

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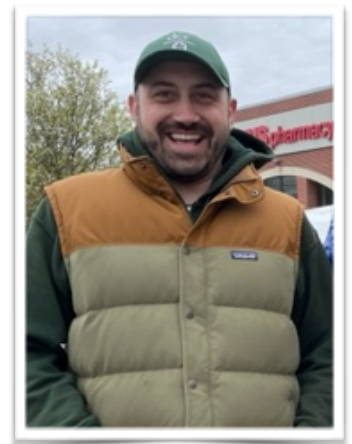
## Farewell, and Farewell

### Sean Riley moves to new position at DCR

I harken back to 2015 when the Friends of Belle Isle Marsh welcomed a new addition to the staff assigned to Belle Isle Marsh Reservation. It was then we met what would become another stellar Department of Conservation & Recreation (DCR) employee.

Sean Riley had been cutting his teeth in environmental work long before 2015, having been at Trustees of Reservations and Mass Audubon in a range of capacities, so all his talents were appreciated immediately. We were forever grateful to Geoff Wood for tapping Sean for Belle Isle. Geoff was the former, longtime, Belle Isle Site Supervisor who passed away this spring (see ensuing article).

Sean began his work at Belle Isle as a seasonal employee, which meant that there was a break in employment at the park. This precipitated a four month neglect of duties, during which lapse the reservation's protocols were challenged. As Sean got into the full swing of keeping up with Wood's work, the Reservation still held the myriad of bird walks, conducted breeding bird surveys and documented the many species that called Belle Isle Marsh home. Sean was taking Belle Isle to another level of significance.



*Photo by Mary Mitchell*

In 2018, the Friends exercised a full court press in securing Sean's position as a full-time, full-fledged Site Supervisor when it had been rumored that DCR might not fill the slot. One of Sean's earliest and notable efforts was creating a bird banding station thanks to a generous donation by the late FBIM founding member Kermit Norris and a donation by the Friends as well. This station will continue under Sean, who has gained attention across the environmental front for this project at Belle Isle. This banding station has made education about urban wildlife ecology an important asset for visitors and educators.

*(continued on page 2)*

## Farewell (continued from page 1)

To date, 1,200+ birds have been banded here and their travels can be tracked through a registry. Many birds have even been found to return to Belle Isle. Most notably, the endangered Saltmarsh Sparrow has been documented here and is the most comprehensive demographic study in the State of Massachusetts, all thanks to Sean's stewardship.

The Reservation has also thoroughly enjoyed the placement of a live Osprey webcam (find link on our website) by Sean and volunteers which began recording during the pandemic. This is thanks to a City of Boston grant secured by Kannan, our current president. It was such an appreciated effort by the many folks who did not travel outside during that time. We've had 1.2 million viewers of the magnificent birds thus far. Bringing the outdoor wildlife to indoor visitors was truly a health benefit.

Sadly for the Friends, Sean has accepted another position after his long tenure at Belle Isle through DCR's Office of Natural Resources but we will continue to have his oversight of Belle Isle in addition to many of DCR's facilities. We know this actually means Sean will have a greater voice in protecting our resource in the future, especially the endangered Saltmarsh Sparrow, various avian-related research, saltmarsh restoration and wildlife stewardship.

It's an understatement to say how much we've valued Sean's ever-present commitment to Belle Isle over the many years, and we feel with his new assignment Belle Isle will be highlighted to a greater degree as we realize threats of climate change. Thank you, Sean, for the multitude of ways you have shown your compassion for the marsh we all so love. We wish you all the best in your new endeavor at DCR.

- Gail Miller

## Geoff Wood's passing

I am sad to report that the birding world has lost one of its most devoted and skilled birders. Geoff passed away at his home on Plum Island in May, after battling cancer for over a year. He knew he was

missing spring migration and that brought him great pain. He was cared for by his loving wife Linda, and died peacefully.

Geoff was a consummate scientist whose knowledge of the living world spanned many topics. He loved animals and birds from the time he grew up on a farm in Shropshire, and that led him to devote his life to their study and conservation. Geoff was headmaster of an international school in Ethiopia for a number of years, telling many tales of encounters with wild animals during his explorations. He came to the states with his wife Linda and young daughter at a time of strife in Ethiopia, and for a while taught science at Amesbury High School. Discouraged by the lack of interest his students had in the scientific world, he left public education and went to work for the Massachusetts Department of Conservation and Recreation as manager of many of their properties over the years. He finished his career at Belle Isle Marsh Reservation.



I met Geoff many years ago when Bill and I would run into him at the Parker River refuge. He accompanied Bill on more than one of his travel adventures for the Brookline Bird Club. When Bill was living at Bridges in Andover, Geoff was kind enough to visit him and I always appreciated that. In recent years as my vision has declined, Geoff helped me find birds and see them. One could not want a truer friend in life.

- Barbara Drummond

# Rising Tides:

Third in  
a series

## *The Dilemma that Saltmarsh Sparrows Face*

by Soheil Zendeh

May first. The marsh is mostly quiet. Distant Red-winged Blackbirds gurgle their songs. An Osprey whistles as it hovers; a gull flies over giving its honking call. A few Mallards or other ducks float about the saltmarsh pools or in Belle Isle Creek.

Two weeks later, early morning. There is a faint buzz from the marsh and a tiny sprite flies from one grass tussock to another.

End of May, early morning. Constant buzzing and hissing, Small brownish birds flying about and dropping in among the saltmarsh grasses. Sometimes one perches up and, if you can get on it quickly, you can see the bright orange face, streaked back and pointy tail.

Thus, in May of every year, Saltmarsh Sparrows (SALS), sprites of the marsh, having spent the winter in saltmarshes of Georgia or Florida, drop in stealthily at night. Suddenly they are everywhere, males busily singing in courtship, females looking for nesting sites. Male songs are faint buzzes that could easily be overlooked as insect noises.

This sparrow is known as an “obligate” saltmarsh nester, meaning that it only nests in saltmarshes. Also, it is a United States east coast “endemic”; in the entire world, it is only found on our east coast.

Female SALS always build their nests on plants of the higher saltmarsh. As described in the article on saltmarsh plants (“Unsung Heroes: Saltmarsh Plants,” Belle Isle News, Winter 2022 – 2023, <https://www.friendsofbelleislemarsh.com/wp-content/uploads/2023/12/BIN-Winter-2022-23-Color.pdf>), the rise and fall of ocean tides determines the zones in which plants with different salt tolerance can thrive. Thus, for example, Saltmarsh Cordgrass *Spartina alterniflora*, the tallest of the marsh grasses, grows in the areas that are more or less constantly flooded with sea water – the edges of the creeks and channels through the marsh. Saltmarsh Hay *Spartina*

*patens* and Spikegrass *Distichlis spicata* on the other hand, grow where it is drier, on the upper surface of the marsh, where it only gets flooded during the highest tides of the month. The highest tides, called spring tides (they have nothing to do with the season Spring), occur twice a month when the sun, moon and earth line up. One of those spring tides is usually 10 – 11 feet above mean low water (MLW), whereas most high tides are between 8 and 9 feet above.

Even a few inches difference in the height of high tide make a big difference in the life cycle of a bird which nests on marsh grasses. Female sparrows arriving in late May or early June often proceed to build nests on relatively low-lying high-marsh grasses, only to be flooded out at the next high spring tide. This event, called a synchronizing tide, then sets the timetable for all the sparrows in the marsh – everyone re-nests at around the same time, presumably having learned where the higher, safer areas are in the marsh.

The window of tide safety for these birds is a maximum of 28 days, the time interval between two highest spring tides. A female sparrow rebuilds her nest within 2 to 4 days, lays 3 to 6 eggs and incubates them for approximately 11 days. The newly hatched chicks grow and fledge out of the nest within 10 days. That is a tight schedule! Bad weather and extra high tides can wipe out the entire nesting effort.

In Massachusetts, there is usually enough time for a second nesting; so, even if the first nesting cycle is disrupted, another spring tide cycle allows SALS females to re-nest and fledge young, possibly as late as August.



SALS female

Photos in this article by Brendan Burke

(continued on page 6)

# President's Report

by Kannan Thiruvengadam

I went back to school in August 2023. My initial wide-eyed wonderment soon turned to stress over assignments and making it to class on time, commuting from a neighborhood with an international airport, which means all the hassle of travel minus the joy of an actual vacation -- on a daily basis. I had to change three subway lines, and at least one of them was reliably unreliable on any given day. On the rare day when I resorted to ride-share, the road was choked because one of the two tunnels out of our neighborhood was closed for repair.

My commuting woes aside, I enjoyed my time back in school. I took courses in leadership, conservation, land use law, environmental law, arts, and climate-positive design. This was all part of a fellowship based in the Harvard Graduate School of Design.

As a climate justice practitioner in a city setting, I also got to provide feedback on student project work in building architecture, landscape architecture, and urban planning. I got to travel to Denver, CO, and Tokyo, Japan to hear from architecture and design firms. In Denver, I learned from indigenous leaders about the current and worsening drought in the southwest.

Of all my activities while in school, the one I am most proud of is how I was able to connect the ground reality of communities like mine to students, staff, and faculty lost well within the walls of academia. I brought them to Eastie Farm, the urban farm in East Boston I run, and the Belle Isle Marsh, the largest salt marsh remaining in the city of Boston. For folks who work on addressing such issues every day, it is good to see ground reality only a hop, skip, and a jump away from the classrooms. They got to witness food insecurity, worsening flooding events, loss of marshland, negative impact of human settlement on natural spaces, value of natural spaces of people living around them, etc.



*Kannan speaking at the MIT Climate Community Collaborative. Pictured on the slide is a Saltmarsh Sparrow from Belle Isle Marsh.*

I presented the plight of the Saltmarsh Sparrow at both MIT and Harvard. I offered walks in the marsh and on the greenway to students and faculty from both universities. I gave them a tour of the geothermally heated-and-cooled greenhouse at Eastie Farm. I realized I went to school only to bring school home.

It has now been a few weeks since my commencement. I am officially a Harvard Fellow. Having completed my Advanced Environmental Studies, though I will always be learning, I feel more equipped to do my conservation and climate justice work in a grounded, community-centric manner, with the help and support of the people in the community and those in academia pondering over the big picture.

With climate change raging, and loss of biodiversity picking up pace, our work is more important than ever. As we face these challenges, we have to center climate justice communities, which includes vulnerable lives – human and non-human. Working together with ingenuity and compassion, and learning resilience from nature, I have faith that we can forge a way forward to a better future for all earthlings.

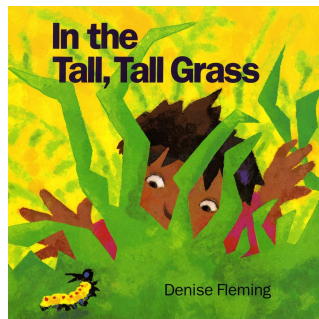
# Children's Corner

by Mary Mitchell

When I was thinking of a topic to write about for this issue of the Belle Isle Marsh newsletter, I decided to focus on our beautiful meadow area. It reminds me so much of the fields that surrounded my childhood home in Western Massachusetts. Many of you may remember that when the reservation first opened it had been designed with the center of the upland area mowed to provide a park like area to be enjoyed by visitors. And it was. My boys and I loved visiting and flying kites. Running down hill helped get the kites to catch the wind and soar above us. But along came Geoff Wood, a new site manager. He knew a lot about birds and building habitats, and understood that nesting birds, hungry raptors, and migrating shore birds needed a meadow habitat to thrive. So, he set out to transform the upland area into an extensive meadow. It took years of tinkering, planting the right plants, mowing selectively, and eradicating invasive species of plants. Today we have a productive and beautiful meadow. Geoff was an amazing person who for twenty years led the team to protect, preserve and improve the Reservation at Belle Isle Marsh. We will always be thankful that he entered our lives, providing leadership, education, and his dry sense of humor.

**In The Tall, Tall Grass** by Denise Fleming, Henry Holt Mifflin Company, 175 Fifth Ave, NY, New York 10010, 1991.

“Strum, drum, bees hum, Crack, snap, wings flap” and so the rhythmic, rhyming prose delights the reader. Denise Fleming is an accomplished children’s book author and illustrator. Her rhyming prose dips and darts across the beautifully illustrated pages entertaining the reader with every turning page. Many meadow animals and insects are depicted. Fleming creates the illustrations by pouring colored cotton ball pulp through hand cut stencils. This creates beautiful, rich and captivating images. In the Tall, Tall Grass makes a perfect first meadow adventure.



**Over in the Meadow** illustrated by Ezra Jack Keats, Four Winds Press, NY, New York, 1973.

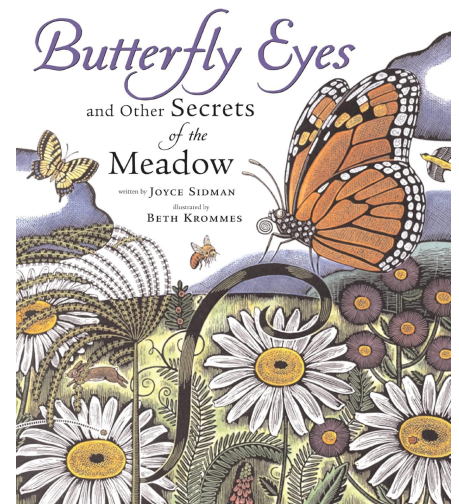


Ezra Jack Keats is just one of several authors who have illustrated this traditional lyrical poem by Olive A. Wadsworth. He uses paint and collage to illustrate this delightful rhyme

which depicts a meadow habitat where many animals live and work. Turtles dig, birds sing, and “over in the meadow, in a soft shady glen, lived a mother firefly and her little flies ten.” Often this delightful poem will be sung in an early childhood classroom. Hence, this is a delightful way to introduce the meadow habitat to young children. Please read before a trip Belle Isle Marsh. Head straight up the hill on the path; then look and listen!

**Who is he?** A poem by Joyce Sidman, *Butterfly Eyes and Other Secrets of the Meadow*, illustrated by Beth Krommes, Houghton Mifflin, 215 Park Ave. South, NY, New York, 10003, 2003.

He trots  
Through  
Meadow-gold grass  
In dawn sun  
Furred  
Mysterious  
A word  
Hunting  
Its own  
Meaning,  
Who is he?



# Rising Tides

(continued from page 3)

## Breeding Biology

A group of Saltmarsh Sparrows forms a nesting colony. There are no pair bonds. Any female may mate with any male within the colony. DNA tests of newly hatched young from one nest often show parentage from more than one male.

As we described previously, a female SALS is the only one occupied with the nitty-gritty of reproduction; she builds the nest, lays and incubates the eggs, and feeds and fledges the young.

Males sing and chase females. Unlike in many other bird species, male song is not used as a territorial marker. Males often sing in areas where there are no nests, possibly where females forage for food. The singing appears to be a competition among males and is meant to be primarily an enticement for females to mate with the singer.

Once eggs are fertilized, laid, incubated and hatched, the young, naked and helpless, are fed by the females. The main food source for young birds is invertebrate prey found in the marsh, primarily insects, spiders and amphipods (shrimp-like creatures). In contrast, during most of the rest of the year, Saltmarsh Sparrows' food is a mix of animal matter with seeds and other vegetable matter. But for the young to grow fast and be healthy in order to leave the nest within a week and a half, they need an all-animal diet for the high-concentration protein it provides.

Tides rise and fall twice a day. Sometimes, perhaps due to miscalculation by the mother bird or possibly due to an extra high tide, a nest can get flooded. It is possible but unlikely that unhatched eggs survive the dunking in seawater. If there are hatchlings in the nest, their survival is somewhat dependent on their age and strength. Strong babies can climb up above the nest in the surrounding vegetation and wait out the high tide. Clearly, survival of the young is intimately tied in to the tide cycle and the

ability of female sparrows to find high enough spots in the saltmarsh to nest.

## Tides, Climate and Extinction

US Fish and Wildlife, based on current climate change predictions, estimates that Saltmarsh Sparrow is on an extinction pathway over the next 40 to 80 years.

Climate change, caused primarily by the burning of fossil fuels, causes ocean levels to rise for several reasons:

- Oceans are warmer. Warmer water expands.
- Warmer polar regions cause melting of polar icecaps, adding to the volume of water in the oceans.
- Tides, particularly in New England, are affected by the flow of the Gulf Stream 100 or so miles to the east in the Atlantic Ocean. Change in ocean temperature and wind velocity has caused the Gulf Stream to slow down. This appears to cause our tides to stay higher than expected – Bernoulli's Principle is evoked for this effect.



SALS juvenile

Rising sea levels drowns seacoasts and saltmarshes. In the past, saltmarshes responded somewhat to rising sea levels by building up on themselves, but ditching of marshes in early and middle of the 20th Century has caused a gradual collapse in the marsh surface. (See "The Past, Present and Future of Saltmarshes," Belle Isle News, Summer 2023, <https://www.friendsofbelleislemarsh.com/wp-content/uploads/2023/12/BIN-Summer-2023-Color.pdf>.)

Also, saltmarshes can no longer retreat further into the uplands – humans have built up structures and barriers to the sea. So Saltmarsh Sparrows have a nesting habitat that is shrinking and, as obligate saltmarsh nesters, they have nowhere else to go.

And now the question is, since humans have endangered the nesting habitat of these sparrows and therefore threatened their long-term survival, what can we do to help restore that habitat? The answers are being worked on right now with teams from our local communities. We will discuss those answers in the next chapter of our saltmarsh articles.

# Conserving the Marsh:

## Innovative conservation is all about getting back to nature.

*by Cindy Baxter, FBIM Conservation Manager*

Discussions about climate change and resiliency are moving from research and policy creation to solutions and action plans. All the talk is about nature-based solutions, but what exactly is a nature-based solution? The World Resources Institute defines nature-based solutions as actions to protect, conserve and sustainably manage ecosystems with interventions that use nature and the natural functions of healthy ecosystems, (<https://www.wri.org/insights/what-exactly-are-nature-based-solutions>). Such solutions include living seawalls, seagrass restoration and more.

The fact is that nature knows what to do. Conservationists worldwide agree that following nature's course of action is the best way forward, not only because research shows it works, but because there are examples in nature to follow. Research has long pointed to the benefits of marshland, with strong evidence of species protection and elimination of pollutants via carbon absorption. Recent data has also shown the financial benefits of such preservation. Losing salt marshes is an expensive issue that the federal government is no longer ignoring. Federal data concluded that northeastern seaboard salt marshes saved \$625 million in property damage from Super Storm Sandy, and the need to protect that natural infrastructure is well recognized under the January 2024 "Investing in America" initiative, (<https://www.fws.gov/story/2024-01/keystone-initiative-centers-salt-marsh-conservation>). Friends of Belle Isle Marsh has taken up the call to action by using the research gathered by the Fish and Wildlife Service, by working with the DCR, which manages the marsh, and by leveraging the knowledge of Friends of Belle Isle Marsh board members. Efforts to protect the largest remaining salt marsh in the city of Boston are gaining momentum with the following programs and work:

♦**Promotion of conscientious development.** Friends of Belle Isle Marsh is discussing with developers the future impacts that are projected to damage the marsh. FBIM is also assessing restoration opportunities that can be supported by developers and area businesses alike.

♦**Enforcement of regulation.** The cities of Boston and Revere, and the town of Winthrop all have rules in place protecting wetlands which align with regulation at the state level. The FBIM membership is dedicated to noticing violations and highlighting issues to make sure corrective action is taken.

♦**Information sharing through public workshops.** Friends of Belle Isle Marsh is pleased to host summer (and beyond) programs focused on conservation. Soon to come is a Monday Night Forum on The Future of Conservation; computer-refresher lunch and learns on finding conservation research and events; and expanding FBIM's popular birding programs held every 1st and 3rd Saturday mornings in the marsh with conservation walks on the 2nd and 4th Saturdays. Stay tuned to our website, <https://www.friendsofbelleislemarsh.com/events/>.

*May in the Marsh event photo by Emily Fitzsimmons*



**Friends of Belle Isle Marsh (FBIM) Annual Membership dues:**

- Family..... \$15
- Individual..... \$10
- Seniors and Youth (under 16)... \$5

*FBIM is a registered nonprofit corporation. Contributions are tax-deductible. Thank you for your continued support.*

FBIM is a volunteer organization dedicated to the preservation of this marsh. We believe that protection ultimately depends on public awareness of the value and beauty of this natural resource. Our focus is mainly educational.

For more information or to add your name to our email list, write to: [friendsofbelleislemarsh@comcast.net](mailto:friendsofbelleislemarsh@comcast.net) with the message "subscribe."

*Facebook:*

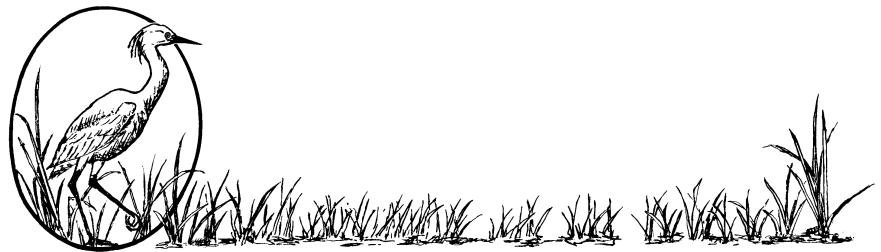
Friends of Belle Isle Marsh

*Website:*

[www.friendsofbelleislemarsh.com](http://www.friendsofbelleislemarsh.com)

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Above: Several Harvard and MIT students visited the marsh during Kannan’s fellowship, as part of his effort to connect academia with coastal communities. This is from one such visit. These are students, fellows, and teaching assistants from Harvard’s Divinity School.

**Belle Isle News Contributors**

- Daniela Foley, Editor
- Cindy Baxter
- Barbara Drummond
- Emily Fitzsimmons
- Gail Miller
- Mary Mitchell
- Kannan Thiruvengadam
- Soheil Zende

*Please send your comments and suggestions for future newsletter articles to: [friendsofbelleislemarsh@comcast.net](mailto:friendsofbelleislemarsh@comcast.net)*



Right: Kayaking at Belle Isle on June 22. (EFitzsimmons)