

#### Summer/Fall 2024 Newsletter

Hello Refuge Friends!

As usual, Summer and Fall are busy times for the Friends! We continue to work with Refuge Partners on their projects, spruce up our pollinator gardens and make progress on our proposed future Mashpee NWR Visitor Center.

As Summer turns to Fall, it is also the time of year when our AmeriCorps Cape Cod member graduates from the program and a new member is assigned to us. In this issue, we celebrate the accomplishments of our 2023-24 member Grace Vachon. Grace summed up her year in a recap of her **AmeriCorps Journey**. She also piloted a program called **Tackle the Trash**, which is highlighted below, as well as an well-researched article about **Invasive Plants** on Cape Cod. We thank Grace for all of her contributions to our group, and we look forward to our new AmeriCorps assignment, Kaycee Doherty, who starts with us on October 15th!

We hope you can join us for our third annual Walk for the Wild, which will be held on Sunday, October 13th. Bring the whole family for a 5k walk through nature and trails of the Mashpee National Wildlife Refuge. Walk for the Wild is a free event, but your optional donations are welcome. All donations made through the registration website are partially matched by an amplifier fund of national donors to the Public Lands Alliance. Donations are accepted through October 31st, 2024. Please register for more details about the walk.

Scroll down to read more or **download** and print the entire newsletter for later enjoyment.

Thank you for your continued support of our vibrant organization!

Glenn Davis President Friends of Mashpee NWR

P.S.: If you haven't already renewed your membership, and/or want to get more involved in the Friends organization, see the mail-in form on the last page (or <u>click here</u> to donate online). More information is always available on our website, with up-to-date info on upcoming events and other Refuge news. Thank you again for your support!

# Recap of My AmeriCorps Journey by Grace Vachon

To say that this year was quite a year would be an understatement. When I chose to work with Waquoit Bay National Estuarine Research Reserve (WBNERR) and the Friends this year, I had only a

very faint idea of what to expect. Would I be planning programs? Teaching students? Designing brochures? I felt nervous as I drove past the gate toward WBNERR's visitor center on my first day in October. It was an unknown place and a new experience. It did not know what to expect. However, I was greeted by a charming old house overlooking the glistening blue waters of Waquoit Bay, and I suddenly felt a little less nervous.



This year, I was assigned to work with WBNERR's School and Interpretive Programs Coordinator Jayne DiCandio, as well as Nancy Church from the Friends. On my first day, Jayne gave me a quick tour of the property and briefed me on my project for the year, which was to design and execute a program about ocean plastics. She did not specify what kind of program this had to be. Could it be for the public? Could it be for people of all ages or only for school kids? I am very self-directed, so I was excited to take this assignment in the direction I wanted it to go in.



Through the fall, I conducted research about ocean plastics and looked into what other organizations had already done to educate students about the topic. I already knew that plastic was an issue, but my research really put the scale of the problem into perspective. First of all, consider what happens to all of the plastic that we produce. You may think that a lot of that plastic gets recycled, but in reality, only about 9% of plastic waste is recycled (source). The

rest of that plastic ends up either in a landfill or in the environment somewhere, such as in the ocean. In fact, I learned that about eight million tons of plastic waste enters the world's oceans every year (source).



Considering that one ton is equivalent to 2,000 pounds, that is quite a lot of plastic! Once that plastic escapes into the ocean, it becomes a danger to sea life like turtles, fish, seals, and sea birds who can become tangled in it or ingest it. Also, plastic can be found almost anywhere, from high in the atmosphere to deepest depths of the ocean. Even as deep as the Marianna's Trench, which is 36,000 feet below sea level, a group of Japanese scientists surveying the area found a plastic bag just floating there (source).

Especially harmful due to their small size are microplastics, which are plastic fragments that are less than 5 millimeters in length. They form when plastic waste is exposed to elements like wind, waves, and sunlight. While I was conducting research and brainstorming activities, I stumbled across an activity where students used microscopes to look for microplastics in samples of sand. Jayne and I collected sand from several beaches in Falmouth. However, we failed to find any microplastics after tirelessly looking through the samples. Therefore, we began to explore another idea. There were a few major storms this winter that caused a ton of trash to wash up on

South Cape Beach, so Jayne and I decided that we were going to create "mini sandboxes" with small pieces of trash and organic materials like shells, feathers, sticks, and seaweed. The goal was for students to sift through the sand and sort the items that they found into the categories of "trash" or "organic material." We created these sandboxes by cutting up or crushing the materials into tiny pieces and hiding them in large containers of sand. In a way, we were creating our own microplastics. This activity was meant to teach students about how microplastics form and how they can end up in beach sand when tides move them around. In March, I combed out the final details of the activity and presented it to a Girl Scout troop for World Thinking Day, which is a day recognized by the Girl Scouts worldwide to get young people thinking about how they



can improve the world that they live in. In May, one of WBNERR's park interpreters, Emily McBride, delivered the program to a group of 6th graders from a school in Dedham, Massachusetts. Although I could not be there to deliver the program that day, I was glad to hear from Emily that it was a success and that the kids had fun.

At the same time that I had been planning plastics programming for school kids, I was working with WBNERR staff to pilot a citizen science project which we ended up calling Tackle the Trash. This is an initiative where community members are encouraged to pick up trash when visiting local beaches. Only beaches in Falmouth or Mashpee count. Then, they can visit WBNERR's website, where there is a page dedicated to the project, and fill out an online data form where they report what they found. In the winter, Tonna-Marie (WBNERR's director) connected me with Nicole Vandale, a graduate student fellow from Northeastern University who is working with the Woods Hole Oceanographic Insititute on plastics research. I already had a rough idea of the project that I wanted to create, but Nicole provided me with some additional insight. I also got connected with Laurie Tompkins, WBNERR's volunteer coordinator, who helped me put together a webpage and flyer for the project. The webpage is now up on WBNERR's website and includes the online form as well as information about the harms of plastic and getting involved with the project. On June 24th, Nicole and I presented the project to a small audience of interested community members and WBNERR staff. Moving forward, the goal is for WBNERR's next AmeriCorps member to design a way to organize or present the data. Hopefully, the data can be used to help WBNERR focus their anti-littering and antiplastic education efforts.

Creating Tackle the Trash was one way for me to get the community involved in environmental protection efforts. However, my work with the Friends this year was where I became more involved with community outreach efforts through writing and graphic design. Specifically, Lucinda from the Friends and I have been working really hard this year to create a self-guided tour for the upcoming 5K Walk for the Wild on October 13th. For the tour, I have designed ten infographics providing general information about plants, wildlife, and landmarks found in the area or along



the walking path. Some of the topics that I cover include herring runs, PFAS

contamination, invasive plants, and vernal pools. I also helped Lucinda film and edit a few videos that will also be part of the tour. These include interviews with Joan Tavares Avant, an elder of the Mashpee Wampanoag Tribe, and Talia Landry, a youth educator for the Tribe. In addition to the Walk for the Wild guided tour, I have had a blast writing articles for the Friends website and newsletter. Some of the topics that wrote about this year included rabies on Cape Cod, the restoration of the Quashnet River Valley, Osprey, pollinator gardens, vernal pools, and invasive plants.

Overall, it has been a joy to work with Waquoit Bay Research Reserve and the Friends this year. I have learned so much and met so many interesting and wonderful people. I especially enjoyed learning about Osprey and the Mashpee Wampanoag Tribe. Observing the Old Ladies Against Underwater Garbage (OLAUG) collect trash at the bottom of pond with Lucinda this July was also a highlight of the year. After this year, I have a better understanding of my interests (including my likes and dislikes) and future career goals. I look forward to visiting and staying in touch with the people and places that I served with this year. Overall, I feel like the projects that I completed over the course of the year were a success and will have a lasting impact on the community.

#### Thanks everyone for a great year!



The Old Ladies Against Underwater Garbage with their haul on July 9th, 2024.



Me with Joan Avant at her home after the interview.

## **Invasive Plants and Their Place on Cape Cod**

#### What Makes a Plant Species Invasive?

Ivy winding up the trunk of a tree is a common and pleasant sight here on Cape Cod. However, what you may not know is that this ivy is most likely an invasive called English ivy. While some invasive plants like English ivy can be aesthetically pleasing, they are anything but good for the environment. You may have heard a lot about invasive species, but what makes a species invasive? Invasive species are plants or animals that are not native to an area but that also cause widespread harm to ecosystems and human livelihoods. Non-native plants that don't cause ecological destruction are not considered invasive, so don't confuse the term "invasive" with the terms "nonnative" or "exotic." They are not interchangeable. Similarly, native plants can display nuisance behavior just like invasives. One such example is greenbriar (also called cat briar), which is a common site on Cape Cod's hiking trails. While native, greenbriar grows in dense thickets that take up large swaths of



the forest understory, often entangling other plants. It is a thick green vine whose sharp thorns make it even more of a pain to deal with. As a result, it is often removed as part of land stewardship efforts despite being native.

#### What Harm Do Invasive Plants Cause?

Every biological invasion begins with the movement of a species from one place to another. How do invasives species move? Well, as humans move around the world, plants and animals move with them. Small animals like insects and mollusks can stow away in ballast water or shipping crates. Plants can attach themselves to boats on the move, and many invasive plants were introduced as ornamentals that escaped the confines of homeowner's gardens. Climate change is also contributing to the movement of invasive species as they shift their ranges to escape warming temperatures. Invasive plants are fast-growing due to their high seed production and aggressive root systems. They also have few natural predators in a new environment. Once these species reach unknown lands, their ability to grow quickly allows them to compete with native species for resources like water, food, space, and sunlight. Additionally, when invasives take over an environment, that environment loses biodiversity due to a reduction in plant species richness (the number of unique plant species). Invasive plants negatively impact both wildlife and humans. According to the U.S. Forest Service, they have contributed to the decline of 42% of vulnerable species in the United States (source here). They do this by competing with and eliminating plants that provide food and habitat for native wildlife. Regarding their impacts on humans, invasive species cost the global economy billions of dollars annually. They damage agricultural crops that people rely on for sustenance and spread harmful diseases that can infect human populations.

#### Common Invasive Plants on Cape Cod:

Here are five invasive plant species that you are likely to see

on Cape Cod. Keep a look out for these while walking the trails at the Refuge's different properties.

#### 1. Multiflora Rose

Although multiflora rose produces pretty white and pink flowers in the spring, be aware of its thorns. Like many other invasives, multiflora rose is a concern because it displaces native species, and its sharp thorns make it a nuisance to hikers.



#### 2. Honeysuckle

A few different species of honeysuckle can be found on the Cape, including Japanese and Morrow's honeysuckle. Japanese honeysuckle grows as a trailing vine, while Morrow's honeysuckle grows as a shrub. Morrow's honeysuckle grows in fields or forest understories, forming dense thickets that take away growing space from native plants. Both have white, tube-shaped flowers. The thick woody vines of Japanese honeysuckle can girdle trees.





#### 3. Bittersweet

Bittersweet grows as a vine with woody stems and large, ovalshaped leaves. You may have seen its recognizable red and yellow berries, which provide food for birds and other wildlife. Its thick, woody stems can kill native plants by wrapping around them and smothering them. These stems form dense, tangled clumps that make it difficult to remove once it establishes itself in an area.



#### 4. Japanese Knotweed

Brought over from Asia as an ornamental in the 1800s, this shrub is easy to spot with its large oval leaves and clusters of small, white flowers. Its hollow stems look like bamboo and are often both green and purple in color. It tends to grow in wet areas like streambanks, drainage ditches, and wetlands.





#### 5. English Ivy

English ivy is a creeping vine that you will often see growing up tree trunks, but it will also grow on the ground. It poses a severe threat to the trees it inhabits. Specifically, this thick vine can weigh trees down and block sunlight from reaching the tree canopy, causing the tree to die slowly over a long period of time.



#### How Can We Manage Invasive Plants?

A major component of land stewardship is managing invasives. Organizations that manage and preserve land, such as land trusts, send a lot of time planning and executing invasive plant management strategies. A common plan of attack is physical removal either with hand tools like loppers and hand saws or power tools like brush cutters and weed whackers. Land managers might also use herbicides or other chemicals to kill unwanted plants. As a member of AmeriCorps Cape Cod, a lot of my service projects involve removal of invasive plants like thorny black locust trees, multiflora rose, bittersweet, and honeysuckle. It is also important to prevent invasive plants from becoming established in the first place. To prevent the introduction and spread of invasive plants, the Nature Conservancy recommends cleaning your boat and hiking boots after use to prevent invasive plant matter from being moved around. They also recommend not moving firewood that may harbor invasives, as well as being aware of the types of plants that you are planting in your garden. Are these plants native or invasive? If they are invasive, replace them with non-invasive alternatives. Historically, invasive plants have been revered for their beauty since many were brought over to be planted as ornamentals. However, it is important for gardeners to start recognizing and appreciating the beauty of native plants. Consider planting a native plant garden on your property or volunteering to help plant these gardens within your community.

#### Language Surrounding Invasive Plants:

Have you ever considered the language that we use to describe invasive plants? Think about terms like "exotic," "alien," and "invader." What about violent language such as "going to war with," "eliminating," or "killing." Although we are talking about plants here, what feelings do these terms evoke? They may evoke hostility or a fear of something foreign taking over an area, using up valuable resources, and disrupting the natural balance of life there. By using such language to talk about plants from other parts of the world, we are normalizing the fear and dislike of things that are foreign, which may translate to people, cultures, or traditions. The ways that we refer to invasives also mirrors the inflammatory language often used against human immigrants. Consider place-based names such as Japanese knotweed or Asiatic bittersweet. Place-based names may seem harmless since they simply refer to the place where the species originated. However, some people might associate the people of that country or culture with the destruction caused by the invasive species and blame them for the invasion. However, the people of that place are often not at fault. Rather, biological invasions have usually occurred after someone takes the species back with them after visiting a foreign land. These introductions can be purposeful in the case of ornamental plants or accidental in the case of stowaways on cargo ships. Therefore, it is important to think about the language that you use to talk about invasive species and the harmful messages it could convey.

#### Conclusion:

Invasive plants are quite common on Cape Cod and come in a variety of forms, including small shrubs and vines. Not only are they non-native, but they cause severe harm to landscapes, wildlife, and humans. However, all hope is not lost and the destruction that invasive plants cause can be addressed through a variety of means such as physical removal and replacement with native plants, herbicides, and the prevention of their spread. Just like climate change and other pressing environmental issues, it is going to require a lot of time, dedication, perseverance, and a diverse arsenal of strategies to tackle the problem of invasive species both on the Cape and around the world.

#### Additional Resources:

Visit these links to learn more about invasive plants and what you can do to prevent their spread.

Invasive Plant Atlas: <a href="https://www.invasiveplantatlas.org/">https://www.invasiveplantatlas.org/</a>

 This atlas contains basic information about a variety of invasive plants found across the United States.

Massachusetts Office of Coastal Zone Management: <a href="https://www.mass.gov/info-details/cz-tip-coastal-plant-identification-common-native-and-invasive-species-found-on-the-massachusetts-coast">https://www.mass.gov/info-details/cz-tip-coastal-plant-identification-common-native-and-invasive-species-found-on-the-massachusetts-coast</a>

Nature Conservancy: <a href="https://www.nature.org/en-us/what-we-do/our-priorities/protect-water-and-land/land-and-water-stories/invasive-plant-species-invasive-species-education-1/">https://www.nature.org/en-us/what-we-do/our-priorities/protect-water-and-land/land-and-water-stories/invasive-plant-species-invasive-species-education-1/</a>

• This article talks about how you can prevent the spread of invasive species.

Smithsonian Magazine: <a href="https://www.smithsonianmag.com/science-nature/why-scientists-are-starting-rethink-how-they-talk-about-alien-species-180967761/">https://www.smithsonianmag.com/science-nature/why-scientists-are-starting-rethink-how-they-talk-about-alien-species-180967761/</a>

• This article presents an interesting perspective on rethinking the language that we use to talk about invasive species.

Photos by: Grace Vachon, or sourced from Creative Commons

### **Osprey Cam - Season Three**

Rachel and Carson successfully raised three offspring this year at the osprey nest at the Waquoit Bay Reserve, Hotel, India and Juliet. Unfortunately, the fourth chick, Kilo, did not survive the season. They're now all on their way South, migrating to Central or South America. We wish them safe travels and hope to see them again in future years!



While there's nothing to see but an empty nest, there's still some activity from occastional visitors like a Great Horned Owl or Cooper's Hawk. Check out our **highlights** clips from the season to view these events and much more!

Please check our website for other upcoming events, activities and volunteer opportunities. Also, don't miss the Town of Mashpee Interpretive Nature Tours on Saturday mornings (see our <u>events calendar</u> for detail)!

### 2024 Friends of Mashpee NWR Board of Directors:

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## Membership Form

YES! I want to sup checked below.	port the <b>Mashpee</b>	National Wildlife Refuge - enclosed are my du	ies as
Name:			
Phone: (H)		(C)	
Street:			
Town:	State:	ZIP Code:	
Email:			

Enclose payment for the membership - please make checks payable to:**FMNWR** *Mail to:* **FMNWR**, **P.O. Box 1283**, **Mashpee**, **MA 02649** 

Thank you!

IJ	Junior (18 and under) \$10
[]	Individual \$25
[]	Family \$50
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[]	Wildlife Sponsor \$200
[]	Refuge Sponsor \$500+
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**Donate Online** 

## Volunteer Form

I would be interested in the following opportunities listed belowing	ow:
[ ] Stewardship Projects	
[ ] Newsletter Editor	
[ ] Native Pollinator Gardens	
[ ] Education Talks/Walks, Events at Schools	
I 1 Volunteer & Membership Coordinator	

The Friends meet monthly on the first Tuesday at 5pm on Zoom. Please join us and get involved with Refuge projects, Friends group, pollinators, and community events! If interested, email us at info@friendsofmashpeenationalwildliferefuge.org for a Zoom invite.

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