# Conservator



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#### ACKNOWLEDGEMENTS

Preserving the values of Watch Hill and Little Narragansett Bay would not be possible without the dedication of those who educate the public about the vital stewarding of the Napatree Point Conservation Area and about maintaining the historic and community character of Watch Hill.

We are especially grateful for the support of the membership of the Conservancy, our Community Programming Sponsors, the A.M. Roberts, Jr. Charitable Foundation, the URI Coastal Institute; and our staff, Board of Directors, science advisors and volunteers who give so much of their time and wisdom to achieve our mission.

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Alan Desbonnet, M.S., *Rhode Island Sea Grant* Janice Sassi, B.S., *The Watch Hill Conservancy* 

Photos provided by The Watch Hill Conservancy, Josh Beuth, Melissa Cote, Alissa Cox, and the Brookings Institute

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#### FROM THE DESK OF THE CHAIRMAN

## VIEWS FROM BAY STREET

As I write, spring is here. The trees are in bloom, the forsythia are brilliant yellow, and summer is not far behind. We had our first eighty-degree day in Watch Hill and more than 700 people came out to enjoy Napatree!

We started preparing for the '23 season last fall: we debrief, take inventory, and begin planning. By January, we began receiving registration inquiries for our Napatree Investigators children's program. In March, jointly with the URI Coastal Institute, we hosted a wonderful evening at the United Theatre featuring a presentation on Napatree migrations of birds, bats, and insects. It was so well received we are reprising it at a Lanphear *LIVE*! in August. By April, any openings in our Naturalist staff have been filled.

Speaking of Lanphear *LIVE*!, we have a wonderful roster of presenters lined up for our popular Monday evening lecture series covering a diversity of topics, from the security of our nation's electric power grid to the ancient art of falconry. See page 11 for the schedule.

The Conservancy is committed to offering visitors to Napatree free programs to inform and entertain. In Napatree Conservation Area Manager Daniel Cole's article, you will find that we've expanded our free activities with some fun additions to enhance your visit.

Our summer fund-raising event, Celebration of Summer, will be held at the beautiful Misquamicut Beach Club on Friday evening, June 30 from 6:00 – 8:00 PM. With the Watch Hill Lighthouse to the east and the Napatree shore to the west, it is a fitting site to toast the arrival of summer. Check our website for ticket information. It promises to be an event you shouldn't miss!

We are looking forward to our Annual Meeting on Monday evening, August 28 at 6:00 PM in the Conservancy's Chaplin B. Barnes Reading Room in the Lanphear Livery. In addition to presenting the Whittemore Award for Exceptional Service, we will hear a thought-provoking presentation by Dr. Alissa Cox from URI Natural Resources who will brief us on another impact of sea level rise – failing septic systems triggered by higher groundwater levels.

Scientific monitoring on Napatree, keeping abreast of community issues, and our work to preserve the community character of Watch Hill keeps us busy year 'round. We welcome summer: the return of our seasonal residents and visitors, being outdoors with friends, and enjoying this beautiful little patch of New England.

I look forward to seeing you,

allow Lamm

Deborah Lamm, Chairman

#### WE'D LIKE YOUR FEEDBACK OF THE CONSERVATOR!



Click the QR code to take a brief survey of this issue. Or visit https://bit.ly/WHC-Conservator



#### CELEBRATION OF SUMMER!

Celebrate the beginning of summer and support The Watch Hill Conservancy's mission to CONSERVE & PRESERVE!

The Watch Hill Conservancy invites you for a classic New England evening with cocktails, light bites and music.

> Friday, June 30th 6-8pm

The Misquamicut Beach Club 22 Fort Road Watch Hill, Rhode Island

THEWATCHHILLCONSERVANCY.ORG/COS2023



List in formation. If you or your business wish to support community programming, please contact us at (401) 315-5399 or email info@thewatchhillconservancy.org

### The State of Napatree Report: **A DECADE OF STEWARDSHIP AND PUBLIC EDUCATION**

- Peter August & Janice Sassi

In the early days of developing educational programs and stewardship plans for Napatree Point Conservation Area, Chaplin B. Barnes and Grant G. Simmons III commissioned the Rhode Island Natural History Survey (RINHS) to perform an ecological reconnaissance on Napatree to document the fauna and flora that was present and identify major management challenges and educational opportunities (Puryear 2005). In 2007, Barnes and Simmons hired Steve Brown and Julia Royster to be the first Napatree naturalists. Based on their work, Royster prepared annual reports on conservation programs and developed the initial baseline documentation in support of establishing a conservation easement for Napatree. Royster moved on to take a position at National Oceanic and Atmospheric Administration (NOAA) and Janice Sassi was hired as Napatree Manager. In 2010, the RI Natural History Survey was engaged to do a second ecological reconnaissance survey of Napatree (Buxton 2010). Both RINHS reports and Royster's documentation provided a detailed inventory of Napatree, including the rare and threatened species that occurred there.

Recognizing that to effectively steward such a delicate ecosystem would require ongoing scientific monitoring, Barnes and Simmons asked Peter August, a participant in the 2010 survey, and Napatree Manager Sassi to assemble a team of volunteer science advisors to guide management decisions and environmental monitoring activities in the conservation area. The initial team, all well-respected scientists, consisted of Dr. Peter August (GIS, ecology), Dr. Keith Killingbeck (botany), Hope Leeson (botany), Dr. Peter Paton (avian ecology), Dr. Howard Ginsberg (insects), and Dr. Jon Boothroyd (geology). Sadly, Dr. Boothroyd passed away a few years later and was replaced by his last Ph.D. student, Dr. Bryan Oakley. Dr. Nicole Rohr (marine ecology) was added to the team and when she took a position in environmental law in Boston, Alan Desbonnet replaced her.

The first annual Science Advisor meeting took place in 2011. It was attended by Barnes, Simmons, Sassi, the Napatree naturalists, and the science advisors. The main topic of discussion was, based on the work of the RINHS, to establish high-priority management activities. The following year they met and committed to memorializing the educational programs and scientific monitoring results in an annual State of Napatree Report. The purpose of the report was to document the stewardship activities on Napatree in an easy to read, beautifully illustrated format available <section-header><section-header><section-header><text><image><text><text><text><text>

as a free PDF download. Manager Sassi, science advisor August, with editorial assistance from the Napatree team, delivered the first edition of the State of Napatree Report in 2013. It consisted of 10 chapters and was 52 pages long. By contrast, the 2022 State of Napatree Report contains 28 chapters spanning 337 pages written by Conservancy staff, science advisors, students, collaborators, organizations, and visiting scientists.

The data reported in the State of Napatree Report are collected by and shared with a number of partners, including the U.S. Fish & Wildlife Service, RI Department of Environmental Management, URI Watershed Watch, Project Limulus at Sacred Heart University, and the Cornell University eBird database. Some chapters in the State of Napatree do not change much; for example, the plants and geography of Napatree, or the tidal properties of the lagoon. Other topics must be updated annually, such as the breeding success of plovers, horseshoe crab abundance, dune elevations, and public visitation rates.



Participants in the second annual Napatree Science Meeting. Back row, L-R: Dr. Keith Killingbeck, Dr. Scott Ruhren, Dr. Peter August, Dr. Howard Ginsberg, Chaplin Barnes, Kim Rayner-Russell, Dr. Jon Boothroyd. Front row, L-R: Kevin Rogers, Jessica Cressman, Steve Brown, Janice Sassi, Hugh Markey, Dr. Peter Paton, Grant Simmons.

## The State of Napatree Report has been well-received by the scientific community:

"The Watch Hill Conservancy has done a magnificent job documenting the fauna, flora, and geological processes of, and developing education programs about, this important natural area. There are few, if any, conservation sites in the region that have such a rich and current inventory of patterns and trends in plants, animals, and visitors. The Natural History Survey is very proud to have played a role in the formation of the science advisors and the production of the annual State of Napatree Report."

- Dr. David Gregg, Executive Director of the RINHS

"The Watch Hill Conservancy's stewardship of Napatree Point is an excellent example of conserving the fauna and flora of a fragile ecosystem while ensuring visitors have a safe and informative experience on this pristine barrier spit! It really showcases the need to balance educating our citizens and protecting nature."

- Kate Sayles, Executive Director of The Land Trust Council of Rhode Island

"The State of Napatree report is an excellent example of scientific transparency and permanently recording the ecological condition of the site and changes that are occurring. Napatree is also a superb training venue for future land managers. Almost half of the chapters in the State of Napatree report include student authors. With the excellent youth education program - the Napatree Investigators – (see Chapter by Brown et al.) run by The Watch Hill Conservancy, and the practical, boots-on-the-ground training Napatree naturalists and students receive, the future of conservation land management in Rhode Island is in good hands. The State of Napatree Report also serves as a valuable model for stewardship of additional natural areas in Rhode Island and along the rapidly changing Atlantic coastline, an undertaking critical to a Goldilocks level of observation and intervention.

- Judith Swift, Director Emeritus, URI Coastal Institute

THE STATE OF NAPATREE REPORT IS A PERMANENT RECORD OF THE FAUNA, FLORA, GEOLOGY, AND HUMAN DIMENSIONS OF THE NAPATREE POINT CONSERVATION AREA. IT IS TESTAMENT TO WHAT A DEDICATED TEAM OF CONSERVATIONISTS, STUDENTS, VOLUNTEER SCIENTISTS, AND INSTITUTIONAL PARTNERS CAN ACHIEVE BY WORKING TOGETHER. ALL EDITIONS CAN BE DOWNLOADED FROM:



## FROM STUDENTS TO PROFESSIONALS: **NAPATREE INFLUENCES CAREER CHOICES**

One reason Napatree Point Conservation Area is such a jewel arises from the work done by our naturalists. From 2007, when Steve Brown and Julia Royster were hired as the first naturalists, dozens of people have worked to conserve Napatree for wildlife and visitors alike. Many joined while in college or in the early phases of their careers, and most went into fields that were inspired by their work on Napatree. The Conservator caught up with four former naturalists who spoke about their career paths.

- Hugh Markey



Jessica Greene and Rey Larsen conducting a shorebird survey

### JESSICA (CRESSMAN) GREENE Conserving Napatree and the World's Oceans

Jessica Greene knows Napatree inside out. She was a US Fish and Wildlife Service biologist who conducted frequent shorebird surveys on Napatree in 2011. Her expertise and attitude made her a standout Napatree naturalist. Jessica has done every task required of Napatree naturalists. For years, she worked with Grant Simmons on water quality sampling and recalls her favorite days on Napatree were assisting ornithologist Reynold "Rey" Larsen on his bimonthly bird surveys. "Rey taught me everything I know about shorebirds. He was a great mentor."

As a URI graduate student in the Master of Environmental Science and Management (MESM) Program, Jessica had an affinity for ecological mapping and quickly became expert in Geographic Information System (GIS) software. She and naturalist Kevin Rogers, also a MESM grad, mapped Napatree – trails, shrub patches, plover nesting zones – and created detailed maps using drone photography. Some of Napatree's foundational maps are of Jes' handiwork.

Upon graduating with her URI Master's degree, Jessica was offered a full-time position as an environmental mapping

specialist in the Environmental Division of the Naval Undersea Warfare Center (NUWC) in Newport, RI. She provides mapping expertise to the team of NUWC scientists that determine where and when Naval operations can occur without impacting marine wildlife, such as whales and sea turtles. Her interests in conserving biodiversity have not changed; be they migrating shorebirds on Napatree or marine wildlife in the world's oceans, Jessica is bringing her computer mapping expertise to bear on protecting birds, mammals, and reptiles. When asked what she misses most of her Napatree days, she was quick to respond. "The staff and the camaraderie we had, especially with Tom Pappadia, Grant Simmons, Kevin Rogers, and Dr. Keith Killingbeck."

Her interests in conserving biodiversity have not changed; be they migrating shorebirds on Napatree or marine wildlife in the world's oceans.

#### JOSH BEUTH From Biologist to Law Enforcement

"I couldn't believe I was getting paid to work there!" When Josh Beuth joined the rest of the naturalists on Napatree, he knew immediately that this experience would be a good one. In the summer of 2016, Josh joined what he described as a "good, tight-knit group" of naturalists. It was a side job for him, since he was working full-time as a DEM biologist. "I felt the work on Napatree naturally complemented my work as a biologist."

Because of its natural beauty, Beuth could see immediately that Napatree was a popular location. "If you didn't take the time to walk out to the first crossover and look out on a busy July Saturday afternoon at 2:00 pm, you would never realize what intense uses are going on there. Everybody gets there with such limited parking, and they pretty much have to come by boat. With that heavy use, it was still an impressive place." He also noted that visitors really seemed to take care of the beach. "The overwhelming number of people respected the area. They played by the rules, picked up trash even if it wasn't theirs. I'd frequently see people with a plastic bag picking up. That's not something you see at other beaches."

Beuth said he'd always been divided in his desire to continue with biology or to pursue his interest in law enforcement. In January of 2019, he made up his mind: he would join the police academy to become a DEM Environmental Police Officer. After five months in the police academy, Beuth graduated and has been an officer ever since. And he still has chances to visit Napatree.

"We cover from Warwick to Narragansett, Point Judith, and then all the way down to Westerly, to the Pawcatuck River and Napatree. One of my favorite places to go and work is the Pawcatuck River and out around Napatree, mainly patrolling via boat. I just I love it out there."

"Looking back at Napatree and the three summers I spent there, it just has a special place in my heart."



"I felt the work on Napatree naturally complemented my work as a biologist."

- Josh Beuth



#### CHRISTIAN FOX Removing Barriers, Reconnecting Waterways

Christian Fox, a marine scientist from UConn Avery Point and Master of Environmental Science and Management graduate from URI was a Napatree naturalist in 2015 and 2016. In addition to the normal duties of beach patrol, Christian participated in many of the Napatree monitoring programs. For two seasons he assisted Grant Simmons with water quality testing. He participated in bat monitoring, nekton sampling in the lagoon, and horseshoe crab surveys. One favorite memory centered on the horseshoe crab surveys: "The nights were nearly pitch black. The only lights came from our headlamps and from the lights of Stonington off in the distance. Bay Street was quiet and there was a chill in the air. Standing in the water counting horseshoe crabs while the small silversides baitfish nibbled on our ankles was magical!" Christian credits his work on Napatree as an eye-opener in educating the public. "Visitor outreach is one of the most important duties of naturalists. I learned how important it is for people to connect policies in land management with the conservation benefits they bring."

Upon graduating, Christian took a position as outreach coordinator with The Nature Conservancy's (TNC) Blue Project,

a marine spatial planning effort for all Long Island Sound. He then headed north where he is now the watershed restoration specialist with TNC Maine. The rivers of Maine support a spectacular diversity of anadromous fish species which live in the ocean but spawn in freshwater rivers and streams. These include Atlantic salmon, herring, eels, alewife, sturgeon, striped bass, and lamprey.

A problem for Maine's freshwater fishery is connectivity. Its many culverts and dams make it difficult or impossible for anadromous fish to swim to their spawning grounds. Christian oversees removing these barriers to reconnect Maine's waterways. Much of the TNC work in watershed restoration is done with partner organizations such as the U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS) and the National Oceanic and Atmospheric Administration (NOAA).

Christian is enthusiastic about the progress made. "With each barrier removed, another section of waterway is open to fish migration. Conservation success comes in small but significant steps!"



#### MELISSA COTE Soul Searching on Napatree

It's not unusual to hear that Napatree's naturalist alumni enjoyed their time with us. Spectacular views, rolling waves: what's not to like? But for some, their time as naturalists also had an important influence on their career path.

Melissa Cote had just wrapped up her master's degree in 2018 when she came aboard. Her work in oceanography and especially climate modeling had been interesting, but Cote was unsure whether she wanted to continue working almost exclusively in a lab. In many ways, the job on Napatree was the polar opposite of her climate modeling work: every shift took place out in the sun, and she often learned things about the marine and coastal environment that broadened her knowledge and prompted her to do some soul searching about her career pursuit.

In addition to public interactions on the beach, naturalists often participate in field research. One of the biggest projects Cote worked on while at Napatree was mapping the location of invasive species, especially shrubs. "Invasive plant monitoring really interested me," she said. "I learned so "Something that I took away from being at Napatree was the way you all work so closely with different partners. That's something that I do now: everyone works together toward a common goal. It's just great to be a part of something like taking care of natural resources."

- Melissa Cote

much about botany that I never realized. My background is in marine sciences. The yellow grass surveys that we were doing solidified my feelings about working in the coastal marine world. I loved the on-the-ground projects, instead of what I was originally working on." Her interest in the project would later lead her to contribute an important written article on invasives that is included in the annual State of Napatree Report.

By the end of that summer, Cote would land a job at Midcoast Conservancy in Maine, where she is the Sheepscot River Watershed manager. "The Sheepscot River is especially important to the protection of endangered Atlantic salmon, and I work with Maine's Department of Marine Resources, USFW, and other local non-profits. I love working on the different projects. It's exciting, but it's definitely a lot of work."

Sadly, Cote's departure was more abrupt than she would have liked. "I haven't been back since I left, and that really has always bothered me. I left just about the time COVID precautions began, and there were travel bans." Despite the jarring departure, Cote has good memories.

"When I think about Napatree, the first thing that comes to mind are Pete August and Janice Sassi. Their teamwork and working with them was always so much fun."

"Something that I took away from being at Napatree was the way you all work so closely with different partners. That's something that I do now: everyone works together toward a common goal. It's just great to be a part of something like taking care of natural resources."

#### Join us for our SIXTH season of Lanphear Live!

We are excited to share our 2023 lineup of presentations in the beautiful Chaplin B. Barnes Reading Room in the Lanphear Livery at One Bay Street Monday evenings from 6:00 to 7:00 PM.



## Join us for the following SPECIAL PRESENTATIONS in the Chaplin B. Barnes Reading Room, Lanphear Livery.

Wednesday June 28, 6:00 PM. *Last Call: Bootleggers, Rum Runners and Watch Hill*. Captain Jack Spratt, Historian. Co-sponsored with the Westerly Historical Society.

Wednesday July 19, 6:00 PM. *Watch Hill, 1866*. Captain Jack Spratt, Historian. Co-sponsored with the Westerly Library.

Tuesday August 8, 6:00 PM. *By the Sea: Watch Hill Memories. A Video Documentary*. Presented by the Watch Hill Memorial Library and Improvement Society.

## BETTER RECORDS YIELD BETTER DECISIONS

Amid the scenes of wrack and ruin caused by Superstorm Sandy were miles of beach dotted with green structures that looked like alien landing crafts.

These were septic systems, completely washed out from the powerful storm and now useless. Replacing them was a top priority, and the jobs were completed relatively rapidly. There was only one problem: in haste of putting in new systems, no records were kept of exactly where or what type each new installation was. How well would the new systems hold up in another major storm event? Are both the new and old systems protecting groundwater?

Doctor Alissa Cox, director of the Onsite Wastewater Resource Center, a URI Cooperative Extension program focused on septic systems. Cox's job is to monitor the effectiveness of existing systems, particularly in coastal areas, and make recommendations to towns about how to better manage them.

"Sandy wiped out a whole bunch of systems, especially along Atlantic Ave," Cox said. "But we don't have clear documents of exactly which systems failed and which ones didn't, and what was done to fix them, because at the time the thinking was, 'Do what you need to do to get the systems back online and let us (in town wastewater management) know what you did after that.' But we don't have those records."



Normally, Cox and her team research wastewater samples from residential houses. "In an advanced system, there's sometimes some sort of wiz-bang proprietary technology piece that provides additional treatment to the effluent. If it's a conventional system, it skips that part, and then effluent ends up in a drain field which is in the soil. We can check these systems to see how they're working. Are they doing what the manufacturer claims they do?"

"A lot of the treatment happens in the soil, but that system only works when the soil is dry or not saturated. You need to have a certain amount of vertical distance or space from that soil below the drain field to get good treatment. If the groundwater starts coming up, which it does in the coast in response to sea level rise, you're losing some of that soil that's available for treatment. We have a long history of sampling in other towns, but in Westerly's case we don't even know where the systems are, we don't know which systems are super old. I've been trying to find out how many septic systems we have. Nobody knows. Based on the way things are currently tracked, we don't know which systems are vulnerable, or which may be damaged even in a normal nor'easter versus Superstorm Sandy."

Cox points out that Charlestown, another coastal community, maintains much more thorough records. "They know where every single system is, they know the last time it was visited, they send out reminders to people who are due for inspections and service, and that's important. But right now, other towns like Westerly don't have the staff or the capacity to track anything."

Cox recently presented the Westerly Town Council with a proposal to modernize the record keeping systems for the town wastewater. The system would be similar to other coastal locations across the state. "If it gets funded, we'll create a database where we can tie every single lot for all of our 21 coastal towns in Rhode Island to record the corresponding septic systems and permits in a DEM database." Getting those records updated and centralized on a map will allow for many analyses that will benefit the town, Cox says. "You can see how many systems are close to the coast. We can estimate the age of the system. As the project progresses, different towns will have different data streams. We can document damage from sea level rise and storms, and then start analyzing. We can see which systems seem to get more damaged. We can start understanding what the patterns are, and that could inform some policy revisions to make sure that what's going in the ground today is actually resilient and will serve our coastal community in the long haul."

There are many resources at the Resource Center here: https://web.uri.edu/owt/.



Source: Mann, R., C. Pearson, and J. Schuetz. 2022. Sea level rise from climate change is threatening home septic systems and public health. The Avenue, Brookings Institute.

## PUBLIC OUTREACH PROGRAMS ON NAPATREE

BY DANIEL COLE, NAPATREE MANAGER

## NAPATREE INVESTIGATORS CHILDREN'S PROGRAM

Registration is now open for our popular youth education program, the Napatree Investigators. Kids 7-13 years old investigate the creatures and habitats of Napatree Point in these free sessions which run Tuesdays, Wednesdays, & Thursdays,July 11 - August 17 from 8:30 –10:30 AM. For more information contact napatreenaturalist@ gmail.com. Attendance is free but registration is required and can be done at: bit.ly/Reg\_Investigators\_2023



#### HORSESHOE CRAB FAMILY WALK:

Join our Napatree naturalist in a survey of breeding horseshoe crabs along our bayside shore on Sunday, June 18 from 9–10 AM. Attendance is free but registration is required and can be done at: bit.ly/2023\_Napatree\_Programs

#### **NAPATREE DISCOVERY TABLE (NEW):**

"What kind of crab is this?" "How are the Piping Plovers doing?"Naturalists will host an interactive exhibit to inform visitors of the natural history of the conservation area. Saturdays and Sundays, June 25, July 9, July 23, August 6 and August 20 from 11 – 2 PM.



## SATURDAY MORNING NATURAL HISTORY WALKS:

Start your Saturday morning with a free leisurely stroll with our naturalists. June 10 – August 26 at 9:00 AM. Attendance is free but registration is recommended and can be done at: bit.ly/2023\_Napatree\_Programs

#### **SEINE NET PROGRAMS (NEW):**

To illustrate the importance of the Little Narragansett Bay ecosystem to the Napatree Point Conservation Area, we will offer a free seine netting demonstration to capture small comb jellies, fish and crabs.These events will be held on a few Saturday mornings instead of our regular nature walks. June 24, July 29 and August 26 at 9:00 AM. Attendance is free but registration is required and can be done at:bit.ly/2023 Napatree Programs



## NAPATREE Investigator

## SPRING 2023

#### **HEADS AND TAILS WITH HORSESHOE CRABS**

After gathering at the gazebo in the morning, Napatree Investigators began their walk toward the beach. As always, some of them liked to walk on the sea wall that ran along the edge of the parking lot. As we worked our way down, we spotted a dark shape in the water. The shape was the size of a dinner plate and might have been mistaken for a rock if it weren't moving slowly along the bottom. Suddenly, one Investigator made the identification: "It's a horseshoe crab!"



Sure enough, we had found an animal that has hardly changed in about 450 million years: *Limulus polyphemus*, or the horseshoe crab. Not only was it lucky that we saw one so quickly, but it was even better because that was the theme of the week! Napatree naturalist Steve braved the chilly morning air to go in and bring the strange looking animal to the land for a closer inspection. They were careful to pick it up by the sides, since picking up a horseshoe crab by the tail (the long, pointy thing that some people mistakenly call a stinger) could injure it. Investigators got a close-up view of the legs, the gills, and even the brushy mouth of the creature. Then they got to do a bit of real science!

Naturalists are working with scientists to measure and tag horseshoe crabs as part of Project Limulus, a program that keeps track of the crab population. Horseshoe crabs are used for several purposes, but the most important has to do with their blood. The blood of a horseshoe crab is used to test medicine before it is sold to the public. Scientists remove a small amount of blood from the crab, which is later released. Investigators helped measure the crab, wrote down the sex and size, and placed a plastic tag on the crab. That tag has a number on it, and if it is seen again, that information can help scientists learn more about where horseshoe crabs live and how far they move in their lives. Way to go, Investigators!

## WHEN DOES EELGRASS WEAR CLOTHES?

One of the many neat things Investigators found last summer were pieces of eelgrass covered with a kind of brownish goo. A closer look showed lots of tiny bumps on this brown stuff, which made us wonder whether this was just one organism or many. Using our handy field guides, we learned that the brownish covering is called a tunicate.

Tunicates are colonies of tiny animals, each of which are a tiny 3/16" (5mm.) long. They're distant relatives of fish, mammals, and other bony animals. The brownish goo is a covering that coats the outside of the creature, just like a "tunic" was a piece of clothing that covered humans in ancient times. In fact, the word "tunicate" comes from "tunic!" Tunicates are filter feeders; creatures that suck in water through a tube, digest microscopic foods mixed with the water, and then spit it back out through another tube.

There are good things and bad things about tunicates. The bad

thing has to do with the fact that it's an invasive species. Scientists think tunicates may have arrived from other parts of the world after accidentally being carried by ships. There's some indication that tunicate colonies may damage the eelgrass that they attach to. That becomes a problem because eelgrass is an important part of the ecosystem.

On the other hand, research is being done on the tunicate's

talent for healing itself. Scientists want to see how they do that, in the hopes that one day humans may be able to do the same. Other research is looking at tunicates as a source of food, and even as fuel! So is the tunicate good or bad? Hard to say, but one thing Investigators do know: it's another interesting creature on Napatree!





## FORT MANSFIELD

One of the questions naturalists often hear from visitors is about a fort on Napatree. "Didn't there used to be a fort out here? I remember going out there when I was a kid." The short answer is yes, there is indeed a fort at the tip of Napatree Point. The longer answer – how the fort got there in the first place and why most of it isn't there today - makes for an interesting story.

Back in 1896, ships were an important way of waging war on countries. They carried cannons, which could open fire on other ships, as well as onto the shore. If they were successful in fighting a territory's defenses, there were sailors aboard the ships who could land and take over an area. To keep that from happening in Rhode Island, the Army decided that Napatree Point would be a great place to build a fort in order to protect Watch Hill (the area where Napatree is located) and Fishers and Long Island Sounds, which is what the waters on the ocean side are called. By 1901, Fort Mansfield was complete, and over 100 men were stationed there. Mansfield had barracks where the soldiers would live and three "batteries," or placements for big guns. It seemed to be a perfect location for the fort. Or so they thought.

Unfortunately, practice runs in 1907 showed that the guns of Fort Mansfield would never be able to protect the areas it should. All the money and effort put into building the fort were nearly for nothing, and soon after, the Army changed the fort from being an active-



duty installation to being a place to only train soldiers. As the fort fell out of use, the population went from about dozens of men to none. The government removed the structures (except the batteries) and sold the property for summer cottage development. The cottages that were built were all washed away in the 1938 hurricane.

Today, there are only cement foundations of Fort Mansfield, and the area is covered with ticks and poison ivy. What was once an important defense building is now all but vanished, a small part of the amazing history of Napatree Point.

#### WORD SCRAMBLE!

Each of these is a word from this issue of the Investigator. Can you figure out what they are?

1. dafimsnle:	 
2. evvsinia:	
3. ctnueati:	
4. tlreif:	
5. <b>mlsluiu:</b>	

### UNTIL NEXT TIME...

This summer, naturalists Steve Brown and Hugh Markey will once again be leading our intrepid group of Investigators out onto the sands of Napatree Point to see what we can see. There are so many things to experience out there that we hope you will join us every week for this amazing free program. We have fish, mollusks, sand, sea, fresh air – the only thing missing is YOU! See you on the beach!

> 401-315-5399 1 Bay Street, Westerly, RI 02891 info@thewatchhillconservancy.org