

Scanning the Sky

Thirty Years of Hawk Watching on Napatree Point

Written by Julie Maurer, M.S., University of Rhode Island
Edited by Jaclyn Witterschein, University of Rhode Island Coastal Institute

It's the second morning in November, a first frost. We find Joe waiting for us in his green Subaru, so we pile in and squint toward the horizon. The car smells like autumn, a wood stove.

Joe's compact binoculars are aimed north, surveying the tree line that encircles the small harbor of Watch Hill. A clipboard propped on the console begins our story: Joe has already been scanning for an hour and noted two Sharp-shinned Hawks on his datasheet, spotted at 8:30.

"They'll fly from the eastern area to the western area. There are other paths that

they take, but that's the primary path," he says. "The stronger the wind, the more likely they'll fly this way and low."

We watch and wait.

§

Joe Zbyrowski has been scanning the sky over Napatree for migrating raptors every autumn since 1992. Thirty years strong, his diligent record of observations is now being used by researchers at the University of Rhode Island (URI) to understand how raptor numbers are faring at Napatree in comparison to other hawk watching locations in New England due to factors like changing habitat and prey populations.

Napatree Point is a narrow, sandy spit extending about a mile into Little Narragansett Bay, Rhode Island from the coastal community of Westerly, where Zbyrowski lives. This narrow

strip of land, surrounded by ocean and bordered by a small town, has balanced the needs of nature and humans for centuries, and in turn, the community has a long history of appreciating and preserving the nature here. "It's 86 acres of some of the most unique and highly prized habitat in Rhode Island," says Daniel Cole, Napatree Point Conservation Area (NTPCA) Manager with the Watch Hill Conservancy.

The serene spit has been a natural escape for New Englanders since the military's presence left Fort Mansfield in 1917, after discovering a design flaw ten years earlier. After the destructive force of the 1938 hurricane erased homes and habitat from the spit, further development on Napatree Point was halted and nature slowly began to rebound. The Watch Hill Fire District purchased much of this dynamic land between 1945 and 1961 and appointed the local Conservation District as the primary steward of the point in 2013. The Conservancy was charged with protecting the plants, animals, and geology of Napatree and ensuring public access. Since 2013, a number of new opportunities have been created for the community to learn about the Napatree ecosystem through public lectures, beach walks, and youth programs. In 2016, The Watch Hill Conservancy partnered with the University of Rhode Island Coastal Institute to designate NTPCA as a Climate Response Demonstration Site, the ideal location to study the organic resilience of coastal ecosystems in the face of climate change and sea level rise.

"The Watch Hill Conservancy stewards Napatree, protects its many conservation values (wildlife and habitats), and offers free programs to educate visitors of the importance of Napatree," says Deborah Lamm, past Chair of the Watch Hill Conservancy. "I am guessing that few Napatree visitors know of the conservation easement but are drawn to the area to enjoy the pristine, natural beauty and serenity of Napatree."

Now, American Beach Grass waves and sprawls across gently-sloping

dunes, stabilizing the sandy soil and allowing bayberry shrubs and shore pine to take root. Wild flora has created knotty shelter for mice, foxes, and deer in shadow of the abandoned Fort Mansfield, which has stood stoically on the Point since 1898. Napatree is now listed as a Globally Important Bird Area by the National Audubon Society, with over 307 species of birds documented on the point according to Cole. The point is well-known for its diverse and bountiful shorebird population; the best place in Rhode Island to spot orange-billed American Oystercatchers, Least Terns, and of course, the protected and beloved Piping Plover. For decades, birders like Zbyrowski have flocked to Napatree to observe rare shorebirds and songbirds.

"It's kind of [like] having this marvelous oasis in front of you that's...well-used by everybody," says Grant Simmons, Parks Commissioner with the Watch Hill Fire District, as he reflects on the beloved nature of Napatree Point. "We have a bunch of folks that are from...the greater community that are out there using it. Each season brings out its own individual folks."

Zbyrowski and his work were deeply connected to the environment and the health of birds in New England long before he established his hawk monitoring project on Napatree. He taught environmental science for thirty years in Coventry, Rhode Island, often incorporating bird ecology and conservation into his lessons. Throughout his teaching career, Zbyrowski and his students were active in improving the habitat at Napatree Point and studying the animal and plant life there; identifying shells on the beach, studying eelgrass and birds. "We'd come down to Napatree to do a number of things," he recalls. "Did a beach cleanup, for example, built nest boxes for Bluebirds and Kestrels." Several of his students went on to make careers in environmental science, he says, working for organizations like the

Rhode Island Department of Environmental Management (DEM) and the Audubon Society.

Zbyrowski's enthusiasm about raptors began with his studies at URI in the 1960's, during a time when birds of prey were in serious trouble. The infamous pesticide dichlorodiphenyltrichloroethane, DDT, was decimating birds of prey around the world via eggshell thinning and reproductive failure. In 1962, just two years before Zbyrowski's first hawk banding, Rachel Carson published *Silent Spring*. Communities began to object to the rampant use of industrial pesticides, calling for stricter regulations.

"Peregrine Falcon, Osprey, and Bald Eagle are three prime examples," explains Dr. Peter Paton, PhD, an ornithology professor at URI and science advisor for the NTPCA. "Their populations really declined in the 1950's and the 60's, and so there's been a lot of interest in the recovery of those since DDT has been banned in North America."

After retiring from teaching in 1992, Zbyrowski visited Napatree regularly with long-time friend and fellow birder, Arnold Moorehouse, to survey shorebirds from the shoreline. It didn't take long for soaring raptors to catch his attention.

"While we were down there, there were hawks coming through," he says, "and we decided at some point, 'well, let's...see what's going on'."

In 1994, Zbyrowski realized his consistent hawk watches produced real data, and he began to record observations in a notebook, following

a protocol that was established by the national Hawk Watch program. The notebook evolved into an organized datasheet, and a birding hobby shared between friends evolved into an annual survey that began to catch



Left: Zbyrowski and Witterschein watch the skies at Napatree Point.

Above: an Osprey with a fish in its talons, taking flight from Napatree Lagoon (Watch Hill Conservancy); Napatree Point is a destination for birders as a Globally Important Bird Area (Coastal Institute); an American Oystercatcher wades in Little Narragansett Bay (The Watch Hill Conservancy).



“You don’t have to be an expert hawk-watcher to participate in a hawk watch.”

Our watch continues, sometimes from behind the windshield, but occasionally standing, stepping out into the air, which has warmed slightly. We scan east to west to east across the slate ombre of sky, and Joe orients our field of vision: a house with blue shutters, a point of land across the harbor, a house with round windows. Wind direction and speed is crucial as well and Zbyrowski had indicators for these, too: the direction boats are facing while moored in the harbor, the direction of choppy waves, and flags.

“I see something above blue shutters in the gray [sky], heading towards the point,” one of us observes. Joe angles his binoculars, seeks the bird, analyzes its size, shape, how it flies. It’s a gull.

While more people joined Zbyrowski on hawk watches, community science birding also expanded. Today, birders can record and post their observations to apps like eBird, or volunteer with major surveys like the national Breeding Bird Survey.

“Birds are one of the best examples of volunteer-based monitoring programs,” Paton explains. “There’s a lot of people that use all that community based information to get really good ideas about population

and changes.” Paton has worked with volunteers for formal surveys like the Breeding Bird Atlas of Rhode Island, which has data on hundreds of bird species, collected by over 200 volunteers around the state.

In addition to being a professor at URI and a science advisor for the NTPCA, Paton is an avid birder. He frequently visits Napatree as a favorite birding spot, and had crossed paths with Zbyrowski while birdwatching on the dunes. When Zbyrowski offered his data to NTPCA and the Coastal Institute, Paton recommended postdoctoral researcher Clara Cooper-Mullin, PhD, to analyze 26 years of the hawk watch data, from the start of the survey in 1994 to 2020.

Napatree Naturalists, summer staff with the NTPCA, diligently worked to upload hundreds of paper datasheets, carefully cataloged by Zbyrowski since the start of his raptor surveys. Paton and Cooper-Mullin then analyzed Zbyrowski’s data for migratory trends, and compared these local observations to other hawk watching sites around New England to get a more holistic sense of how well raptor populations are doing since their recovery from DDT, and now in the face of climate change.

“It really helps to have not only this one site, but other sites [to understand the data].” Paton explains. In 2023, the results from their analysis were published in the 10th Anniversary State of Napatree Report, Diurnal Raptor Trends During Fall Migration at Napatree: 1994-2020.

As a Coastal Institute Climate Response Demonstration Site, research at Napatree focuses on studying natural resilience of Rhode Island’s undeveloped coastline. The rolling dunes move with the winds and the lagoon, a valuable habitat for

fish, horseshoe crabs, and shorebirds, changes on a daily basis with the tides and over time with each major storm. Understanding how migratory species like raptors and monarch butterflies use Napatree Point as a stop over helps Napatree scientists understand the value of this ecosystem to animals; both local and visiting. Zbyrowski’s hawk watches also bring visiting people to this special ecosystem. For a period of time, the Audubon Society of Rhode Island and the Denison-Pequot Nature Center advertised Zbyrowski’s hawk watches, and as many as twenty people would come out on a weekend to experience the beauty of Napatree and the exhilarating challenge of spotting a hawk in flight.

The brisk wind propelled a few other folks along the shores of the harbor and up the lolling dunes of Napatree: other birders, dog walkers. We take a short break to amble along the beach, joined by Piping Plovers who scuttle in and out of the surf. Later, our faces turned back to the sky under the golden light of a November morning, we spotted two more Sharp-shinned Hawks.



the interest of visitors and community members in Western Rhode Island and eastern Connecticut. Zbyrowski would periodically share his data with organizations that had an interest, such as Rhode Island DEM, the Eastern Massachusetts Hawk Watch Organization, and most recently with Dr. Paton at the University of Rhode Island.

Tracking the birds of prey over Napatree can help scientists like Paton learn more about their populations and even about the health of other birds. As top predators, raptors are a keystone species, keeping populations of rodents, small birds, and insects in check.

“I’m interested in the entire avian community,” says Paton. “By keeping track of the raptors, you have a good sense of how other species lower down the food chain are doing. If raptors are doing well, it suggests that a lot of other species are doing well, too.”

As the hawk watch grew, Zbyrowski expanded his observations to include more species of raptors. Now, the data sheets track 16 species and 20 total classifications of raptor each September, October, and November. Zbyrowski even records the migrations of insects such as dragonflies and monarch butterflies, which are important to the health of the Napatree ecosystem. Each

species has a different destination, he explains. The Cooper’s Hawk has a shorter migration, between southern Canada and Mexico. Others, like the Peregrine Falcon, migrate over 15,000 miles from northern Canada to South America. Vastly different migrations, but one underlying commonality: Napatree Point.

Over the years, Zbyrowski’s survey began to attract other fall beach-goers. “For a number of years, there were six to eight people that came to the hawk watch continuously,” Zbyrowski recalls. “You don’t have to be an expert hawk watcher to participate in a hawk watch. If you have a pair of binoculars and can spot a bird, that’s all we need.”

“If raptors are doing well, it suggests that a lot of other species are doing well, too.”

Left: Zbyrowski (left), Arnold Moorehouse (right), and Maddie out on a hawk watch (Zbyrowski). Right: Coopers Hawk in flight over Napatree Point (Bill Thompson Photography).

Community members from nearby towns like Westerly, RI and Stonington, CT enjoy observing and walking alongside their wildlife neighbors, and are invested in learning about them through their hobbies, NTPCA events, and even, in Zbyrowski's case, conducting their own studies.

The State of Napatree report provides proof of the balance here, documenting the natural dynamics at play between sea and land and the dedication of community members like Zbyrowski. It is the balance between nature and community that makes Napatree so special. "The beaches, the water, the boats." Zbyrowski says fondly. "It's just a nice place to be."

This uniqueness of place inspires generation after generation, through familial and local histories, and encouraged by Watch Hill Conservancy programs like the Napatree Investigators, which leads



school-age children through the natural wonders of the point. "[The kids] go home and say 'Oh, what a great experience,'" Simmons

explains. "[Napatree is] really open to everybody."

§

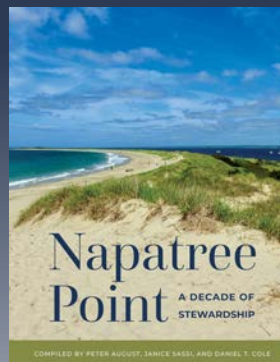
This article was funded by the University of Rhode Island

COASTAL INSTITUTE

in partnership with our friends at The Watch Hill Conservancy.



thewatchhillconservancy.org



State of Napatree
thewatchhillconservancy.org/napatree/napatree-resources/



Napatree Point
Climate Response
Demonstration Site

For information about the Climate Response Demonstration Sites, please visit the University of Rhode Island Coastal Institute at ci.uri.edu.

*Above: The Napatree Investigators program is a free summer camp that gets youth involved with nature (Coastal Institute).
Cover: Looking down the Point (Coastal Institute).*