



THE CURIOUS CASE OF THE PIPING PLOVER

Twenty-five years after Massachusetts started shutting down entire beaches to protect the tiny shorebirds, they're still struggling to survive. But as one unlikely success story shows, maybe the best way to help them is to stop worrying so much.

BY KRIS FRIESWICK /// PHOTOGRAPHS BY KEN RICHARDSON

Revere Beach has a new breed of summer resident. An inconspicuous sort, they are particularly fond of an area at the north end of the beach, where they huddle in the narrow strip of sand between a concrete sea wall and the sound. For five years now, young couples have made the trip here to enjoy the saltwater, to dine alfresco, and to – well, to hook up.

In residence this summer are three pairs of piping plovers, a species of migratory shorebird



BEACH BLANKET BINGO
Revere Beach has become a surprisingly successful habitat for piping plovers.

that was in danger of disappearing just a few decades ago. Plovers are still among the rarest birds in North America – there are only about 1,800 pairs on the Atlantic Coast – but for the last 25 years they’ve had an outsize influence on how New Englanders can and can’t use our beaches.

Since the United States first listed them as a threatened species in 1986, plovers, which nest on the sand, have been entitled to a variety of habitat protections. Driving off-road vehicles

on many beaches is often banned between the time the plovers lay their eggs (as early as April) to when their chicks can fly (sometime in July). Sections of sand get fenced off to protect nests, and entire beaches are often shut down altogether for months at a time. For some of the frustrated people who’d like to enjoy those beaches, too, the inconvenience has come to represent environmental do-gooding run amok. The plovers’ defenders, though, think differently.

“There’s a whole sector of society that would argue that the habitats that these species require have changed in such a significant way that it’s not possible” to save them, says Katharine Parsons, director of Mass Audubon’s Coastal Waterbird Program. But as humans, she says, we have a “moral responsibility” to do everything we can to rescue them.

The Revere Beach plovers have been doing all they can to help themselves. Wildlife officials



A WING AND A SWEAR
For some beachgoers, plover-related restrictions represent environmental do-gooding run amok.

would like plovers to “fledge” an average of 1.5 chicks per nest over five years, though these days even getting one chick out of four to survive is considered cause for celebration.

In Revere, however, the plovers have been posting extraordinary numbers. The 2009 pair fledged all four of their chicks, and the three pairs in 2010 fledged 11 of 12, or 3.66 per nest. Although it’s too early to say for sure, it looks like they’re set to do just as well this summer. Many other beaches may have higher plover populations, but few can claim Revere’s productivity rates.

This unlikely level of success has left biologists and beach managers scratching their heads. “We’re flabbergasted,” says Cathy Garnett, director of the ecology program at the Massachusetts Department of Conservation and Recreation.

The conventional wisdom regarding threatened species has always been pretty straightforward: Since human meddling is the thing that nearly drove the animals into extinction, the best way to save them is to keep people far away.

But crowded places like Revere Beach, with its 2.5 million annual visitors, have been forcing environmentalists to reconsider their assumptions. Even on raucous Sandwich beaches in 2008, when bonfires and fireworks weren’t uncommon, 41 plover pairs fledged 87 chicks (that’s 2.12 per nest for folks keeping score at home).

With all this productivity, you might think the

plover was on its way to coming off the threatened species list. But the Atlantic Coast population overall has curiously been stuck at a plateau for the past five years. This despite intensive efforts by wildlife agencies and communities all along the East Coast and millions of dollars spent every year on protection and management.

There are lots of theories about why the region’s population stopped growing, but the generally accepted one is that the biggest threat to plovers these days comes not from humans but from nature itself: predators such as crows and foxes, storms that wash away nests, and unseasonably hot or cold weather that kills them.

Of course, even the most well-meaning and deep-pocketed plover protectors can do very little in the face of nature’s whims. And that leaves a question as necessary to ask as it is unpopular to consider: How long do you continue to invest time and money in a species that nature herself seems determined to kill off?

Let’s get this out of the way first: Piping plovers are ridiculously cute. Especially the babies. They look like cotton balls balanced on toothpicks, or kids’ drawings of what birds are supposed to look like. The adults have a black ring around their throats and a demeanor that comes across as awfully defiant, especially for something so small. “Yeah,” says

Revere Beach resident Jason Smith, “they sort of have a Napoleonic complex.”

At less than 2 ounces fully grown, plovers never made good eating for our ancestors. But the plover’s delicate feathers were highly prized by 19th-century hat makers. Being ridiculously cute almost led plovers down the path of the dodo. By the early 1980s, plovers had been pushed further toward extinction by human development on their prime breeding habitats, particularly barrier beaches and dunes along the US and Canadian Atlantic Coast and in the Great Lakes region.

In 1986, with merely 800 or so pairs of Atlantic Coast plovers left, the federal government added them to its list of “threatened” species. The designation indicated their status was not as dire as “endangered,” but it nevertheless ensured them the legal protections of the Endangered Species Act. Massachusetts also brought plovers under the umbrella of its even more stringent endangered species law – it’s a crime here to kill the birds, but also to disturb their migratory, feeding, or breeding patterns – as well as the Wetlands Protection Act, which makes it illegal to adversely affect their habitat in any way.

With three sets of laws protecting them, Massachusetts plovers staged a remarkable recovery. Between 1986 and 1999, the state’s pop-



ulation rocketed from just 139 pairs to 501. Another decade of effort earned the region praise as a national model. “[W]ildlife managers and park service personnel in Massachusetts are setting the gold standard for piping plover management,” stated a 2009 article in *Audubon Magazine*. The state still boasts the largest breeding population of plovers on the Atlantic Coast.

Yet the success story has come at a cost. John Chatham, the conservation agent in Harwich, remembers when the plovers started appearing in his town in 2004. “From that time on, the population has grown and more plovers have nested and spread up and down the beach,” he says. “Each year the bill for plover monitoring continues to rise, because the number of plovers is rising.”

The \$2,000 Harwich spends on plovers, though, is minuscule compared with what other towns and organizations ante up. At Barnstable’s Sandy Neck Beach, the annual tab for managing the plovers and some other birds runs to \$92,000. The nonprofit Duxbury Beach Reservation also doesn’t itemize plover costs, but it spent nearly \$150,000 last year on “endangered species management,” according to its annual report.

At a time when cash-strapped communities are eyeing budget cuts for human programs, the plovers continue to do pretty well. Plymouth’s Council on Aging, for instance, pays for a senior center, free meals, and other services. The town

spent \$310,000 last year on more than 2,500 elderly residents. To protect its population of around 40 plovers and their chicks, it spent \$245,000. (“That is a big-ass number,” exclaimed town manager Mark Stankiewicz upon seeing the plover budget for the first time. “I never would have thought it would be that much.”)

But even higher than the economic costs can be the frustration factor of being constantly kicked off the beach by tiny birds. To protect a dozen or so plover pairs this spring, Parker River National Wildlife Refuge in Newburyport announced most of its ocean beach would be closed – even to pedestrians – from April to mid-August. Plymouth’s Long Beach didn’t open to off-road vehicles until July. There were additional closures at beaches in Wellfleet, at busy beach parking lots like Head of the Meadow in Truro, Nauset in Orleans, and elsewhere.

For Dick Seed, who has managed Truro’s beaches for more than a decade, it’s all getting to be a bit much. “There were literally no birds here when I first started,” he says. “Then they started showing up, and we had to protect them. And you’d never know they were rare if you come down here.”

But woe to the beachgoer who doesn’t take the birds seriously. The federal Endangered Species Act says that harassing a plover is punishable by a \$25,000 fine or six-month prison sen-

tence. Harm a pair and the penalties are double.

“I don’t have a lot of love for the birds at all,” Seed says. “They’re a pain in the neck and the care of them has gotten too intense.”

If there’s one place in the state where the words “piping plover” are liable to elicit anything from an impassioned environmental lecture to a swift punch in the nose, it’s in Plymouth. On one hand, the town has some of the strictest rules in the state to protect the birds; on the other, it’s the kind of place where disgruntled residents have been known to display bumper stickers that read “Piping Plovers Taste Like Chicken.”

The effect of plover protection is felt particularly keenly in Plymouth because of its unique geography. Long Beach is a 2.8-mile-long barrier beach, a section of which borders the town-managed parking lot. But the section of beach far north of the lot, with its rolling dunes and pristine sand, has long been the most treasured by locals. It is also impractical to visit without an off-road vehicle, especially with young kids, the elderly, or the disabled. And since there’s only one trail to the point, an inopportunistically placed plover nest could stop motorized access altogether.

So it’s perhaps not surprising that Plymouth has a history of plover-related recalcitrance. In 1992, the town created its first beach manage-



LIFE'S A BEACH AND THEN YOU FLY
Some communities spend serious money protecting plover chicks until they're old enough to migrate.

ment plan, a document outlining rules for how towns must protect threatened animals from off-road vehicles. In 1998, two years after a plover was killed by an ORV on Long Beach, the US Fish & Wildlife Service took Plymouth to court to force it to create a more stringent plan. A few years and many modifications later, one was finally approved.

But for some, the new plan still wasn't strict enough. Newton native Cate Muther and her husband, Dennis Aftergut, are a wealthy couple who live in San Francisco but spend summers in a cottage at the northern end of Long Beach. In 2000, they formed the private Goldenrod Foundation, with the stated mission to "conserve and protect the coastal environment in Southeastern Massachusetts for people and wildlife." Until several months ago, however, most of Goldenrod's efforts involved trying to restrict ORV use on the beach in front of the couple's properties (a second cottage is owned by the foundation).

Since it was created, Goldenrod has been battling Plymouth and various state wildlife agencies. Along the way, its challenges to versions of Plymouth's rules have resulted in the most comprehensive plan of its kind in the Commonwealth – camping is restricted, 24-hour security is posted at beach gates during particularly sensitive times, and ORVs are limited to 225 at one time, when they're allowed at all. Goldenrod is now trying to get the state to modify that plan, too.

Goldenrod argues that current ORV use in prime habitat – such as that northernmost beach

area that locals love – is causing damage by creating an adverse effect on bird migration, breeding, and feeding behaviors. In environmental law, such disruptions are called "takes." And the only kind of take allowed by the state, explains Goldenrod lawyer William Henchy, is one that can be shown to ultimately benefit a species. If the town can't show a benefit, he says, the law demands that the activity causing the take be prohibited.

State and town officials, though, say that the disturbances allowed by its rules are so minor that they don't cause takes. "If our management doesn't rise to the level of a no-take determination," says David Gould, the town's environmental resources manager, "then there isn't a beach in the Commonwealth that would rise to that standard."

Goldenrod's opponents say that what Cate Muther really wants, even more than saving plovers, is to keep vehicles out of her view. "My question for her is that if you're a legitimate bird conservation organization, why is Plymouth – where you just happen to have two homes – the only beach you're interested in?" asks Belinda Brewster, a town selectwoman and cofounder of the Plymouth Beach for All Coalition, a group seeking to preserve beach access for walkers, boaters, and ORVs. (Muther was unavailable for comment, but the group's executive director points out that it is also working to restore shorebird populations in the Gulf of Mexico.)

Rulings by magistrates adjudicating the Goldenrod actions against the state Depart-

ment of Environmental Protection and the Division of Fisheries and Wildlife appear to support Brewster's theory. In December 2010, a magistrate determined not only that Goldenrod failed to present any credible evidence to support its claims that ORVs are causing takes, but also that Muther's testimony appeared "motivated more by her long-standing opposition to any ORV access to the beachfront due perhaps to her family summering experiences at her beachfront cottage."

Undeterred, Goldenrod is now challenging the agencies' decisions in Suffolk Superior Court. If the court decides to apply a strict interpretation of the law, the end result could be that access to the north tip of Long Beach, even for homeowners like Muther, could be even more severely limited, perhaps even banned outright.

What seems to upset some Plymouth residents the most – besides the \$150,000 in tax money their town has spent defending itself against Goldenrod – is that their plovers are actually thriving. In 1993, the federal government estimated Plymouth's maximum plover capacity was 10 pairs, but it's been at or above that level since at least 2000 (except for 2001, when it dipped to nine pairs). This year, there are 20 pairs, and yet the debate about how much protection is enough still isn't settled.

"Plymouth residents have grown to accept the [beach] restrictions, realizing it's the way things are," says Brewster. "But what they won't accept is to be totally kicked off the beach."

“There’s protecting the birds, which we all want to do,” says one beach manager. “But then there’s all this additional stuff that isn’t going to make any difference whatsoever but causes a lot of hardship on folks.”

Despite the image Goldenrod and the state’s Endangered Species Act seem to paint of plovers as delicate birds whose patterns of behavior and habitats must never be disrupted, plovers have shown a remarkable adaptability to humans. On the Fourth of July, the piping plover chicks on Kalmus Beach in Hyannis were happily feeding while a massive fireworks display exploded over their heads. In South Boston this year, a plover nest was spotted on the men’s side of the L Street Bathroom, though it was gone by the time wildlife officials arrived to check it out.

Plenty of people agree the birds can be gregarious, including officials from Mass Audubon, who keep the location of nests secret lest they be tampered with. On a recent visit to Seagull Beach in Yarmouth, several plovers came within a couple yards of Ellen Jedrey, who is assistant director of the group’s Coastal Waterbird Program. “They’ll come right up to you,” she says with a laugh, “I saw one walk over a beach blanket once.” Even Goldenrod’s executive director, Scott Hecker, admits that under certain conditions the plovers can happily coexist with humans.

That seems to be the case on Sandy Neck, a 6.5-mile barrier beach in Barnstable that hosts hundreds of off-road vehicles during the summer. It is also the only beach on the Cape that has ORV access all summer; even when part of it gets closed, there is almost always still plenty of beach for people to use. And yet for all its

traffic, Sandy Neck attracted 44 pairs of plovers this year, a record for the beach.

Nina Coleman, Sandy Neck beach manager, thinks the town’s rules strike just the right balance between human and avian interests. “There’s protecting the birds, which we all want to do,” says Coleman. “But then there’s all this additional stuff that isn’t going to make any difference whatsoever but causes a lot of hardship on folks that want to recreate.”

The main problem facing plovers today, Coleman says, isn’t off-road vehicles but natural predators. Sandy Neck has never lost a plover to human meddling, but this year, coyotes, crows, gulls, and other animals ate the eggs and chicks in 18 of its 44 nests. In Plymouth, a plover hasn’t been killed by a human since 1996; yet in 2005, all 15 plover pairs lost *all* their eggs to predators.

It is now widely accepted by plover experts that predators and storms are primarily to blame for the East Coast plover population being stuck at a plateau. Yet controlling those threats isn’t as bloodless as banning off-road vehicles. Long Beach in Plymouth has experimented with a program to relocate or kill foxes, for instance, while the Cape Cod National Seashore has considered killing crows by tricking them into eating poisoned chicken eggs.

Coleman says she has no plans to put such a program in place at Sandy Neck. They’re expensive, she says, and killing one kind of animal to protect another tends to be a politically polarizing endeavor. More than that, though, she’s not convinced they work.

“It’s not like if I eliminate all the coyotes we’re all set,” she says. “If we kill all the coyotes on Sandy Neck, that would just increase the skunk and raccoon population.” The larger ranks of those predators would then only further threaten the plovers and other birds.

Wildlife officials say that endangered species management is incredibly complex and caution against reading too much into any one factor. For example, after a couple of years of high productivity at busy Winthrop Beach, plover nests were recently decimated by predators.

Still, the experts haven’t failed to notice that some of the most remote beaches can have the highest rates of predator attacks and therefore the lowest productivity among plovers. At the same time, some of the state’s busiest beaches have posted exceptional productivity rates.

“It’s not always true that the most heavily used beaches are the most productive,” explains Katharine Parsons, of Mass Audubon’s waterbird program, “but it’s something that looks like it might be a pattern.”

It’s possible then that one of the best ways to help plovers is continuing to let them live right up against people – people who watch where they’re stepping and driving, to be sure, but who also by their mere presence scare would-be predators away.

“At this point in the game,” says Coleman, “we’re not the enemy any longer.”

Except for those drivers with the menacing bumper stickers, pretty much everyone can agree that piping plovers should be saved, but the debate about how to do it will likely continue for years. The New England population has exceeded its federally mandated target, but there’s still work to be done. All four Atlantic Coast nesting regions must achieve a total population of 2,000 pairs before the federal government will even begin to consider delisting the species. So until other communities step up their game, mitigation and management efforts are here to stay.

“We can save [plovers], I think, if we can protect enough barrier beach, wild barrier beach that isn’t up against some concrete wall someplace,” says Hecker, who directed bird conservation programs for the state and national Audubon societies before coming to Goldenrod.

The irony, though, is that the plovers up against the sea wall of Revere Beach are doing better than anyone expected. (Some officials even wonder if the smells of car exhaust and food are making it difficult for predators to find them.) And as such, that community’s relaxed attitude – take steps to protect the birds, but let people have their fun, too – might just be a model for the future.

When the plovers first arrived on Revere Beach a few years ago, some people expected them to get a less than warm welcome. Even though their preferred spot is not as busy as other sections of beach farther south, the mandated plover enclosures take up a big chunk of the area where local residents like to walk their dogs and sunbathe. But the neighbors and the birds quickly learned to happily coexist with a minimum of inconvenience to either side.

Some neighbors have become the birds’ staunchest allies, helping maintain the plover habitat signs and educating visitors about how the birds turned up in such an unusual place. Longtime residents such as Alan Graff, who has lived in Revere for 47 years, are enormously proud of what these plovers and their nesting selection tell us about the harbor cleanup, the cleanliness of their beach, and the success of their neighborhood.

Jason Smith, who grew up on Revere Beach, lives in his childhood home directly across from where the plovers nest. Every chance he gets, he brings his own kids – 5, 3, and 3 months – across the street to see them. He says he occasionally has to remind them that they can’t throw rocks at the plovers, though “they can still throw rocks at the gulls.” But mainly he explains how threatened the little birds are, how special they are.

“I like that my kids are seeing something that most people don’t get to see,” Smith says. “We saw five of them the other day, just hanging out. It’s nature coming back.” ■

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