Of birds and sheep

Tusket Islands conservation involves some complicated relationships

by David Lindsay

Those who have visited Peases Island, off southwestern Nova Scotia, frequently describe it as a wild, windswept place that seems remote from human society, though it is only six kilometres from the mainland. Peases is one of the Tusket Islands, an archipelago just beyond the mouth of the Tusket River. To get there, likely setting out from Wedgeport, you would want to be accompanied by someone well acquainted with the local currents and rip tides, which can be treacherous. The most probable reason for your visit would be to see the birds – because Peases, comprising just 11 hectares, fairly teems with avian activity.

There are the gulls, of course, as well as cormorants and various ducks, but also colonies of Black Guillemots, Common terns, and Arctic terns. Roseate terns were recently found to be nesting there – a sign of hope for this endangered species that now survives only in Nova Scotia. And the island's varied habitat – ranging from barrens and beaches to salt marsh and lagoons – attracts other uncommon species such as the Hudsonian godwit, the American Golden-Plover, the Snowy owl, the Horned lark, and the Snow bunting.

Sanderlings and Semipalmated plovers on Peases Island, an important migratory bird site that has recently been purchased for conservation by the Nova Scotia Nature Trust. (Simon d'Entremont photo)

Moreover, the island's location along the migratory route known as the Atlantic Flyway makes it an important resting and feeding stopover for many birds – including the Red Knot, an endangered sandpiper renowned for its annual journey between breeding grounds in the Arctic and winter habitat in South America, flying for as long as a week at a stretch.

For these reasons, Bonnie Sutherland, executive director of the Nova Scotia Nature Trust (NSNT), was pretty happy to announce the group's acquisition of Peases Island this spring, calling it "another major win for bird conservation."

The NSNT has sought to raise public awareness of dramatic declines in bird populations – especially migratory species. For seabirds and shorebirds, coastal development represents a significant threat, which is why the NSNT has devoted considerable attention to the Tuskets. In addition to Peases, nearby Spectacle Island will soon be purchased, adding to several hundred hectares of protected habitat on the Bald Islands, Bon Portage Island, and – further offshore – Seal Island.

There is a popular conception that lands set aside for protection will be maintained in a pristine, natural state, but this does not fully reflect the reality of the endeavour.

Sheep have been kept on the Tusket Islands for generations – perhaps centuries. The ecological implications of this practice is a topic of ongoing research. (David Hodd photo)

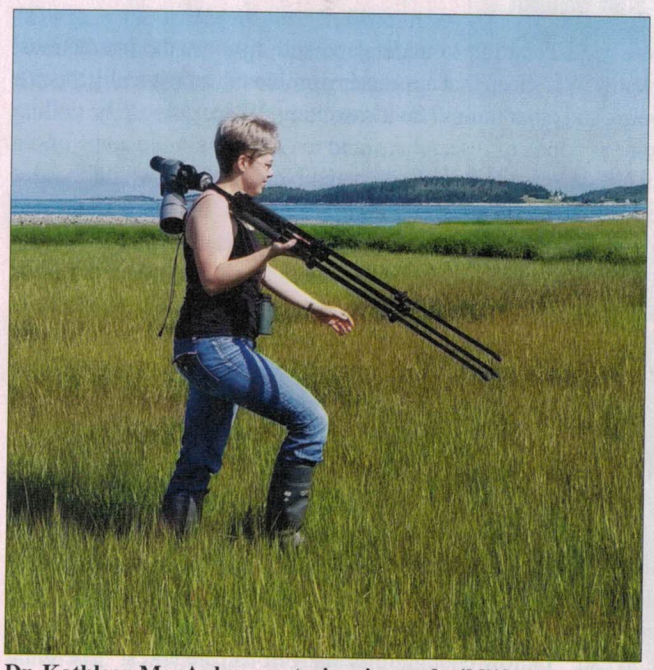
In many cases, a return to wilderness conditions may be impossible – and it may not even be desirable, given changes in the population dynamics and habitat needs of certain species. Peases Island is a prime example of how conservation management can be very complicated in the Anthropocene – a time when virtually all landscapes and ecological systems bear the mark of human activity.

For starters, people once lived on the island, at least as far back as 1879, when a lighthouse with an attached dwelling was erected there to guide sailors and fishermen through Schooner Passage and Ellenwood Passage. The human presence continued until the mid-1980s, when the light was de-staffed. Over the years, the lightkeepers were likely responsible for the total removal of trees from the island, and the introduction of various non-native flora and fauna. But even before that, there were the sheep.

PERFECT SETUP

"I think people along the Maritime coast of both Canada and the U.S., and the Gulf of Maine, have been having sheep on islands as long as anyone can remember, because it's sort of a perfect setup," says Dick Henry, the landowner who agreed to sell both Peases and Spectacle Island to the NSNT at less than market value.

Henry, a U.S. citizen, has a family connection to the Wedgeport area that dates back to his grandparents' generation, when they used to visit in the 1920s. As a child in the 1950s, he often went out to the islands to band birds with his mother, an avid birder who got involved in research and conservation efforts led by local ornithologist Israel Pothier. Henry went on to become a sheep producer, and was involved in the use of intensive grazing for vegetation management in New Hampshire and Massachusetts, and later in Florida.



Dr. Kathleen MacAulay, a veterinarian and wildlife expert from Yarmouth, N.S., doing field work on Peases Island.
(Alix d'Entremont photo)

"I actually started with sheep on an island off the coast of Maine, and when I came up to visit my parents in Nova Scotia I would go and visit all the local guys who had sheep, and say, 'Now tell me, what should I be doing?' They taught me how to shear, and gave me a lot of good pointers."

He purchased Peases and Spectacle in 1989 and 1990, primarily to protect them from development, and he had no reservations about allowing local farmers to continue keeping their sheep on the islands.

This time-tested practice involved leaving ewes on the island year-round, and introducing a ram in the autumn, resulting in spring lambs. "You could just leave them there, and come back in the fall and have these 70- or 80-pound lambs," says Henry, adding that the rams had to be removed to a separate island for the summer. "If you leave the rams, they'll start breeding the ewes in August, and then the lambs are born in February, and that's the end of that.... That's why when you go up and down the Maritime coast there's a gazillion Ram Islands, and none of them are very big, because they only had one or two rams on them."

Other than sheering, and maintaining the breeding schedule, it was a simple and inexpensive production system. "You have to pay attention to the stocking rates, but I don't think any of the islands had more than 40 or 50 sheep on them – maybe one sheep per acre would be about what it could tolerate. The fact that you get moisture from the fog means that even in dry summers the grasses do well out there," says Henry.

"All these sheep overwintered on the islands. There was always a leeward side where they could get down under the bank, away from the wind. And they fed mostly on kelp during the winter – washed up on the shore. There's enough fog and moisture on the grass when they're eating it, they don't need a lot of water – but most of the islands do have some fresh or brackish water on them. Sheep can go a long time in those kinds of environments, where there's a lot of moisture in the feed, without too much water."

The sheep are still out there – freely travelling between Peases and Spectacle at low tide. Henry likes the idea of the islands being "preserved in their sort of quasi-natural state," and he's inclined to disagree with conservation purists who believe these quasi-domestic livestock should be removed.

"The sheep tend to keep the grass short enough so that the terns can nest and still be able to take off from their nests," he says. "The Common tern doesn't have too much trouble with that, but the Arctic tern has such a short leg length – the tarsus of the leg is so short – that it can't jump up into the air as well as the Common can. So unless the grass is fairly short, they have to nest on the beach, and I think, in general – I haven't studied it, but other people have – the survival rate is probably a little better not being right on the beach. That's an interesting symbiotic relationship. I think grazing animals have their place, and it's not too surprising that the birds took advantage of the sort of improved environment – the improved habitat for their nesting."

PREDATION

But there are further ecological complexities. "There were no coyotes when I was a kid, but now the coyotes will actually

The Roseate tern, a critically endangered seabird species, was recently found to be nesting on Peases Island, highlighting the island's conservation value. (Alix d'Entremont photo)

The Red Knot, an endangered species known for its epic annual migration from the Arctic to southern Argentina, has been observed stopping over on Peases Island. (Russel Crosby photo)

The Bank swallow, an endangered songbird known to nest on Peases Island. (Simon d'Entremont photo)

swim out and kill sheep and then swim back, so that's a problem," Henry says. "Another problem has been Bald eagles. As the Bald eagle population has bounced back quite a bit – I haven't seen it, but I've been told by local fishermen – they apparently can prey on the young lambs. For a Bald eagle to pick up a five- or six-pound lamb is no problem at all, so the successful growth of lambs on the islands has dropped off precipitously."

Predation on lambs can be prevented with guard dogs, but presumably that could have other consequences – just as the use of cats, to control accidentally introduced rats, had negative outcomes for ground-nesting birds on some islands.

Then there is the question of buildings, which historically provided habitat for Barn swallows – a species that needs all the help it can get, although it would not have been present under pristine island conditions. The two-storey lightkeeper's residence, abandoned and derelict, was a ghostly landmark on Peases for decades, but eventually it was deemed to be a hazard, and the Coast Guard removed it in 2018, leaving only the nearby fibreglass tower that houses an automated solar-powered light.

All of these factors are under consideration as the NSNT develops a conservation plan for Peases and Spectacle. David Hodd, the group's land stewardship manager, has experience with island ecology in the U.K. Along with fellow staff member Joanna Skomorowski, and volunteer Mary Guptill, he spent half a day on the islands last fall, beginning the process of documenting bird life, vegetation, and human impacts. A detailed baseline survey will provide the starting point for all management decisions.

"We also now own the large part of Seal Island, and we have a conservation easement with Acadia University on Bon Portage, and we own a number of the Bald Islands, so one of the things we've started is a really interesting collaboration with scientific partners and academics and government agencies and NGOs, to try to really understand the ecology of islands, with sheep and rats and other non-native species," says Sutherland.

"We're just starting to understand and discover the interactions. You know, is it sheep that are causing problems, or is it really the rats and mink and other things? So it's exciting. We're going to be pulling together all kinds of researchers, and maybe bringing in some of the international experience in Britain and New Zealand, where they've done some interesting work with sea birds and islands – to try and figure out how do we best steward these islands.

"And we also have to balance that with historic uses and community values, so we've been meeting with people in the local community to talk about sheep and what that means to them and what they envision for the future. Getting the island secured was the first step, so that we know no harm can come to it, and then we're going to work together to figure out some pretty complex ecological questions."

Henry, for his part, is very pleased with the way things are developing. "The Nature Trust approached me, and I couldn't think of a better curator of the islands, so I was very happy to sell them and see them preserved for posterity. It seemed like an ideal match," he says.

He is particularly keen to see more research done to help improve the prospects for migratory birds, and he will be happy to assist in any way he can. "I know enough to be dangerous," he jokes. "The thing I emphasize to everybody is that the local community knows a huge amount about these islands." ●