



# THE FUTURE OF MDI'S NATURAL WORLD

RUTH GORTNER GRIERSON

Mount Desert Island is a precious gem in a beautiful setting. We can give thanks to many farsighted people in the past who recognized this and took strong and successful steps to protect it for us. In 2009 it is the responsibility of residents and island visitors to look to the future and make sure the special natural beauty and character of Mount Desert Island and the outer islands continue to sustain healthy habitats for all the flora and fauna, including humans. By "outer islands" in this writing I specifically mean the town of Frenchboro, which includes 12 islands: Long Island, Crow Island, Harbor Island, Mount Desert Rock, Great Duck Island, Little Duck Island, Black Island, Placentia, the two Green Islands, Pond Island, and Drum Island.

Acadia National Park has preserved many acres of land from further development, and it preserves the natural wildlife habitat on several lakes, ponds, ocean shoreline, mountains, fields, and forests. We still need to make sure the areas outside of the Park stay healthy. The Park itself attracts millions of people to MDI and that contributes to the development problem.

When homes are built, it automatically means the cutting of trees, the loss of various kinds of habitats for wildlife, and more and more paved roads. Paved roads prevent water from soaking into the ground. Humans demand quantities of water to live, not only for drinking but for bathing, washing clothes, and sewerage disposal. This puts a tremendous pressure and strain on an island's limited water supply. By its very nature an island is limited to its available water. After all the ground water is used up on an island, sea water comes in and fills the void. Salt water can be processed and made potable, but it is not convenient and is very costly. With each new hotel, motel, housing development, and new business built on an island, the demand for water is greater. We cannot continue to grow on an island with no thought to the future, for the results will be very unpleasant overall.

The biggest threat as I see it is overpopulation and the subsequent overdevelopment and use that occurs. An island, no matter what its size, has a limit as to how many people can live there, visit it, and not destroy it. It is imperative then that the number of people on any island be



limited to the island's ability to sustain a healthful habitat for humans and wildlife. Development pressure on an island is very strong. Each year more seasonal and year round homes are built. Acadia National Park's attendance continues to grow throughout most of the year. Mount Desert Island needs to limit the number of people living and visiting here and to



limit the number and kinds of buildings constructed. This is the hardest concept for humans to understand, for we tend to see it, want it, and take it without looking at the whole picture. Money is often the tempting ingredient, with no thought for the future health of the island.

More homes and people mean more pets running loose even though there are laws restraining them in towns and in Acadia National Park. Historically, people's pets on islands have caused certain species to become extirpated because the pets were not controlled. Irresponsible pet owners can seriously disturb wildlife in any habitat. Even an afternoon of free-roaming dogs in the breeding season, especially, can wreak

havoc with young wildlife. In the last 35 or 45 years certain birds such as the ground-loving Whip-poor-will have all but disappeared on MDI because of cat predation. Whip-poor-wills have a very loud call announcing their presence, and they call at night when such predators are out hunting. Because the domestic cat is not a native mammal in North America, birds are not instinctively afraid of them. Our domestic cats came from Egypt, where they have natural predators and therefore a natural balance.

Plants and animals naturally come in four ways to an island: by wind, on wings, by flotation in the water, and by human introduction. The larger the size of human population the lower the bird population. Birds through the years have been taken for food, feathers, oil, and eggs. Some were driven to extinction and I believe our lives are poorer because of it.

Hawaii is a fine example of what happens when an unnatural predator is introduced to an island and let loose. The nonnative Mongooses intro-

duced there have done tremendous damage on these lovely islands, and some bird species have been all but wiped out. Mongooses were brought to Hawaii over 100 years ago in the mistaken effort to eliminate rats. The Mongoose is diurnal and rats are nocturnal, so instead of eating the rats the Mongooses co-existed with rats and fed instead on other creatures, including the Nene, Hawaii's endangered state bird. Nene nest on the ground and are easy prey for the Mongoose.

Add a lot of human activity in the form of buildings for homes and businesses, and other stresses come to an island. Tree cutting and making properties more "park-like" have detrimental effects on wildlife. Tidying the woods is not a good idea either because the rotting logs and dead trees in the woods and ground vegetation are all necessary for a healthful living environment for wildlife small and large. A manicured lawn can be all right if not too large an area and if it is not treated regularly with harmful pesticides. Such birds as Robins have died in great numbers where lawns were treated with lethal pesticides. Runoffs from pesticides also affect wet areas, streams, and ponds where fish and wildlife abound.

When a field is destroyed or becomes a home site, complete with all of the normal disturbances this brings about, wildlife suffers. For certain birds, insects, and mammals a field is "home." Meadowlarks, Bobolinks, Marsh Hawks, Kestrels, Swallows, voles, grasshoppers, butterflies, and countless other creatures live their entire lives in a field. Foxes hunt in fields for mice, hares find food and cover, insect-eating birds find food for their young. Snakes hide at the edge of the woods and may be grabbed by a Broadwinged Hawk looking for lunch.

Ponds and lakes and streams are filled with wildlife and rich habitats. A beaver pond always provides "home, sweet home" for numerous animals. The requirements for life are water, food, and a place to live. A





body of water and the surrounding area fit these requirements, especially if there are some shallow weeds, nooks and crannies where orchids, cranberries, and pond weeds grow and where fish can live their lives as well as providing food for other wildlife. Some insects spend their entire life



cycles on the underside of a lily pad. Salamanders need ponds and streams to live out their cycles of life, but they also need a forest nearby that is cool and where they can hide and find food after they leave the water.

Temporary pools, called vernal pools, are very important for their survival. If these pools are filled in, the lives of numerous creatures are in danger. In the spring, amphibians need to go to shallow-water areas, especially

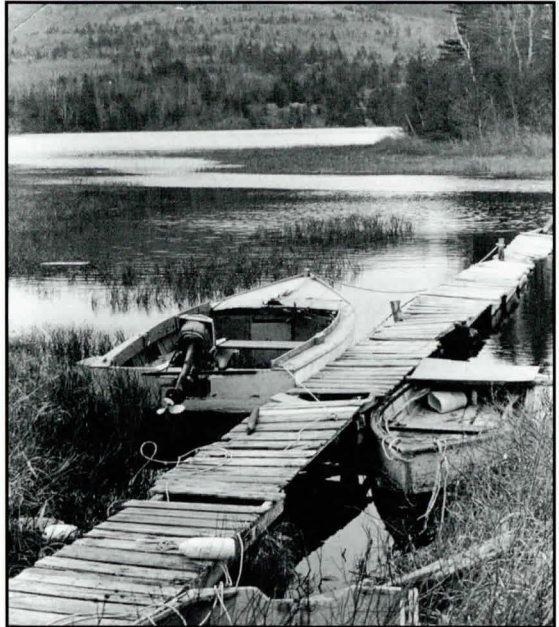
temporary pools, where they can breed, lay their eggs in a predator-free environment, and then have time to develop before the pool dries up. If a home owner destroys such a pool, death comes to many living creatures. It does not take much to throw a habitat off balance.

## INVASIVE PLANTS

Invasive plants coming in accidentally or brought in and allowed to “take over” can cause native plants to get crowded out and disappear. They change animal habitat by eliminating native foods, altering cover, and destroying nesting opportunities. Many such plants were brought over by the colonists, and some invaders came from nursery stock brought in for local gardens. Invasive plants come from various sources. Some are stowaways in packaging material; some in soil brought from another country; and some in ornamental and landscaping plantings. The problem is accelerating. Prevention is the key to success with invasive plants. Look at what has happened with Loosestrife, with its colorful magenta-pink spikes spreading over wet areas and along our highways. This colorful invader filling in wet habitats has become a large nuisance on MDI. Loosestrife, unfortunately, is here to stay.

In the case of Eurasian Milfoil threatening our ponds and lakes, pre-

vention is very important. There are things we can do such as washing boats before taking them into another pond. Just this one step is very important in stopping the invasive Milfoil. Sea planes on Somes Pond and Long Pond, for instance, need to be alert to their possible impact as a "carrier." Eurasian Milfoil is native to Europe, Asia, and Northern Africa, and was introduced to the U.S. in 1940. It spread mostly by boating activity and continues to be dispersed by boats, motors, trailers, bilges, and bait buckets. It can stay alive for weeks if kept moist. The best control is to prevent it from being introduced to water in the first place. This Milfoil is a highly aggressive aquatic plant forming dense mats that congest waterways and crowd out native plants. Milfoil habitats are lakes, ponds, slow-moving streams, reservoirs, and estuaries, and all such habitats in Maine are vulnerable to this species. Once established, such an invasive aquatic plant is extremely difficult to eradicate. Maine has no law concerning plants. Island ecologies are altered subtly or dramatically by humans and done so quickly. Constant vigilance is a must.



## OUR CANARIES

Canaries have traditionally been used to detect bad air in mines. Our "canaries" are the health of the lichens, fish, amphibians, birds, insects, trees, vernal pools, and air quality on the islands. All lichens are useful indicators of air quality because they act like sponges, taking up pollutants that come their way. Lichens have no roots, so they take all their moisture and nutrition from the air and are, therefore, sensitive to air pollution, especially automobile exhaust, and in their early life they do not tolerate lead. They are particularly intolerant to sulphur dioxide and therefore grow more poorly near towns and cities. When lichens look healthy, it is a sign of good air quality in that area. MDI unfortunately



is a victim of acid rain and poor air quality coming to us from far-away cities. In regards to acid rain and air quality, we are not completely in charge of what happens here. Our islands are subject to the air streams coming from big city areas that drop pollution on our islands. Neither is something we can do much about. Acadia National Park is monitoring the situation. MDI is losing some of its lichen flora, and it is a mute testimony to the contamination of the region's air and fog that provide the lichens with their moisture. Lichens thrive in fog. Mosses, lichens, and ferns are capable of extracting moisture directly from the air. Forest floors of islands are miniature cities of odd plants that are part algae, part fungi.

*Xanthoria* lichen coats local rocks like spilled paint, sometimes orange, yellow or green. Lichens are the first growth to colonize bare rocks. They secrete a mild organic acid that begins to dissolve their hard rocks and initiate the process of soil formation. Little bits of mineral soil collect in crevices and crannies, facilitating settlement of other plants. Without lichens many islands would have remained as bare as when the glaciers scraped them clean.

### **SMALLER COASTAL ISLANDS**

The air over coastal islands is invested with life. Islands are the nurseries and habitat for sea birds, eagles, and seals. Even the sandy beaches support Terns and Plovers, and the sub-tidal areas near shore are homes for scallop, flounder, lobster, and water birds. Puffins, Guillemots, Eiders, Laughing Gulls, Leach's Petrels, Razor-Billed Auks, Cormorants, and seals abound on and near outer islands.

Maine islands provide a chain of "bed and breakfasts" for birds. Some of these islands are mostly bedrock with little vegetation, some are treeless, some are covered with shrubs and grasses, and some have all three and speak to a variety of birds including sea birds, raptors, wading birds, shore birds, and song birds. These islands provide places for them to hunt and rest. They also provide migrants with a stopping place or stepping stone on their migration. Maine's 6000-plus islands with 240 nesting islands provide temporary home for nearly half of the United States' breeding birds east of the Mississippi.

Five miles from the mainland is Great Duck Island. It is a refuge for nesting birds and was first set up to protect nesting Herring Gulls. Herring Gulls and Great Black-Backed Gulls live there successfully now.

Great Duck Island and Penobscot Seal Island share the title for having the largest Guillemot colony on the eastern seaboard. Common Eiders nest on Great Duck as well as the largest colony of Storm Petrels in the eastern United States. Petrels come to land only to breed. The rest of their lives they are out over the sea. Their nests are in burrows tunneled under the duff. These nest tunnels are very vulnerable to any animals or humans walking over them because such large creatures can crush the tunnel and any life beneath it. It took many caring and generous people working hard to raise the money to save the two Duck Islands. Common predators on this island are Crows and Ravens, unless other mammals are brought out there. The lighthouse on Great Duck was built in 1890, and it and the island itself are owned by The Nature Conservancy, which manages it as a bird sanctuary. The keeper's house is used for ecological research. The Maine branches of The Nature Conservancy and Audubon Society give occasional bird watching tours to and around these bird islands.

Organizations such as Maine Coast Heritage Trust, The Nature Conservancy, the U.S. Fish and Wildlife Service, and the Audubon Society have had much to do in saving this sea bird nesting island and others in the Gulf of Maine. These outer islands are valuable as sea bird nesting areas. True sea birds spend the majority of their lives at sea and come to land only to nest. Ground nesters such as these must be free of predatory mammals such as fox, mink, coyote, cats, and rats.

Whether an island is the size of MDI, the Cranberries, or the Duck Islands, life is special on these pieces of land, and humans must look at the whole picture and try to fit in so we all benefit and life is more interesting. Just by our very presence and lifestyles we can easily destroy the areas we like so much.

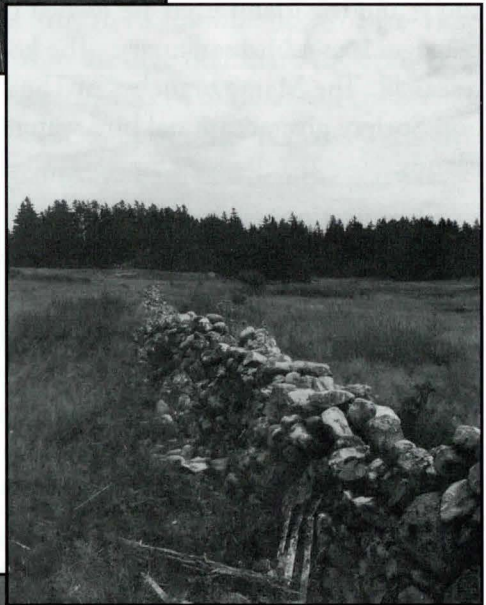
## **CHAIN OF LIFE**

Everything in the natural world is connected, and one thing out of balance creates havoc with all the others. Just one link broken in the great chain of life can have a bad effect on the whole chain. If we, for instance, get rid of one creature or plant, another will come in and fill the void. You can't kill all raccoons, wolves, coyotes, or whatever you happen to dislike without opening a "Pandora's box." No void goes unfilled.





*Great Duck Island*



Just think what happened when Starlings and the House Sparrows were brought here from England. That happened in the late 1890s and we have seen the tremendous effect these nonnative birds have had on our native species. Bluebirds have been eradicated in many areas where they were once common. In England and Europe, where the Starling and House Sparrow are native, they are no problem. Here in the United States, House Sparrows have thrived, much to the detriment of native species, especially Bluebirds and Flickers. Bluebirds are not aggressive birds, and when House Sparrows challenge them for a nest site the Bluebird gives up without much of an argument. If the Bluebirds start to nest, the very aggressive House Sparrows will go right into the nest box, kill the Bluebirds, and take over the site. In some areas of our country, Bluebirds have been pretty much driven out by the introduced House Sparrows. Starlings do the same thing to Flickers, so much so that Flickers do not nest some years because of Starling harassment.

Nature has a natural balance and, if left well enough alone, it all works very well with ups and downs in population and natural changes. A good year for hares and small rodents means that foxes, coyotes, and owls feed well. Let some problem affect these predators and some other creature benefits. If we have deep snow, some creatures make out very well and others suffer. A year with no snow causes the same problem. Over a ten-or-twenty year period, however, it all works out. Even fire and drought have their place in the scheme of things.





Many islanders enjoy watching Pileated Woodpeckers feeding on logs and trees in their yards. This Woodpecker is an amazing bird and one bird that went from being a truly wilderness bird to one that now is commonly seen poking about in dead wood right outside your window. If all wildlife could adapt in such a fashion, it would be very helpful in today's world.

### **SUMMATION - WHAT DO WE DO?**

Do we let nature takes its course? Do we recreate the past or freeze the present with no consideration for the future of population size? Do we take a "que sera, sera" attitude? Our natural landscape is precious and all we love about living and visiting here depends on choices we make now.

In recent years environmental successes in Maine have slowed down because of our headlong flight into development. Even though conservation groups and private individuals have saved and are saving crucial areas, we can not rest on our victories. Greed and money are powerful motivators for more building and ultimate destruction. Well-financed development interests move into any vacuum left unattended by citizens concerned for an island's future. All development contains risks. If we continue to overuse our islands, we will lose them.

It is imperative for us now to seriously figure out just how many people any one island, including MDI, can sustain for a healthy environment for humans and wildlife. Then we must limit the numbers of residents and visitors on the island. It's a bold move, but necessary.

In closing I'd like to quote Charles Tyson from the book *First Light* by Tom Blagdon and Charles Tyson. No one could make a better end to this discussion. "Acadia's and MDI's and the health of all the islands depends on the choices made today and in the years to come. We can choose beauty over ugliness, diversity over sameness, learning over ignorance, stewardship over exploitation, altruism over selfishness, generosity over greed and the future over the present."

Do we do as we please and suffer the consequences, or choose wisely even though it is hard and possibly inconvenient? The choice is ours today.



*Ruth Gortner Grierson is the Nature Columnist for the Mount Desert Islander and a freelance nature writer. Her natural history pursuits have taken her to South and Central America, Africa, Europe, British Isles, China, and many places in the USA. She is also a violinist and participates in many musical activities on MDI. She lives in Bass Harbor.*



## RESOURCES

Maine Coast Heritage Trust; The Nature Conservancy; Friends of Acadia; *First Light* by Tom Blagdon and Charles Tyson; *Islands in Time* by Philip Conkling; University of Maine; U.S. Fish and Wildlife Service; College of the Atlantic; and my (r.g.g.'s) life's experiences.

## PHOTOGRAPHS

The photographs on pages 22, 24, 25, 26, 27, 31, 34 and 35 were taken by LaRue Spiker. All are undated. Spiker, a journalist and ardent environmentalist, wrote for *The Bar Harbor Times* and other publications. To learn more about her, see "LaRue Spiker and 'America's Most Beautiful Island'" by Elizabeth Redhead, *The History Journal*, Volume IV (2001-2002), published by Mount Desert Island Historical Society.

The photographs of Great Duck Island on page 30 were taken by Hall Quarry resident C.H. Breedlove during a MDI Historical Society field trip to Great Duck Island in August 2008.



