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Bar Harbor, Acadia National Park, Downeast Maine

This article was published in the January 26, 2012, edition of *The Bar Harbor Times*. The winter of 2011-2012 is seeing one of the most significant Snowy Owl irruption years of all time. Rich treats this week's column as a species account for this denizen of the Arctic.

The Nature of Things....

By Rich MacDonald

In the natural world, the Snowy Owl is the major topic of conversation this winter. In fact, we could make the case that it has been a topic of conversation for millennia since it has been found in prehistoric cave art. This winter, everywhere I turn, Snowy Owls keep coming up. Articles have appeared in the *The New York Times* and *Washington Post*. Stories have run on National Public Radio. It has been regularly mentioned in newspapers across Maine, including several times in my column. Given the extensive influx of Snowy Owls across North America, it seemed high time to profile the bird.

The Snowy Owl certainly fits the bill of charismatic megafauna. It is large, white, beautiful with commanding yellow eyes that seem to size you up more for your prospects as a meal than for any potential as a threat. It is often cooperative, allowing observers ample opportunity to watch and take pictures. Given the influx of owls and the number of people flocking to see this magical bird, there may even be a little spike in regional economic activity.

A bird of the tundra and open terrestrial habitats of the Arctic, Snowy Owl are circumpolar (meaning they are found in the northern reaches of North America, Europe, and Asia). Given the hinterlands where they live, there are some differences between Snowy Owls and most others. They hunt regardless of the time of day. This makes sense considering the Arctic day is six months long followed by six months of night.

Their diet consists largely of lemming, a cousin to voles and muskrats. Lemmings are a compact rodent, four-to-seven inches long...

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As an aside, there is an interesting principle—Bergmann’s Rule—positing that within broadly distributed genera (as a reminder, the plural of “genus;” think back to your high school biology and the classification of all life in a descending hierarchy: Kingdom, Phylum, Class, Order, Family, Genus, Species), body size increases the further you move toward the poles; that is, toward colder climates. Allen’s Rule takes this a step further, adding that these same northern animals tend to have shorter limbs. Both of these are means of conserving heat. These rules are generally applied toward the warm-blooded species of mammals and birds. Examples include bears (Polar Bear are larger than Black or Brown Bear), Canada Geese (the further north they migrate, the larger they tend to be), owls (Great Gray and Snowy Owls are larger than Barred Owls), and, of course, lemmings (again, the Varying Lemming of the Arctic has a larger body than the lemmings of Maine).

... While lemmings are a major part of the Snowy Owl diet—by one estimate, Snowy Owls consume more than 1,600 lemmings a year—they also eat Snowshoe Hare, all manner of rodents, and a variety of birds. They have even been known to eat fish. To some degree, their diet depends on available food supply; which, in turn, is a factor of habitat. For instance, in the summer, Snowy Owls living near marshes will consume Brant, ducks, and grebe. Those living in more hummocky tundra consume more lemmings.

Snowy Owls are a large bird, standing up to 27 inches tall with a wingspan that can reach 5½ feet. They are sexually dimorphic, meaning males and females are noticeably different. In the case of the owls, this dimorphism is mostly manifested by size: females are about 20% larger than males. There are some less obvious plumage differences, too. Females, as well as juvenile birds regardless of sex, tend to exhibit noticeably more black flecking or barring in their otherwise white plumage.

The global population of Snowy Owls fluctuates from year to year, largely in response to the availability of their prey.

In the world of Arctic ecology, lemmings are a well-studied subject, particularly known for having significant highs and lows in their population (think back to that 1958 Disney classic, *White Wilderness*, and the mythical mass suicide jump off the cliff). Summer 2011 was an exceptionally good year for lemmings. An abundant food supply means more predators survive their first year. We are now seeing the proof of this:

with so much food available in the form of furry, protein-filled lemmings, record numbers of Snowy Owl chicks fledged. In fact, it is likely too many survived to be supported by more typical wintertime Arctic food resources, so they record numbers are striking south in pursuit of sustenance. The result: Snowy Owls are being observed across a broad swath of the U.S. and Canada.

The Birds of North America, that definitive source on all our breeding avifauna, labels the Snowy Owl as a “nomadic species and often unpredictable migrant”. This is an apt description. Previously, I have commented on the fact that we know Snowy Owls have been frequenting the peaks of Acadia National Park since at least 1992. The great majority of these are young birds. So, the fact that mostly juvenile Snowy Owls visit and virtually no adults return suggests the same birds do not year after year. That certainly fits within the definition of “nomadic and unpredictable migrant”. Still, I am curious how some they find us year after year after year.

Locally, a scan of the records reveals a few highlights, including five Snowy Owls reported by Bill Townsend atop Cadillac Mountain in 1981. During the winter of 2001-02, Ron Wanner and I found four atop Sargent Mountain. There are anecdotal reports of a 1980s Snowy Owl atop the Bar Harbor Post Office (I would be interested in dates if anyone has records). They generally arrive sometime in December and are gone by the beginning of April.

This winter, Snowy Owls have been found at Bass Harbor Marsh, flying along the Eagle Lake Road, and atop several of our mountains (Day, Sargent, and Cadillac). Cadillac Mountain is a particularly good place to look for Snowy Owls because it is just a matter of a two-hour walk up the road from where you park by the gate of the Park Loop Road entrance on Eagle Lake Road. If you decide to look for these incredible birds, please remember that they are wild animals. Practice good Leave No Trace ethics and do not harass them, only observing from a distance. And if you do see a Snowy Owl, I would be keen to share your report.

Rich MacDonald runs The Natural History Center in Bar Harbor. If you would like to share your observations of the natural world that is Mount Desert Island, contact him at

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