

OBSERVATIONS FROM NATURE

WINTER 1, 2013

PHOTOGRAPHS BY
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Surprise Inside

The seedpod (capsule) of Oleander (*Nerium oleander*) is fairly drab looking (left). But when it matures, it splits to release a large number of fuzzy, brown seeds ready for dispersal by the wind. Oleander is widely cultivated in many areas of the world. It is relatively drought-tolerant, easily maintained and upright in habit, so it is extensively used along highways, and around motels and public buildings in warmer parts of the U.S.





Snowy Day at Tybee Island, Georgia

The area depicted above does not seem to be a very likely area to search out a large, predatory bird from the Arctic. However, if you look closely, a small white dot can just be made out on the roof of the center building above (arrow). The view through a telephoto lens reveals that the spot is a Snowy Owl (*Bubo scandiacus*). This is perhaps the only Snowy Owl with a street address; it has been seen on top of this building at 1701 Strand Avenue almost every day for the last 2 or 3 weeks.





Actually we first spotted the owl on top of another building in an adjacent block. While we watched, it flew to its usual resting place at 1701 Strand Avenue.

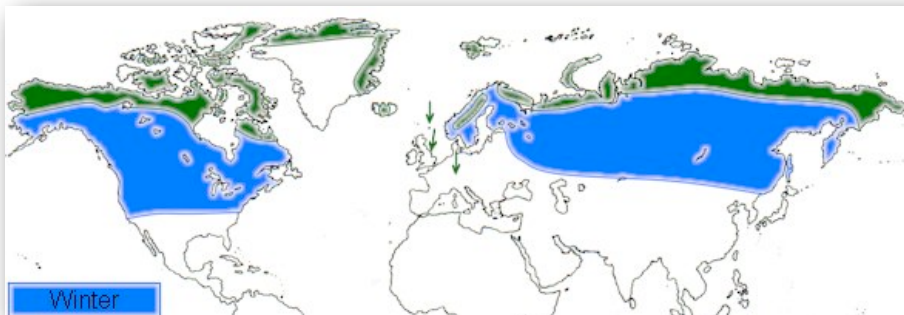
Snowy Owls have a wingspan of about five feet, and their feet are heavily feathered to protect them from the Arctic cold.





Our best views of the owl were from the third floor balcony of the building next door (circled on the top photograph on page 2). The photograph above was taken from that location and shows the Snowy Owl's yellow eyes.

Snowy Owls normally breed in Arctic regions north of the 60th parallel, and their distribution is circumpolar. Since there are no trees in their normal breeding area, they nest on the ground, typically on a slightly raised area. Their usual prey are lemmings and voles, but they have been seen to catch and eat a great variety of mammals including hares, moles, rats, prairie dogs, rabbits, muskrats, squirrels, raccoons, and marmots. Sometimes they catch and eat ducks, geese, coots, gulls, grouse, pheasants and many other types of birds. After the breeding season is over and winter begins to set in, snowy owls may migrate south. They are great wanderers, and how far south they go depends on factors such as the intensity of the winter and the availability of prey species. In North America, they regularly migrate to Southern Canada and the Northern United States, but occasionally Snowy Owls may be seen as far south as Texas or Florida.



The Snowy Owl breeding area is depicted in green on the map to the left; normal winter range is shown in blue (map from owlpages.com).



Roadside Diner

This group of Black Vultures (*Coragyps atratus*) has gathered to enjoy a bit of roadkill. Black Vultures are very sociable when feeding; Turkey Vultures (*Cathartes aura*), on the other hand, usually feed singly or in very small groups.

In the photograph on the left, the two adult birds have fleshy bare skin around their eyes. The immature bird to the right still has a feathered head.



Eyes Left!

A group of Turkey Vultures are resting on an abandoned farm building. Although Turkey Vultures are not very good about sharing food, they do gather in groups to rest. Both Black and Turkey Vultures gather in large groups to roost at night.



Distant Ducks

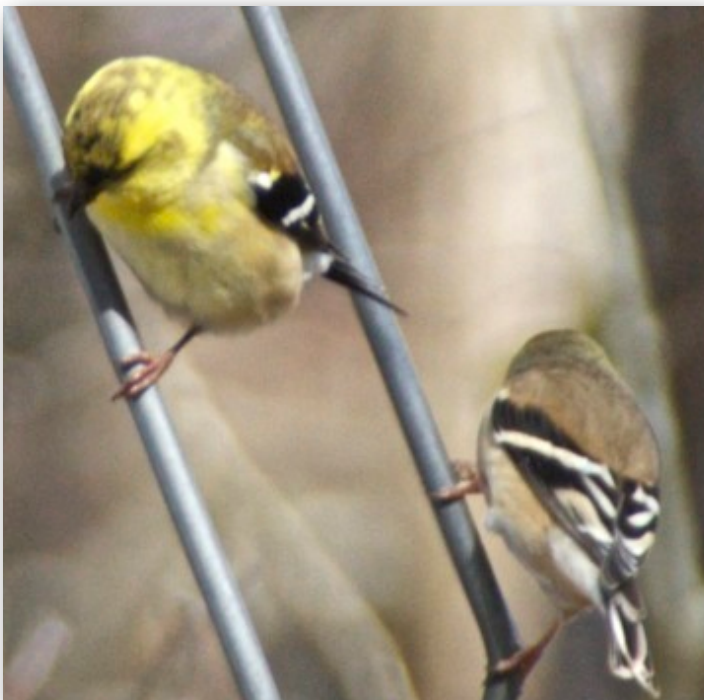
A pair of Ruddy Ducks (*Oxyura jamaicensis*) briefly visited the lake behind our house. I was only able to get these distant shots. The head pattern and the blue bill are field marks for this small diving duck.





High-speed Chase

Driving just north of Athens we spotted this Woodchuck (*Marmota monax*) very near the roadside of a busy highway. We turned around and made another pass in the hope that we could slow down enough to get a photograph. However, traffic immediately piled up behind us, and we had to pass the animal at about 50 mph. We counted ourselves very lucky that one of the shots I took out of the car window while flying past actually had the animal in it.



Changing Clothes

This time of year, the American Goldfinches (*Carduelis tristis*) are just beginning the molt in which they replace some of their drab winter feathers with bright new yellow or black ones. Thus they molt twice each year; once to the breeding plumage then once back to the winter plumage. However, the larger feathers of the wings and tail, which are very energy-intensive to replace, are the same color in breeding and winter plumage and do not need to be changed so often. The bird on the left is just beginning to show the black feathers on the top of its head and the bright yellow ones on the rest of its head and breast.



Angry Birds

From left: an American Goldfinch (*Carduelis tristis*), a Tufted Titmouse (*Baeolophus bicolor*), and a female Purple Finch (*Haemorhous purpureus*) compete for sunflower seeds at one of our feeders.

Tails up!

Here are two views of Carolina Wrens (*Thryothorus ludovicianus*). The specific name *ludovicianus* means “from Louisiana”, although Carolina Wrens are found all over the Eastern U. S. and south into Mexico. This species does not migrate, so cold winters in the northern part of its range may cause local populations to crash. Its “teakettle, teakettle, teakettle” song can be heard all year long.





Eye vs. Camera

I am often awake in the middle of the night (perils of old age!). On the night pictured here, there was a full moon. We are not troubled by too many nearby outside lights, and it was quite bright outside; everything was bathed in a sort of silvery glow. I decided to try to photograph the scene through our living room windows. So I set up my camera on a tripod, and took a variety of long exposures attempting to capture the scene outside. All the pictures shown are 30 second exposures at an f-stop of 3.5. I then adjusted the exposure a bit on my computer.

The photograph on the left shows what the camera “saw”. I had to convert the image on the left to black and white in my computer to approximate what my eye saw out the window (photograph below).



So why does the camera “see” a colored scene just like one would see in the daytime, and my eyes see a black and white scene? The answer lies in the way in which our eyes function. Human retinas have two types of photoreceptor cells; rods and cones. Cones come in three types, which detect different wavelengths of light, and analysis of the signals from these three cell types allows the brain to “detect” colors. However, cones do not function at low light levels, so they cannot function on a moonlit night. The other cell type in the retina, rods, do function at low light levels. However, the retina has only one type of rod cell. These simply report the levels of light or dark to the brain, which constructs a black and white image for us. However, the colors are still there at night; we just cannot see them.

A camera sensor, on the other hand, has three types of detectors (red, green, and blue) that function at all light levels. So if you expose long enough, your camera will produce a fully colored image.



This is another photograph taken out of a different window of our living room. Above is the actual photograph; below is a black and white version, which is very much what it looked to my eyes. What looks like the sun coming up in the photograph above is a “security” light on the other side of the lake (it looks like the moon in the lower picture).





Winter Guests

Many birds, including the Tufted Titmouse (*Baeolophus bicolor*) enjoy a bath even in winter.



Sunflower seeds are enjoyed by many different species of birds. Depicted above is a Red-breasted Nuthatch (*Sitta canadensis*). This species visits us during the winter, but normally breeds much further north. Nuthatch is a linguistic corruption of “nuthack” referring to the habit of wedging nuts into cracks in tree bark and then “hacking” them open with their beak.



The bird in the photograph to the left is an immature male Rose-breasted Grosbeak (*Pheucticus ludovicianus*). At his next molt, all the spots on his breast will be replaced with solid-colored feathers. Rose-breasted Grosbeaks normally winter in Central America and the Caribbean. The ones we see in our area are migrants or strays. Grosbeak means “large beak”. Note also the species name, which is the same as the Carolina Wren shown on page 8.

Tiny Tomatoes?

The small yellow fruits shown to the left in the palm of my hand look for all the world like small tomatoes. These are fruits of Horse Nettle (*Solanum carolinense*), and they are still hanging on the plants in mid-winter. They look like tomatoes because they are, in fact, very closely related to our cultivated tomato, which is *Solanum lycopersicum*, another species in the same genus.

These small yellow fruits are deadly poisonous, so don't try them on your salads!



We took these photographs of Horse Nettle flowers last summer. Gardeners will see their similarity to the flowers of cultivated tomato. The yellow convergent anthers protrude straight out from the recurved petals, and the matchstick-like stigma can be seen protruding from the center of the anthers.

Horse Nettle is well-armed with spines on its leaves and stems. These can be seen in the flower photographs.





Early Winter Color

Virginia Creeper (*Parthenocissus quinquefolia*) leaves turn rusty orange in the Fall. This vine (up to 30 meters long) is sometimes mistaken for Poison Ivy (*Toxicodendron radicans*), but Virginia Creeper has five leaflets per leaf rather than the three leaflets of Poison Ivy.

The stalk of pink flowers on the left is a species of Smartweed (*Polygonum* sp.). These tiny flowers are only about 1/3 inch long. Smartweed is named because it “smarts” when it touches bare skin.