Red-breasted Merganser

Dark-eyed Junco

Snowy Owl

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Winter Bird Notes

Melanitta americana* (Black Scoter** *formerly known as Common Scoter)**

ORDER: Anseriformes (3 Family)
FAMILY: Anatidae (174 Species)

The gales of November came early this week to the shores of Michi gami, which is the Native American name for Lake Michigan. One day this week, the weather made duck watching in Veteran's and Lakeshore State Parks challenging because of the the rain-pelting, umbrella-useless, southwesterly wind. Fallen leaves were windswept into swirling tornados, or wind eddies, along the path which made you briefly close or shield your eyes for protection. The strong wind made the sail lines snap loudly on the dry-docked sailboat masts. But, this didn't stop me! I was eager to find what migrating waterfowl sought refuge in calmer waters inside the breakwater near the shore. I was thrilled to see white-winged scoter males (*Melanitta deglandi*), black scoter females (*Melanitta americana*), red-breasted merganser females (*Mergus serrator*), long-tailed ducks (*Clangula hyemalis*), and buffleheads (*Bucephala albeola*). I love this time of year when the ducks arrive!

Scoters are some of my favorite sea, diving ducks that frequent the Great Lakes during the winter. The black scoter (*Melanitta americana*) is the smallest of the three species we typically see on Lake Michigan and the male is most often heard with a whistling '*geeew*.' They are chunky, potbellied, diving ducks that consume crustaceans, mollusks, and insects. Scoters can survive in cold climates because they have dense down feathers covered by compact plumage. The male is solid black and has a carrot-colored knob on top of the bill near the base. The female can be identified easier than the other female scoters by its defined pale face and contrasting dark cap. I often compare the female facial features to that of the female ruddy duck (*Oxyura jamaicensis*). However, the ruddy duck is much smaller and has a long tail.

I contemplated some questions during my walk. Here are a few with researched answers:

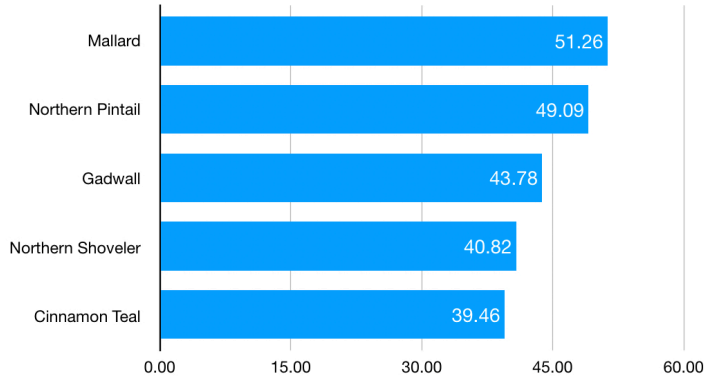
How fast do ducks fly?

Now, I realize there are many factors to consider, such as wind speed, altitude, up-drafts, presence of a predator, and migration vs. “near home” flight. These factors, for example, influence how a flock of migrating birds flying 5 hours at 15 mph will travel 75 miles or the same flock under different circumstances could be flying at 20 mph and travel 100 miles in the same amount of time. Since there are many things that affect speed, how does altitude alone affect migration? Birds will typically fly at higher altitudes during migration which helps to avoid dehydration from the warmer ground air. Additionally, many migrating birds will steadily rise to higher altitudes - typically from 5,000 to nearly 30,000 feet - as their energy and body weight declines, allowing them to maintain steady speeds and reach farther distances. Surprisingly, an airplane pilot flying over Northern Ireland once reported a flock of migrating Whooper Swans flying at an impressive 29,000 feet! At any rate, answering how fast ducks fly may be more challenging than I thought.

One paper from *Wildlife Research* studied migration flight speeds of dabbling ducks. They found that larger ducks fly slightly faster than smaller ducks. Here is a graph of their compiled data.

Median Migratory Flight Speeds of Dabbling Ducks

Dabbling Duck	Speed (mph)
Mallard	51.26
Northern Pintail	49.09
Gadwall	43.78
Northern Shoveler	40.82
Cinnamon Teal	39.46
American Wigeon	32.10

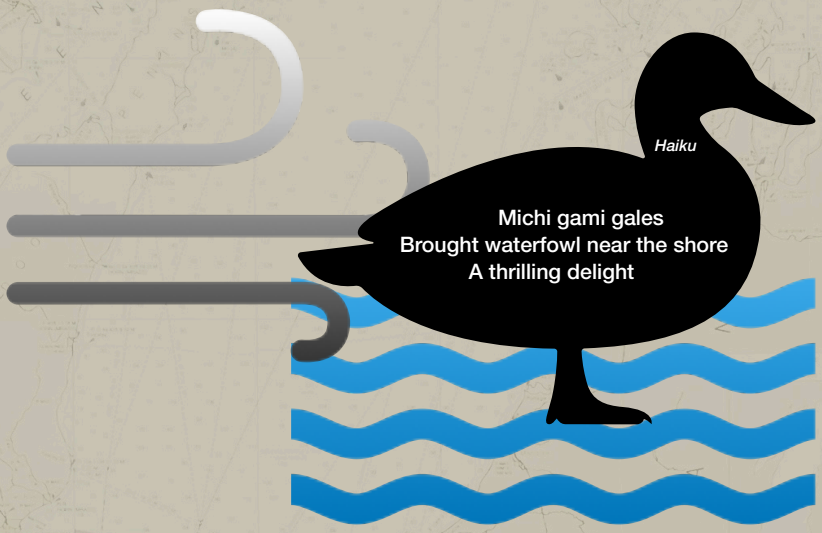


Source: 2019, *Wildlife Research* 46(6): 533-543

Can birds differentiate ice cover from open water in flight?

I have often wondered how birds know to land on open water and not on ice or snow. I thought that perhaps birds have enhanced vision which can be used to differentiate water from ice. Well, simply, birds *do* have better vision! Unlike humans, birds can see even longer or infrared wavelengths and even shorter or ultraviolet wavelengths. In other words, humans have only three types of color retinal photoreceptors which are for red, green and blue light, also called “trichromatic.” Bird vision, on the other hand, is “tetrachromatic” which allows them to detect ultraviolet colors. I can’t even imagine what four-dimensional vision would be like! So, how does this enhanced vision allow for differentiation of water and ice? Simply, snow and ice reflect ultraviolet or UV light and water absorbs and transmits

it. But, the intensity of the UV wavelengths varies on time of day, cloud cover, and altitude. In other words, the UV light is stronger at dusk and dawn, more intense on cloudy days, and stronger at higher altitudes. Therefore, birds can visualize water from ice by detecting more light wavelengths and reflections. I think we should consider making binoculars that would allow us to see more wavelengths too! Every birder or nature enthusiast would never leave home without their binoculars!



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