

This Winter, Crossbills?

An irruption of winter finches refers to an invasion of northern, or boreal, birds down to our region. This is a fairly regular occurrence in Massachusetts. We get Red- and White-winged Crossbills, Evening and Pine Grosbeaks, Pine Siskins and Common and Hoary Redpolls every few years. The species vary from year to year: one year having a lot of redpolls; another year having a lot of crossbills.

The most recent irruption of crossbills to our area was in the winter of 2008–2009. There were many more White-winged Crossbills than Red Crossbills in Newton that winter. I saw them first at the end of September over Richardson Field, between Beethoven and Allen Avenues. They were around my yard later that winter and continually in the Newton area a lot of the winter.

As of late October, 2016, folks have been seeing White-winged Crossbills elsewhere in Massachusetts. This might mean that we are in for an irruption this year, or it might be wishful thinking on the part of birders.

The two species of crossbills are very different in their breeding habits and looks. Both have the unusual crossed bills, which make them look deformed. (When you occasionally see another bird, such as our Northern Cardinal, with a deformed beak, you wonder how long it will live.) It seems that an ancestral bird of the crossbills had such a deformity, and the new beak allowed it to extract the seeds from conifer cones. Its offspring then survived in the harsh northern winters differently than other birds. It had discovered a new niche in which to feed.

Extracting pine nuts from cones has made crossbills evolve stronger feet than other finches. This allows them to wrestle with cones while perched on a tree limb or on the ground. Their jaw muscles are asymmetrical, allowing their beaks to move sideways, which helps them to get at the seeds hidden in the cones. Watching them eat reminds me of a small parrot as they tumble a cone around while holding it.

The White-winged Crossbill is very nomadic, and we have only one type in North America. The Europeans also have only one type, but it is a little different from ours. The two continental types are called “subspecies.” (That may change

as DNA research goes on, and they may be “split” into two different species.) There is a different species of White-winged crossbill in Haiti and the Dominican Republic, called the “Hispaniolan Crossbill.” It probably was a population of our White-winged Crossbills that got isolated on Hispaniola when the glaciers receded.



Red Crossbill



White-winged Crossbills

Our White-winged Crossbills find suitable food and breed almost all of the year. The decision to reproduce depends on finding a big cone crop in tamarack or spruce forests. Once the nomadic flock discovers such a source, they settle down and nest. At a given nesting area they are monogamous. It is not known whether that habit extends beyond the move to a new area.

White-winged Crossbills travel in flocks, rarely as individuals. In Canada, they must travel long distances to find food sources because the cones that they consume are spread widely across the northern part of North America. Thus, they never settle down in one place for very long. These birds eat cones from various fir trees but do not specialize a lot in their diet. Thus, they are constantly mixing their gene pool, and no separate subspecies emerge.

The very similar Red Crossbill is a different animal, genetically speaking. There are twelve known subspecies of Red Crossbills in North America. The different subspecies eat different sorts of fir tree cones, usually. They do better with slightly different beaks for the different types of cones. They do not interbreed normally. They are also nomadic but keep somewhat isolated from each other due to their food preferences. (Have you noticed a difference in your friends who are meat eaters and those who are vegetarians?)



PHOTO: PETE GILMORE

White-winged Crossbills Feeding

The different food preferences and the resulting isolation have created different groups of birds. At present these are considered subspecies.

The way to distinguish red Crossbill subspecies is by the vocalizations that the different types make. This difference was first discovered by a student, Jeffrey

Groth, at Virginia Polytechnic Institute in 1983. A great article, with all of the different vocalizations, written by Matt Young at the Cornell Lab of Ornithology is at the link: ebird.org/content/ebird/news/recrtype/



PHOTO: PETE GILMORE

Female Red Crossbills

One interesting wrinkle in the Red Crossbill's makeup was pointed out by Charles Darwin, who was fascinated by the crossbills. He wrote in *Natural Selection* about how variable these beaks are. He believed that the most variable part of a creature's anatomy was what would be most likely to create new species when some difficulty in surviving forced natural selection to operate. So, in the face of global warming, the Red Crossbill is poised to take advantage of shifts in food sources and evolve into a species, or several new species, that survive the coming changes.

Darwin believed that we would never see evolution because it operates over such enormous time spans. But biologists have watched various mammals, small fish and plants evolve in the space of a decade or two. Each of us should be aware

that using a lot of antibiotics puts survival pressures on the bacteria we are killing. They then evolve into resistant strains that do not die when that antibiotic is used. Evolution is a little too close for comfort.

Birders also have been seeing Pine Siskins and Evening Grosbeaks in Massachusetts.



PHOTO: LANNY MCDOWELL: LANNYMCDOWELLART.COM

Pine Siskin

The Pine Siskin is a little boreal species that turns up at our feeders in Newton. They resemble female goldfinches but are very streaked underneath, and have a

yellow bar of color in their brown and black wings. They also have very pointed and sharp little beaks. It pays to keep an eye on your feeders for these little guys. They have a taste for thistle seeds as do goldfinches. They often will find food by following the local goldfinches, so watch those goldfinches for a different looking sidekick.

The chance that more boreal birds may follow those grosbeaks, siskins and White-winged Crossbills to Massachusetts will get me out of doors this winter. I hope to see some of you out in the cold, bundled up and curious about the winter landscape and creatures. It is a nice change from the warm comfort of your home and helps you appreciate your home when you get back. The peace you get outside will give you a different peace when you return. Get out this winter, and check out the chickadees!

One organized venture of this sort is the **Newton Christmas Bird Count**. A group of us meet at 5 AM to look for owls, which we always find, more some years than others. More relaxed folks meet at 7 AM and look for birds in groups, covering most of Newton, until about 12 noon. Some folks participate for only part of the morning as they choose. We meet on Rayburn Terrace in Newton Highlands for bagels and coffee before organizing ourselves into groups and going out. The exact date has not yet been set. If you are interested, contact Pete Gilmore, 617-969-1513 or maurice.gilmore@comcast.net. ■

✍ *Pete Gilmore*