

Bright Colors on Birds



PHOTO: GEORGE MCLEAN

Northern Cardinal Female and Male

You must have noticed how birds are very alert and are always on the lookout for predators. All of the songbirds that are now nesting around our homes are small and vulnerable. Hawks, owls, loose house cats, and even some other species of songbirds will prey on them. Have you considered how dangerous it is to have very bright plumage under these circumstances?

One of the earliest singers in Newton is the bright red male Northern Cardinal. This bird sits at the very top of trees and loudly sings to attract a mate and to warn other male cardinals that he is on his territory. In behaving like this, he is putting himself out on a limb. Any passing Cooper's Hawk or Sharp-shinned Hawk can pick him off up there. Both species of hawks are in Newton. This is in defiance of Darwin's "survival of the fittest." Such behavior is an invitation to eliminate his genes from the next generation. He is a candidate for a "Darwin Award" that is given to people who perform very stupid stunts (see <http://darwinawards.com>).

And those Northern Cardinals are not the only brightly beautiful birds that behave this way. What is going on? Whatever it is, it has been going on for millions of years, while evolution harshly eliminates behavior that is not directed at survival. It is a credit to Darwin's genius that he saw through this problem in his theory of evolution. It emerges that a female's choice of a mate is a more powerful factor in the survival of the fittest than is the avoidance of predators.

At any rate, this is referred to as "**sexual selection**" among evolutionary biologists. Sexual selection is part and parcel of the broader "natural selection" that refers to the adaptation of creatures in a way that makes them more and more fit to survive in a particular environment.

The bright yellow American Goldfinches moderate the danger due to their breeding plumage. The males have the

golden feathers beginning in April and lasting until October. During the winter months, when no mating is occurring, the males revert to a drab color and are very similar to their female peers.

There are also many brightly colored wood warblers that migrate through Newton in the spring. When they travel back through Newton during the fall migration, their plumage has changed drastically. They are much more subdued and are referred to as "confusing fall warblers" because they are often difficult to tell apart. Going north to mate, they exhibit very attractive appearances. After raising their young, they drop the conspicuous feathers for the dangerous flight to the tropics.



PHOTO: PETE GILMORE

Male Mallard

The ever-present Mallards in our ponds and the Charles River give another variation on this theme. The familiar iridescent green head of the male Mallard is a common sight for all of us. Less known is the fact that these male Mallards lose

their bright green heads and other bright plumage from June to September. You may not have missed seeing the standard male Mallards in our summer months. They are there, but in "eclipse" plumage that resembles the female Mallard's plumage. Ducks are courting during our winter months and lay eggs in the early spring. Their courtship timing seems all off and is different from that of our songbirds.

The Scarlet Tanagers that nest in Newton have a molting cycle similar to that of the American Goldfinches. The males molt into the brilliant red bodies with jet-black wings in March. They arrive in Newton in May, as flashy as a bird can be. In the fall, as they migrate south, they are much more difficult to spot. Scarlet Tanager males have the bright red plumage from March to August. They then molt into a greenish-yellow body plumage with black wings. This



PHOTO: LANNY MCDOWELL

Scarlet Tanager

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resembles the female Tanager's garb. The reasons are probably the same as the previous birds with this pattern of molting.



Baltimore Oriole Male



Baltimore Oriole Nest

A final example of bright male plumage is our Baltimore Oriole. In this species the males do not shed their orange and black plumages for the fall and winter cycle. But they do not

take an active part in building the interesting nests. Their flashy plumage would show predators the way to the nest site. Common Grackles, in particular, would make nasty use of that information, as might American Crows. Here is an Oriole's nest that was along Beaconwood Road next to Cold Spring Park a few years ago.

An interesting group of shorebirds, the Phalaropes, reverse the roles played out by our songbirds. Red, Red-Necked, and Wilson's Phalaropes are the three species of Phalaropes that migrate past us along our coasts. The female Phalaropes have flashier plumage, defend territories, attract their mates, lay eggs, and leave. The duller looking males incubate the eggs and raise the young. The sexual selection process plays out in the same fashion but with the genders switching roles.



Red Phalarope Female in Grass



Red Phalarope Male Defending Nest

In the pictures at left, the female Red Phalarope is stalking through the grass, while her male counterpart below is crouching defensively near his nest. The nest is very camouflaged and difficult to see. His plumage resembles his mate's, but is considerably duller and so is better suited to lurking around the nest, undetected.

During our summer months you can see all of the above species in Newton's open spaces except the Phalaropes. The parents will not be showing off, but will feel enormous pressure to feed their growing youngsters. You can thus catch a glimpse of them because the pressure to find food eclipses their usual fear of humanity.

A little walk outside along a trail in Newton is a healthy and relaxing activity. Having the goal of finding an oriole's nest and watching the parents bringing food for the chicks gives the walk an extra pleasure. Go do it. ♦

✿ Pete Gilmore



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