

Seeing Scarlet: Saving a Gorgeous Neotropical Migrant

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Lights Out

Walking through downtown Baltimore at 5 AM with a butterfly net in my backpack, I get odd looks from security guards. For the most part, I am undisturbed. The city's human inhabitants have not woken up yet. Baltimore's migratory birds, however, are wide awake; in the peak of migration when I walk, the sky overhead is filled with invisible neotropical migrants – birds that travel from Central America to mid-Atlantic forests, their summer homes. These creatures prefer to travel under the blanket of night to protect against predation; using the stars for navigation, they travel north in a handful of days, stopping only to rest and replenish.

Urbanization and increased light pollution poses a large threat to night migrants, who become confused by artificial lighting. Disoriented, they fly down into urban centers, and once there, their migration quickly turns into a dreadful obstacle course, complete with the second-largest threat to birds in the United States: windows. Birds are unable to understand that windows are impenetrable barriers; they see trees reflected in the glass and fly toward their "haven" ... bam! Many birds die upon impact, and those that do not experience swelling of the brain that ends in death. Window strikes kill up to 1 billion birds per year [1], and while window strikes can occur at any time of the day, migrant window strikes at night compose a large portion of deaths. Once the migrants are attracted to the city by lights, they encounter glass buildings and collide, looking for a tree to rest in until morning.

So why was I in downtown Baltimore before sunrise with a butterfly net? I have volunteered since 2014 with Lights Out Baltimore (LOB), a nonprofit that aims to reduce light pollution and migratory bird window strikes. Every morning, volunteers walk four miles around downtown Baltimore, picking up the dead birds and using butterfly nets to rescue the live birds

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that survived. Dead birds are sent to the Smithsonian Institution for research on window collisions, and the live birds are rehabbed before being released. It's critical that we walk before the custodians clean up the birds; sometimes cleaning crews can toss live birds in the trash, mistaking them for dead. That's why most Americans don't know about urban bird window collisions – the birds are cleaned up before pedestrians ever see them.



Glass can be quite reflective, like this window in downtown Baltimore. Photo by Claire Wayner.

On any given day monitoring, I could find a variety of migratory species. For this essay, I wanted to highlight a species that is already threatened by climate change, a gorgeous species that is one of my favorite birds, and a species that I find often when I volunteer with LOB. *Piranga olivacea*, the Scarlet Tanager.

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Piranga olivacea: A Stunning Migrant

The Scarlet Tanager is one of North America's most beautiful breeding birds and neotropical migrants. Wintering in Central America, the bird migrates north to states like Maryland, nesting in mature forests [2]. Witnessing a Scarlet Tanager male singing away in the sunlight is stunning and completes any summer of mine spent hiking through Maryland's woods.

Like many other forest breeders, Scarlet Tanagers are threatened by climate change.

Audubon's 2015 Birds and Climate Change Report classifies only 7% of the Scarlet Tanager's breeding range as being able to withstand climate change, with an overall decrease of 26% in its breeding range between 2000 and 2080 [3]. The U.S. Forest Service reports that Scarlet Tanagers could be driven into poorer habitat for breeding by climate change. Additionally, Scarlet Tanagers' arrival dates on their breeding grounds will soon become out of sync with insect populations. While their arrival date will remain constant, the natural cycles on breeding grounds will start earlier with warmer temperatures, resulting in less available food and decreased nesting success [4]. Already, Scarlet Tanagers are showing the impacts of climate change. In Maryland, the species has "declined significantly" since the 1980s in part due to climatic change, according to the 2nd Maryland Breeding Bird Atlas [5].

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A Scarlet Tanager window strike found by the author on May 8, 2016. Photo by Claire Wayner.

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Linking The Two Threats

Climate change and window collisions are both threats that are already impacting Scarlet Tanager populations. While climate change is a more obscure threat, window collisions are easily preventable. Why should Scarlet Tanagers face the danger of windows when they already are facing the bigger threat of climate change? That's why I chose to work with LOB. Many downtown buildings leave nonessential lights on at night, but by turning off these lights during migration, these buildings can reduce their bird window collisions. Turning lights off can also result in crucial energy savings, in turn reducing fossil fuel pollution and shrinking Baltimore's carbon footprint. In 2015, I was named LOB's outreach liaison, and I have helped to get five major buildings to turn off their lights and have worked with Baltimore's Downtown Partnership and Building Owners & Managers Association to encourage buildings to turn their lights off during migration.

Reducing window collisions begins with awareness by not just businesses but by the general public. Collisions can also happen at residential locations, and homeowners can treat their windows with films and stickers to prevent collisions [1]. Through LOB, I've encouraged window treatment in my neighborhood.

Saving the Scarlet Tanager from climate change is going to require more than window treatment. It will necessitate an international effort to increase suitable habitat and to track Scarlet Tanager population shifts. It will also require awareness by the public that neotropical migrants like the Scarlet Tanager are threatened by climate change, something that can start with community events. This past year, in partnership with LOB, I have hosted multiple bird walks in my neighborhood and an Urban Bird Fest to celebrate urban migration. By increasing a love of and appreciation for birds, the movement to protect our migrants can grow.

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Children participating in a bird walk being led by the author during migration (September 24, 2016). Picture by Claire Wayner.

Starting with window collisions, however, is a perfect first step – it eliminates the most unnecessary threat to Scarlet Tanagers. And it helps me feel like I am really saving these gorgeous birds and giving them a chance to sing again.

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