Environmental Moments

Bird Migration

September Edition

The How and Why of Bird Migration

Millions of birds migrate south as winter approaches, flying vast distances to warmer climates in search of food. As winter thaws, these birds will return north to their homelands to breed. It is a dangerous journey, especially when, "It is estimated that half of all migrants heading south for the winter will not return to breed in the spring" (Powell). The reason for their trip is the greater abundance of food in the north during the breeding season, allowing them to raise more young than if they stayed in tropical locations year-round.

It has long been speculated how birds know when to migrate and how they navigate the trip. While it is a little mysterious, our current understanding is that, "Migration can be triggered by a combination of changes in day length, lower temperatures, changes in food supplies, and genetic predisposition." There are many potential explanations for how they navigate a trip to a place they have never been to for their first migration and return to their home when they have only been there once previously. Some theorized methods include magnetism, landmark recognition and the use of a portion of the brain known as the "Cluster N (National Geographic).

Migratory Bird Treaty Act

Integrated habitat management can help provide stopover habitats for migrating birds, but crews on rights-of-way (ROWs) and the birds can be obstacles to one another. There are several acts protecting birds, whether they are migrating or listed as threatened or endangered, including the Migratory Bird Treaty Act. The purpose of it is to make "...it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid Federal permit" (U.S. Fish & Wildlife Service). Work on ROWs can threaten migratory birds protected by this act, and therefore an initial sweep of the area headed by a biologist can help avoid unintentional take of migrating birds.

Produced by the Utility Arborist Association Task Force and Davey Resource Group:

UAA UTILITY ARBORIST ASSOCIATION

DAVEY Resource Group

References

"FLAP Canada." FLAP, flap.org/glass.php.

"Migration." Wild Birds Unlimited, www.wbu.com/migration/.

"Migratory Bird Treaty Act." U.S. Fish & Wildlife Service - Department of the Interior, www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php.

National Geographic Society. "How Do Birds Navigate?" National Geographic Society, 21 Aug. 2013, www.nationalgeographic.org/media/how-do-birds-navigate/.

Powell, Hugh. "The Basics of Bird Migration: How, Why, and Where." All About Birds, 25 Oct. 2017, www.allaboutbirds.org/the-basics-how-why-and-where-of-bird-migration/.

How We Contribute to Migration Dangers

Predators, severe weather and the trials of navigation have always made the migratory journey a treacherous one. However, over time, people have contributed to the negatives in substantial ways. Decreased habitats, unnatural sources of light and buildings with reflective metal and transparent glass all increase the chance that birds will not return from the migration.

Habitat Deforestation

Stopover habitats are vital for when birds need food and rest on their long journey. Unfortunately, much of these environments are being cleared, compromising birds who need rest, water and food on their trip. Even if the birds survive these conditions, "Late arrival, or arrival in poor condition, on the breeding grounds because of inadequate food and rest en route, is likely to jeopardize a bird's ability to reproduce" (Migration). So even if the individual survives it can still decrease the overall population.

Nighttime Lights

The Fatal Light Awareness Program, or FLAP, is an organization committed to decreasing the impact of modern architecture on birds. City lights disorient birds, who are instinctively drawn towards light. It is not uncommon for a bird to become trapped in beams of artificial light, flying aimlessly until they have worn themselves out and collapse on the ground. "Once on the ground, the stunned or injured birds become vulnerable to predation," (FLAP Canada) which is why programs like the Great Lights Out Initiative are trying to save migrating birds by encouraging people to turn off artificial lights at night.

Building Collisions

Another factor that FLAP seeks to educate on and mitigate the effects of is glass in man-made structures. The amount of birds that die due to collisions with structures is staggering: "An estimated 1 to 10 birds die per building, per year" (FLAP Canada) Birds don't have the ability to determine glass from the sky, and some collide with buildings as they attempt to fly through. Birds struck this way may become stunned or injured, and in this helpless state they are easily killed by predators. These factors are most impactful during their migration when they are in transit and more likely to get lost or injured in new areas.

Getting Involved

FLAP has a few suggestions for decreasing this risk and aiding migrating birds. Since birds have difficulty with windows, you can install decals or screens to obstruct the reflection, decreasing the risk of them crashing into it. Providing food and water by placing a bird feeder and birdbath on your property can help provide birds a place to rest during their flight. It is just important to place them a few feet away from windows to help with safe landing. FLAP also offers detailed instructions for caring after birds who have collided with buildings to help them recover, along with more helpful resources and information at: https://flap.org/.