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# Big Red's Feathered Friends

## *On the Delicate Ecosystem Hidden Right Above Our Heads*

Written by Marco Balic

Illustrated by Mia Formato

**D**enison University is teeming with life. Even during the pandemic, the majority of students can be found on campus, power-walking from building to building. As humans go about their businesses during the day, the “Denison Venison” frolics across roads at dusk and maybe a skunk or racoon rummages through toppled trash at night. However, there is a particular group of animals that are in attendance all day and night, facing dangers that many of us humans do not even think about.

Birds are majestic — but ultimately delicate — creatures. Careful observations can reveal the diversity of Denison's bird population to even the most amateur of birdwatchers in Granville Ohio. Such observations can unearth how fragile the relationship between humans and birds can really be, with the former often causing immense harm to the latter.

In 2018, an article was released by The Denisonian, Denison University's student-led newspaper, describing a noticeable decline in the presence of previously-common vultures. The turkey vulture, in particular, holds great significance as the unofficial mascot of Denison University, nicknamed “Big Red.”. The turkey vulture is known for having an incredibly strong sense of smell, used to help locate rotting corpses. It is a scavenger at heart, like the lesser-known black vulture, which tends to follow the turkey vulture in search of food. The easiest way to distinguish between the two species lies in the underside of their wings: turkey vultures display mostly pale feathers, while black vultures are pitch-black with white wingtips. At Denison, both species are ubiquitous — at least, until now.

Before the vultures' disappearance, the immense flocks of corpse-eating birds were causing major damage to the roofs and heating, ventilation, and air conditioning (HVAC) systems of the buildings they roosted upon. Fixing the repeating damage was not cheap, so Denison administrators partnered with the United States Department of Agriculture (USDA) to disperse the vultures from the village of Granville altogether. All of the tactics used were harmless to the birds. One such method was pyrotechnics — repeated use of noisemakers at sunset. Pyrotechnics intended to get vultures to leave the treetops behind Swasey Chapel before they could fall asleep. This program has proven safe and effective, with the firework-like noises becoming a familiar sound for students attending in the Fall. However, what if there are collateral effects to scaring Big Red's mascots away?

Despite their bad public image, vultures are vital to ecosystems across the world. Their unique adaptations make them incredibly effective at their job as nature's janitor. For example, their stomach acid has a pH of one to two. The acidity annihilates much of the microbes in the carcasses they consume, thereby reducing the chances of diseases spreading in their local environment. Unfortunately, about 60% of vulture species across the globe face the threat of extinction. A study from 2011 covered the topic of

massive population declines in vultures found in Asia and Africa — primarily due to poison entering the environment or due to poaching. This trend correlated with an increase in decay time of carcasses and a growing number of feral dogs and rats acting as disease-carrying scavengers. Thus, leaving vultures unprotected can lead to serious health and economic issues. So, what about the ecosystem in and around Denison? While the USDA-approved deterrence methods have had a visible effect in the Granville area,

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they simply keep vultures from making the place their permanent residence. They can still be seen flying overhead, searching for food. Thanks to the legal protections surrounding vultures (as well as many of the birds of North America), these unsung heroes are here to stay.

Vultures are not the only birds frightened by the USDA's noise-making fireworks. In the fall, hawks also flee due to the noise. Subsequently, the prey of these majestic birds visits campus more often than Denisonians expected. The red-tailed hawk, one of the largest and most common hawks in the United States (U.S.), is one notable example. Red-tailed hawks are found perched by themselves — perhaps on a tree by the steps that lead up from downtown Granville, or on top of a lamppost behind the athletic center. They swivel their heads like a gimbal, their piercing gaze searching for small mammals to consume. The most perceptive observers may get a chance to see a red-tailed hawk settle in for the night on campus. However, Denison's campus is just an occasional hunting ground for them. The lofty perches are great vantage points for hawks who are hungry enough to ignore the presence of humans. Thus, even with occasional evening noisemakers in the Fall semester, it is safe to say that these pest-controlling birds of prey are unlikely to permanently leave campus.

If vultures feel like an eyesore, Denison University still offers plenty of beauty to behold. Swasey Chapel, for instance, serves as the school's primary landmark. The towering steeple watches over Granville and draws the attention of campus visitors. Pigeons are also attracted to the building, roosting together below the spire. There are other buildings on campus, though, that pose



a much more fatal attraction for birds. The end of summer spells the beginning of countless birds' migration to the south of the United States. Among them are Ruby-Throated Hummingbirds and American Goldfinches; the former journeys across the southern U.S. and over the Gulf of Mexico, while the latter rarely ventures south of the U.S. border. Unfortunately, the dead bodies of these species can be seen on the academic quad of campus, particularly during September when their migrations are just starting. Whether on a set of stairs by the Talbot Hall of Biological Sciences, or under the bridge between Burton-Morgan and Knapp Hall, corpses have appeared near immense arrays of windows. This is unlikely to be a coincidence. A study from 2014 set the upper bound for annual bird fatalities due to building collisions at nearly one billion. Birds fly head-first into window-covered buildings for multiple reasons, such as mistaking their own reflection for a competitor invading their territory or being attracted to the light emitted from indoor lamps just beyond the transparent panes. Window collisions can instantly render a bird dead, or induce long-term brain damage. Either way, these accidents are more often fatal than not.

These are not the only major killers of birds. Free-roaming domestic cats — introduced into the environment by humans — prey upon as many as four billion birds every year. An additional 64 million birds die due to power lines, whether by collision or

electrocution. In fact, a relatively recent report shared a terrifying result: the avian population of North America is at about two-thirds of the abundance it had in 1970. This steep decline will not stop unless humans do something. From adding decals to sunroom windows to reduce collisions, or keeping pets indoors when young fledglings in the backyard have just left their nest, there are many small-scale ways for people to help the U.S.'s avian population stay strong. Even if birds cause problems for humans sometimes, there are safe and legal solutions that keep their well-being in mind. For example, Denison University deterred the vultures that were damaging its buildings with the help of a government agency.

The balance in any given ecosystem is fragile. Denison University is no exception. Birds are delicate and majestic creatures, and they are an integral part of the gorgeous campus. From Ohio's handsome state bird, the Northern Cardinal, to Big Red's bald-headed mascots, to rare birds passing by during migration — opportunities to appreciate birds are abundant at Denison. This makes it a great place for students to try out birding. Students at Denison University are truly lucky to have such a rich avian population — but it is up to each individual to see this for themselves, and realize just how delicate the balance between humans and nature can be. ● ● ●