Nature Discovery WILD TIMES

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A Turkey Vulture soars with its wings positioned in a shallow V or dihedral mien. *Photo © Greg Smith*

THIS ISSUE

Vultures Abound on October's "Blue Highway"

I've seen it countless hundreds of times through the decades, but, despite their commonality high over rural landscapes I still can't imagine the day where I will have grown indifferent to Turkey Vultures in flight - dark, V-set pairs of wings banking, circling, twisting and spiraling against a backdrop of bright azure.

Spring or fall, if skies are blue, keep looking up. Before long you are certain to be rewarded with the sight of a migrating large bird, or flock of them, heading north or south. Vultures and many birds of prey enter peak southward migration through our latitude in October. Sandhill cranes also take advantage of clear days to cover some serious ground on their southward journey. Through the month, the Turkey Vulture may be the most regularly spotted of these migrants.

Nearly every October, like last year, when weather conditions are right around the third week of the month I may be working in the yard and look up in mid-afternoon in time to witness a boiling plethora of Turkey Vultures circling overhead. The lowest birds come into view barely over the north tree line. The highest are mere dots in the sky. Many, many more drift and circle in a southward bearing at elevations in between. I quickly run into the nature center classroom, snatch my binoculars from the hook, run back out, eyes and lenses to the sky, then make a semi-futile attempt to keep a tally of the myriad, moving targets. On such a day last October I counted over seventy vultures in view at the same time!

Even at a great distance a Turkey Vulture can be identified as such by the position of its outstretched wings in flight – held in a shallow dihedral or V-shape. As I scanned the masses I was hoping for something else and was rewarded with the identification of not one, but two high-soaring Bald Eagles nearly lost within the sea of vultures. Through the binoculars their large heads jutted prominently ahead of the leading edge of wings that were more noticeably in-line as they banked. A featherless vulture head is a comparative nub ahead of outstretched wings. A couple of migrating Red-tailed Hawks also circled within the mix, drawn to the area of strong upward currents or thermals that push them further into the air.

In the hours before and after this sudden glut I looked up many times to see one, two, or several vultures drifting in lazy, southward circles. Surely, several hundred had passed over our rural property on this particular sunny, fall afternoon. As the sun angled lower in the southwest sky the strong thermals that had provided hours of flap-free riding began to abate, and so did the vultures. Perhaps a secluded stand of tall spruce trees near Stockbridge or Manchester would play communal host for a night to twenty, fifty or a hundred of the graceful, yet, largely unappreciated scavengers that passed over me earlier that day.

A "kettle" of vultures, hawks or cranes usually indicates the presence of a strong thermal. They take advantage of the rising warm air to keep aloft without having to expend energy flapping their wings. Photo © Greg Smith

The vast majority of our society is oblivious because they were never made aware of it. On clear afternoons this month, while in the yard or at a park; in the school yard or your workplace parking lot; while taking a walk or driving down the interstate, or just about anywhere outside you may find yourself… keep looking up. A busy, blue, migratory highway with a profusion of avian commuters exists over all our heads.

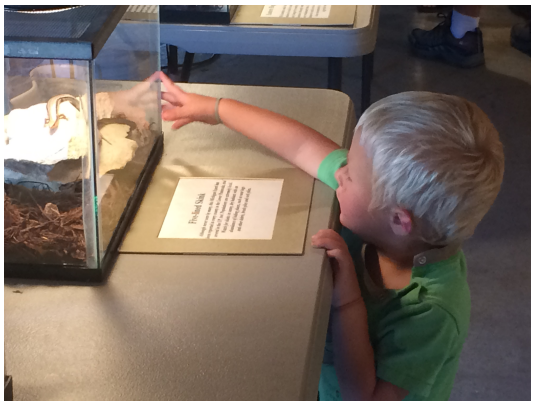
-Jim McGrath

Catch Nature Discovery on WLNZ Radio's Coffee Break *on Thursday, October 5*

Jim is scheduled to appear on Thursday, October 5 at 9:30am, to discuss a Michigan wildlife topic. The show airs weekdays from 9 to 10am on 89.7 FM. Listen live online at lcc.edu/radio/onair/ or watch it live (or later in the day at 6pm) online at lcc.edu/tv/watch. We'll post a reminder on our Facebook fan page.

Around the State in October

- ***Saturday, October 14*: 1 to 6pm. MI Reptiles & Amphibians Exhibit; Cranefest, Bellevue.**
- ***Saturday, October 21*: 11:30am & 2pm. MI Reptiles & Amphibians Presentation; MDNR Outdoor Adventure Center, Detroit.**



A Powerpoint Guide to Michigan Hawks & Eagles

Sunday, October 8 1 to 5pm; $5/person

Join us any time during our open hours. At 2 pm we will present *A Powerpoint Guide to Michigan Hawks & Eagles*. Throughout the seasons, up to twelve species of hawks can be found in Michigan, as well as the Bald and Golden Eagle. Vultures will also be featured since they share similar flight characteristics with the birds of prey. While viewing an abundance of color images, learn how to identify all of them in the field. Discussion will also include classification, interesting behaviors of each species, the best seasons in which to find them, and where, specifically, you can go to see them around Greater Lansing as well as throughout the state.

Come early or stay late to visit, and interact with our huge zoo of Michigan reptiles & amphibians. Knowledgeable staff is on hand to help visitors of all ages make the most of their visit.

Saturday Gifted/Talented Youth Classes thru LCC

Carol is teaching 5-week Saturday LCC Fall GATE classes (East Campus) beginning October 21.
Michigan Wildlife Adventure (9am-noon, Grades 2-4) Learn about Michigan wildlife, plenty of live animals in class each day! Includes a field trip to Nature Discovery.
Advanced Fun with Physics (1-4pm, Grades 4-6) Learn how to build a simple motor, generate electricity from renewable sources, build a solar cooker and more in this hands on, project based class.
To register or for more information visitlcc.edu/seriousfun and click on Fall/Spring GATE.

Thank You!

To Marlene Epley and Leo Sheets of Flower Essence & Blue Barn Market for funding our monthly exhibits at Williamston Farmer's Market from May through September.

To Bill St. John and Janet O'Brien for their generous donation.

In Defense of Scientific Integrity

Our friend and colleague, Steve Mueller, is the manager of Ody Brook Nature Sanctuary in Cedar Springs, MI. Ranger Steve writes a regular column for the Cedar Springs Post. Here is one from the August 31, 2017 issue, printed here with his permission, entitled Solar Eclipse and Science Credibility.

The enduring credibility of a scientist depends on the ability to remain vigilant in using physical evidence that supports conclusions. People often prefer to accept what they desire to believe rather than what is supported by physical evidence. Science is not about belief but requires physical evidence for determining acceptability.

Scientific conclusions are tested and modified to improve accuracy. Many people are not clear on scientific process. People expect that when a reputable scientist has made a conclusion, the conclusion is unchanging. That is not how science works. Science is self-correcting in the sense that continued research brings new information to light that modifies original conclusions. Faulty aspects are replaced to improve conclusions.

The advent of DNA and mRNA testing added a new dimension to help scientists draw more accurate conclusions. The new species of moth I discovered, *Grammia brillians* (Brilliant Virgin Tiger Moth), was beyond my resources and knowledge for accurate identification. The specimens collected did not fit any known species. My conclusion to species was tentative and later modified.

Help from scientific specialists was essential. Two of three scientists familiar with the Genus were contacted but were unable to identify it. A third took the specimens for intensive study. His specialty was the Genus *Grammia* and he did not recognize the specimens provided. He studied details of physical appearance (phenotypic characters). Phenotype helps distinguish species but some have nearly identical appearance.

He conducted genitalia dissection because characteristics have distinctive features often referred to as “lock and key”. The male and female genitalia often develop adaptations that only allow individuals of the same species to mate. Evolution is in progress so closely related species still transforming to new species sometimes mate to produce individuals with poor offspring survival. Behavior is important to prevent developing species from mating but that is a detailed nature niche separation subject of its own. Lastly, he used the tools for conducting DNA sequencing to compare *Grammia* species. Based on the three forms of physical evidence, he recognized why I could not identify the individuals to species. They belonged to an unknown species and he named it.

Many people choose to be selective about what supported evidence they will accept based on what they desire to believe. Most people have come to accept that the Earth is not the center of the universe. They understand we can determine when the positions of solar bodies will produce the next solar eclipse. Some are still unwilling to accept physical evidence regarding climate change, for how our existence developed through evolutionary adaptation, or that the Earth has been present for nearly 5 billion years.

Scientists do not have the luxury of choosing to accept only what they desire to believe. Selectively choosing to ignore physical evidence undermines scientific credibility. Most observations Copernicus made in the 1400's concerned eclipses, alignments, and conjunctions of planets and stars. Galileo built on Copernicus' work and refused to recant physical evidence supporting the Earth goes around the sun instead of the sun going around the Earth. That resulted in his being placed under house arrest for the remainder of his life. His vigilance for the integrity of scientific physical evidence allowed us to understand the solar system. It led to accurately predicting the timing of solar eclipses.

Whether it is the position of solar bodies, atmospheric climate change, or evolution of species, scientists are vigilant in using physical evidence for understanding how nature niches develop and function. Scientific evidence is currently being censored by political directives to stop government agencies from sharing physical evidence to prevent agencies like the Environmental Protection Agency from being open with research findings. It is similar to what occurred in the 1600's. Encourage people to remain vigilant like Galileo against the claim today that science is "fake news". Science has a self-correcting process for maintaining credibility.

You can contact Ranger Steve at (616) 696-1753 or odybrook@chartermi.net. Ody Brook Nature Sanctuary is located at 13010 Northland Drive, Cedar Springs, MI 49319

-JM

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Science for a healthy planet and safer world

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