Nature Discovery WILD TIMES

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A Pine Siskin pays a visit far from its home taiga biome.

THIS ISSUE

Biomes Without Borders

As defined by Dictionary.com, a biome is "a complex biotic community characterized by distinctive plant and animal species and maintained under the climatic conditions of the region, especially such a community that has developed to climax." A scan over a typical map of biomes of the world reveals large swaths of various colors, mostly stretched in an east-west mien. They spill across political boundaries without a visa, reminding us that the jigsaw puzzle of abutting, precisely-delineated shapes memorized by every school child are not really "of the Earth" but of self-regulating conglomerates of *Homo sapiens*. (Click on this link to view a simple North American Biomes map: http://bluewhalesweatherbyscience10myrrin.wordpress.com/2013/03/08/biome-map-of-north-america/.)

Some examples of biomes are desert, prairie, tropical rainforest and tundra. Most of Michigan is within the Temperate Forest Biome, or, more specifically to our continent, the Eastern Deciduous Forest.

A view of the globe with the North Pole as the focal point reveals a circumpolar perspective of the planet's Tundra Biome - a band of treeless, permafrost-bound expanses surrounding a literal "cap" of ice. At an increasing rate, the cap is shrinking and the "perma" is deserting the "frost." The very climatic conditions that define a tundra are shifting so rapidly that this biome may become unrecognizable within a few decades.

The ring below the tundra is comprised of the Coniferous Forest Biome, or taiga. On our continent this stretches southward through the remainder of Canada to just across the U.S. border. The band of northernmost states east of the Great Plains, including Michigan, falls smack within the transition zone between the Canadian Taiga and Eastern Deciduous Forest. Unlike our precisely delineated political boundaries, most abutting biomes have fuzzy borders, sometimes requiring a hundred miles or more to attain the full transition from one to the next.

Travel northward from Lansing to L'Anse to traverse a wide biome border that separates deciduous forest from taiga. You'll begin to see the first signs around Clare – a patchiness that develops between alternating stands of mature beeches and maples, and stands dominated by mature pines and spruces.

Of course, man's activities on the landscape can hamper, if not, outright frustrate any effort to recognize which biome immediately surrounds you by studying the vegetative makeup. The opening definition

mentions biomes based on plant communities "developed to climax." This state of equilibrium requires hundreds of years to repair itself if any portion is physically damaged. For instance, when a forest is clear-cut in Michigan, centuries must pass before majestic beeches and maples fully return and mature to reclaim the space. Man is clearing and altering spaces within the biome with such regularity, most of what we see exists in a continuous state of "sub-climax" repair. Indeed, some areas of the biome are so obliterated by densities of human edifices and associated infrastructure that nearly every vestige of the existing biome is out of sight. "Anytown, USA" can be found in any biome.

A visually-oriented being tends to identify a biome by its stationary flora. However, acknowledgement of the fauna present, by nature, tends to be fleeting at best. Birds fly away. Deer and rabbits run away. Some are small enough to go undetected. Countless others are hidden from view - some incidentally, others by design.

So, back to that hundred-mile deciduous-coniferous biome transition in northern Michigan…

Countless elements of a neighboring biome extend far deeper into an adjoining biome than this. In fact, some elements can and do regularly blow out of the "home" biome, completely through the adjoining biome and into another that is many hundreds or even thousands of miles from the biome of origin.

Migratory birds are the most notable from our perspective. A long list of birds of the Taiga Biome spend the winter here. A Pine Siskin that, on a January day, shares a thistle tube perch with resident American Goldfinches outside the window is, literally, a piece of the taiga blown into a yard nestled firmly within the Eastern Deciduous Forest Biome. This bird's very existence is made possible by nutrients gleaned from the taiga. If it is attacked and eaten by a Cooper's Hawk or dies of exposure in an ice storm, its body's components become absorbed and recycled within the new biome. Some other "taiga-to-temperate" transients include songbirds such as the Purple Finch, Red-breasted Nuthatch and crossbills; and birds of prey, like the diminutive Saw-whet Owl, one of which is currently roosting in a trailside pine tree at Fenner Nature Center. The Merlin, a small falcon of the coniferous biome, and the Goshawk, largest of the accipiters, also wander into temperate latitudes in winter.

Avian elements known to traverse the boundaries of multiple biomes include drifters from the tundra. In some winters, the Common Redpoll shows up at winter feeders more densely than goldfinches. Snow Bunting flocks whirl through the air over treeless expanses, like ag lands and beaches, throughout winters here. The Long-tailed Duck accumulates by the millions on Lake Michigan's icy waters. The Snowy Owl has undergone record-setting irruptions into temperate regions and beyond the past two winters. The Rough-legged Hawk, a buteo similarly-sized and shaped to our ubiquitous Red-tailed Hawk, can be seen in winter among wide open expanses that resemble the landscape of its origin.

A first-year Rough-legged Hawk is the size of a Red-tailed Hawk, but wears a broad, dark-brown patch over most of its belly. Photo by Erik Enbody.

How many more far-flung elements of distant biomes settle among us, undetected by our limited senses and perspectives? This past August our insect camp students were collecting from the upland fields at Legg Park (see October's newsletter). One student showed me a small butterfly that he had placed in his killing jar and asked me if I knew the species. It was new to me, too. A check of the field guide revealed quite a surprise. It was a Common Ringlet, a butterfly that inhabits grassy clearings within the coniferous forest latitudes. In Michigan, its range was shown to exist no further south than the northernmost tip of the Lower Peninsula.

Imagine a dog emerging from indoors with its owner for a neighborhood stroll. A strong weather front pushes down from the North or rises from the Southwest. The animal faces the wind, stops in its tracks, stretches its neck, and, very deliberately puts its nose to work. A stimulating blend of odors not of this biome - gas molecules from tundra and taiga, or prairie and desert, charge its olfactory system. Faces wrapped and downcast against the gale, we're completely oblivious to the dog's piqued interest - a flood of invisible particles borne by a wind from a far-away biome.

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Check out the following pages for more opportunities to experience birds that cross biome borders. Sunday's program, *A Powerpoint Guide to Michigan Hawks and Owls* includes beautiful photos and additional information about the Merlin and Rough-legged Hawk mentioned above. The November 22 birding trip to Muskegon allows for great views of Rough-legged Hawks, Snow Buntings and many more transients from the tundra and taiga.

-Jim McGrath

A Powerpoint Guide to

Michigan Hawks & Eagles

Sunday, November 9 1 to 5pm; $5/person

The migratory Northern Harrier exhibits a number of owl-like features and behaviors.

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.

At the presentation's conclusion participants are invited to carpool to Moore's Park in Lansing, across the river from the Eckert Powerplant, where Peregrine Falcons regularly nest and roost. Our spotting scope allows for up-close viewing opportunities.

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.

Catch Jim on Coffee Break
Wednesday, November 13

Jim is scheduled to appear on Wednesday, November 13 at 9:45am, discussing winter birds. 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.

Muskegon Area Birding Day

Saturday, November 22

6:30am to 4:30pm

Northern Shovelers visit the Muskegon wastewater holding ponds by the thousands in the fall. Photo © Steve Sage.

On Saturday, November 22, from 6:30am to about 4:30pm, join us on a guided trip to the Muskegon area for some great, late-fall birding. Jim will lead and drive a maximum of five participants on this full-day odyssey to tally as many species as possible through habitats that harbor thousands of birds.

Wastewater treatment facilities are typically hot birding locales. Holding ponds of various depths are waterfowl magnets. Density of water birds in turn, attracts predatory hawks, eagles and owls. The expansive Muskegon Wastewater Facility, several miles from Lake Michigan, allows birders to acquire a special permit to access their facility. Jim has one!

Miles of dikes surround vast holding ponds crammed with thousands of ducks of over a dozen species, plus geese, swans, grebes and other surprises. Miles of open area north and south of the ponds offer a slew of other species, including Bald, and sometimes, Golden Eagle, Rough-legged Hawks, kestrels, shrikes, Snow Buntings and lots more.

We'll head to Lake Michigan to pick up more birds from the shore and on the breakwater. Diving ducks, loons, grebes and more, forage everywhere in the water. The uncommon Purple Sandpiper, migrates along Lake Michigan in late fall and can be found foraging on rocky shorelines.

Weather-permitting, we should tally over 50 species. Most of the birding will be in or near the vehicle. The only extended walking will be on the breakwater. Each participant will also receive a Michigan Birds checklist to keep track of the day's finds.

COST: Only $65/person, includes all transportation. Meet at Nature Discovery. With notice, we can also arrange to pick you up at a convenient location for you. Contact us to reserve a spot.

Thanksgiving Eve Michigan Wildlife Day Camp

Wednesday, November 26
9am-3pm

For K thru middle school. If your children have the day before Thanksgiving off school (or even a half day – we'll pro-rate it!) enroll them in a day of in-your-face Michigan wildlife. All students will spend time learning about, holding and feeding cold-blooded occupants of our huge zoo of Michigan snakes, turtles, frogs and salamanders. We'll also spend time engaged in outside activities. A hot lunch is provided. COST: $55/student. Call or email to enroll in advance.

Do the Right Thing – Broken Government

So far in 2014, the months of May, June, August and September have set global warmth records (http://www.ncdc.noaa.gov/sotc/). Does anyone find this alarming? Apparently, not the politicians running for election this week, nor the media responsible for asking the pertinent questions. A recent Gallup Poll shows global warming to rank last among a list of 13 issues posed to citizens. Despite such close proximity to last month's climate summit in New York, a voter concerned about meaningful social progress toward curtailing greenhouse emissions still has to engage in some extensive research to find where a prospective candidate stands.

So many voters seem increasingly frustrated with both, the democratic and republican candidates for a given office. Is our long-standing, increasingly polarized, underachieving two-party system broken beyond repair? It is, if campaign finance reform is not addressed. Want your government back to being of the people, by the people and for the people? Criminalize corporate $$$s and PACs.

Michigan Radio's political commentator, Jack Lessenberry, offered these essays that are worth a peruse and ponder at any time: http://michiganradio.org/post/november-elections-reveal-polarization-politics; http://michiganradio.org/post/detroit-free-press-endorsement-shows-our-system-government-broken

One candidate for office that has demonstrated his commitment to work for the good of the people, the environment, and, ultimately, the world, is Terry Link, Green Party candidate running for a seat on the MSU Board of Trustees. Let's hope he aims for higher public office in the near future.
These links are worth a look, even after the results are in: http://gogreengolink.org/; https://www.youtube.com/watch?v=35VGTBKroAs&list=PLCE48D16593AA02E6&feature=share&index=11

-JM

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