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THE NATURALIST

THE HISTORIC RIVERS CHAPTER OF VIRGINIA MASTER NATURALISTS

President's Message

by Rick Brown

Now is The Winter of Our Discontent

Every month it is incumbent upon the Chapter's president to generate "a message" for this newsletter. Sometimes it involves merely passing along announcements of upcoming events, or the latest changes effecting our projects. Other times it becomes more serious and involves a remembrance of those we have lost. This month's is a little different. It is a book review. Even if you are not a reader, hang in there with me for the next couple of paragraphs; there is a point.

Three days after our November 6th election, President-Elect Biden addressed the nation and warned that "we are facing a dark winter". It turned out to be a deeper metaphor than anticipated to describe our national pain. Each day seems to try to drive us even deeper into depths of despair we did not consider possible. Recently I have been reading a book recommended by my wife Sarah. She always seems to be reading just the right book, at just the right time, and thought this one would appeal to me. *Wintering*, by Katherine May, an English author, is a poignant and comforting meditation, not just on the cold season but uses the word to describe "a fallow period in life when you're

cut off from the world, feeling rejected, sidelined, blocked from progress, or cast into the role of an outsider." Released in February 2020, when her own country was enduring its share of hardships, it struck me as so currently appropriate to our own travails, even though it was completed before the UK went into pandemic lockdown. May began writing when she was experiencing a period of personal dislocation and turned to the soothing examples found in the natural world for the ways other creatures and cultures deal with winter. In this excerpt, May observes that during what appears to be dormant periods, trees are actually engaged in "the business of life".

"Even as the leaves are falling, the buds of next year's crop are already in place, waiting to erupt again in spring...We rarely notice them because we think we are seeing the skeleton of the tree, a dead thing until the sun returns. But look closely and every single tree is in bud, from the sharp talons of the beech to the hooflike black buds of the ash...The tree is waiting. It has everything ready. It's fallen leaves are mulching the forest floor, and it's roots are drawing up the extra winter moisture, providing a firm anchor against the seasonal storms. Its ripe

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cones and nuts are providing essential food in this scarce time for mice and squirrels, and its bark is hosting hibernating insects and providing a source of nourishment for hungry deer, it is far from dead. It is in fact the life and soul of the wood. It's just getting on with it quietly. It will not burst into life in the spring. It will just put on a new coat and face the world again."

In this beautifully written book trees, dormice hibernations, bird visitations and Druidic solstice celebrations, all point towards naturally occurring hopeful outcomes that annually emerge and instruct after a period of darkness. "Nature shows that survival is a practice...winters and summers are the ebb and flow of life." We are now experiencing one of the darkest winters in my memory. I take such comfort from her prose that seems so perfectly prophetic now and guides the reader to transcend the hardships that usher in each new season.

"We must emerge slowly from our wintering. We must test the air and be ready to shrink back into

safety when blasted by unseasonal winds; we must gradually unfurl our new leaves. There will still be the debris of a long, disoriented season. These are moments when we have to find the most grace: when we come to atone for the worst ravages of our conduct in darker times, when we have to tell the truths that we'd rather ignore...It often seems easier to stay in winter, burrowed down into our hibernation nests, away from the glare of the sun. But we are brave, and a new world awaits us, gleaming and green, alive with the beat of wings. And besides, we have a kind of gospel to tell now, and a duty to share it. We who have wintered, have learned some things. We sing out like birds. We let our voices fill the air."

I recommend this good book to shut out some of the current darkness and noise. If you're not a reader, then perhaps you will turn again to the lessons of nature that offer the consoling truths we are all searching for to mark the end of this bleak, dark winter.

Reminder: Volunteer Management System switch, and current need to manually record your service hours

by Rick Brown, Shirley Devan, & The Editors

As you know, the Historic Rivers Chapter is no longer using VMS to record our hours, starting January 1st, 2021. In a few months, the state VMN office will transition to a new system!

As President Rick Brown has advised earlier, you should be saving your 2021 hours manually — on a calendar, a journal, or some other record so you can enter them in the new system when it comes online and we've been trained on how to use it.

To ensure that your pre-2021 hours are "saved," Shirley Devan is in the process of downloading everyone's hours since they started in the HRC. It's an easy thing to do! Shirley will save your hours in an Excel spreadsheet — one file per person, and she will save

these in case the transfer from the old VMS to the new system runs into glitches.

However, it is expected that the new system will not import the same granularity for pre-2021 hours that you're accustomed to.

If you want your files, with YOUR pre-2021 hours, sent to you, please let Shirley know. She can send it as a PDF or as an Excel file. Let her know which file type you prefer.

Thanks so much! And remember to keep a record of your 2021 hours!

Sex in Mosses

by Helen Hamilton

Most plants actually do it twice – non-sexual (fragments, runners, rhizomes) and sexual (eggs and sperm). Most mosses can start new plants from fragments broken off leaves of stems. Many make roundish bodies called gemmae at the ends of stems of leaves that carry the same genetic information as the parent and will grow into a mature plant if relatively undisturbed.

I am always amazed when I find yet another plant or animal that has sex essentially the same way we do – swimming sperm and stationary egg. Throughout the living world there are many variations on this procedure. Some bacteria form conjugation tubes between two bacteria through which they exchange genetic material. Many single-celled organisms do the same.

The sexual phase involves stationary eggs and swimming sperm, that act in the same way as in humans, whales and dogs. The only difference is the method of transport. Most animals use a structure to transfer the sperm from male to female but the medium all living things use to carry sperm to eggs is water.

The green leafy moss body, most familiar on tree trunks, in sidewalk cracks, on bare spots in lawns, is either male or female. That means all parts of the plant have only one set of chromosomes in all the cells. So they must have developed from sperm or eggs that have only half the chromosomes of the body cells.

The male moss plant produces sperm at the stem tip that must swim through a tiny amount of water to reach a female plant with egg cells at the top of the stem. This is the sexual part of moss reproduction. Biologists have actually photographed these swimming moss sperm!

From the moss fertilized egg, a stalk with a rounded or cylindrical capsule arises. Inside, the double set

of chromosomes that came from the sperm and egg divides to form spores that each have only one set of chromosomes. Spores are very tiny bodies, averaging only 50 microns (0.05 millimeter) in diameter. Essentially invisible to us, they travel lightly through air or on animal bodies, or shoes of walkers.

When spores find a moist habitat, they germinate to form a minute green thread that closely resembles aquatic plants like green algae, often seen in quiet bodies of water as slimy threads. From these green strands of mosses a leafy stem will grow as the familiar moss body that is either male or female.

Mosses, ferns and some algae reproduce by this method of alternating their sexual and non-sexual generations. Many and varied are the ways these plants have their sex!



Apple Moss (*Bartramia pomiformis*) | Helen Hamilton



Haircap Moss (*Polytrichum* sp.) | Seig Kopinitz

“Our Girl”

by Suzanne Stern

Yesterday Mother Nature gave me a New Year’s gift - “Our Girl” returned to our Tall Oak tree for the first time since early last fall. I decided to try to take some photos of her, even though I still don’t have full use of my right arm, and by extension, my right hand. My lens is heavy and I need two hands to take photos, otherwise there’s camera shake, which produces blur.

These photos are ‘good enough.’ As you can see, I did not catch her wide-eyed and bushy tailed. I find it fitting that these photos were my first since my bike crash. It was the Barred Owl visiting our yard a year ago this month that led me to take up photography in the first place.

Two observations:

First, after taking photos, I went inside to do some work. After about an hour, I walked into the kitchen and happened to look outside through the backdoor window. At just that moment I saw our girl flying low through our yard with 4-5 crows in hot pursuit. The crows and several songbirds were not pleased with her visit. I haven’t seen her today. I hope she returns.

Second, when I saw our girl flying through the yard, her wing span didn’t look that wide. I have seen Barred Owls in our yard with much wider wing spans. Since the female Barred Owl is larger than the male, I have to acknowledge the distinct possibility that “our girl” is actually “our boy,” or perhaps even a young offspring of “our girl.” It’s highly unlikely I’ll ever know, so unless and until I can distinguish the owls, I’m going to continue to call the Barred Owl(s) that visit(s) our yard “our girl.”



Barred Owl (*Strix varia*) | Suzanne Stern

Christmas Bird Count, Williamsburg Results

courtesy of Jim Corliss

121st Audubon Society Christmas Bird Count Williamsburg Results: December 20, 2020

Species	Total	Species	Total	Species	Total
Canada Goose	2,452	Common Loon	5	Marsh Wren	4
Mute Swan	---	Double-crested Cormorant	871	Carolina Wren	263
Tundra Swan	48	American White Pelican	21	Golden-crowned Kinglet	31
Wood Duck	57	Brown Pelican	41	Ruby-crowned Kinglet	78
Northern Shoveler	2	Great Blue Heron	95	Eastern Bluebird	287
Gadwall	266	Great Egret	2	Hermit Thrush	43
American Wigeon	5	Black Vulture	373	American Robin	3,574
Mallard	239	Turkey Vulture	202	Gray Catbird	6
American Black Duck	30	Bald Eagle	49	Brown Thrasher	59
Northern Pintail	---	Northern Harrier	2	Northern Mockingbird	88
Green-winged Teal	12	Sharp-shinned Hawk	3	European Starling	486
Canvasback	13	Cooper's Hawk	7	Cedar Waxwing	360
Redhead	1	Red-shouldered Hawk	26	House Sparrow	35
Ring-necked Duck	563	Red-tailed Hawk	20	American Pipit	CW
Greater Scaup	---	Eastern Screech-Owl	4	Evening Grosbeak	7
Lesser Scaup	25	Great Horned Owl	19	House Finch	344
Bufflehead	145	Barred Owl	8	Purple Finch	88
Common Goldeneye	---	Belted Kingfisher	27	Pine Siskin	177
Hooded Merganser	258	Red-headed Woodpecker	19	American Goldfinch	360
Common Merganser	---	Red-bellied Woodpecker	203	Eastern Towhee	114
Red-breasted Merganser	16	Yellow-bellied Sapsucker	74	Chipping Sparrow	324
Ruddy Duck	319	Downy Woodpecker	131	Field Sparrow	30
Wild Turkey	31	Hairy Woodpecker	25	Savannah Sparrow	40
Pied-billed Grebe	21	Northern Flicker	101	Fox Sparrow	31
Horned Grebe	4	Pileated Woodpecker	39	Song Sparrow	313
Rock Pigeon	160	American Kestrel	1	Swamp Sparrow	44
Mourning Dove	207	Merlin	CW	White-throated Sparrow	1,117
Clapper Rail	4	Eastern Phoebe	17	Dark-eyed Junco	718
Virginia Rail	7	Blue-headed Vireo	---	Eastern Meadowlark	36
King Rail	1	Blue Jay	208	Western Meadowlark	1
Sora	1	American Crow	373	Baltimore Oriole	6
American Coot	14	Fish Crow	CW	Red-winged Blackbird	2,746
Killdeer	46	Crow sp.	29	Brown-headed Cowbird	41
Wilson's Snipe	2	Horned Lark	CW	Rusty Blackbird	26
Greater Yellowlegs	16	Carolina Chickadee	370	Common Grackle	1,851
Dunlin	12	Tufted Titmouse	365	Orange-crowned Warbler	1
Bonaparte's Gull	---	Red-breasted nuthatch	64	Palm Warbler	3
Laughing Gull	13	White-breasted Nuthatch	112	Pine Warbler	31
Ring-billed Gull	325	Brown-headed Nuthatch	13	Yellow-rumped Warbler	725
Herring Gull	21	Brown Creeper	14	Yellow-throated Warbler	1
Great Black-backed Gull	12	Blue-gray Gnatcatcher	---	Northern Cardinal	666
Lesser Black-backed Gull	---	House Wren	5	Total Number of Individual Birds Counted	24,480
Forster's Tern	34	Winter Wren	5		

Williamsburg CBC High Count

First Williamsburg CBC Record

CW = Count Week Sighting

December 2020 Volunteer Hours and York River State Park Wildlife Mapping Update

In December 2020, Historic River Master naturalists volunteered 1471 hours of time. In December 2019 they volunteered 1687 hours.

The number of hours volunteered is amazing considering the pandemic limitations.

Wildlife mapping has resumed with limitations at Jamestown, York River SP, and New Quarter Park. Trash pickup has resumed at several locations. Weekly work has continued at the botanical garden at Freedom Park.

- Shan Gill



Judy Kinshaw-Ellis



Judy Kinshaw-Ellis

Wildlife Mapping has started on a limited basis at York River State Park on Mondays. Group size is limited to six with masks and social distancing. If a larger group arrives for mapping, it is divided to maintain the smaller group size.

- Judy Kinshaw-Ellis



Yellow-bellied Sapsucker (*Sphyrapicus varius*) | Judy Kinshaw-Ellis

Ice Flowers

by Mona Overturf

Last fall, I listened to a webinar on ice flowers and ice ribbons and lo and behold! I actually had some of my own!

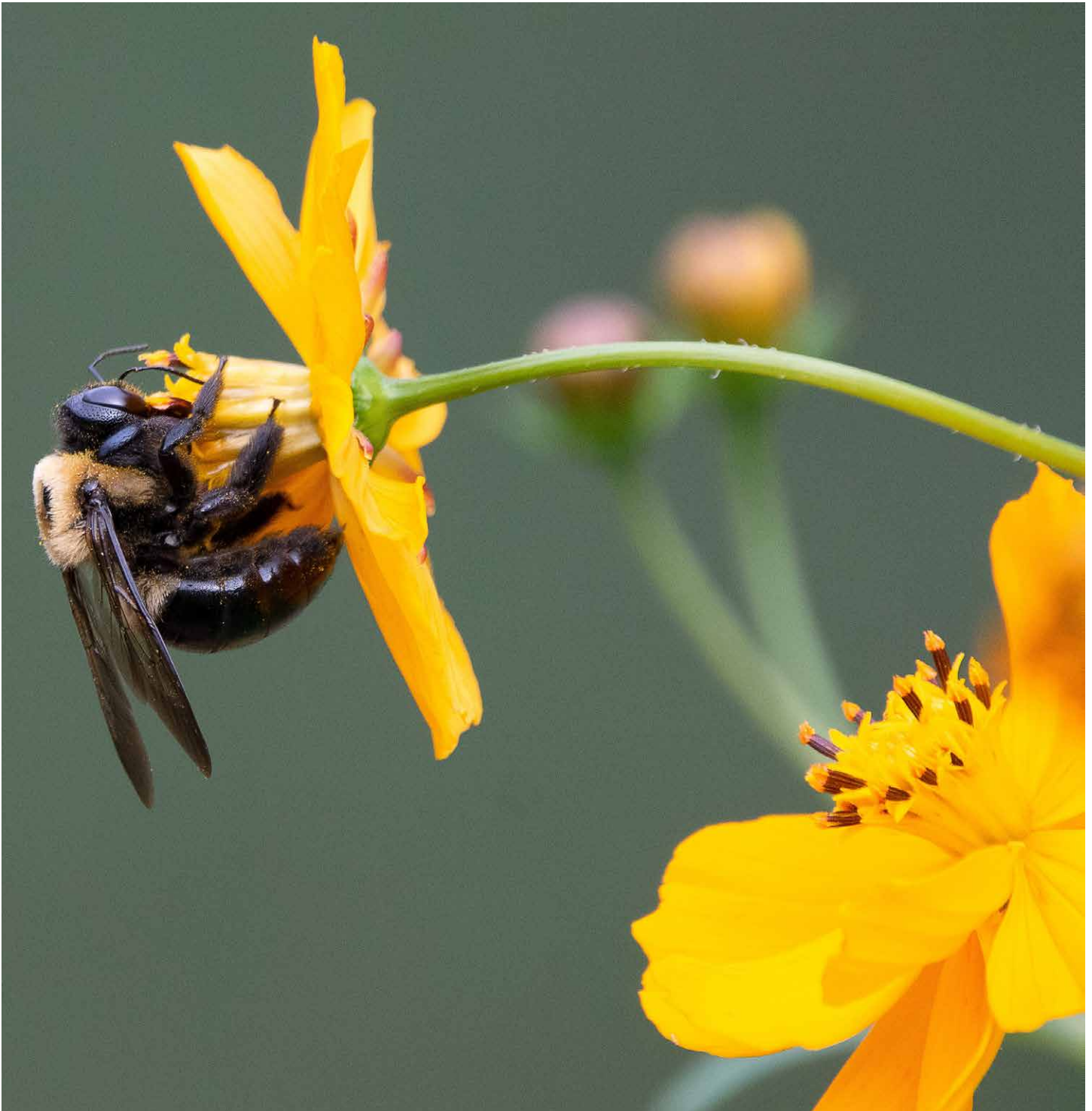


All photos: Mona Overturf



[Ice Flowers, also known as Frost Flowers, form when the water in a plant stem freezes, expands, and bursts forth through small cracks. This creates short-lived, wild, ribbon-like extrusions resembling flower petals. Their formation, both in timing and structure, is unpredictable — but they are most commonly created from long stemmed plants that mature late into the Fall and still have stems that actively transport water. Mona has captured some wonderful examples, here! -Editor]

As the days get longer, and warmer, and more colorful, we hope you're looking forward to the blossoms and reawakening of Spring. Until then: enjoy Winter's beauty and photographs. This particular Carpenter Bee was getting the most out of a rare mid-November treat!



Carpenter Bee (*Xylocopa* spp.) | Adam David Ferguson

The Naturalist is the monthly newsletter of the Historic Rivers Chapter of Virginia Master Naturalists. It is a membership benefit for current members of HRC.

Newsletter contributions are due by the 15th of the month for inclusion in the issue distributed to the HRC Google Group by the end of the month. Send your ready-to-publish photos, notices, stories, or reports to The Naturalist's newsletter editor at:

HRcenewsletter@gmail.com

Make sure your work is formatted and labeled properly. Please make sure your copy is error-free. We are happy to help you if you have questions!

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