



Winter 2021

UPEnvironment

CONNECT + COMMUNICATE + CELEBRATE = ACTIVATE

UPEC PRESENTS THE 2021 CELEBRATE THE U.P.!

March 19–21 • free • online • open to everyone

upenvironment.org/2021-celebrate-the-up

2021 Celebrate the U.P.!—What's so special about this place where we live???

Your 2021 Celebrate Team

The 2021 Celebrate the U.P.! will be held virtually during March 19–21. The speakers will be coming from all over, but they will all intersect with this place we call the U.P. And what they will bring to us will be as varied as salamanders from Presque Isle Park, or songs from the imagination of Michael Waite, or words from our keynoter Jessica Thompson on the subtleties of our connection to this place. And it is all free and accessible to the public.

Friday evening (6:00–9:00), March 19, will be the chance for all of us to participate. There will be an Annual General Membership meeting. Then, in a wide-open Show and Tell, we are all invited to bring an object that connects us to the U.P.—natural as a mineral or piece of driftwood, cultural as an old photo or tool—and expound on what it means to us. The social evening will be filled out with music from Michael Waite and poetry from Keith Taylor. Keith is a retired University of Michigan poet whose latest book is set in the U.P., *Let Them Be Left: Isle Royale Poems* (2021).

Saturday afternoon (1:00–4:00), March 20, will begin with our Keynoter, Jes Thompson, whose theme explores how we communicate our connectedness to place. Thompson is a professor of business and communication at Northern Michigan University (NMU) who recently edited an award-winning book, *America's Largest Classroom: What We Learn from Our National Parks* (2020). Her talk will span the public lands part of our connection with nature, from Pictured Rocks to Isle Royale, from wildlife refuges to national forests, to all the varied places that create habitat for our plants and animals, including ourselves.

The afternoon will be shared with a research biologist, Al Manville, whose career has led him from national parks

out West, to a national monument in Maine, to Alaska's Tongass temperate rain forest. He will share insights from teaching and research in regions that are often viewed as setting the standard for the USA's natural wonders. How is the U.P. similar and different are questions that will run through our minds.

A panel on Native American knowledge of place will close out Saturday afternoon. The focus is on the treasures that are being unearthed from the indigenous traditions that were long neglected. Known as Traditional Ecological Knowledge (TEK), how do these traditions enrich or alter a scientific viewpoint? The speakers include Donal Carbaugh, an intercultural communications specialist who has studied the tradition of deep listening with Blackfeet tribal members; Charlie Otto Rasmussen, the editor of *Mazina'igan: A Chronicle of the Lake Superior Ojibwe*, a publication that for decades has focused on culture, science, and Native American treaty rights; and Aaron Payment, the chairperson of the Sault Ste Marie tribe of Chippewa Indians.

The Sunday program on March 21 (1:00–4:00) is a rich offering of challenges in environmental activism and research opportunities for both specialists and citizens. One panel looks at what's involved in creating a coalition of activists to save a river from a nearby proposed mine that

would also be damaging to indigenous cultural resources. This is the Back Forty proposed mine on the Menominee River that UPEC's own Mining Action Group has been fighting for years, with some success. A second issue is the proposed spaceport along the Lake Superior shoreline about ten miles north of Marquette. This initiative has attracted a large following of concerned citizens and led to the founding of a new group. Learn how you can become engaged.

Parallel to these two activist sessions are two researchers, one at the beginning of his career and one with many years of experience. The first is an NMU student, Eli Bieri, who succeeded in reversing the roadkill of hundreds of blue spotted salamanders during their spring migration at Presque Isle Park in Marquette. The senior researcher, Stan Temple, is a conservation biologist now retired from the

University of Wisconsin–Madison. He poses the intriguing question “What have we done to deserve all these (sandhill) cranes?” The crane story is another illustration that human attitudes and actions can make a difference.

The final event on Sunday is a trio of citizen scientists, who are all contributing their bit to our knowledge of plants and animals in the field. Karen Bacula has participated for nine years as a leader in the Moosewatch program at Isle Royale National Park. Joe Youngman is a passionate birder known for numerous bird counting programs on and around the Keweenaw Peninsula for over 20 years. Andrea Denham is the Executive Director of the Upper Peninsula Land Conservancy and well-versed in electronic devices that are designed to help citizen naturalists in field studies.

Plenty to see and do at the 2021 Celebrate the U.P.! Join us!

Friday, March 19 • CONNECT

BOARD MEETING & SOCIAL HOUR

5-6 PM (all times Eastern)

UPEC ANNUAL BOARD MEETING

Agenda:

- Election of Board Members (mail in your ballot ASAP!)
- Brief Overview of 2020
- Report on Community Conservation Grants via short videos of grant winners
- Report on Environmental Education Grants

6 PM

SOCIAL HOUR

Sharing our Connections to Place. Many of us have a photo or object that connects us to a special place. The item might be from nature, or have a cultural connection for you. Bring your special item or photo to our social hour for a chance to share it and a brief story with others. Because we might not be able to get to hear from everyone, please feel free to share a photo and short description on our Facebook page by replying to our CONNECTIONS TO PLACE post, beginning on March 14.

Signature cocktails, mocktails, and Yooper brews. The Delft Bistro (facebook.com/delftbistro) in Marquette is developing a special cocktail for our event this year. They will also be streaming this event on their big screen. Blackrocks Brewery (facebook.com/BlackrocksBrewery) is introducing Float Copper, a limited edition copper lager, as Celebrate's featured brew. In addition, we are working with other Marquette establishments to create an alcohol-free mocktail. Check out facebook.com/upenvironment and upenvironment.org for complete information coming soon!

POETRY READING

7 PM

KEITH TAYLOR, author of *Let Them Be Left* (Alice Green & Co., 2021). Reading is co-sponsored by the Peter White Public Library. Keith Taylor has authored or edited 18 books and chapbooks, the most recent of which, published in 2021, is *Let Them Be Left: Isle Royale Poems*. His last full length collection, *The Bird-while*, won the Bronze medal for the Foreword/Indies Poetry Book of the Year. His poems, stories, reviews, essays and translations have appeared widely in North America and in Europe. He recently retired from the University of Michigan.



LIVESTREAM MUSICAL PERFORMANCE

8 PM

MICHAEL WAITE

Michael Waite's songwriting is thoughtful Americana without any glitz, both brutally and joyously honest. He lives with his family in the Huron Mountains north of Marquette and draws from a repertoire of hundreds of songs ranging in style from Irish folk to bebop to popular hits. His delivery of his own songs and interpretations of others is influenced by his first musical exploration, the jazz trombone.



Saturday, March 20 • COMMUNICATE

WELCOME & INTRODUCTION

12:45 PM

HORST SCHMIDT, UPEC President

KEYNOTE

1 PM

JES THOMPSON

The Subtle and the Sublime: Communicating Our Connection to Place.

Places matter to people and people are connected to places. This presentation will explore how we communicate our connection to landscapes. From our public lands to your backyard, there are subtle and sublime stories to tell. *Dr. Jessica Thompson is a Professor in the College of Business at Northern Michigan University. She teaches courses in sustainability, communication, and social responsibility. As an editor she recently received the Stewart L. Udall Award for her book, America's Largest Classroom: What We Learn from Our National Parks. The book examines how public lands can provide inclusive learning spaces for understanding science, history, society, and ourselves.*



2 PM

AL MANVILLE

Case Studies Using Two National Parks, a National Monument, and a National Forest as Living Laboratories to Teach Conservation Biology and Wildlife Management.

We'll investigate how field studies have been conducted at Glacier and Acadia National Parks, Katahdin Woods & Waters National Monument, and Tongass National Forest to teach graduate conservation students about specific issues in conservation biology and wildlife management. *Albert M. Manville, II, Ph.D., C.W.B., has served as a senior lecturer and instructor for Johns Hopkins University's Advanced Academic Programs for 21 years, teaching field classes in wildlife ecology, conservation biology, and wildlife management. He recently retired from the Division of Migratory Bird Management, US Fish & Wildlife Service, after 17 years working as their national lead on reducing anthropogenic causes of bird mortality from human structures.*

PANEL DISCUSSION

3 PM

Different Ways of Knowing Places: Native American Traditional Ecological Knowledge (TEK) and Western Science.

Panelists are **AIMEE CREE DUNN**, Northern Michigan

University's Center for Native American Studies; **CHARLIE OTTO RASMUSSEN**, Editor of the *Mazina'igan*, Great Lakes Indian Fish and Wildlife Commission (GLIFWC); and **AARON PAYMENT**, Chairperson of the Sault Ste. Marie Tribe of Chippewa Indians.



"Having Nunavut: Shakin' Bacon and Dissecting DesCartes to Indigenize Science," Aimee Cree Dunn. A brief look at the values that shape our scientific perceptions of the world. Aimee Cree Dunn, unaffiliated metis (mixed-blood), has taught Indigenous environmental studies at Northern Michigan University's Center for Native American Studies for over 15 years. With old family roots in Bahweting/Sault Ste. Marie as well as in Ireland, France and the Black Forest

region, Aimee has spent all her life in the rural wilds of anishinaabe aki (the northern Great Lakes area). She enjoys living in community with all our relations and is deeply concerned by the press of civilization as it intrudes into the few remaining wild places.

"Mazina'igan: Science, Culture and Great Lakes Ojibweg," Charlie Otto Rasmussen. The quarterly newspaper Mazina'igan is a reflection of the Great Lakes Indian Fish & Wildlife Commission's unique work where science, culture, TEK, and traditional Ojibwe lifestyles drive research and decision making in support of off-rez treaty rights. Otto attended grad school studying American Indians & the Environment at UW-Eau Claire (MA, 1997), winning Outstanding Thesis of the Year for "The Enduring Sylvania Wilderness." Otto came to GLIFWC in the same year and was hired on as an historian, writer, and photographer. Otto authored two books for GLIFWC Press; freelance outdoors writer since 1994, publishing over one hundred articles and photos in national and regional magazines and newspapers. Lives in Ashland. Wisconsin.

"Different Ways of Knowing Places: A Chippewa Perspective," Aaron Payment. He will share his perspective as the Chairperson of the Sault Ste. Marie Tribe of Chippewa Indians. Payment, EdD, EdS, MEd, MPA, is the Chairperson of the Sault Ste. Marie Tribe of Chippewa Indians. He is an officer in the National Congress of American Indians, and has served in leadership positions in various regional and state tribal alliances. Pertinent to this panel, he is currently serving on the National Advisory Council on Indian Education (Obama-appointed).

Sunday, March 21 • CELEBRATE + ACTIVATE

WELCOME & INTRODUCTION

12:45 PM

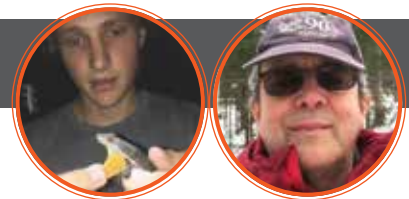
EVAN ZIMMERMANN, UPEC Vice President

BREAKOUT TALKS

1 PM

ELI BIERI

Reversing Roadkill: Marquette's Blue Spotted Salamanders. Hundreds of salamanders at Presque Isle Park were unknowingly killed by vehicles every spring. How did research and advocacy by a team of NMU students and professors prevent this? What else needs to be done? Cool salamander facts? Eli is a senior Biology/Ecology student at NMU. When he's not chasing frogs and salamanders, he is probably surfing or playing in Lake Superior. He plans to start a Master's program in the fall to pursue his passion for amphibian conservation.



1 PM

DENNIS FERRARO

Save Our Shoreline: Everybody's Backyard! Ferraro will provide an update on Citizens for a Safe & Clean Lake Superior (CSCLS): what they are doing to prevent an intense industrial rocket launch zone at Granot Loma on Lake Superior's Coastline, a resource we all have a duty to protect and sustain, regardless of municipal, township, or neighborhood borders. Dennis Ferraro is the president of CSCLS, a newly formed Michigan non-profit. Their mission is to protect and improve the precious environmental resource of the coastal habitat, shoreline, and fresh water of Lake Superior and its watershed in Marquette County; to oppose individual, corporate, or governmental action which may jeopardize that resource; and to encourage community action to preserve the quality of life provided by this Lake Superior Coastline environment for generations to come.

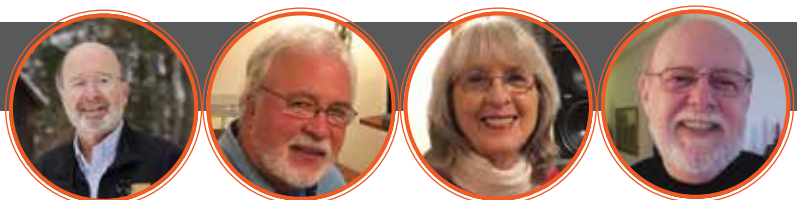
BREAKOUT TALKS

2 PM

DR. STAN TEMPLE

What Have We Done to Deserve All

These Cranes? Sandhill Cranes have made a dramatic comeback in the upper Midwest. Why has there been such



an impressive resurgence in the crane population since Aldo Leopold worried about its impending extirpation 80 years ago? *Stan Temple is Beers-Bascom Professor Emeritus in Conservation in the Department of Forest and Wildlife Ecology and former Chairman of the Conservation Biology and Sustainable Development Program in the Gaylord Nelson Institute for Environmental Studies at UW-Madison. Since his retirement from academia he has been a Senior Fellow with the Aldo Leopold Foundation.*

2 PM

Saving the Menominee River: Grassroots Resistance to the Back Forty Sulfide Mine, and Advocacy for Ancient Cultural Resources. Presenters are **DALE BURIE, LEA JANE BURIE, and DR. DAVID OVERSTREET.**

"By the People, Of the People, and For the People," Dale Burie and Lea Jane Burie. The Buries will provide an overview of the grassroots effort to protect the Menominee River from sulfide mining, including early efforts of the Front Forty Environmental Fight and the Coalition's founding and purpose. Coalition to SAVE the Menominee River was founded four years ago; they work in affiliation with other environmental groups, and participated as litigants in the Contested Case Hearing in Lansing, Michigan, culminating in a decision from Judge Pulter to deny the Aquila Resources Wetlands Permit.

"The Dog's Belly, a Menominee Cultural Landscape," Dr. David Overstreet. Overstreet will provide an update on the Menominee Indian Tribe's work to protect tribal cultural properties along the Menominee River, working with the Michigan Historical Preservation Division, the Wisconsin Historic Preservation Office, utilizing the Native American Graves Protection and Repatriation Act, and pursuing federal listing as a National Historic District. David Overstreet is the Principal Investigator at Center for Cultural Research, and professor at the College of the Menominee Nation.

PANEL DISCUSSION

3 PM

Citizen Science. Panelists are **KAREN BACULA**, Moosewatch Leader; **JOE YOUNGMAN**, Ornithologist; and **ANDREA DENHAM**, Executive Director, UP Land Conservancy.



"Moosewatch: Predator/Prey Study on Isle Royale," Karen Bacula. Find out what it takes to be a part of the world's longest running predator/prey study. Karen has been a part of leading Moosewatch expeditions for 9 years as well as expeditions designed for educators. Karen is a retired middle/high school teacher who has received several awards including recognition from the Michigan Alliance for Environmental and Outdoor Education for her significant contributions to environmental education. Karen continues to stay involved with community organizations and looks forward to leading more people on Moosewatch expeditions.

"Citizen Science for U.P. Birds," Joe Youngman. A whirlwind overview of Christmas Counts, eBird, and the projects of Copper Country Audubon. Joe Youngman has gathered data on bird migration over a 20-year period at 15 locations (including 9 islands) around Lake Superior, and has contributed to the Michigan Breeding Bird Atlas project. Youngman says, "I have zero academic training but I have co-authored three articles published in ornithological journals." He is a board member of Copper Country Audubon and has given many local bird tours and talks.

"iNaturalist and the U.P. Land Conservancy," Andrea Denham. Learn how the U.P. Land Conservancy incorporates iNaturalist, using citizen science to inventory and document flora and fauna on their preserves and other holdings. Project management and strategic planning are my strong points; whether trail building, fundraising, or volunteer program development. Whatever I do will be done to absolutely my best effort. I am determined and driven to see the projects I take on through to success. Executive Director of the UP Land Conservancy during a period of rapid growth. Helped create and implement first Fund Development and Outreach Strategic Plans. Led the charge to become an accredited land trust through the Land Trust Alliance (accredited 2018). Outdoor Educator and Education Program Developer in the Upper Peninsula. Volunteer Program developer. Five years in the guiding industry in Alaska, Yosemite, and the Upper Peninsula of Michigan.

All times Eastern. For livestream options, go to
upenvironment.org/2021-celebrate-the-up

WHERE DO INLAND MICHIGAN BROOK AND BROWN TROUT SPEND THE WINTER?

Bill Ziegler

Michigan is blessed with numerous cold and exceptional-water-quality trout streams. The state has over 38,000 miles of rivers and streams, of which over 12,500 are classified as trout streams. Brook (native) and brown (historically introduced) trout are common to Michigan's inland and Great Lakes tributary trout streams. Considerable thought and study have gone into improving critical winter habitat for deer. Likewise, biologists and some avid anglers have a strong interest in trout stream habitat that supports trout year round, including the winter.

Unlike that of deer, winter habitat of trout has not been as extensively studied by researchers. Researchers and field biologists have been aware that trout typically move to slower water from the faster-flowing main channel to conserve energy. Brook trout are especially likely to utilize trout streams with a strong ground (spring) water input.

Those streams are often warmer in the winter and often do not freeze for more than short periods in the highest ground water areas of the stream. The warmer water is better habitat for overwintering trout. Field biologists in Michigan and Wisconsin have tried to manage and rehabilitate headwater spring ponds along trout streams. These spring ponds are

Headwater spring ponds at Cooks Run in the Ottawa National Forest. The spring ponds are critical winter and year-round habitat for brook trout. In winter, spring ponds provide slack water that is typically warmer than main trout stream temperatures, which allow trout to conserve critical energy. These spring ponds were recently inaccessible to trout because of many beaver dam barriers. The beaver and dams were removed, making this important habitat accessible again. Cooks Run has been documented to have one of the higher trout densities in Michigan.



BILL ZIEGLER



South Branch of the Paint River headwater spring ponds partially and temporarily frozen over during an extreme cold period. This spring pond habitat is also critical winter and year-round habitat for South Branch brook trout.

critical overwinter habitat, along with providing good cover and sometimes a spawning area for brook trout. Wisconsin Department of Natural Resources (DNR) had a program to dredge out thousands of years of siltation to improve these spring ponds. Some attempts have been made in the Upper Peninsula by Michigan DNR fisheries biologists, although they did not have access to the larger dredge Wisconsin DNR was using so major spring pond rehabilitation was limited. Much of the work in the UP by DNR was to remove as many barriers as possible to trout movement up to these spring ponds and spawning areas. Examples of barriers removed were excessive beaver dams, culverts that trout could not pass, and low-head man-made dams.



Dam 2 on the East Fence River. Plunge pools from log-driving dams from the late 1800s still exist. These pools created by historical log-driving activity provide valuable adult trout holding cover and critical wintering habitat.



Plunge pool from Wheeler Dam on the Brule River in Iron County. The old log-driving dam is gone, although the plunge pool still exists, providing valuable habitat and critical wintering habitat for both brook and brown trout. Crystal Falls DNR fisheries personnel followed a radio-tagged brown trout through the season into the winter on the South Branch of the Paint River. The brown trout with the longest-lasting radio tags dropped downstream from summer cover to spend the entire winter in a large pool like this one created by human activity.

Major pools in Michigan trout streams provide valuable overwinter trout habitat. Many pools result from natural stream flow regimes, although some of the larger and deeper pools in Northern Michigan were created by activities like log driving. In the late 1800s pine logs were floated downstream through log-driving dams that scoured out deep-plunge pools behind them. Most of those pools remain today. Whether a pool is natural or not, it typically provides deeper, slow-moving or slack water habitat, making good wintering habitat for trout. As a DNR fisheries biologist in Crystal Falls, I, along with colleagues, conducted a radio telemetry study on brown trout of the South Branch of the Paint River. A couple of the radio transmitter tags lasted through the winter. The larger brown trout had dropped some distance downstream in the South Branch to a large pool where they spent the winter.

It was locally called the “Gold Mine Hole” and was created by errant gold miners in the late 1800s who dug out this large hole in the river only to find out it was pyrite (“fool’s gold”). The pool is well-known to this day and good habitat for both summer and winter trout. Most of the larger and deeper holes like this actually resulted from log-driving dam activity in this area’s trout streams.

Years of early spring fisheries survey activities have taught DNR fisheries biologists that trout often winter near the mouths of trout rivers and streams in lakes and reservoirs. We encountered numbers of trout either moving up into streams or rivers from these waters just as the ice was going out on the lakes/reservoirs with our nets or electrofishing survey equipment. Of course, this can be a hostile environment for small brook trout with all the

pike, walleye, and bass that are typically present in many Northern Michigan lakes/reservoirs. The fact that we saw large numbers in some cases (for example, in the Fence and Deer Rivers) moving upstream near the mouths at ice-out showed that many survive the winter. Of course, if large pools in the stream are limited, the downstream lake or reservoir may be the necessary winter habitat option. We also observed downstream movement of stream smallmouth into reservoirs where they spent the winter to conserve energy.

Another source of wintering habitat pools in a trout stream is beaver ponds. This was elaborated on by Rachael Guth in her master's research project at Northern Michigan University. This type of cover is especially valuable in high-gradient and mountain streams in the Western US where pool habitat is limited. If a stream has very low pool density a limited number of beaver dams can provide

wintering cover, although Wisconsin and Michigan DNR found in low-gradient streams (typical of the Upper Great Lakes states) excessive beaver dams are detrimental to trout populations.

In addition to a trout using excessive energy to maintain itself in flowing water of the main channel, it can be inhospitable in the winter for other reasons. In very cold weather anchor ice can form, scouring the bottom of the stream channel and the aquatic organisms there. In addition, winter is often a relatively low-flow period for many streams with limited ground water input. This lower water level limits the depth of shallow instream pools. Low water and actual exposure and freezing, along with anchor ice, can be most destructive to fertilized trout eggs. The factors covered above illustrate why brook and brown trout do best in stable streams with ample ground water input and optimal mixture of riffle and pool habitat. This is a

Shields Dam plunge pool on the East Branch of the Fence River in Iron County. These historical plunge pools are relatively common all over the state on trout streams that were used to float pine logs to the mills—which is a large percentage of Northern Michigan's trout streams.





Brown trout conserving energy in low-velocity pool habitat. Conserving energy is critical in the winter period.

good example of why only some streams can support trout year round, allowing for good year-to-year carryover. It is fairly well known that a stream that gets too warm in the summer cannot support trout very well; in addition, those trout have to have proper slack water habitat to conserve energy and make it through potential hostile conditions in the winter.

Bill Ziegler is a regular contributor to UP Environment.

THE 2021 UPEC PHOTO CONTEST WINNERS



ABOVE LEFT: "CANOE LAKE," JARED HUNT ("HUMANS ENGAGED"). **ABOVE RIGHT:** "UNDER MUSHROOM," ADAM MANNINEN ("HIDDEN BEAUTY"). **BELOW:** "ICONIC PILINGS," ELIZABETH BATES ("NATURE PANORAMAS").





ABOVE: "BOND FALLS REFLECTION," DAVID HUNTER ("FLUID WATER").
RIGHT: "WATER SCENE," LEANN PULDA ("CABIN FEVER CURE").

OUT OF NECESSITY, OPPORTUNITY: UPEC's livestreams

Horst Schmidt and Evan Zimmermann, your UPEC livestream co-hosts

As happened all across America in March 2020, UPEC out of necessity took on the task of doing virtual programming as a way of communicating with you, our members and friends, during the pandemic that caused a shutdown of public meetings. By going this route, we have discovered technology new to us. It opens our ability to reach all of you. We are able to have speakers from far and wide come into your home.

As an organization that attempts to cover the entire UP, we've succeeded in reaching a larger part of our supporters, as well as new listeners. We plan to continue our virtual programming because it is effective and almost cost-free. We'll continue to have interesting and exciting speakers on environmental topics in 2021.

When we shifted our annual 2020 Celebrate the U.P.! event online by necessity, our speakers were kind enough to change their format to connect with our members. The information they presented was inspiring and engaging, and we wanted to keep it going all year. We've been consistently impressed, inspired, and educated by our guests throughout the year. We've covered important local events like Line 5, the proposed spaceport, wolf management, and heroic efforts to clean up our homes and offer new sustainable ways of

living, and connected with our community over shared interests as we learned from each other's experience. As a community that's spread out over a wide and beautiful landscape, Yoopers have a lot to gain from communicating over the distances that define the expansive boundaries of our homes, and we look forward to all the future conversations we'll have with each other.

Screengrab from video recording of UPEC livestream on the year in review, December 2020.

All UPEC livestreams are recorded and can be viewed anytime on our YouTube channel: https://www.youtube.com/channel/UCi_SGwX-pXW4wCz646OPJDQ.



UPEC 2020 Year in Review

3 views · Jan 5, 2021

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BILL ZIEGLER



Where does this species spend its winters? See inside.

Support UPEC by becoming a member or renewing your membership today! Just fill out the form below. All memberships run with the calendar year. Not sure if your membership is current? Email us at upec@upenvironment.org. (All memberships expire on January 1.)

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Debbie Stabenow (D)
202-224-4822
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U.S. House

Jack Bergman (R)
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Michigan Senate

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109th: Sara Cambensy (D)
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110th: Greg Markkanen (R)
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GregMarkkanen@house.mi.gov

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 Year-round address
 Primary address; I also have a seasonal address

If you have a seasonal address, please give it, and the approximate dates you are there, on the space below this form.

I'd like to support UPEC's goals by ...

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- Regular Member \$25
- Supporting/Organizational Member \$50
- Student/Low Income Member \$15
- Lifetime Member \$500

This is a gift membership
Please give us the recipient's name and contact information in the space below this form.

- I want to volunteer! *Please give details below.*
- Please send me a digital (PDF) version of the newsletter from now on instead of paper

Making an additional contribution

- \$ UPEC General Fund
- \$ Mining Action Group
- \$ Community Conservation Grants
- \$ Environmental Education Grants

My contribution is in honor/memory of

Please give us the honoree's contact information on the space below this form; or, if a memorial, the name and information for a family member.

Please clip and mail along with your check to: UPEC, P.O. Box 673, Houghton, MI 49931

Thank you for your support!

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