



Emerging Health Effects of Climate Change

by Peter Debes, Chair

Through 2015, the October sea ice extent in the Arctic has declined 6.9% per decade over the satellite record. Over the past 50 years, temperatures in Alaska have increased by 1.9° C on average. As a result, lower sea ice in the Arctic has opened up a passage for sea life for Atlantic sea mammals to have contact with marine mammals of the North Pacific. Bowhead whales from the Atlantic met some from the Pacific in Arctic waters in the summer of 2010, something scientists think has not happened since 15,000 years ago. Scientists now believe this new opening of the waters may be causing outbreaks of disease in wildlife rarely seen before.

One casualty appears to be sea otters. Their population in the Aleutian Islands of Alaska has decreased by 70 percent in less than 10 years. They have contracted a distemper virus that has killed more than 50,000 seals on Europe's shores in two decades.

As temperatures warm in the far North, parasites that were restricted by the cold temperatures of severe winters are maturing faster and infecting populations of animals once little affected. Ticks, which transmit a variety of diseases, have been found recently on moose hides in Sahtu of Canada's NW Territories for the first time. In Sweden, in 2011 and 2012, there were record numbers of tick-borne encephalitis cases in people. That disease is caused

by a virus which can multiply to high concentrations in warmer temperatures.

Musk oxen, those iconic animals of the Arctic, are suffering from warmer winters too. Imagine this unpleasant scenario. Musk oxen are hosts for a lungworm, the females of which can grow up to 25 inches long and lay eggs in large cysts in the lungs. When the eggs hatch, the oxen cough them up, swallow them, and pass them into the environment through their poop. The larvae are picked up by slugs and snails, which are eaten by the oxen in the vegetation they consume. The larvae used to take one or more years to mature but now can mature in the warmer summers in one season. Thus, their range has expanded several hundred kilometers into prime musk oxen territory. Warm weather is "bad" weather for the musk oxen, stressing their bodies and making them less able to resist the lungworms.

More research is needed into these trends and their risks to human populations. Our most effective defense, of course, is to cut carbon emissions quickly and halt the advance of climate change. Your action and voice is essential in making this happen. Join other Sierra Club members as we take steps to stop consuming fossil fuels and support transition to renewable energy.

Source: "Sickness in the Arctic", *Scientific American*, Aug.2014, pp.58-63

Executive Committee Ballot: Rochester Regional Group Sierra Club

Each year the Nominating Committee recommends candidates to serve a term of two years on the Executive Committee.

Please cut out ballot and mail by Dec. 26th.

Ballots will be counted at the first Ex-Com meeting in 2016.

Send ballots to:

Elections, Sierra Club - Rochester Regional Group
PO Box 10518
Rochester, NY 14610-0518

Vote for up to 6 candidates for term 2016-2017. Members may vote for those nominated or write in a candidate.

- Cenie Cafarelli
- John Kastner
- Lucienne Nicholson
- Jack Spula
- Robert Withers
- _____



From the Chair: Taking a Stand in Our Community

As this newsletter comes out, nations will be assembled in Paris for the 21st Conference of the Parties, which is all countries which want to take action for the climate. It is being held in Le Bourget, France, from 30 November to 11 December. Around the world, citizens are becoming increasingly disturbed by our leaders' inability to take the actions required to curb carbon emissions in time to stop the devastating effects of climate change. Recent news highlights the actions of big corporations such as Exxon to deliberately deceive the public about the urgency of climate change, even when their own scientists affirmed that it is happening.

In our country, when our leaders fail to take the actions needed to address urgent problems, it has been necessary for citizens to step forward and make their voices heard. Last year's Climate March was such an event and raised spirits by the massive turnout and messages written on posters and banners. Despite this event, another year has passed with only slow, inadequate steps toward a real solution.

One of the results of the Climate March was the founding of a new coalition here in Rochester to continue raising awareness on the urgency of the issue, educating the public and pressing for leaders' bold meaningful action. This organization is the Rochester People's Climate Coalition, or RPCC. Now comprised of representatives of 51 different organizations with concerns about climate change, this organization is coordinating ongoing events and activities to help bring real progress towards mitigating climate change.

On November 29th in Rochester, a march was organized by the members of RPCC to demonstrate our concern and highlight our demands for meaningful action by leaders of government, business, and communities. In December, there will be a variety of events and actions taking place that we encourage you to participate in



to make your voice heard. Our Rochester Regional Group is organizing a candlelight vigil on December 21st to mourn the loss of species that have gone extinct or on the brink of extinction. See the short article below to find out how to support this event and highlight a particular species. Join us as we call for Action! Visit Sierra Club Rochester Regional Group on Facebook for information on events and actions.

Peter Debes,
Chair

Going, Going and Gone: Candlelight Vigil for Endangered Species

by Peter Debes

The RRG of the Sierra Club is holding a candlelight vigil to highlight species near extinction and those recently declared extinct due to the impact of humans on Earth. This is a family event. Please Join us on the day before winter solstice to shed light on these beautiful, curious, and special living things and call attention to urgency of taking action to stop climate change and protect their remaining natural areas on Earth. Each person

is welcome to choose a species she/he would like to represent. (See <https://www.worldwildlife.org>, endangered species).

We will set-up our luminaries at 4 PM at the triangle park at 12 Corners in Brighton, Monday, December 21. The vigil runs 4:30 to 6:30 PM. Wear reflective clothing since we will have to cross a street to access the park. Bring a flashlight or headlamp to shine on your poster. Please carpool and avoid parking in front of any stores there.

Bring a poster to let others see what species you cherish and where it lives. We will offer a poster-making session to highlight your species at the School Without Walls, 480 Broadway St. 14607, Sat. Dec. 19, 10 AM - 12 noon. Poster board and markers will be provided. Check our website (www.sierraclub.org/atlantic/rochester) or Facebook (Sierra Club Rochester Regional Group) for details and to let us know you're coming. Materials provided. Donations invited.

Year-End Donation Appeal

Your Rochester Regional Group helps keep you informed on all the major environmental issues in our area. We are a force in educating our community and taking action on these issues. This year, we made a major investment in bringing climate scientist Dr. James Hanson to our community. We depend on your donations to support these activities and ask that you consider us for a year-end donation to help us with our activities in the coming year. Donations are tax exempt if made out to: **Sierra Club Foundation, Rochester Regional Group**, and mailed to **P.O. Box 10518, Rochester NY 14610-0518**. Donations made to Rochester Regional Group are not tax deductible but allow us more discretion on use of the funds. Thank you for supporting us.

Winter Bicycling: Cooler Than Cool

by Jack Bradigan Spula

With snow on the way, you may be preparing to put your bicycle into “cold storage” until next... But wait, stop that defeatist thinking! This can be the year you taste the pleasures of winter biking.

No, that’s not an oxymoron. In fact, more and more seasoned bicyclists are becoming four-season ones. And they’re loving it, with that love reciprocated by the Earth and environment.

People often think biking through an Eastern Great Lakes winter is hair-shirt, something left to the hard-core or masochistic. But even when the snow cover is significant, cold-weather biking isn’t really much different in “feel” than cross-country skiing or other seasonal outdoor activities. The keys to success and pleasure are pretty basic: wearing appropriate clothing, using the proper biking equipment and cultivating a mild sense of adventure.

I’ve been biking through the winter for about 20 years, and I’ve learned some things through trial and error.

First, don’t assume you’ve got to buy new, fancy outfits to confront the elements. Clothing suitable for general cold-weather activities will work just fine; look for comfortable, well-ventilated, more-or-less water-repellent wool or synthetic (hydrophobic) fabrics or blends. Avoid 100 percent cotton, particularly in socks. Don’t overdress (again, think x-c skiing), choose designs that won’t catch too much wind and slow you down, and pre-

fer bright colors for visibility (it’s nice to have reflective strips sewn in, too – and it goes without saying that you’ll have decent lights, front and rear).

Toes and fingers are the most vulnerable to sub-freezing temperatures, so be careful about footwear and gloves. I use good old Bean Boots: they’re warm but very light in weight. Almost 100 percent waterproof, they fit comfortably and securely on a wide range of standard pedals. Ski gloves work very well, and mittens are even better on the coldest days. Just make sure your gloves and mittens allow for a safe grip on the bar, brake levers and shifters.

It goes without saying you’ll wear a helmet. But in winter you’re well-advised to get a waterproof, windproof nylon helmet cover. Some riders prefer a thin knit cap under the helmet. Use some kind of ear cover, too, and you’ll be good to go even on subzero days.

Pedal choice is a good starting point to discuss how to fit out your machine for the cold. Prefer pedals that have some kind of non-slip surface, since smooth surfaces get even slicker in icy conditions, and having your foot slip off a pedal can under some circumstances lead to disaster. Myself, I use old-fashioned MTB cage-type pedals with equally old-fashioned toeclips and straps; this combo is efficient, comfy and secure.

Of course, you must concentrate on where the rubber meets the slippery road. Even experienced

riders get nervous thinking about the inherent instability of a two-wheeled, singletrack vehicle on ice (or wet leaves, wet grass, etc.). But be not afraid. For one thing, frozen water comes in many forms; soft crunchy ice is pretty navigable with tires equipped with sufficient tread. And fresh snow on previously bare surfaces is tractable and pleasingly quiet. “Black ice,” on the other hand, can be slick as all get-out, particularly if there’s a thin coating of liquid on top.

So pick the right tires for winter. I keep one of my bikes mounted with studded tires (26 x 1.75) made by Schwalbe; they’re effective and durable, and the sidewalls are tough enough to withstand jagged ice and metal debris hidden under snow or slush. Other brands are good, too, and today studs can be found on practically any tire size. Go for the more expensive tungsten-carbide studs, as opposed to plain “carbon steel”; carbide studs can last for years, even when run regularly on dry pavement – and let’s face it, in the typical Rochester winter, the pavement is dry or wet and salty more often than not.

The biggest – almost the only – winter burden you’ll feel is keeping your bike clean and well-lubed. The issue here is road salt. I spray my bike frame and components to remove salt after every ride in snow, slush or brine.

(Continued on p. 4)

NATURALIST'S CORNER Pate Debes

The gluttonous Woodchuck (*Marmota monax*)

red fox, the main predator in our area.

weighs up to 10 lbs. Eats fresh vegetation... up to $\frac{1}{3}$ rd their body weight per day!

Our only true hibernator

Burrows up to 5 ft. deep, extend 20 to 40 ft.

burrows have multiple entrances for escape

2 to 8 young born, April, blind and naked

eating chamber

latrine chamber

Winter Bicycling (cont. from p. 3)

Then I use a little (repeat: little) light oil on the chain. Keep your eyes peeled for rust on the chain and other moving parts, and don't delay in removing it. A good old chromium-molybdenum steel frame resists rust to a great extent; if you keep it clean and shiny, it'll be like new even after many a winter.

All this advice and encouragement is about personal matters, but also be aware of the sociopolitical aspects of human-powered transportation. Limiting your use of internal-combustion engines in winter is obviously as good for the environment as it is for your own health. At lower temperatures, car and truck engines are especially inefficient and emit more pollution than during the warmer months. So getting on your bike or trike in wintertime will pay extra benefits all around.

When you immerse yourself in the literature of winter biking, you'll find opinions differ on the perfect clothes, tires, riding techniques and other details. There are many webpages that can help you sort out the issues. Be advised that no one rider agrees with everything any other rider believes - and that sometimes the debates get almost theological in seriousness.

A good internet starting point: <http://www.rei.com/learn/expert-advice/winter-bicycling.html>

If you decide to wade into the deep drifts of controversy, though, don't forget that winter biking is just plain fun.

Have You "Liked" Us on Facebook?

If you're on Facebook, be sure to "like" us at www.facebook.com/SierraROC. We post info on upcoming activities and events, and share news on environmental topics.

Connect with us to stay up-to-date on what we're doing and to link up with some like-minded people. Since Facebook displays pages' posts to a limited number of fans, be sure to check our page regularly, and please feel free to comment on our posts or message us with questions or requests. We love to hear from our members!

You can also keep up-to-date on water issues and the Great Lakes Committee's activities at www.facebook.com/GreatLakesRochester.

Tipping Points

by Robert Withers

It has been said “All that is necessary for the triumph of evil is that good men do nothing.”

We are at or near, one side or the other, many tipping points, both in the environment and in human affairs. The latest warning from the environment is the possible locking in of the collapse of the Antarctic ice shield. A process that would continue for thousands of years, accompanied by unimagined consequences beyond the sea level rise of over ten feet from this source alone.

Of course there are many other environmental tipping points we are at or near, one side or the other, as well. Methane releases from a warming ocean and a melting tundra, ocean acidifica-

tion accompanied by mass extinctions, to name a few of the ones we know are imminent and catastrophic.

We are at a tipping point in human affairs also. Science and our own logical minds tell us we must act. Not just for our children but for ourselves as well.

Self-interest and big money are poised to triumph. Having spent a paltry few millions of dollars telling lies, sowing doubt and buying politicians evil has brought science and society to its knees. We are seemingly unable to stop the unfolding disaster before our eyes.

Like magicians diverting our attention, those that would steal the future have control of a rigged political system pretending to govern wisely while emptying not

just our pockets but our destiny. Informed public opinion lacks effect on policy. Ignorance has been lauded as a virtue.

The tipping point in human affairs is this: Either we let the fate of the world be determined by the greedy and the selfish ... the evil among us... by doing nothing, or we stand with the moral certainty that this must not be allowed and good people will do what is necessary to triumph. All that is necessary is that we stand together. And it will be achieved.

Stand. Speak. Now, before it is too late.

What gives me hope is all of you members who support the Sierra Club and are helping to make a difference.

How Much Do You Love Me?

by John Kastner

Those of us who try to keep up with Earth science and the environmental news know that we humans have had a devastating effect on our mother planet...so much so that scientists are now calling our increasingly more tentative visit here the “Anthropocene Epoch,” after us anthropods. We have become a new, reckless force of nature trashing the place like a drug-crazed rock band in an expensive hotel. It ain't gonna be easy to fix and it's gonna cost us.

Without a doubt, the most urgent catastrophe we need to set right is the loading of our atmosphere with greenhouse gases that are rapidly heating up the planet, portending a very scary future. We also need to hang on to organized civilization long enough to put our technology to use on this problem while we still can. To do this, we must ensure that homo sapiens doesn't run out of food and water...Which brings us to the prob-

lem of MEAT! – and fish fry.

Let's do meat first, fish a little later. I have been a vegetarian for about 30 years – 35 if you don't count the once a week chicken dinner with my mom and the occasional fish fry until I broke off with meat entirely in 1986. I had a number of reasons for doing this, but even back then the deep ecologists were telling us that eating meat was bad for the planet. My main motivation was environmental. However, it wasn't until recently, when I watched the film *Cowspiracy*, that I learned how the cattle industry was generating more greenhouse gas than the entire transportation sector combined. There is some dispute about this figure among environmentalists, but none about the fact that meat agriculture's impact is way more than subtle. While methane traps many times more heat than CO₂, it breaks down much faster in the atmosphere. However, even if we're talking decades as opposed to millennia,

the shorter lived methane is still a very significant problem given the short amount of time we have to prevent climate change from escalating out of control. Then there is the rapid deforestation of the Amazon for grazing cattle, trading carbon-trapping trees for heat-trapping methane from cow butts. When you add in the fossil fuel burned to supply, transport, process and market meat, you have an enormous greenhouse footprint.

The production of meat also requires vast quantities of land and water. There are 70 billion cows living off the earth, ten for every human being. 3.5 billion of our fellow humans don't get enough to eat and one billion don't have access to clean water. Hunger and thirst tend to destabilize civil societies, leading to war, desperate refugees, increasing carbon outputs and energy diverted from efforts to control climate change. (Continued on p. 5)

How Much Do You Love Me? (continued from p. 5)

The wars in Darfur and Syria have significant roots in drought. The climate wars have already begun.

Speaking of water, the oceans have lost 40 percent of their phytoplankton. They are becoming so saturated with carbon that it's being converted into carbolic acid. That, and rising water temperature, is killing the phytoplankton. This is the bottom of the food chain, ultimately affecting fish populations which are also being decimated by overfishing. Not only is this stressing fish beyond their capacity to maintain viable populations, but also the increasingly poorer catches are forcing the cattle feed and pet food industries to look at harvesting phytoplankton and zooplankton. You can see where this is going.

Phytoplankton absorb CO₂ and exhale oxygen, which we find personally useful, even though we seldom think about where oxygen comes from. About 50 percent of it comes from phytoplankton and most of the remaining half comes from Earth's forests, a great many of which are burning or being clear cut for paper and to make room for...more cattle!

WOW! So what are we going to do? What are YOU going to do? Well, in our hands, and on our plates, is the future survival of humanity, and probably most other species as well. What kind of effort will it take to preserve life on our favorite planet? During World War II, Americans made incredible sacrifices so that democracy might survive. My parents' generation answered the call by driving less or not at all. They grew victory gardens; collected scrap metal; volunteered for the Red Cross, USO and Civil Defense, submitted to food rationing; cutting back or even eliminating coffee, sugar, MEAT and DAIRY. They even gave up their husbands, sons and their very own lives so that their children would not have to live under fascism. Though it may not yet be so apparent, what we are facing

now may make World War II look like a picnic in the park. A great deal is going to be required of us to keep the human enterprise and the rest of life on Earth a going concern.

Americans love to eat. That is certainly apparent in the 60 percent of us who are obese. We especially love our meat. Love is certainly what it comes down to in the end. How much do we love our beautiful planet and those unborn generations we will never see? How deep is your heart? It's as personal a question as, "What do you eat?". It adds new depth to the definition of a moral human being. Is it right to embrace a diet that requires so many resources to maintain that others must go to hungry and the Earth goes to Hell? If we believe that it is our moral duty to leave a functional, abundant planet to those coming after us, we have to change the way we eat.

The bright side of this is that it doesn't require a diet of water, crackers and raw broccoli. I have learned to eat closer to the bottom of the food chain by learning how to cook. At first I just ate to love - beans and rice mostly. I dropped 50 pounds and I needed to. Then I bought some cookbooks and discovered a cornucopia of foods that I had overlooked as a meat and potatoes guy. I found stir fry, burritos, guacamole, pasta primavera, deviled tofu, Thai, tempeh, tempura, miso seitan, hot whole grain cereals, whole grain breads and pancakes with fresh fruit. I found that carefully and imaginatively prepared vegetables responded with gales of flavors, savory and sweet. I discovered cooking was fun and for the busy person, pots of soups and stews could be prepared in advance, dinners could be frozen and thawed or cooked in a crock pot, ready to be eaten when you got home. Tired people could refry or steam a little rice with one or two sautéed vegetables. Often

I found this to be enough and not an assault on the taste buds, but a gentle caress. I learned to appreciate subtle flavors of simple food when I was too tired to prepare something more elaborate. Not only does a veggie diet expand your palette and the variety of foods you eat, it costs less than meat. It's also healthier than grain-fed, antibiotic-infused, e-coli-riddled, tortured and processed meat.

Of course there's more to it than personal choices. To achieve a new, healthier diet more compatible with our planet, we need education and leadership. This is where government is indispensable. But government requires our leadership before it will act. We must force it to lead. We must demand that agriculture's contribution to climate change and the ocean's decreased ability to regulate carbon due to overfishing and overheating be recognized and brought to the table at the Paris climate talks as well as subsequent discussions. We must demand that governments end subsidies, not only to the fossil fuel industries, but to the cattle industry as well. Let the rising cost of beef move consumers to a more planet-friendly diet. There must also be incentives to re-employ displaced meat workers and fishermen in sustainable food production, renewable energy and mass transit.

We must demand that broadcast corporations, which are licensed by government to use the public airways, balance the time they give to advertisers who urge us to consume and pollute at the planet's expense, with equal time to PSAs that provide us with science-based information on how to live a full life that is compatible with the system Mother Nature designed to sustain us.

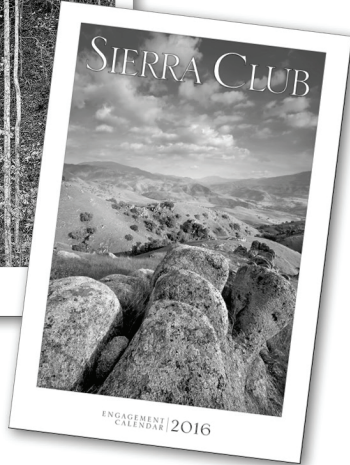
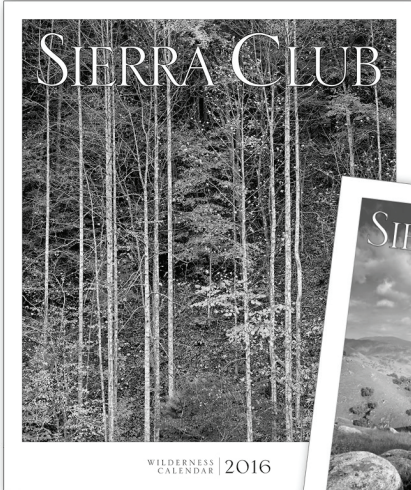
(Continued on p. 7)

2016 Sierra Club Calendar Sale



Enjoy, explore and protect the planet

2016 Sierra Club Calendars



Order Form

Item	Cost	Qty	Total
Engagement Calendar <input type="checkbox"/>	\$16.00	_____	_____
Wilderness Calendar <input type="checkbox"/>	\$15.00	_____	_____
Shipping Costs:			Subtotal : _____
1 - 3 calendars: \$5.50			Shipping : _____
4 - 5 calendars: \$7.00			Tax included in cost
6 or more: Call (585) 271-0544 for pricing			GRAND TOTAL : _____
Also call this number for free pick up in Rochester			
Please make checks payable to "Sierra Club" and mail to:			
Rochester Regional Group of the Sierra Club			
P.O. Box 10518, Rochester, NY 14610			

Limited supply of gift shipping envelopes available for \$1.25 each. Call (585) 271-0544 for details.

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This is the Rochester Regional Group's biggest fundraiser each year.

Please consider ordering 2016 calendars for yourself and holiday gift giving and support the work of your local Sierra Club. With your help, we can truly make a difference.

Proceeds from calendars purchased at local bookstores do not benefit the Rochester Regional Group, so please purchase directly from us!

THANK YOU FOR SUPPORTING YOUR LOCAL SIERRA CLUB!

How Much Do You Love Me? (continued from p. 6)

Admittedly, these are tall orders that will require diligence and persistence and time, but here are a few ideas that aren't quite so difficult: An occasional letter to the editor, taking small steps to simplify your own life. Or, how about this one - there are nearly a million people in Monroe County, yet we only have

about 2,000 Sierra Club members. If each one of us got just one more person to kick in their \$15, we'd double our membership and twice as many people would be reading this newsletter. The more people Sierra Club represents, the more effective our lobbyists can be when advocating on important environmental issues. Here is an-

other: This holiday season, why not give gift memberships to the Sierra Club? A little action goes a long way toward eliminating - or at least ameliorating - feelings of helplessness or hopelessness. We are neither helpless nor hopeless. Get busy and best wishes to all.



**Rochester Regional Group
of the Sierra Club**
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Rochester, NY 14610-0518
 585-234-1056
<http://newyork.sierraclub.org/rochester>
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Winter 2015 Calendar

All Committees are local volunteer groups of the Rochester Regional Group of the Sierra Club

Date	Day	Time	Calendar/Event	Place
Dec. 1	Tuesday	6:30-8:30pm	Executive Committee Meeting	Harro East Bldg., 400 Andrews St., Ste 600
Dec. 19	Saturday	10:00am-12:00pm	Poster making session for Candlelight Vigil	School Without Walls, 480 Broadway St. 14607
Dec. 21	Monday	4:30-6:30pm	Candlelight Vigil for Endangered Species	12 Corners in Brighton
Jan. 4	Tuesday	6:30-8:30pm	Executive Committee Meeting	Harro East Bldg., 400 Andrews St., Ste 600
Feb. 1	Tuesday	6:30-8:30pm	Executive Committee Meeting	Harro East Bldg., 400 Andrews St., Ste 600

Executive Committee meetings are open to Sierra Club members. All other meetings are open to everyone.

The Eco-Logue is printed on 100% recycled paper with green plant-based toner.