



## HOW TO PREVENT THE NEXT PANDEMIC

by Linda DeStefano

Chair of the Chapter Biodiversity/Vegetarian Outreach Committee  
ldestefano3@twcnyc.org

ROCHESTER REGIONAL GROUP—Explore, enjoy and protect the planet

# SIERRA CLUB ECOLOGUE

“It just boggles my mind that when we have so many diseases that emanate out of that one human-animal interface that we don’t just shut [wildlife markets] down. I don’t know what else has to happen for us to appreciate that.” .... “What we’re going through now is a direct result [of wildlife markets].” (thehill.com, article by Joseph Guzman)

These words are from an interview on Fox News with Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases. Dr. Fauci is a member of the White House Corona Task Force and has been guiding public behavior to slow the spread of Covid-19. Another name for the wildlife markets is wet markets. These are place where wild and domestic animals are crammed into cages and slaughtered on the spot. Blood, feces and urine make for extremely unsanitary conditions. Species of animals who ordinarily would not be in close contact with each other are forced into this hell hole and transmit disease viruses between species. These mutate and eventually find their way into humans. Wildlife markets have been implicated in the spread of several disease outbreaks in recent years, including Severe Acute Respiratory Syndrome (SARS), avian influenza or bird flu, Ebola and Middle Eastern Respiratory Syndrome (MERS). The novel coronavirus pandemic was also traced to a wildlife market in Wuhan, China.

It isn’t only China and some other foreign countries which maintain wildlife markets. They also exist in NYS, including more than 80 in NYC. They are often called “live animal markets” and typically kill and sell domestic animals, such as fowl, rabbits, goats and cows. By law, they also can sell fish, crustaceans, and some species of turtles and frogs. I suggest people communicate with Gov. Andrew Cuomo and ask him to shut these down. You can send an email through his website <https://www.governor.ny.gov/> or send a physical letter to him at Executive Chambers, State Capitol, Albany, NY 12224.

Another type of business which has been the incubator for viruses is factory farming. These operations keep thousands of animals crammed into cages inside huge buildings. The pigs, chickens, cows and other animals are so stressed by the poor conditions they endure that antibiotics are routinely administered to keep them alive until they are transported for slaughter.

According to Michael Greger, M.D. of Nutritionfacts.org: The largest and oldest association of public health professionals in the world, the American Public Health Association, has called for a moratorium on factory farming for

nearly two decades. Its journal published an editorial entitled “The Chickens Come Home to Roost” that went beyond calling for a deintensification of the pork and poultry industries: “It is curious, therefore, given the pandemic threat, that changing the way humans treat animals, most basically ceasing to eat them, or at the very least, radically limiting the quantity of them that are eaten—is largely off the radar as a significant preventive measure. Such a change, if sufficiently adopted or imposed, could still reduce the chances of the much-feared influenza epidemic. It would be even more likely to prevent unknown future diseases that, in the absence of this change, may result from farming animals intensively and killing them for food. Yet humanity doesn’t even consider this option.”

Dr. Greger goes on to say:

This may be changing, thanks to food innovations like plant-based milks, egg products, and meats.

Our food choices don’t just affect our personal health but our global health. Not just in terms of climate change, but in terms of pandemic risk.

Major meat producers have started blending in vegetable proteins to make hybrid meats like Tyson’s “Whole Blends” sausage links and Perdue’s “next generation” chicken nuggets. The world’s largest pork producer, Smithfield, recently launched a whole line of plant-based products. Egg-free mayo has taken the sandwich spread sector by storm, and Quorn, a brand of meat-free meat made from the mushroom kingdom, opened a facility capable of producing the meat equivalent of twenty million chickens per year.

While these products may not be the healthiest from  
*(continued on page 2)*

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**COVID-19 and the Environment**

The COVID-19 (or coronavirus) pandemic has illustrated how vital many environmental causes are to our overall survival. I'd like to discuss just a few of them here.

**Weather Events and Human Expansion**

Evidence shows that COVID-19 is a zoonotic disease – or a disease that jumped from animals to humans. This isn't unique, as 70 percent of the world's infectious diseases originated in other animals. Viruses are opportunists, and when they are put in close proximity to other potential hosts, they can rapidly evolve so they can spread to species that were initially immune to their attacks.

Weather events such as droughts or floods (which will become more prevalent as climate change worsens) provide these types of opportunities by forcing together species that otherwise would have remained separated. This includes humans. When you add to that our penchant for expanding further and further into animals' habitat, we are providing viruses with more and more opportunities to gain the ability to infect us. Then when these viruses do jump over to us, growing population density and our ability to easily travel from one point of the globe to another provide these viruses with ample opportunities to quickly spread throughout the human population.

**The Omnivore Diet**

Like outbreaks of SARS and avian influenza (bird flu), COVID-19 most likely originated from a wet market. Found throughout the world, wet markets are large, open air markets where fresh meat, fish, and produce are sold. At some

of these markets, "fresh meat" means that the animals are brought to the market alive, then slaughtered when customers place an order. The blood, urine, and feces that are prevalent at these markets greatly increase exposure to viruses.

**Pollution, Contamination, and Environmental Racism**

In the US, non-white communities (especially African American, Latino, and indigenous) have been hit by COVID-19 much harder than white communities. This is partially (perhaps largely) due to the fact that many non-white neighborhoods are the victim of targeted zoning that has allowed corporations to pump heavy pollutants into the air or dangerous chemicals into the ground. The air they breathe, the soil they walk on, and the water they drink are harming them. For decades, they have asked for help with these issues, but their voices have been ignored. Now they are paying the price.

**Any Positives?**

On the plus side, we've all seen the dramatic changes that occur when our modern world essentially shuts down. Photos have been shared of crystal-clear skies in cities that had spent years in a constant haze of air pollution, or crystal-clear bodies of water that, frankly, everyone thought were naturally opaque. Between these types of changes and the focused attention that has been brought to issues like the ones I shared above, I very much hope that this could be the wake up call people needed to start taking action.

**How to Prevent the Next Pandemic**

*(continued from Page 1)*

a personal standpoint, they tend to be healthier than their animal-product counterparts and, from a pandemic standpoint, they present zero risk. What about cultivated meat? The primary human health benefit of a slaughter-free harvest would be food safety. (If you make meat without intestines, you don't have to worry about fecal bugs like Salmonella, and if you make meat without lungs, you don't have to worry about brewing respiratory viruses.) Growing meat directly from muscle cells has been touted for the environmental benefits - reducing water use and greenhouse gas emissions as much as 96 percent and lower land use by as much as 99 percent - but factoring in a pandemic risk, the benefits to human health may rival those to planetary health.

**SOURCES:**

"Calls Grow to Ban Wet Markets Amid Concerns Over Disease Spread" by Jackie Northum on National Public Radio, April 16, 2020  
npr.org

thehill.com article by Joseph Guzman

"A Humane World" blog by Kitty Block and Sara Amundson of the Humane Society of the U.S.

"Takeaways from my Webinar on Covid-19" by Michael Greger, M.D. of nutrition facts.org April 16, 2020

# Notes on Sierra Club Zoom Forum on Defunding Climate Destruction, 5/13/20

By Margie Campaigne

MCampaigne@hotmail.com

Presenters were Michael Brune, our Executive Director; Rachael Heaton, an indigenous woman with MazaskaTalks.org; Ben Cushing, our campaigner in DC; Dan Chu, Executive Director of Sierra Club Foundation; and Lena Moffitt, Senior Director of the **Sierra Club's** Our Wild America Campaign.

Brune mentioned the Rewind Act which is aimed at preventing the Trump administration from bailing out the fossil fuel industry. He also referenced [www.PeoplesBailout.org](http://www.PeoplesBailout.org) where the focus is to get banks, governments and their agencies, mutual funds, individuals, etc. to divest from all fossil fuels.

Heaton is an activist based in Seattle, fighting the Dakota pipeline. The City of Seattle has divested from Wells Fargo, a major funder of the fossil fuel industry. A move to public banks exists. Heaton made the connection



between the fossil fuel infrastructure and thousands of disappearing indigenous women. This is because of "man-camps" populated exclusively by men working on pipelines, etc. on indigenous lands. These "men" have no regard for these indigenous women at all.

Cushing did not hesitate to name the worst offenders financing fossil fuels: JP Morgan Chase, Wells Fargo, Citibank, and Bank of America. WE can do our part by switching any accounts we have that are associated with



these banks to credit unions and locally owned banks. We also need to look at our retirement funds, credit cards, and mortgages. Even big insurers like AIG and Liberty Mutual are part of this problem. (I am already with a credit union, local bank, looking into switching my auto insurance.)



Chu is part of a group that contacted many big banks about the risks they should know about when considering funding things like drilling in the Arctic. With the low price of a barrel of oil now, it makes no sense, as drilling in the Arctic is expensive. Then there is the risk to human rights,



especially indigenous, as mentioned above. They mostly succeeded except with Bank of America.

**Webinar link shares:** <https://mazaskatalks.org/>  
<https://stopthemoneypipeline.com/>

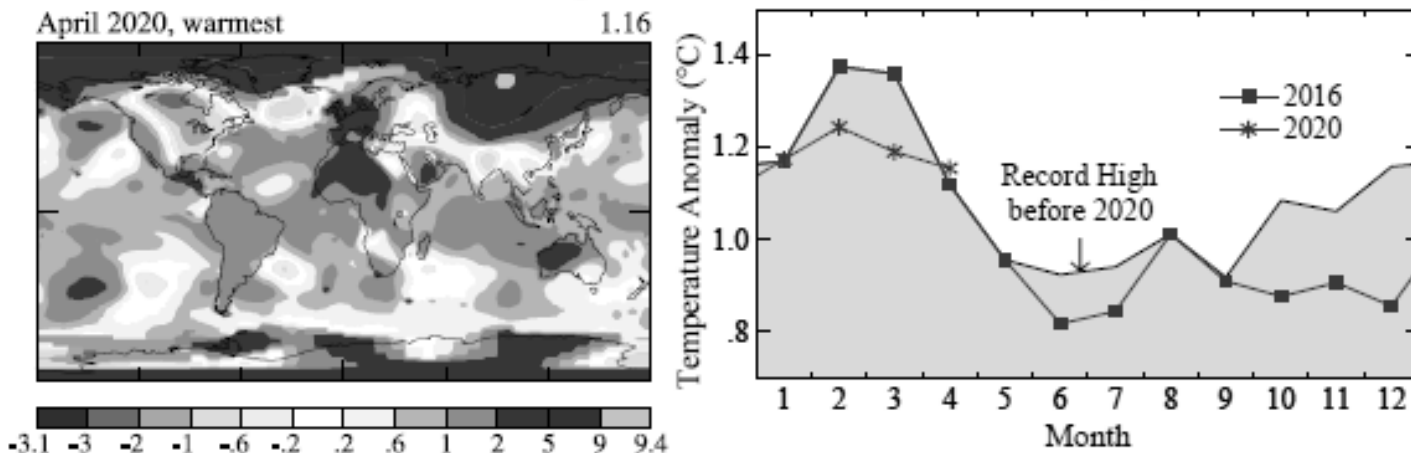
Send a message to Bank of America to say no to funding Arctic drilling: <https://addup.sierraclub.org/campaigns/tell-these-big-us-banks-that-arctic-drilling-is-bad-business>

Message the largest shareholders of JPMorgan Chase -- BlackRock, Vanguard, State Street -- to vote Lee Raymond (former Exxon CEO) off the board of Chase: <https://addup.sierraclub.org/campaigns/tell-jpmorgan-chases-biggest-shareholders-to-vote-this-climate-denier-off-the-board-of-directors>

## 2020 Record Warm Year? Don't Bet on it

By Dr. James Hansen  
(Used with permission)

**Global Surface Temperature Relative to 1951-1980 Mean (°C)**



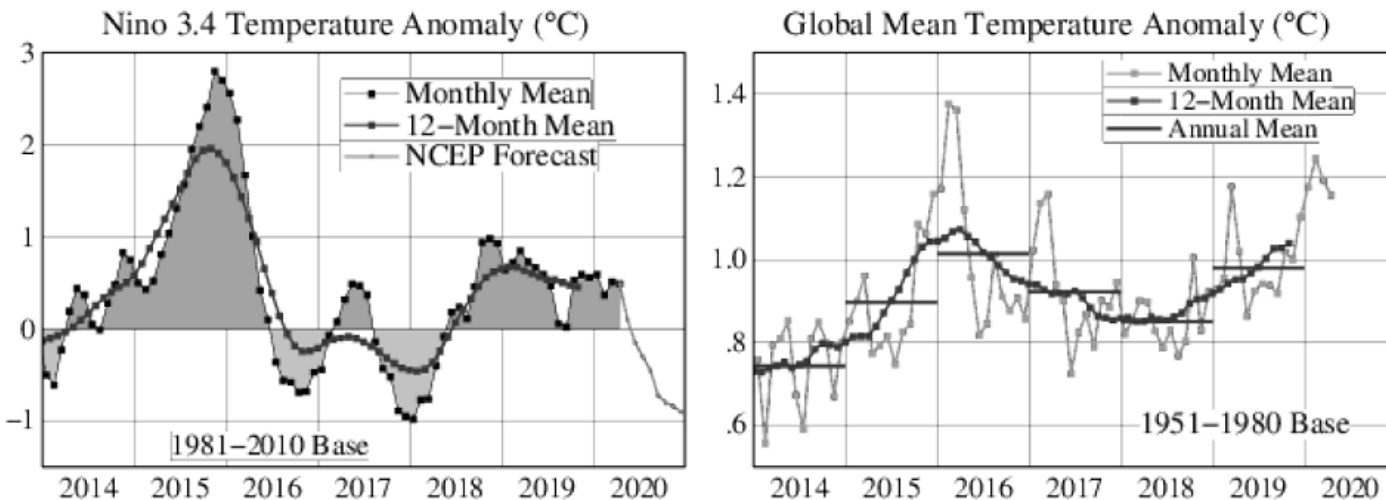
This year, 2020, should have record global warmth according to widespread media reports in April. The reports were based largely on a NOAA conclusion that such a record was likely with 75% confidence. April has since come in with record warmth for the month (see map above), although practically the same as April 2016. That should seal the deal, right?

Not so fast. Their expectation is based on the fact that the first few months of 2020 are almost as warm as the same months in 2016, and the fact that global temperature fell rapidly in the last eight months of 2016, as the super El Niño of 2015-16 faded and was replaced by a La Niña in the tropical Pacific Ocean.

The graph on the left below shows the Niño 3.4 temperature index, including the NOAA NCEP model projection, which predicts a rapidly developing La Niña this year. So, the 2020 global temperature may fall as fast or faster than in 2016. A strong La Niña, if it occurs, will affect 2021 as well as the rest of this year, in which case we do not expect record annual global warmth until 2022, at the earliest.

The game of predicting near-term global temperature records is of little import. We just want to insure against public misinterpretation, if, as is perhaps probable, 2020 does not achieve the predicted record.

Tropical ENSO (El Niño Southern Oscillation) variability is the largest cause of interannual variability of global temperature, but there are other factors. The increase of greenhouse gases, mainly CO<sub>2</sub> and CH<sub>4</sub>, will give 2020 a warming boost, but that will be partly offset by the present deep minimum of solar irradiance. The wild card is caused by a reduction of human-made aerosols, due to reduced emissions during the ongoing global Covid-19 epidemic. Reduced aerosols will cause a boost in warming, but unfortunately global high-quality aerosol measurements are not being obtained.



# A Trillion Trees...or where can we stick 200 gigatons of carbon

By John Kastner [jkastner@weeblax-uzzl.com](mailto:jkastner@weeblax-uzzl.com)

According to those who have counted them, there are about 3.1 trillion trees left on the planet. This is about half of what the earth had before our species started dabbling with civilization 12,000 years ago. Since consuming all these trees we have nearly doubled the CO2 in the atmosphere creating the planetary fix we now find ourselves in.

Then someone figured out that we still have room for a trillion trees, about a third of what we destroyed, without having to plow under any cities or crops. Theoretically, a trillion trees would remove two thirds of the current atmospheric carbon. This idea was happily seized upon by the corporate titans at the World Economic Forum in Davos, Switzerland. The masters of the universe in Davos probably hoped that this simple solution would allow this thin crust of billionaires to continue bleeding the planet for more cash without killing it entirely. I have to admit, it sounded good to me, too. But, like most things that sound too good to be true, it's not quite so simple.

Massive tree planting projects in India and China are not going well. Farmers in India opposed some projects over worries that planting additional trees in drought-stricken areas would shrink overtaxed water resources even further. Lack of proper research doomed China's effort to stop desertification of depleted land on its northern border. Most of the trees planted died because they were the wrong species and the needed water was scarce there as well. Also, forests are infinitely more complex than merely planting a lot of trees in one place (see Sierra Club's excellent book "CLEARCUT").

Marc Benioff, Salesforce CEO, enthusiastically announced at Davos that his company was going to fund the planting of one hundred million trees. Forrest Fleischman, (great name for a tree expert) of the University of Minnesota, had spent years studying tree planting projects in India. Fleischman suggested that Benioff's money might better be spent helping the indigenous peoples of the Amazon defend what remains of their land. I wondered why all the concentrated cash at the Economic Forum didn't just offer to buy the Amazon out right and hire an international army to help the Amazonian peoples to protect and preserve their home. Having lived there sustainably for millennia they would know how best to do this. As another scientist put it, you have to stop subtracting trees before adding new ones. It would help if we stopped the destruction of rainforest for meat and palm oil production. It would help if we would stop cutting boreal forest for paper towels and toilet paper. It would help if we stopped burning trees for energy and calling it biomass. A trillion trees will not reverse climate change unless we stop

adding greenhouse gasses to the atmosphere.

While planting trees is not a panacea or a license to continue bad behavior, it remains a vital tool in a coordinated broad range of actions to mitigate and reverse climate change. Trees do remove and store atmospheric carbon, but you have to plant the right trees in the right places. You cannot plant trees on tundra or in snowy places where they do not occur naturally, otherwise they absorb solar radiation instead of reflecting it back into space as snow would. You cannot plant them in areas prone to drought or wildfire or you end up just adding more carbon to the atmosphere.

Here, in the northeast, is prime tree growing land. New York and much of New England was once 90% logged over but a lot of the forest cover has returned. While forests can regenerate themselves if left alone, climate change may alter them in ways we cannot predict. Planting trees in cities and suburbs as well as transitional areas, where they can be monitored and cared for more

easily, can significantly enhance their crucial work. Trees also keep cities cooler, cleaner and make them more pleasant places to live. They are easy to plant and care for needing only occasional watering feeding and protection.

The Rochester Regional Group Sierra Club, with the help of the city of Rochester forestry department, is planning a fall project with the modest goal of planting a thousand trees. Initially, this was intended to be a family event in Genesee Valley Park until COVID-19 intervened forcing modifications. We will probably go with a drive through tree giveaway. Trees, materials and instructions will be dispensed safely, free of charge, at two locations. We will be encouraging people who have room on their property or access to good tree sites... churches,

organizations, clubs or friend's property, to plant as many trees as they can conveniently manage.

We are asking Sierra Club members to participate and also to help us raise the two or three thousand dollars we will need or purchase the trees, seedling protection sleeves and cedar stakes, we will also need some money to promote the event. If this project is successful, we hope to expand it incrementally into an annual, countywide event. But we need you to help ensure its success. If you would like to donate time, money or both to this pilot effort, please send your check payable to, Sierra Club Rochester Group with a note to: Rochester Regional Group Sierra Club, PO Box 10518, Rochester NY, 14610-0518...or you can contact me at: [jkastner@weeblax-uzzl.com](mailto:jkastner@weeblax-uzzl.com)

This is one way you can take direct action on climate change with relatively little effort. Thank you.



## Outbreaks in Nature...and Humans

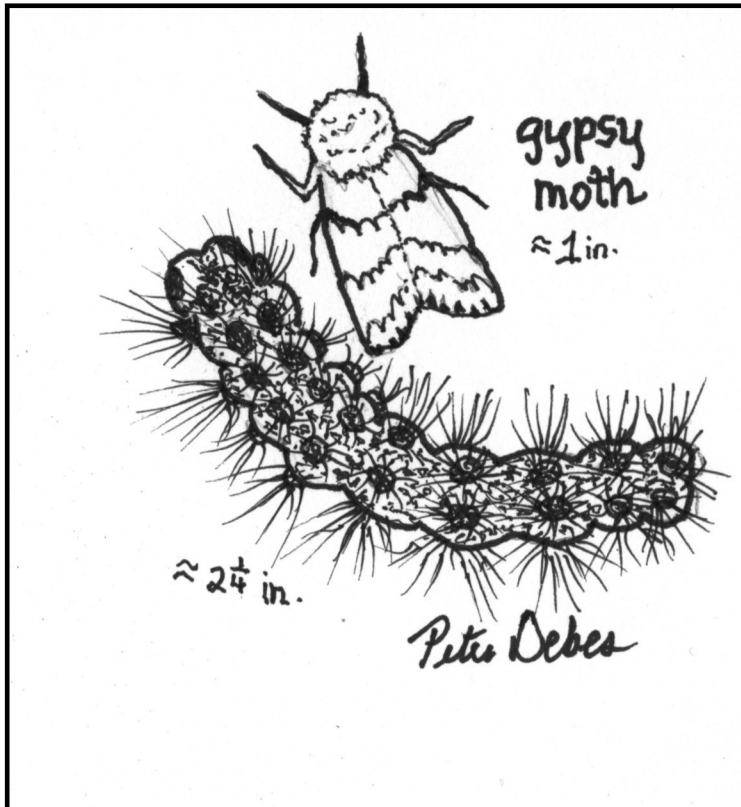
By Peter Debes, Naturalist peter8245debes@gmail.com

You may have heard of the gypsy moth. It was introduced to the USA in 1869 by Étienne Léopold Trouvelot of Medford, MA. His goal was to crossbreed it with the domestic silk moth to make these silkworms more resistant to predation and more profitable. Alas, gypsy moths escaped from cages and soon led to massive outbreaks that would completely devour all the leaves of hardwood trees in an area. Now outbreaks happen throughout most of the northeast US, but usually last only two to five years in any one location. This happened around Mt. Arab, near Tupper Lake about 5 years ago. It was eerie looking at the leafless trees that usually hid the sky, letting unusual light filter down below, and hear the dropping of a myriad of the feces of the caterpillars, like the patter of rain.

What makes these creatures so explosively successful? One factor is their reproductive potential.

A female plasters an egg case on the bark of a tree, covered by a mass of light brown fuzz, which contains anywhere from 500 – 1000 eggs! The caterpillars are covered by spiny hairs that only our not-so-common native bird cuckoos can stomach, because they can regurgitate the lining of their stomachs that traps all the bristly spines of the caterpillars. So with few predators, a population of gypsy moths can rapidly explode into a major infestation! But...why do these last only a few years and then disappear in an area. One huge factor is that the female gypsy moths, although they have fully formed wings, do not fly because the muscles are atrophied. Thus, they are forced to lay their eggs at the edge of the year's infestation, instead of scattering far and wide to new places.

So, the gypsy moth, brought here with few or no natural predators or parasites just multiplies and multiplies...but then, after a few years, what else controls a population that grows so massive? Parasites and Disease! This is most potent mainly in



populations with high densities—like the gypsy moth caterpillars. They become weakened as they decimate their food supply, and more susceptible to disease. They clump together, bump into each other—little social distancing here. And the disease spreads like wildfire! So in the caterpillars case, it is disease, probably a virus, that wipes out the population. The few that survive will gradually multiply until another outbreak happens.

All of this calls attention to our present predicament. Massive population increase with population concentrated in

scattered locations- but with humans, a lot of mobility and contact between groups too. Loss of resistance due to poor nutrition and degradation of the environment. Emergence of a very contagious parasite. Here we are.



Gypsy Moth devastation



## Collaborating For Environmental Justice Forum 2020

Visit [www.SierraClub.org/Atlantic/Rochester](http://www.SierraClub.org/Atlantic/Rochester)

### SIERRA CLUB ENVIRONMENTAL FORUM UPDATE

This is a reminder that our annual Earth Day Forum is ready to go when it is safe to hold it, right now perhaps end of September or early October. We have had a lot of encouragement for our mission. Climate change worsens all injustices. It directly impacts the health, environment, and economics of our communities. Throughout 2020, we are committed to establishing an inclusive and comprehensive movement that educates, responds and benefits all. We are seeing all too clearly the disparate impact of the virus on communities of color. Our forum team is a reflection of our commitment to our mission, and we are sending periodic updates to introduce you to members of our planning team and people presenting at the Forum. At the Forum in the Fall, you will be able to meet us in person and we look forward to meeting you.

#### Rev. Dr. Jonathan McReynolds

Senior Pastor

Aeon Missionary Baptist Church  
Rochester, New York



"I hold the distinct honor and privilege of serving as the Senior Pastor of one of the leading African-American Congregations in upstate New York. The Aeon Baptist Church has been serving Christ for over ninety-seven years. During this time the ministry has invested a lot into the community and humanity.

I recognize as a community leader and pastor the importance of being engaged in movements and organizations that advocate for the welfare of our community, environment and the general good of humanity. This is why I am committed to the principles and mission of the Sierra Club. Theologically and through my personal convictions I believe that we are entrusted to care for the environment and how it impacts the lives of everyone. The Sierra Club has a balanced mission and methodology to be stewards of our environment from the rural mountaintops to the open green spaces of our urban centers. I am excited about the work that we are doing together to maintain a healthy and thriving environment for all to enjoy. The Sierra Club recognizes that climate change will propagate injustices upon the daily lives of most. This is especially true among urban and poor communities in contrast to more affluent communities. Thus I am looking forward to hosting a forum in collaboration with the Sierra Club in the future to address these injustices."

### WXXI Connections: How climate change affects the health of at-risk communities

By [EVAN DAWSON](#) & [MEGAN MACK](#) • APR 16, 2020

The Rochester Regional Group of the Sierra Club has postponed its Earth Day Environmental Forum, but its members are pushing forward with their work. We're joined by several of the forum's presenters who discuss how climate change impacts at-risk communities, specifically in terms of health. It's a conversation about environmental justice with our guests:

Peter Debes, vice chair of the [Rochester Regional Group of the Sierra Club](#)  
[Kim Smith](#), community organizer, and candidate for NYS Senate, 61st District  
Ron Garrow, Akwesasne Mohawk, Bear Clan, and cultural advisor for [SURJ ROC](#)  
[Dorian Hall](#), leader of the [PLEX Neighborhood Association](#)

Terry Chaka, executive director of the [Baobab Center](#)

[Pastor Jonathan McReynolds](#), [Aeon Baptist Church](#)

**Rochester Regional Group of the Sierra Club**  
**P.O. Box 10518**  
**Rochester, NY 14610-0518**  
 Message line: 585-234-1056  
 www.sierraclub.org/atlantic/rochester; Find us on **Facebook** and **LinkedIn!**

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**Executive Committee Members**

Jessica Slaybaugh, Chair: Jessica.A.Slaybaugh@gmail.com  
 Peter Debes, Vice Chair  
 peter8245debes@gmail.com  
 Margie Campaigne, Ecologue Editor., Secretary  
 mcampaigne@hotmail.com  
 John Kastner: jkastner@weeblox-uzzl.com  
 Jack Bradigan Spula: jbspula@gmail.com  
 Frank Regan: frankregan@rochesterenvironment.com  
 Joe Grinnan, Treasurer: fjgrinnan@aol.com  
 Ronald Garrow: Ronald\_garrow@yahoo.com  
 Patrick Suter: suter.patrick@yahoo.com

**Committees & Projects- Leaders**

Biodiversity/Vegetarian: Margie Campaigne  
 mcampaigne@hotmail.com  
 Climate Change: Frank Regan  
 frankregan@rochesterenvironment.com  
 Friends of Washington Grove:  
 Peter Debes  
 peter8245debes@gmail.com  
 Open Space/Parks: Hugh Mitchell  
 goshawk@twc.com  
 Wetlands: Sara Rubin  
 rubin150@aol.com

**\*The opinions expressed in the articles within are those of the authors and are not necessarily an official Sierra Club position or policy.\***

<b>Summer 2020 Calendar</b>		<b>SIERRA CLUB and other environmental events</b>		
<b>DATE</b>	<b>DAY</b>	<b>TIME</b>	<b>MEETING/EVENT</b>	<b>LOCATION</b>
June 2nd	Tuesday	6:30-8:30 pm	Executive Committee Meeting	Via ZOOM, not in person
July 7th	Tuesday	6:30—8:30 pm	Executive Committee Meeting	Via Zoom, not in person
August 4th	Tuesday	6:30—8:30 pm	Executive Committee Meeting	Via Zoom, not in person
My 24—Nov. 22	Sundays	9 am—1 pm	Brighton SUMMER Farmers Market	Brighton HS parking lot, 1150 Winton Road South PREORDER ONLY www.Brighton FarmersMarket.org
All year	Every day	See Facebook for COVID hours	Abundance Coop Food Market: local, organic, sustainable food, open to public	571 South Ave., Rochester, NY in South Wedge (585) 454-2667 www.Abundance.coop

**\*\*\*Watch our Facebook page and website for information on upcoming community meetings, outings & other activities\*\*\***

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

Follow us on Facebook to keep up-to-date on new events throughout the year—www.facebook.com/SierraROC

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

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