



Biodiversity for a Livable Climate

Restoring Ecosystems to Reverse Global Warming

April-May 2022 Newsletter

Dear Friend,

I remember once having a conversation with my grandfather when, at one point, he turned to me and said, "I'm fierce for family." His words had such power, and I remember reflecting deeply on their truth for a while after that.

My grandparents have stuck by my side since the day I was born in ways that would move anyone to tears. Papa taught me the multiplication tables and how to spell "big" words like "Mississippi" while we waited for the school bus. My grandmother, Ema, gave me books like *Pride and Prejudice* to start reading as early as the fifth grade. Once they retired, Ema and Papa took on a huge role in homeschooling me. They helped with online courses and created vocabulary quizzes. After my schoolwork was done, they taught me all about gardening, how to respect nature, and how to



The Cobbles in Cheshire, Massachusetts. Photo taken by Abby Abrahamson.

take care of animals. When I got to college, Ema and Papa were always a phone call away - and I called often! They encouraged me to take on a second major, and then a minor when the opportunity came along. They believed I could do it, even when I wasn't sure of myself. They offered endless support.

This past weekend, I graduated from college and found myself reflecting on the significant role that my grandparents have played in my life, and particularly in my academic journey. So often, people make immense contributions yet don't get recognized nearly as much as they should for their dedication and generosity.

This month at Bio4Climate, we have also been reflecting upon the enormous contributions of four members of our community and feeling deep gratitude for their work. It is with great sadness that we share the recent passing of Jan Lambert, a remarkable friend, passionate advocate for water cycle restoration, and director of our Voices of Water initiative. We celebrate her life and her incredibly important work. Additionally, you will meet one of our lovely interns, Sreyashi Basak, and our Compendium Editor, Hannah Lewis, who recently published a new book on Miyawaki forests! Finally, we close this newsletter with an introduction to a close friend and colleague of Jan's, Zuzka Mulkerin, who is continuing the mission of Jan's organization, Voices of Water for Climate.

I hope you will join us in recognizing the incomparable hard work that these lovely people dedicate to healing the challenges of climate change. As you read through this letter, please know that you have also made a significant contribution to our work as a reader and supporter, and we are tremendously grateful for you as well. We could not be doing this work without you.

With warm wishes,



Abby Abrahamson
College Outreach Coordinator & Newsletter Editor

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Upcoming Events:

- Jim Laurie's Summer 2022 Course
 - Life Saves the Planet GBH Forum Network Talk: [Using The Miyawaki Method To Rapidly Rewild The World](#) - May 30, Noon ET
-

In Memoriam: Jan Lambert

There are many reasons to appreciate and honor Jan Lambert, our friend and colleague from early on in Biodiversity for a Livable Climate's story going back to 2015.

First, for the determination with which she dived into the water issue, conceiving of the Valley Green Journal, and writing on her own and with colleagues. She helped to bring the New Water Paradigm to our Water Cycles conference making it a central focus in our perspective on water.

Her unwavering support for Bio4Climate played a significant role in our success. She created her own non-profit under our fiscal sponsorship, Voices of Water for Climate, which she merged with Bio4Climate a couple of years ago to get out from under administrative duties and give herself more time to devote to the cause. In honor of Jan and her passion for restoring the Earth however she could, that website will continue to evolve (<https://bio4climate.org/voices-of-water/>).

Jan was so easy to be with - unpretentious, down to earth and good humored. We celebrate her life well-lived, and will continue to miss her deeply.

Paula Phipps & Adam Sacks



Community Tributes to Jan

This is sudden and very sad news. Our condolences to Jan's family and to her extended Water Family at the New Water Paradigm (NWP). An irreplaceable loss.

Duane Norris, Sydney, Australia

~

With great sadness I heard the news about Jan's passing. I spoke to Michal [Kravčík] today and then picked up her book from the shelf in my library ([WATER, Land and Climate - The Critical Connection, How we can Rehydrate Landscape](#)). Jan holds an admiration in my heart and I will think of her when I drive home through the open countryside from Třeboň. The enlightenment about the sun, water, plants - the climate was her mission, it came from her heart.

Greetings from Třeboň
Ján Pokorný, Třeboň, Czech Republic

~

Jan Lambert, a humble, sensitive, empathetic lady with a big heart and a sense of environment and justice. I had known her since 2014, when she contacted me by e-mail, saying that she was very much looking forward to meeting at the conference on the environment and climate in Boston. In the end, my trip to Boston took a year.

In 2014, we agreed not to criticize the state of the environment and climate, but to prepare a [Global Climate Recovery Plan](#) for the [Boston Conference](#) in November 2015. It took us a whole 6 months to put together the whole plan. I prepared an English-Slovak text and Jan edited it in a structured way.

In 2015, we had 9 presentations at the Paris conference on water and climate. If you remember the Paris Climate Conference, for the first time in the history of climate summits, water had seriously resonated in connection with climate. Jan was excited about it and had big plans. That is why we established [Voices of Water for Climate](#) together.

Jan wrote the amazing book *Water, Land and Climate-The Critical Connection*, which also includes the entire Global Action Plan for Small Water Cycle Recovery and Climate, and summarizes all the reasons why water is important for climate recovery (info about the book can be [found here](#)).

Unfortunately, her perseverance, and her enthusiasm for water and climate solutions were interrupted by an insidious disease that Jan's big heart couldn't withstand. Jan, I promise you that I will also be behind you with the whole team that you know to continue working, even through bad times. Thank you for everything you have done for water so far. My sincere condolences to her husband John Lambert and the whole family.

Jan, You watch over us and guide our steps so that our plan, so necessary for future generations, gets into a crucial position and so that as many people as possible understand it and help to implement it.

~ Michal Kravčík, Slovakia

Recording: Introducing the EcoRestoration Alliance with GBH Forum Network

The recording of our [Life Saves The Planet GBH Series](#) lecture, Introducing the EcoRestoration Alliance, is now live!

The EcoRestoration Alliance is a project of Biodiversity for a Livable Climate (Bio4Climate). The Alliance is a rapidly growing global collaboration of scientists, thought leaders, conservationists, on-the-ground restoration practitioners and storytellers whose work challenges the prevailing view that reducing fossil fuel use at this late date can still result in the global cooling that we need.

The discussion features three Alliance members: Cuenca Los Ojos founder Valer Clark, Ecosystem Restoration Camps founder John Liu, and League for Pastoral Peoples and Endogenous Livestock Development founder Ilse Köhler-Rollefson. They discuss how ecosystems can be restored in a way that supports and empowers local communities. Healthy ecosystems like forests, grasslands, wetlands, and regenerative farmlands with year-round cover crops cool the biosphere and tame extreme weather. This conversation is moderated by ERA co-founder Jon Schull.

Click here to watch the recording:



Using The Miyawaki Method To Rapidly Rewild The World

Monday, May 30 at 12:00 pm ET

What can hold more than 500 species, sequester more than 500 lbs. of CO₂ per year, be 10F cooler than its surroundings, soak up lots of rainwater, and be made by and for children in a space no bigger than a tennis court? A “mini-forest” planted using the Miyawaki Method, of course!

Biodiversity for a Livable Climate hosts Miyawaki-Method advocates Hannah Lewis (Bio4Climate Compendium editor) and Daan Bleichrodt (The Netherlands’ Tiny Forest initiative leader), as they talk about mini-/tiny-forests and their role in climate resilience, urban beautification, and connecting all of us to nature.

The talk will be recorded and made available online through GBH Forum Network. [Register for free here.](#)

Hannah’s new book, *Mini-Forest Revolution* will be published by Chelsea Green on June 9, 2022. You can order it today [here](#). If you’d like to get a glimpse of the GBH Talk on May 30, check out this conversation with Hannah and our Digital Communications

Manager, Tania Roa:



Bio4Climate Spring 2022 Course Offerings

Biodiversity for a Livable Climate is delighted to introduce two new courses, taught by our Ecological Economist, Fred Jennings!
Keep reading to learn more and register!

[Systems Thinking & Scenarios - Tools for Creating Better Ecological Futures](#)

*Wednesdays, June 22 – September 7
12pm ET & 2pm ET*



Biodiversity 6 will be a 12-week course beginning on Wednesday June 22nd. There will be two Zoom classes each Wednesday until early September: 12 noon to 2pm and 7pm to 9pm, both US Eastern time. Students can attend either time, and the only prerequisite is curiosity!

Systems thinking is a way of zooming out and looking at the Big Picture. Writing scenarios is another tool used by planners, strategists, and futurists. Every extinction episode in Earth's evolutionary history has, in time, led to an emergence of greater biodiversity. Often the time scale is millions of years. With the vast new knowledge that is now available to us, could humans be a global force for the reemergence of healthy ecosystems on a much faster timeline? (centuries?) (decades?) Let's find out.

To learn more about this course and to register, [visit our website](#).

Intern Spotlight: Sreyashi Basak

Here at Bio4Climate, our interns drive much of the work that goes on behind the scenes. Today we are shining a spotlight on Sreyashi Basak, our Media and Outreach intern based in Kolkata, India. Sreyashi is passionate about the environment, nature, diverse ecosystems, and sustainability. She is also interested in innovative technology, pharmaceutical sciences and business development. An art enthusiast, she loves to practice various art mediums, from music to photography. Keep scrolling to learn more about Sreyashi's work with Bio4Climate!



Q: How and why did you get involved with Bio4Climate?

A: I have always been passionate about environmental sciences and have always tried to stay updated with news about climate change, global warming and sustainability. The vivid reality of destruction and damage, followed by the severe negative impacts that greenhouse gas emissions have on nature that led me to step forward and join the global movement to stop climate change. I intend to invent new ideas and sustainable systems that will enable our nature to coexist with all our human activities. However, my current focus and priority is to spread awareness and make the necessary efforts to keep the temperature increase to no more than 1.5 degrees above pre-industrial levels.

Q: What is your role at Bio4Climate? Can you describe some of the projects you have been working on?

A: I joined Bio4Climate as a Media and Outreach Intern. I write articles for the public and spread awareness by educating people about how each human activity can cause a severe impact on ecosystems - ranging from the clothes we wear and the water we use to our other daily habits. I believe eco-restoration awareness, the project I have been working on, is a big part of mitigating the adverse effects of climate change. I am enthralled by the success of Miyawaki forests and look forward to learning more, and have great hope about inventing more methods along those lines to keep biodiversity from getting to the edge of mass extinction.

Q: What is something that you are proud of yourself for doing?

A: Through my work at Bio4Climate, I am learning a great deal about biodiversity and ecosystems. I have the opportunity to hone my skills and network with many eminent people across the world who are leading the change towards a more sustainable Earth. In the future I would like to be associated with ocean and marine life restoration, focusing on coral reefs, as I believe they play a huge part in maintaining balance in our ocean systems. I would also like to explore, travel and understand everything there is in nature, from species interaction to inventing new technologies and innovations to create a happy and healthy planet going forward. I won't say I would be proud of anything, because pride does not help in correction and improvement. I will say I am happy to be a small part of it, and that many people should realize the urgency of the situation and put their share of contribution to mitigate the very imminent catastrophe.

Meet Zuzka Mulkerin, Director of Voices of Water for Climate



We are delighted to announce that Zuzka Mulkerin has agreed to take on Jan Lambert's former role as director of Voices of Water

for Climate.

Zuzka brings a unique perspective from having lived behind the iron curtain in Slovakia and currently in New Jersey. Born in Czechoslovakia, she was a nature activist and a program coordinator for a local organization, Tree of Life, and also involved in the Global Catholic Youth Movement since her college days. The word "eco" has its root in the ancient Greek word for "home." Zuzka's former background as a finance operations manager at Pepsi Slovakia, financial planning manager in Kraft Jacobs Suchard Figaro, and auditor at PWC allows her to make connections between economics and ecology with the places we live. In New Jersey, she works as an educator and volunteers her time to care for our common home as a Laudato Sí animator in her community. Her collaboration, starting in 2020, with the People and Water NGO, and the Water Holistic group and its founder Michal Kravčík, led her to Biodiversity for a Livable Climate, where she had the privilege to work with Jan Lambert, a friend and the co-founder of Voices of Water. She hopes to continue being a voice for ecosystem-based water renewal, supporting a sustainable and community-based [new water paradigm](#).

Compendium Notes

Below is a passage from our latest issue of the [Compendium of Scientific and Practical Findings Supporting Eco-Restoration to Address Global Warming](#). This article is from our [tenth issue](#), Volume 6 Number 2, (p.12), published January 2022.

Trees, forests and water: Cool insights for a hot world, Ellison et al. 2017

This article (also highlighted in Compendium v2n1) reviews research on the benefits of tree cover in relation to water and energy cycles.

Forests help produce rain. Vegetation releases water vapor through transpiration, increasing atmospheric moisture that is then transported by wind. In fact, "over most of the tropics, air that passes over forests for ten days typically produces at least twice as much rain as air that passes over sparse vegetation" [Ellison 2017: 53]. Forests also release biological particles, such as spores, bacteria and pollen into the atmosphere. Water condenses around these particles, forming raindrops.

In addition to the atmospheric moisture produced by forests that is transported by prevailing winds to generate downwind rain, forests also help transport moisture from the coasts to the interior of continents. According to the biotic pump theory [Makarieva & Gorshkov 2007], evapotranspiration over coastal forests creates low pressure zones that draw in atmospheric moisture from the ocean. This oceanic moisture eventually comes down as rain over land. Deforestation of coastal forests thus reduces this influx of moisture to land, while deforestation anywhere can decrease the reliability of rainfall downwind.

Through shading and evapotranspiration, forests cool the Earth's surface in tropical and temperate climates. Due to a lower albedo compared to other land cover types at high latitudes, boreal forests potentially contribute to local warming. However, forests also increase cloud cover and thus albedo, higher in the atmosphere. In the absence of vegetation, such as in cities, solar energy remains in the environment in the form of heat, rather than driving evapotranspiration.

Using the sun's energy, individual trees can transpire hundreds of liters of water per day. This represents a cooling power equivalent to 70 kWh for every 100 L of water transpired (enough to power two average household central air-conditioning units per day) [Ellison 2017: 54].

High-elevation forests have a unique potential: they can intercept fog and cloud droplets. In turn, that boosts tree growth, evapotranspiration, groundwater infiltration, and ultimately contributes up to 75% of catchment runoff. Tree cover can improve water infiltration by offering increased organic matter to hold water and the presence of their roots can loosen and shade the soil and channel water into the ground. In areas where infiltration rates are higher than transpiration rates, the presence of trees increases groundwater recharge.

All of these mechanisms distribute water naturally, and hence reduce floods.

Last But Not Least. . .

You're a valuable part of your community, ecosystem, and planet, and we're so thankful for you. Would you share the love and join our Eco-Restoration Team of Monthly supporters?

Make a Monthly Gift

Make a One-Time Gift

All contributions help in our vital work to build a livable climate that sustains into the future. Many thanks!

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