



HUDSON RIVER
ENVIRONMENTAL SOCIETY

WINTER NEWSLETTER

February 2022

NOTE FROM THE PRESIDENT

Dear HRES Members:

Welcome to 2022. The past year was certainly challenging but through the efforts of our Executive Committee and Board of Directors, we were able to keep our annual activities moving forward.

2022 will be a busy year. We hope to be able to hold live in-person events, but if not, we have become quite adept at conducting online meetings. Planned activities will include:

- Our annual symposium in the fall 2022.
- Monthly Executive Committee and Quarterly Director's Meetings.
- 2022 McKeon Student Grant announcements.
- 2022 Leadership Awards and hopefully a live, in-person dinner to celebrate winners from 2019, 2021 and 2022.

Thank you for your continuing support. Stay safe out there.

Jim Morrison

HRES Membership: Our 2022 Membership period for renewals and new members began in January.

You can sign up through our EventBrite:

https://2022_hres_membership.eventbrite.com

or to save the fee, print out the application online at www.hres.org and mail with your check to: HRES, PO Box 279, Marlboro, New York 12542.

2021 LEADERSHIP AWARD WINNERS!

Although we were not able to hold our annual awards dinner this fall, the Hudson River Environmental Society (HRES) is pleased to announce the following winners of our 2021 Leadership awards:

Distinguished Service Award

Clay Hiles – Executive Director - Hudson River Foundation (Retired)



This award is given to an individual for outstanding and distinguished service contributing to the preservation and management of the Hudson River Valley. Clay's long tenure as Executive Director at the Hudson River Foundation (beginning 1986) is a testament to his dedication and commitment to understanding, protecting, and improving the Hudson River estuary and environments. HRES has enjoyed working with Clay over the past many years and has appreciated his willingness to support programs that were in line with the Foundation's mission.

Outstanding Practitioner Award

Melissa Everett, Ph.D. – Executive Director – Sustainable Hudson Valley



This award is given to an individual who has demonstrated outstanding achievement in the application of science, social science, or engineering that contributes to a better understanding or solution to environmental problems in the Hudson River Valley. Since 2004, Melissa has helped to build a movement of local innovators who are reducing their communities' carbon footprints and building the market for clean energy industries. Her accomplishments include convening influential regional conferences and bringing the Solarize model for community education and solar group purchasing to the Hudson Valley on a three-year funding award from NYSERDA. Melissa has been instrumental in bringing scores of experts together in nine subject-matter working groups to draft a Regional Climate Action Strategy.

The HRES Executive Committee and Board of Directors thank both Clay and Melissa for their significant and lasting contributions to the Hudson Valley.

INTERVIEW WITH JONATHAN KRAMER, PH.D.

Dr. Jonathan Kramer has been the Executive Director of the Hudson River Foundation for Science and Environmental Research, Inc. (HRF) since April 2021. Prior to his appointment, he was nationally recognized for developing new and innovative ways to support teams of natural and social scientists to address critical impacts caused by human interactions with the environment. Dr. Kramer was the Director of Interdisciplinary Science at the National Socio-Environmental Synthesis Center at the University of Maryland and the Director of the Maryland Sea Grant College Program.



Jim Morrison, HRES President: Dr. Kramer, thank you for speaking with me for our Winter 2021 Newsletter. Also thank you again for HRF's co-sponsorship and your leadership during the five-part 2021 Hudson River Symposium "Hudson River Fish in an Ever-Changing Ecosystem."

Q. What inspired you to pursue a career in environmental science and policy?

I've always been interested in aquatic systems and my education and research experiences gave me the chance to work in freshwater, coastal and marine environments. Over time I became particularly focused on marine microorganisms. That helped me see the importance of understanding the patterns and mechanisms that underlie how ecosystems function (or at least a small part of the bigger ecosystems) and to appreciate the value of research. About 20 years ago I began to work in programs that provided funding and linked research outcomes to management and policy development. First with a focus on Chesapeake Bay and more recently in a national/international context. In each case I've been immensely lucky to have been in positions where I could learn about a range of environmental problems and the ways that scientists can provide insights for management. There are many challenges to making that work, but I think there is a real commitment on the part of researchers, managers, and policymakers to working together to find solutions to complex problems. There is no shortage of those in the environmental arena and especially when we think about the aquatic systems we are so dependent on. Being part of a process of learning, engagement and bridge building has been truly rewarding for me and the chance to continue that work at the Foundation is inspiring on so many levels.

Q. As the Executive Director of HRF, what do you see as the greatest challenges facing the organization today?

The Hudson River Foundation has a remarkable 40-year history of supporting research that has made a difference. We've been instrumental in building an understanding of how this great ecosystem works and bringing knowledge forward through deep engagement with many communities and decision makers. The work of Clay Hiles and the late Dennis Suszkowski stands as a tremendous legacy of accomplishment and sets a very high bar as I look ahead. HRF is one of the best examples of a "bridging organization" with a staff whose interests, skills and dedication are central to what makes us relevant and impactful. We're in the midst of an era of unprecedented change across the social and environmental systems we depend upon. I believe our challenge is to use all our tools (funding, engagement and capacity building) to contribute to positive outcomes. For me, that means looking at the Hudson River as a tightly linked socio-ecological system. We need to understand human communities, their needs, behaviors and especially their role in decision making, and we need to work together to provide credible information — all with the goal of achieving stewardship that is inclusive and equitable. We also need to form partnerships and bring funders together to increase our ability to tackle complex problems. The central collaboration of the Foundation and the New York-New Jersey Harbor and Estuary Program is an example of how effective this approach can be. Finally, HRF has a long history of supporting high impact education programs for undergraduate and graduate students. We're building on that legacy in ways that can engage new communities of students and new disciplines, all with the goal of continuing to empower the next generation of researchers.

Q: The HRF mission is “to make science integral to decision making with regard to the Hudson River and its watershed and to support competent stewardship of this extraordinary resource”. What do you see as the most critical scientific areas to focus on for protecting and managing the natural resources of the Hudson River?

“Change” and the accelerating rate of change has become a central theme for me as I’ve taken on my new role here. I don’t think I’m alone in that regard. Understanding and responding to climate change will structure much of the conversation around research needs. Here are a few examples of research areas that I’ve been thinking about, but I would say there are certainly others that are important. The wonderful fisheries symposium that HRES and HRF conducted last year gave us good information on priorities. Some of those include filling knowledge gaps for specific species such as shad and sturgeon, but others are broader, such as understanding the impact of changing habitats on fisheries, how invasive species may re-shape the ecosystem and how changes in the watershed will be felt in the River over time. Beyond fisheries, I think communities all along the River — from small towns to New York City — will be challenged as water levels rise and storm impacts intensify. We’re very interested in thinking about what combinations of shallow water enhancements can provide ecosystem services that are beneficial ecologically and socially. While we know a great deal about the biophysical aspects of the Hudson we know much less about the social systems that are integral to it. We need to work with researchers from the social science community and those who study policy and law to gain insights that can inform our thinking. Similarly, there are critical areas and modes of research that focus on environmental justice that we have not yet engaged. That must be a priority going forward. Finally, I think we need to build a new capacity for interdisciplinary research. There is great strength in bringing different ways of knowing together and the results can truly inform how we achieve sustainable outcomes for the river we all care so much about.



Photo Credit: Anne Morrison

HRES thanks Dr. Kramer for his participating in our Newsletter interview. We look forward to working with him and the Hudson River Foundation in the future.

MCKEON RESEARCH GRANT AWARD UPDATES

HRES received an update from 2020 McKeon grant winners **Avi Bagchi** and **Ayaan Bargeer**. Although they were unable to present their findings at the 2021 HRES symposium due to COVID19 restrictions, they were able to continue their research on the “Effects of Temperature on the Spread of Hemlock Woolly Adelgid (*Adelges tsugae*) in New York State.”

“Ayaan and I would first like to thank you (HRES) for providing us with the opportunity to pursue our research. We have worked on it all four years of high school, and we are very proud of our results! After receiving the grant, Ayaan and I developed "Find Your Invasive," an invasive species reporting and modeling software. We used machine learning techniques to predict the spread of invasive species in future climate scenarios. This was embedded in a user-friendly interface that has reporting and computer vision features.

We have presented our work at the following places:

International Science and Engineering Fair (ISEF)

- After placing 2nd in the Capital Region science fair, we qualified for the international fair. At ISEF, we were awarded 2nd Place in Category Grand Prize and a special sustainability award out of 1800 qualifying students from around the world.

National Aeronautics and Space Administration (NASA)

- We pitched our product to scientists in a citizen science program at NASA.

New York State Department of Environmental Conservation

- We received feedback on our product from scientists who worked with the NYSDEC.

We also presented our work in five other regional science fairs at the regional and international levels. After we complete our college applications, Ayaan and I plan to expand Find Your Invasive and continue to improve its features while also working on different computational ecology-oriented research projects that we have pursued.”

Congratulations to Avi and Ayaan on a job well done. We look forward to hearing more from you as your project continues. The HRES McKeon Research Grant program is overseen by an HRES committee led by Secretary Lucy Johnson, PhD. **Notification for the 2022 McKeon Research Grant winners will be announced later this year.**

We need your help. Interested in volunteering your time to support the HRES mission?

Do you have a raffle item or know a donor willing to support the McKeon Student Travel Fund?

Contact an HRES Board Member today!



2021 BOARD OF DIRECTORS ELECTION RESULTS

HRES Executive Committee

Jim Morrison (President)

Chuck Nieder (Vice President)

David S. Davis (Treasurer)

Lucy Johnson (Secretary)

Emilie Hauser (Ex Officio)

HRES Board Members

Bernadette Connors, Ph.D.

Chris DeRoberts

William Dey

Stuart Findlay, Ph.D.

Zion Klos, Ph.D.

Karin Limburg, Ph.D.

Mark McLean

Margie Turrin

David Yozzo, Ph.D.

The results are in for the HRES Board of Directors Election. Margie Turrin, Bill Dey, Karin Limburg and Zion Klos were unanimously reelected to the Board for the term beginning January 1, 2022 and running through December 31, 2024. David Yozzo has also joined the Board for 2022. We look forward to working with the Class of 2022 and appreciate their commitment to helping HRES meet its mission.



Photo Credit: Anne Morrison

Hudson River Environmental Society
PO Box 279
Marlboro, New York 12542
HUDSONRIVERENVIRONMENTAL@GMAIL.COM



hres.org/

Founded in 1970, the Hudson River Environmental Society is a nonprofit, non-advocacy organization that delivers the science behind Hudson Valley issues to citizens, scientists, and decision makers. We enable objective discussions, provide forums for rigorous science, connect disparate views, and showcase the region's natural heritage. We are academic researchers, government officials, nonprofit scientists, private consultants, teachers, students, and interested residents who find real solutions.