

Communicating Science weekend

Descriptions, Bios, Presenter Pictures

Keynotes: [Amy Seidl](#) (Friday opening keynote) and [Tom Wessels](#) (Sunday closing keynote)



Amy Seidl has authored *Early Spring: An Ecologist and Her Children Wake to a Warming World* and *Finding Higher Ground: Adaptation in the Age of Warming* and has taught at both Middlebury and UVM. She also hosted the VT Public TV series *Emerging Science*, and co-founded the eco-media company [Bright Blue](#). As a practiced ecologist, educator, and mother of two girls, Amy Seidl writes with a lucid and passionate eye about the state of life itself in the *Age of Warming*. By drawing on her 20 year career studying ecology, evolution, and sustainability, Amy illuminates the historical significance, impacts, and opportunities that come with climate change in the 21st century. A passionate speaker on contemporary environmental issues, Seidl frequently keynotes and lectures on climate change, renewable energy, local food systems, and the emerging field of sustainability science. Her research in ecological systems and alternative energy makes her a sought-after lecturer on global warming and green design and she emphasizes the need to innovate and build new physical infrastructures that do not rely on fossil fuels.

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Tom Wessels, preeminent terrestrial ecologist and AUNE Environmental Studies faculty emeritus, has written several books including *Reading the Forested Landscape: A Natural History of New England*, *The Granite Landscape*, *Untamed Vermont*, and *The Myth of Progress: Toward a Sustainable Future*. His *Forest Forensics: A Field Guide to Reading the Forested Landscape* was published this year. Tom is founding director of the master's degree program in Conservation Biology at Antioch University New England. He is the current chair of [The Center for Whole Communities](#) that fosters inclusive communities that are strongly rooted in place and where all people—regardless of income, race, or background—have access to and a healthy relationship with land. He is former chair of the Robert and Patricia Switzer Foundation that fosters environmental leadership through graduate fellowships and organizational grants. He serves as an ecological consultant to the Rain Forest Alliance's SmartWood Green Certification Program. In that capacity Tom helped draft green certification assessment guidelines for forest operations in the northeastern United States and adjacent Canada. Tom has conducted landscape level workshops throughout the U.S. for over 30 years.

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Performances



[Kansas vs. Darwin](#) (feature documentary shown 4:30-6:00pm Saturday afternoon)

In May of 2005, a 3-member subcommittee of the Kansas State Board of Education held hearings to determine whether Darwin's long-held Theory of Evolution should be challenged in public-school science curriculum. At stake was, in effect, the definition of science for Kansas schoolchildren. ***Kansas vs. Darwin*** takes you inside the hearings to meet the characters who captured the world's attention: school board members who believe their literal interpretation of the Bible trumps modern scientific evidence, and members of the Intelligent Design Network who believe mainstream science is conspiring to suppress evidence that would overturn evolution. You'll also get face to face with an organization of Kansas scientists, educators, and citizens that organizes a

worldwide response to put an end to what they see as a religiously-motivated kangaroo court. *Kansas vs. Darwin* is a heady, absorbing swirl of politics, science, religion, education and emotion in which the filmmakers unflinchingly race from one, compelling point of view to its polar opposite in order to challenge the viewer's own opinions. Audiences may experience discomfort as they plunge to the heart of one of mankind's most central questions of existence - and to the epicenter of the American culture war.

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[Erica Wheeler](#) (Saturday evening)



More than entertainment, these are well-researched, educational, customized 'sense of place' performances. **Erica Wheeler** links her songs and stories to the natural and cultural history of your place or region, creating a one-of-a-kind programs that are entertaining, educational and inspiring. Erica is a Massachusetts based, award-winning singer/songwriter, educator and speaker with a background in environmental studies. With six CD's to her credit, her latest CD, "Good Summer Rain" was sponsored in part by the Trust for Public Land, a national land conservation organization. The CD also won the 2008 National Association for Interpretation Media Awards for "Best Interpretive Music." Erica has been featured on syndicated radio programs such as "All Things Considered" and "Voice of America" and her music has charted in the top-ten on Billboard's Gavin Americana Chart. In addition to recording and performing, Erica offers programs that help people connect to their 'sense of place.' Since 2001, she has presented her Soulful Landscape programs at conferences, events and learning centers across the country, from Yosemite National Park (CA) to Walden Woods (MA.) Her work connecting people and place has been feature in Orion, Yes! and Yankee magazines. Erica brings two decades of experience as a performer, and over a decade of experience as a speaker and educator. She also brings her lifelong passion for place, nature, history, culture, and her expertise working with parks, museums, schools and conservation organizations. Erica's work helps to foster the personal connections between people and place, helping people enjoy places more today, and take care of places for the future.

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[Secret of the Seasons: A Global Warming Co-Operalimate Co-Opera](#) (Saturday evening)



Dr. John [Ungerleider](#) is a professor of [Peacebuilding & Conflict Transformation](#) at SIT Graduate Institute in Vermont. He founded and directs international Youth [Peacebuilding](#) and Leadership Programs.



Bill Conley is an English teacher to speakers of other languages (TESOL) for students in schools around southern Vermont. He performs regionally as the guitar player for [Jazzberry](#) Jam.

Secret of the Seasons (SOS) is an original "Co-opera" -- a musical, participatory experience that stimulates audience members to address their relationship to global warming and climate change. Based on a song written for the Copenhagen climate conference, the Co-opera engages the audience with the external and internal challenges that climate change is bringing to our lives. Consisting of original songs and reflective activities, SOS has been performing around New England, including: Benefits for newly forming Transition Town groups around Southern Vermont; For an international audience of peacebuilders at the SIT Graduate

Institute; at a religious leader's retreat in Connecticut; for global studies students at Newton South High School in Massachusetts; by teens at the Vermont Governor's Institute on Current Issues & Youth Activism; featured in a televised special on Brattleboro Community Television.

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Science/Media/Policy Panelists



Abigail Abrash received a B.A. in International Relations from the University of Pennsylvania and an M.Sc. in Political Theory from the London School of Economics and Political Science, Department of Government. Her interest is in exploring and making connections between human rights and environmental concerns, and in advancing our collective understanding that successfully addressing these challenges is fundamental both to sustainable development and to basic requirements of peace and justice. In addition to teaching at Antioch New England, Abigail Abrash Walton, a resident of Keene, is principal and founder of ActionWorks, a public interest consulting firm. Her past positions include service as program director for New Hampshire Citizens Alliance, a statewide membership organization that advances social, economic and political justice issues, and as program director for the Robert F. Kennedy Memorial Center for Human Rights in Washington, D.C. Prior to moving to New Hampshire, Abigail was a Visiting Fellow at Harvard Law School's Human Rights Program. Abigail has served as a commentator on a variety of human rights issues for media outlets including The Washington Post, The Boston Globe, The New York Times, National Public Radio and "The News Hour with Jim Lehrer." She serves on the City of Keene's Planning Board and Cable TV Commission, and was appointed in June 2008 by NH Senate President Sylvia

Larsen to serve as one of seven members of the state's Public Funding of Elections Commission. Abigail has served on the board of directors of the Papua-based Institute for Human Rights Study and Advocacy and of the Papua Resource Center. She was a founding board member of Project Underground, a human rights organization that supports communities resisting mining and oil exploitation.

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Herman A. Karl, retired from the U.S. Geological Survey, holds position of Affiliate Associate Professor with the University of New Hampshire Department of Natural Resources and Environment. He was co-director of the MIT-USGS Science Impact Collaborative (MUSIC) from 2004 to 2010; during this time he held a faculty appointment as a Visiting Lecturer in the Department of Urban Studies and Planning at the Massachusetts Institute of Technology. Prior to becoming co-director of MUSIC he was Chief Scientist of the Western Geographic Science Center. His current research focuses on climate change adaptation. Karl has been a visiting scientist at the Institute of Oceanographic Sciences, United Kingdom and a Senior Associate with the Harvard Law School Program on Negotiation. He has authored/co-authored about two hundred articles, abstracts, book chapters, maps, and reports and has given numerous invited presentations. His contributions to the USGS have been

acknowledged with a Non-recurring Service Award for Leadership, the Department of the Interior Unit Citation for service on the USGS Strategic Planning Team, a Unit Award for Excellence of Service as a member of the Western Mapping Center, and the Department of the Interior Superior Service Award. He has been honored with the USGS Shoemaker Award for Communication Product Excellence, the Association of Earth Science Editors Outstanding Publication of the Year Award, and the National Association of Government Communicators Blue Pencil Award for outstanding achievement in the field of government communications. He is a member of the American Association for the Advancement of Science and the American Geophysical Union. Dr. Karl received a Ph.D. from the University of Southern California in Geological Sciences, a M.S. from the University of Nebraska in Geology, and a B.S. from Colgate University.

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Jim Rubens served two terms in the New Hampshire state senate and chaired the platform committees of both the national Independence Party in 1993 and the New Hampshire Republican Party in 2000. He has founded over a dozen businesses. His first book, [OverSuccess: Healing the American Obsession with Wealth, Fame, Power, and Perfection](#) was published by Greenleaf Press in 2009. He chairs the [Granite State Coalition Against Expanded Gambling](#) and has successfully fought off heavily-funded casino interests for over ten years. Rubens consults to the [Union of Concerned Scientists](#) on clean energy policy. He is a venture investor and member of the [Granite State Angels](#), focusing on New England start-ups offering proprietary technology solutions.

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Kristina Stinson is a community ecologist and Senior Investigator at the [Harvard Forest](#). She also is a fine writer; her essay 'Native Ground' in *Whole Terrains* volume on [Where is Nature](#) is an extremely well-crafted example of science writing. The Harvard Forest is a department of the Faculty of Arts and Sciences (FAS) of Harvard University. From a center comprised of 3,500 acres of land, research facilities, and the Fisher Museum, the scientists, students, and collaborators at the Forest explore topics ranging from conservation and environmental change to land-use history and the ways in which physical, biological and human systems interact to change our earth. Since 1988, the Harvard Forest has been a Long-Term Ecological Research Site, funded by the National Science Foundation to conduct integrated, long-term studies of forest

dynamics. Since 2011, the Harvard Forest has been the Northeast Core site for the National Ecological Observatory Network. Research faculty at the Forest offer courses through the Harvard College Department of Organismic and Evolutionary Biology (OEB) and the Freshman Seminar Program. Close association is also maintained with Harvard's Department of Earth and Planetary Sciences (EPS), the Kennedy School of Government (KSG), the School of Public Health (SPH), and the Graduate School of Design.

Workshops (alphabetical by title)

Communicating Science Through an Art Competition - [Andrew Zwicker](#)

Since 2005, Princeton University has held an "Art of Science" competition that asks scientists to submit images from their laboratories that also have an aesthetic value. The top 40 submissions are shown in a year-long exhibition that explores the interplay between science and art. These involve the pursuit of those moments of discovery when what you perceive suddenly becomes more than the sum of its parts. Each piece in this exhibition is, in its own way, a record of such a moment. These extraordinary images are not art for art's sake, rather, they were produced during the course of scientific research. Entries were chosen for their aesthetic excellence as well as scientific or technical interest. Questions to be explored in this workshop include: Does exhibiting scientific images in a gallery change how they are perceived? Change how the science behind them is understood? Change the scientist's perception of research?



Andrew Zwicker tries to inspire students of all ages every day, even lifting them up two at a time! (ok, he's not that strong, that's in microgravity and he's holding them down but still...) He's the Head of the [Science Education Department](#) at the Princeton Plasma Physics Laboratory, went to Bard College and got a Ph.D. from Johns Hopkins University. When not performing experiments aboard NASA's "Weightless Wonder," he studies plasmas, the 4th state of matter, helps to organize an art competition for scientific photos, and is a lecturer in the Princeton University Writing Program. For more information about him, check out his blog, <http://science-edumacation.blogspot.com>.

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Communicating Science: Arts and Multimedia Platforms - Oludurotimi Adetunji/David Targan

This workshop explores different science communication initiatives at Brown University that engage students of all backgrounds in the creation of animations that tell stories about science. These initiatives include Science Cartoons, Learning Exchange animation projects, Coursewire, and Science Fellow projects. These projects combine art animation, high quality multimedia and storytelling to engage a broader audience in science. The presenters describe the process by which students are drawn to animation and thereby engage with each other, with scientists, and with a topic of interest to them. These products are powerfully compelling to their fellow students. The authors share selected animation products and describe how these projects were developed. They describe how these art and multimedia platforms can be used to develop new approaches to teaching, learning, and assessing Science, Technology, Engineering, and Mathematics (STEM) curricula. Other positive outcomes point to new approaches that engage students and develop an appreciation for and knowledge of scientific concepts and methods. We address questions such as: Do narratives encourage students (including both the creators and the viewers) to develop a greater understanding and appreciation of science? What is the current and future role of visual media, including animated narratives, in science communication as well as both formal and informal science education? Can this model be replicated at other universities and in other settings, such as the K-12 environment?



Oludurotimi Adetunji earned B.S. in Physics and Computer Science from Fisk University, and received his Ph.D. in experimental condensed matter physics, in the areas of conducting polymers and nanostructure materials from The Ohio State University. As an IGERT fellow, he worked as a Physical Scientist in the areas of biomaterials and nano-channel glass device/application at the Naval Research Laboratory in Washington, DC. Prior to coming to Brown, his research was focused on the development of piezoresistive sensor based on nano-network of conducting polymers and he served as principal investigator on two NSF grants. Dr. Adetunji brings his interdisciplinary Science, Technology, Engineering and Mathematics research background and experience to his current interest in STEM education and Innovative Science Communication. Dr. Adetunji is a member of Brown's Department of Physics.



David Targan is an astronomer who has had a long-standing commitment to science education and communication. He is Associate Dean of the College for Sciences at Brown University, where he is also Adjunct Associate Professor of Physics and Director of the Ladd Observatory. He is the founding Director of the Brown University Science Center, which is an interdisciplinary creative space for science students and faculty from all departments, as well as artists, animators, writers, and social scientists. David came to Brown in 1988 after studying astrophysics at UCLA, then at Minnesota, where he received his Ph.D. His latest interests include curricular development for medical students, incorporation of research in first-year seminars, the renovation of the 19th century timekeeping system at Ladd Observatory, "citizen science" using all-sky cameras and

supercomputers, CCD imaging of distant galaxies in light-polluted environments, and development of programs in visual storytelling for the sciences. On most weekends you can find David on Mount Monadnock, where he directs search and rescue for lost or injured hikers.

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Digital Storytelling – [Joanna Cummings](#)

This workshop will explore methods and techniques for creating compelling digital stories about your town’s natural resources, without having to spend a lot of money or be a video expert. Utilize your youth’s digital expertise to construct video and audio presentations that can be viewed on smartphones or iPads. A major challenge for town conservation commissions is helping citizens understand the commission’s purpose, relevance and expertise in advising on land use decisions. A typical mission for this municipal body is to promote land and other resource use decisions that protect and enhance the town’s natural and cultural resources. Critical to the commission’s success in garnering support for their work, and to encourage citizens to become environmental stewards, is to provide outreach and education that interprets the complexities and benefits of a town’s natural resources. Conservation outreach usually includes field trips, workshops, printed newsletters, brochures and some use of email and websites.

Lectures by naturalists can tell stories about the plants and animals that live in the nearby wetlands and forests. People respond to storytelling because it helps create a personal connection to the subject, especially when told by one’s peers. Digital storytelling can enhance traditional methods of environmental education and make it more accessible, especially for a growing percentage of youth who spend their time indoors on computers and digital devices. So what is digital storytelling, and how could conservation and other organizations use it to engage and educate town citizens? Bring your ideas to the session and be inspired!

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Film in Action: Tools for visual storytelling and advocacy (double session) – [Dyanna Smith](#) and [Mike Goudzward](#)



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Homing in on Aesthetic Wisdom – [Ju-Pong Lin](#) and [Devora Neumark](#)

Building on each our respective research-creation practices, we propose a participatory workshop on the subject of fostering fruitful art and science collaborations. Aiming to counter the unidirectional nature of closed communication, we will structure the workshop in ways that involve participants in dialogic, relational forms of communication such as story

circle, live-art and community performance. We will begin by engaging participants in an aesthetic experience with the intention of engrossing the senses. We will then present a variety of communications models and collectively explore how they might hinder or support learning, sharing, and development of knowledge. Together with the workshop participants, we will examine the limitations of slideware as a form of communication, drawing on Edward Tufte's Power Point critique. Peter Norvig's web-based version of the Gettysburg Address will act as a counter example to initiate our exploration of successful artist-scientist partnerships (e.g. Mel Chin, Jackie Brookner, Critical Art Ensemble, and the DATA project at the Nanolab of McGill University).



Ju-Pong Lin works with community performance and video to re-make "home" from within and without, drawing on theories of urban ecology. Devora Neumark is currently completing her doctoral thesis titled *Radical Beauty for Troubled Times: The (Un)Making of Home*, which examines the role that beauty plays in the process of becoming home anew in the aftermath of forced displacement. Working with Gregory Bateson's philosophy of aesthetic wisdom, Neumark writes, "Bateson's philosophy upholds a view of beauty's holistic educational benefits. He suggests that the loss of aesthetic wisdom has brought humanity to the brink of unhoming ourselves on earth." While our specific research interests lie in questions of home and the problematics of restoring a

sense of being at home on earth we propose that beauty is not the "what," but the how and the why of communication. Participants will take away new skills and deeper appreciation for artistic approaches to knowledge-making. They will gain a heightened capacity to recognize the importance of sensual perception in assessing forms of communication and a revitalized awareness of the importance of incorporating a concern for beauty as a scientific value within their research paradigms, community and educational projects and communication efforts. We believe that an interdisciplinary art-science collaborative practice holds the possibility of reawakening the aesthetic wisdom Bateson celebrates and nurturing the co-creation of knowledge at the nexus between arts and science.

Ju Pong Lin makes community performance and performative video and is a faculty in the MFA in Interdisciplinary Arts Program at Goddard College (Washington and Vermont). Lin has just begun the PhD in Environmental Studies at Antioch University New England. Interdisciplinary artist Devora Neumark is a member of the MFA-Interdisciplinary Arts Program Faculty at Goddard College (Vermont). Neumark is also currently a SSHRC-funded Humanities PhD Candidate at Concordia University's Centre for Interdisciplinary Studies in Society and Culture (Montreal).

How to Communicate Science as an Advocate – [Matthew J. Young](#)



In an age of frequent climate change and volatility, alongside growing realities of food insecurity and declining fossil fuel resources to drive economic and societal interests, we inevitable are confronting a time of transition. A transition into a future of collaborative, diverse food production, revitalizing local economies, developing renewable energy infrastructure, and ergo lower greenhouse gas emissions that contribute to helter-skelter climate changes. As Raymond DeYoung, Bill McKibben in his work *Deep Economy*, and other scholars and practitioners of the civic ecology movement have noted, we need to bring science alongside policy, story, and tradition to the public conversation along the transition journey. In this workshop, I aim to synthesize trends in civic ecology (e.g. individual and collective mental vitality), science journalism (e.g. interpreting scientific jargon into everyday stories), and social advocacy (e.g. how to empower

individuals to rhetorically support transition causes). I will utilize a Prezi presentation with small group dialogue and large group conversation during the course of the session, I hope to help individuals discover not just the necessity, but ultimately to hone their capacity, of communicating scientific events and trends to family, friends, neighbors, and broader society to support future transition causes.

Matthew “Mateo” Young is a graduate student at Antioch University New England in Keene, New Hampshire. Matthew is a candidate for a Master’s degree in Environmental Studies within the concentration of “Advocacy for Social Justice & Sustainability.” Matthew grew up in Vermont and worked winter breaks during his college years at a goat farm. During his senior year at St. Lawrence University in Canton, New York, Matthew wrote a senior honors thesis, “Beyond Round River,” which documented small farm agriculture in northern New York. After graduating from St. Lawrence in 2009, Matthew apprenticed at a 5-acre farm in Espanola, New Mexico, learning seasonal cycles of planting, growing, harvesting, & distributing local foods. Matthew transitioned into work on public lands & water policy at the New Mexico Environmental Law Center and the Student Conservation Association. Nevertheless, his attraction towards food issues grew, compelling Matt to join the Santa Fe (N.M.) Youth Food Cadre in 2010. As Urban Food Infrastructure Coordinator, Matthew provided outreach & taught workshops on City of Santa Fe initiatives on composting, rainwater harvesting, & other arid-climate strategies. Matthew loves to write, photograph, plant, harvest, & especially bake fresh bread and cook meals from Chinese to Mexican & beyond when not at the Food Bank. His new venture, Young Bread Works, aims to make handmade, locally-sourced French & olive breads that exemplify the possibility.

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Music and Science: A Soulful Landscape - Erica Wheeler (also performing Saturday evening)



We all have stories of connections to places. When you discover the relationship between yourself and a place that matters to you, you open a window to your world you may not have seen before. Creating a warm, welcoming setting, Erica begins with an presentation of ‘place-based arts’ to stir your imagination and empower your creative voice. You'll be guided through a series of writing experiences designed to help you see how your life and "your place" are interconnected. Followed by sharing, discussion and demonstration. (Erica often takes a participants writings to create a song-on-the-spot.) Take away a restored sense of self and place, new tools, fresh ideas and writings to develop further, for use in your personal or professional work.

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Science and Religion: Contradictions and Collaborations – Jeff Tamblyn and Fred Taylor

Science and Religion have at times been seen as in conflict with each other, and at other times as complementary. Religion also has played a role in the way science is viewed by the public. This workshop will explore several examples of the interaction between science, religion and the public - including the debate over the teaching of evolution in Kansas public schools, and current discussions around the issue of climate change. What is the relationship between science and the public? How effective are scientists in communicating with the public, and how might they communicate more effectively? How might religion be a positive force in that relationship? Augmented by video clips and literature readings, the conveners will host a dialogue we hope will spark new perceptions, ideas and solutions.



Fred Taylor is a writer and teacher who has been exploring the use of narrative in his writing classes for 20 years. He has taught Environmental Writing in Antioch's M.S. program, and offered seminars in Antioch's PhD program using narrative in the dissertation research and writing process. His own essays have been widely published, and focus on themes of sense of place, migration, and most recently, climate change. Fred has been exploring and teaching about the relation between Religion, Spirituality and Environmental Studies for 25 years. He received an M. Div. from Union Theological Seminary, and a PhD from Union Institute and University in "Religion, Literature and Environmental Thought." Most recently, he has been working with interfaith groups to develop resources around climate change, including a Lenten Carbon Fast.



Jeff Tamblyn began his professional career in live theatre, having studied acting and directing with instructors as diverse as John Reich (a Max Reinhardt protégé), Stuart Vaughn (co-founder of the New York Shakespeare Festival), and the experimental Open Theatre. He worked on stages in New York, New England and the Midwest before becoming a filmmaker to the business world in 1980. Self-taught as a scriptwriter, producer and director, he won a handful of high-level awards and served clients in several industries across the United States. In 2005, he directed, co-wrote and co-produced *Kansas vs. Darwin*, now in distribution at New Day Films. He was also a field producer for *Patriot Guard Riders*, another New Day film, responsible for interviews and footage of the Topeka and Iowa sequences. Today, he's working on a narrative feature titled, *Joan Dark*, and a new documentary about science education.

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Storytelling Science: How to Use Narrative to Help Scientific Writing Come Alive – [Fred Taylor](#)

In this hand-on writing workshop, we'll explore how good stories can bring to life your writing about scientific subjects. Some of the most engaging scientific writers, such as E. O. Wilson, Stephen Jay Gould, and Carl Safina, have used narrative to create engaging essays that grab the reader from the very first sentence. We'll examine several examples of this kind of writing, and then see explore how you can use it in your own organization or writing project. The workshop will include time for brainstorming stories and approaches, and techniques to jump-start your writing process.

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Talking conservation: Big "C" and little "c" – [Emily Hague](#)

This workshop delves into the purpose of communicating conservation - how we make land conservation relevant to people. We develop a connection between people and the landscape around them, and my work at the Monadnock Conservancy is focused on cultivating that connection by helping people take care of their land. It's not just about the actual act of conservation (little "c"). Rather, that land transaction is one step in a perpetual process of resource conservation, called stewardship (big "C"). We do this one-on-one, we do this through events and hikes, we do this through communications, photographs, and maps, and we do this by demonstrating the land management we'd like to see. Building understanding of and connection to the land can change the way we relate to and use the land, and most of all, build community.

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Emily Hague came to love the natural world exploring Moose Brook and the Lake Horace Marsh near her family's home in Weare, NH. Emily spent summers in college working for the USGS assessing water quality all over the New England coastal basin and developed a strong interest in environmental issues. After living briefly in Ireland, Australia, and Ohio, she has returned to her native state and made the Monadnock Region home. Emily lives in Keene, close to one of the city's many parks. At both Oberlin College and subsequently Antioch University New England, Emily pursued her interests in geology and environmental science, supplementing school with work in the fields of recycling, organic agriculture, water resource management, and land conservation. Emily holds a Master's Degree in the field of Resource Management, telling of her interest in conscientious land use planning and resource conservation. Emily has worked as stewardship manager for the Monadnock Conservancy for seven years, and currently serves on the Keene Planning Board. Off the clock, Emily can be found hiking, wading, snowshoeing, taking photographs, or playing music.

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Toward a New Model of Science Learning, Teaching, and Communication - [Adetunji/Targan](#)

The problem of improved communication about climate change has attracted a greatly expanded community of people who have a stake in science communication. Until recently science educators have focused on developing improved curricular and pedagogical strategies, informed by decades of research in education and psychology. In this brave new world of science communication, findings and approaches from marketing, the arts, media, psychology, sociology, political science, brain science and cognitive science, inform the development of adjuncts or alternatives to traditional science education and communication. This workshop describes two approaches that combine science education with visual storytelling. One is a classroom biology project that allows students, with the supervision of a peer "mentor" who is trained in animation, to create their own animations about invertebrate zoology. Another is a course, co-taught by Brown University and Rhode Island School of Design faculty, designed to teach both science and animation students to work together with content experts to create compelling stories that communicate science. We address questions such as: What makes certain stories compelling? Where does this mode of communication reside in the taxonomy of science communication, science education, and contributing fields ranging from neuroscience to marketing? Can this form of communication address the disconnect about subjects such as climate change and evolution? As tools for visualizing "Big Data" become available, how will they interact with the tools of animation and storytelling?