It is said that landscape ecology plays out on a regional scale, but that it occurs locally. The same could be said of the adoption of environmental stewardship practices. Success may be measured in terms of mainstream adoption, but it occurs one individual at a time. In practice, both our collective and individual values shape our environment. In addition to our built-works, ecological awareness is a powerful design tool for environmental change. Long-term sustainable practice depends on a heightened ecological awareness. To that end, my creative practice is driven by the notion that our mounting environmental challenges demand new interdisciplinary education models and communication methods.

My mission-driven projects, often a hybrid of art, design, and science communication, are intended to foster environmental awareness and ultimately action. Based on my experience and research, the lesson is clear: to make an impact, environmental communication must be accessible, informative, and engaging. Making ecological issues relevant to popular culture in one way or another is critical. There are many ways to do so, but my most successful projects typically employ a combination of community engagement, education, and accessible aesthetics.

I agree with Paulo Freire, the late Brazilian educator and philosopher, that education is the most transformative value-producing system in society. That said, education is the most far-reaching investment of our collective design effort. An informed public with a shared ecological awareness will be in a better position to support long-term sustainable practices. Moreover, an informed public is in a position to become their own empowered advocates and are more likely to assume an active role as responsible environmental stewards.

-David Buckley Borden
David Buckley Borden is an interdisciplinary artist and designer. Using an accessible, often humorous, combination of art and design, David promotes a shared environmental awareness and heightened cultural value of ecology. David’s place-based projects highlight both pressing environmental issues and everyday phenomena. Informed by research and community engagement, David’s work manifests in a variety of forms, ranging from site-specific art installations in the woods to data-driven cartography in the gallery.

David was a 2016/2017 Charles Bullard Fellow (Artist-in-Residence) at the Harvard Forest where he answered the question, “How can art and design foster cultural cohesion around environmental issues and help inform ecology-minded decision making?” As a Harvard Forest Associate Fellow David continues to collaborate with Harvard researchers, to champion a cultural ecology supported by interdisciplinary research-driven environmental communication.

Starting in the fall of 2020 David will be a Visiting Professor within the Landscape Architecture Department at the College of Design’s School of Architecture and Environment at the University of Oregon. In addition to teaching studio and environmental-communication coursework through the lens of his practice, David will spearhead a new design-ecology initiative between the Department and the HJ Andrews Experimental Forest, a 16,000-acre Long-Term Ecological Research site in Oregon’s Cascades Mountains.

David studied landscape architecture at Harvard University’s Graduate School of Design and worked as a designer at Sasaki before focusing his independent practice at the intersection of landscape, creativity, and cultural event. David continues to work with landscape architecture firms as a consultant, including recent collaborations with Agency Landscape + Planning, Reed Hilderbrand, Sasaki, and Rios.

Learn more about Borden and his practice at davidbuckleyborden.com.

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Warming Warning, Public Installation Art, Harvard University, Cambridge, MA. 2018.

Warming Warning was a collaborative public art project installed on Harvard University’s Science Center Plaza (1 Oxford St. Cambridge, MA) from October 22nd to December 7th, 2018. This educational installation was a co-creation by myself, Harvard Forest Senior Ecologist Aaron M Ellison and an interdisciplinary team of scientists and artists. The piece combined art, environmental design, and science communication to convey global climate-change data and spur action. The 9’ x 10.5’ x 28’ sculpture was coupled with events, both on and off campus, that were geared towards local work on climate and pathways for direct action.

Local Warming Warning programs included events at Le Laboratoire, Somerville Museum, Cambridge Public Schools Design Lab, Project Zero/Harvard Graduate School of Education, and the Science Center Plaza.
Warming Warning immersed visitors in a three-dimensional visualization of ongoing climate change. On one side, the > 1.5 °F change (since 1880) in global average temperature is highlighted as a white-to-red heat-gradient. The other side illustrated different future scenarios of carbon dioxide emissions. These are the paths we can take now that will lead either to a fossil fuel-free future or to an increasingly warm and uninhabitable planet.

The design represented climate change as a series of painted triangles (“deltas”) constructed from standard 4x6” timbers. Sunlight channeled and diffused through 6” gaps bounced off the brightly painted sides, endowing the whole sculpture with luminosity. Shadow patterns and color-spectrum vibrancy shifted as the sculpture reflected the sun’s daily arc. The visual experience of the installation also changed in response to the visitor’s perspective. The combined dynamics animated the work throughout the day and reward repeat visits.

Finally, Warming Warning left space for more triangles to be added at the end of the series. A stack of nine wood timbers made up a reflection-bench that suggested each person’s role in the narrative of unfolding climate change. The primed seating element prompted each visitor to consider how they can color the future through individual and collective actions to confront climate change.

This collaborative project was supported by a unique partnership between the Harvard Forest, Harvard University’s Office for Sustainability, and Harvard Common Spaces.
Various views of Warming Warning installation at Harvard University’s Science Center Plaza, Fall 2018.
Hemlock Hospice was a year-long, art-based interpretive trail I designed and built with a team of interdisciplinary collaborators at Harvard University’s research forest. Framed as a science-communication initiative, this immersive installation project told the story of the ongoing demise of the eastern hemlock tree at the hands (and mouth) of a tiny invasive insect, the hemlock woolly adelgid (HWA). The Hemlock Hospice interpretive trail featured 18 site-specific sculptures installed throughout a 200-year-old grove of hemlocks. While telling the story of the loss of eastern hemlock, the project addressed larger issues of climate change, human impact, and the future of New England forests. The project employed a model of landscape stewardship that combines installation art, public programming, and shared cultural experience.
Exchange Tree, Hemlock Hospice installation at Harvard Forest, 8 x 10 x 12.5 feet, wood and acrylic paint, 2017.

Inspired by fallen hemlock trees on site, I designed this wooden sculpture to function as a low-tech interactive installation. Visitors are welcome to reflect on the declining hemlock forest by leaving a hand written message on blue ribbons. The personal notes, tied to the installation by visitors, are for the trees, for future forests, or for others. Ribbons are collected and recorded quarterly and will be published as part of year-long outreach campaign.

The Exchange Tree installation is an example of the Hemlock Hospice project’s two pronged approach. This two-year project can be divided into two phases. Phase one is the collaborative creation of the built work. Phase two is leveraging the temporary installation as an outreach asset in support of the Harvard Forest’s education mission.
Hemlock Hospice Installations, examples of fabric-based installations (clockwise from top); Forest Lantern No. 2, HWA Tent, and 6th Extinction Flag. Collaborations with Jackie Barry, Dr. Aaron Ellison, Tim Lillis, Salua Rivero, and Lisa Ward.

The Hemlock Hospice installations were not just site specific, they were also culture specific; as they were created to represent the environmental ethos of the Harvard Forest community. This cultural consideration is reflected in the narrative and forms of the work, but also in the material selection. In response to the sensitive nature of the research forest, all temporary installation were low-impact by design. When possible, ecologically sensitive materials, such as durable fabrics, were used as alternatives to paints and plastics. Marine-grade fabrics were sourced to withstand harsh forest conditions. Installations “pop” in the landscape due to selected fabric’s ability to capture and reflect the limited sunlight available within the dark hemlock woods.
When possible, recycled and salvaged materials, were used to create Hemlock Hospice installations. Decommissioned Harvard Forest field experiments, known as “eco debris” among researchers, was the primary source of recycled materials. This design practice is an example of how material was chosen to reflect the Harvard Forest community, their work, and their dedication to sustainable research methods.

The installations take on additional meaning for on-site researchers as they see their old field equipment transformed into new science communication media. The material culture not only serves as prompts for the Hemlock Hospice narrative, but also speaks to past scientific studies embedded in the work.

The material choice represents two strong subcultures at the Harvard Forest; the high-tech culture of field research, and the low-tech “boots on the ground” culture of forestry. The majority of wood in the project was either salvaged from scrap wood piles, or milled to specification by the Harvard Forest sawmill operation.

Examples of installations created from recycled/salvaged materials (from top down); Global Warming Warning made from decommissioned data-shed and firewood, Double Assault made from reclaimed sawmill blade, Insect Landing made from construction debris (old banisters), and Wayfinding Barrier No. 2 made from ant nests, specimen tray, heat lamp, and sawmill scraps.
The *Hemlock Hospice* project was more than an art installation; it was ultimately a program-driven outreach campaign. The installations served as the foundation for an event-based public engagement strategy. Both public events and strategic invitation-only events, were supported by a coordinated outreach effort. This year-long engagement was executed by a diverse team including internal communication professionals at Harvard, external PR consultants, and allied community partners.

**Hemlock Hospice Activation Program**
- On-site project tours led by members of collaborative team of artists, designers, and scientists.
- Wayfinding design and interpretive trail maps support self-guided tours.
- Regional lecture series to promote project awareness and attract new Harvard Forest visitors. Venues ranging from local library to Harvard Graduate School of Design to Maine Audubon.
- Graphic communication workshops focused on intersection of art, design, and the ecology at Harvard Forest and colleges throughout New England.
- Companion satellite science-art installations and exhibitions at education institutions such as the Rhode Island School of Design, Urbano Project, and Montserrat College of Art.
- Project press coverage driven by public programming; press coverage ranges from *Boston Globe* to national media such as NPR’s *Living On Earth* and *Landscape Architecture Magazine*.
- Final book publication will present project as a case study for using program-driven art installations to communicate ecology issues to the general public.
The *Hibernaculum* project was an immersive public installation and event series at the Innovation and Design Building. The multidisciplinary exhibition framed woodland ecology issues through the playful pop-art lens of summer recreation culture in the Adirondack region. The installation served as a flexible event space, and was activated by two-months of programming including public talks, community art making, live music, art yard sales, and professional networking events. The project is an example of my practice of integrating public programming into temporary installations with the goal of creating community experiences that celebrate art, design, and our shared environment.
Installation as Accessible Art and Design for an Intergenerational Audience

*Hibernaculum* installation, examples of accessible art and design with pop culture appeal (clockwise from top); *Hudson Bay Company Kayak* and *Snack Stand*, large-format canvas *Wetland Flag*, and *Emerald Ash Borer Invasive Species Hex* print on paper, featuring a humorous reinterpretation of the traditional barn hex, re-designed to ward off invasive insects threatening the Adirondack landscape.

In support of environmental education, this woodland-inspired “mural” highlights ecological issues found throughout the Adirondack region. Design was inspired by hand-painted signs found along the tourist-friendly scenic byways of the Adirondacks. Design direction was driven by appeal to intergenerational target audience.
I was awarded a MASS MoCA artist residency in April 2016. I used the opportunity to test a creative approach to art-based community engagement. As part of the Residency, I interviewed a diverse group of stakeholders including local residents, community groups, scientists, and other creative minds engaged with the Hoosic River. I then created daily drawings to communicate the ongoing local narrative of the Hoosic River’s urban ecology.

The series of digital prints were made by combining photography of iconic Hoosic River views with suggestions for art installations. These proposed installations are community memorial, testament, and celebration of the Hoosic River. The site-responsive works address issues of river access, recreation, river ecology, water quality, infrastructure, as well as cultural history, practice and future.
Conceptualized as the Hoosic Expedition, in aggregate the installation proposals form a speculative art trail along the channelized sections of the river. The goal of this two-week project was not to build an art walk, but to use the process of imagining art installations as an engaging form of public outreach. The stakeholder-driven conceptual designs are intended to highlight diverse cultural and ecological issues at play in North Adams and ultimately promote a constructive public dialogue about the community stewardship of the river.
A 2019 follow-up residency at MASS MoCA enable a collaboration with Casey N Keenan to progress the Hoosic work into an animated “virtual tour” of the speculative art-walk. Keenan and I developed the original static illustrations into a media-rich experience with the addition of Keenan’s original score, sound design, and narration. The collaboration, entitled *Hoosic Virtual Tour*, produced a series of social media friendly videos in service of Hoosic River awareness and stewardship.

Watch the video by visiting [http://davidbuckleyborden.com/Hoosic](http://davidbuckleyborden.com/Hoosic). Please use your favorite high-fidelity headphones to fully enjoy the rich sound design.