



This summer - amid many intersecting challenges in our world - we have continued to move forward with Inside the Greenhouse efforts in the spaces of research, teaching and engagement in the spaces of creative climate communications in the public sphere.

Among those intersections, we recognize that successfully advancing climate change engagement in the 21st century requires confrontation with environmental and institutional racism. With that in mind, Inside the Greenhouse expresses its profound support of Black Lives Matter (and the many movements towards racial justice that improve our world) by sharing these sources to support the integration of anti-racism into the communication of climate change.

- The Environmental Movement Needs to Reckon with Its Racist History - by Julian Brave NoiseCat:
https://www.vice.com/en_us/article/bjwvn8/the-environmental-movement-needs-to-reckon-with-its-racist-history
- Why Every Environmentalist Should Be Anti-Racist - by Leah Thomas:
<https://www.vogue.com/article/why-every-environmentalist-should-be-anti-racist>
- Racism and the Environment - by Somini Sengupta:
<https://www.nytimes.com/interactive/2020/06/05/climate/racism-climate-change-reading-list.html>
- Teach Climate Justice Campaign - by the Zinn Education Project:
<https://www.zinnedproject.org/campaigns/teach-climate-justice>
- Can We Talk? Difficult Conversations with Underrepresented People of Color: Sense of Belonging and Obstacles to STEM Fields - a film by Kendall Moore, PhD: <https://www.kendallmooredocfilms.com>

In newsletter #17, we share some highlights of our many ongoing activities. Visit our website <http://www.insidethegreenhouse.org> for further details and more information. We continue to carry out these projects through valued collaborations and partnerships linking campus and community as well as the local with the global.

Please don't forget that your support is vital to our ongoing efforts. Please visit <https://giving.cu.edu/fund/cires-inside-greenhouse-gift-fund> to provide a tax-deductible gift. We are grateful for contributions in any amount, especially in these trying times of high un- and under-employment as well as pressing threats to public health.

Up with (constructive) hope,
Beth Osnes, Phaedra Pezzullo, Rebecca Safran and Max Boykoff
(Inside the Greenhouse co-directors)

Support ITG!

To support our work with your donation go to:

<https://giving.cu.edu/fund/cires-inside-greenhouse-gift-fund>

Be Boulder.
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Subscribers to ITG will be notified by email when a new edition is available, and may access it either in pdf or html format. The newsletter is also available online at:

<http://www.insidethegreenhouse.org/about/newsletters>

RESEARCH & CREATIVE WORKS SPOTLIGHT

Green Communication & China: On Crisis, Care, and Global Futures

INSIDE THE GREENHOUSE co-director Phaedra Pezzullo has a new co-edited book.

China often appears as either an eco-apocalyptic nightmare or a green utopic dream. Phaedra's co-edited book with Jingfang Liu, *Green Communication & China: On Crisis, Care, and Global Futures* (2020, Michigan State University Press) began with two invitations to visit China in 2017 and 2018. There, she met Jingfang and many other scholars working on related research, and she was inspired to learn more beyond sensational headlines.



Cover art is titled "To Green Peacock," by Ella Yiran Liu, age 9. It won first place in an art competition at Fudan Elementary School, 2018. Green peacocks are endangered.

The book includes ten chapters. They ask:

- How does China speak for nature?
- How are the pollution and climate change crises being addressed?
- What are the possibilities and limitations of mobilizing publics to care about the environment through new media, tourism, and government policy?

Green Communication and China is the first volume to identify the importance of studying environmental communication in, about, and with China, a rising global environmental leader whose ecological and political controversies often make international headlines.

Multiple chapters focus on climate communication research, from the Belt and Road Initiative to imagining eco-cities of our future. One chapter, for example, includes research from Binbin Wang & Qinnan Sharon Zhou. Wang is the first Ph.D. on climate change communication in China and co-founded the China Center for Climate Change Communication (China4C) at Peking University, which raises awareness on climate change and promotes innovative strategies—and is also where Zhou works. They have worked with the Yale Center for Climate Communication and the George Mason Center for Climate Communication to conduct public opinion polling to determine public perceptions of climate change's existence, their level of worry, and linkages with human activity. For more information, see: <https://msupress.org/9781611863673/green-communication-and-china>

Barn Swallows & Climate Change

INSIDE THE GREENHOUSE co-directors Beth Osnes and Rebecca Safran teamed up with their students to explore artistic and scientific observation, side by side. Over the summer, this group of high school aged women worked with Osnes and creative collaborator Chelsea Hackett to observe birds in nature, including barn swallows breeding near east campus and a fantastic roost of turkey vultures living west of town. Safran and her graduate students Jonté Allen and Molly McDermott joined outings as scientific advisors.



RESEARCH & CREATIVE WORKS SPOTLIGHT

Drawdown Adaptation!

With **INSIDE THE GREENHOUSE** co-director Beth Osnes, a motivated team of Inside the Greenhouse student interns have been making remarkable progress adapting Project Drawdown top climate solutions (<https://drawdown.org>) to a 5th grade reading level in both English and Spanish.

Over the summer they have been meeting as a group to devise a system for adapting the most recent publication by Project Drawdown - *The Drawdown Review*: <https://www.drawdown.org/drawdown-review> - that describes 82 of the most impactful solutions for reversing global warming. As with any translation, there have been numerous choices to be made in adjusting the language in these solutions to make them appealing, clear, and engaging for 5th grade students, while keeping the science accessible and accurate.

Two PhD students through the College of Education are guiding the overall educational approach. Caitlin Fine is primarily doing the editing of the writing and visuals and collaborating in the creation of the teacher's guide for our collection. Daniel Garzon is also providing guidance in the adaptation and is translating the work into Spanish. Patrick Chandler, a PhD candidate in Environmental Studies, is overseeing the entire project with Beth.

A special team of 5th grade climate activists from Bear Creek Elementary School will serve as youth peer reviewers of the solutions. Once completed this fall, this work will be peer reviewed through the Climate Literacy Energy Awareness Network (CLEAN) and will be made widely available as an Open Educational Resource: <https://cleanet.org/index.html>.



A Zoom meeting for the team adapting Drawdown climate solutions for 5th grade students, Patrick Chandler, Beth Osnes, Izzy Sofio, Sarah Manning and Daniel Garzon.

Creative Climate Communications: Teaching From the Heart Through the Arts

CU Boulder Environmental Studies PhD student Patrick Chandler (see student spotlight in issue #10 for more about Patrick: <https://insidethegreenhouse.org/about/newsletters/issue-10>) - with co-authors (and **INSIDE THE GREENHOUSE** co-directors) Beth Osnes and Max Boykoff - contributed a book chapter entitled 'Creative climate communications: teaching from the heart through the arts' for the recently published book *Teaching Climate Change in the United States* - Edited by Joseph Henderson & Andrea Drewes: <https://www.taylorfrancis.com/books/e/9780367179496>. In this chapter, Patrick, Beth and Max argued that evidence and logic aren't enough to persuade people to live more sustainably. Effective action requires a combination of cognition and affect. In their affective roles as agents of personal and social change, the arts unite with the cognitive power of science to speak to our humanity - allowing global change issues to transcend language, background, education level, age, attention span, and time - and move people, emotionally and physically, to act. In this chapter, Patrick, Beth and Max also explained why they feel this combination is vital to teaching about and spurring action on environmental issues while substantiating this claim with research they and others have published.

INTERNSHIPS HIGHLIGHT

Presley Church

This year, we in **INSIDE THE GREENHOUSE** are fortunate to be working with Presley Church as an intern focusing on a number of ongoing projects. Presley is a native Boulderite and a second year Fashion Design Major at Cornell University's Fiber Science and Apparel Design program. Presley is specifically interested in sustainability and transparency in the fashion supply chain and informed, technical, ethical design.

Presley is also an alumna of Trash the Runway (see issues #7: <https://insidethegreenhouse.org/about/newsletters/issue-7> and #10: <https://insidethegreenhouse.org/about/newsletters/issue-10> for more about the **INSIDE THE GREENHOUSE-TTR** collaboration).

Here, Presley reflects on her work with **INSIDE THE GREENHOUSE** through this internship and through a collaboration with Chuck Nice and Nancy Holt in the lead up to September 2020 Climate Week that follows each year after the United Nations General Assembly in New York City. What follows is Presley's account of the work so far:

As Climate Week NYC 2020 rapidly approaches (September 21-26), Inside the Greenhouse has joined forces with the climate campaign, "Shhh, It's Real," to launch "10,000 Teachers." Knowing that teachers are natural communicators, "10,000 Teachers" is seeking 10,000 individuals dedicated to bringing climate crisis conversations into their circles. Launching at Climate Week NYC, Pod Zero, **INSIDE THE GREENHOUSE** and "Shhh, It's Real," will bring together scientists, politicians, and celebrities to discuss the climate crisis with comedian, climate activist, and founder of "Shhh, It's Real," Chuck Nice. In the spirit of climate communication, the Climate Week NYC symposium will feature our #changeclimatechange TikTok campaign motivating young people to vote with the climate in mind this November.

As a student intern at **INSIDE THE GREENHOUSE**, my role has been to provide youthful energy and insight into our collaborations. My involvement in the 10,000 Teachers campaign has shown me that we are all students and we are all teachers. It is our human duty to learn and diffuse information about the climate crisis.

Leading up to Climate Week NYC, I am coordinating our TikTok campaign. Social media plays a powerful role in the spread of information, and **INSIDE THE GREENHOUSE** recognizes TikTok's potential as a teaching tool. This campaign will bring young people together to #changeclimatechange and solve the



Presley Church

climate crisis by voting. I have focused my search for TikTok influencers to university students who have wide reach to informed, curious, young voters, particularly in Wisconsin, Pennsylvania, North Carolina, Florida, Colorado and Arizona where the youth vote will have the greatest influence in the 2020 election. Starting with my connections at the University of Colorado and Cornell University, I hope to expand our reach to campuses nationwide. TikToker @nyajoyssimmon at the University of Colorado has created a pilot video for this campaign. The best of these videos will be featured at Climate Week NYC in addition to our interviews with "Shhh It's Real." I am also looking to explore platforms such as Instagram, HerCampus, and campus newspapers to spread our TikToks until Election Day.

As we confirm more interviewees for our Climate Week NYC show, I am helping to shape the conversations had between host and expert. Because this discourse is presented for our 10,000 Teachers, I am focusing on effective climate communication, future policy, and actionable steps towards solving the climate crisis. In meetings with Chuck Nice, Nancy Holt, and **INSIDE THE GREENHOUSE** Co-Directors Max Boykoff, Phaedra Pezzullo, and Beth Osnes, I have learned the importance of seizing opportunities, because the earth isn't getting any cooler, and we have the ability and responsibility to fuel climate crisis communication via education. By participating in Climate Week NYC planning, I have a new appreciation for human connection. We have brought together an amazing group of speakers, influencers, and teachers that will be the catalyst for change. JOIN US!

STUDENT SPOTLIGHT



On the sandy beach of Golden Gardens, Seattle, Washington. Photo: Patrick Daniel Murphy.

Erzebet Kalwaitis

Each newsletter we feature students involved in our ongoing Inside the Greenhouse efforts. This issue, we feature Erzebet Kalwaitis. Erzebet is a recent graduate from the University of Colorado Boulder majoring in Environmental Studies and Geography. She is currently interning for **INSIDE THE**



GREENHOUSE's project working on translating Project Drawdown solutions (<https://drawdown.org>) to be comprehensible and 5th grade reading compatible (see above for more about the project).

Erzebet says she is happy to be working on this important project due to not only her passions regarding the environment, but also for her particular interest in childhood education. She has many dreams

and aspirations, hoping to go to graduate school in the next few years to get a Master's degree.

Because of particular passions regarding education and environment/human rights, she hopes to study environmental law and aid in the creation of environmental education policies. In the meantime, Erzebet hopes to work with organizations focusing on conservation and restoration operations around the world.

During this work she hopes to begin a photography portfolio to chase her dream job working with National Geographic. She hopes to better environmental education and better help younger generations understand how the world is working to help maintain and manage climate change.

ANNOUNCEMENTS

Ongoing Information-Sharing, Talks and Workshops

This summer, Inside the Greenhouse co-directors and others in the **INSIDE THE GREENHOUSE** community have led information-sharing and participatory workshops as well as giving talks involving creative climate communications while moving additional projects forward. Among them:

Co-Director Prof. Phaedra Pezzullo will be publishing a chapter in a new edited volume next month: *The Rhetoric of Social Movements: Networks, Power, and New Media*. Routledge, 2020. The penultimate chapter is coauthored by Phaedra with former CU Boulder graduate student Constance Gordon (University of San Francisco) and former CU Boulder Environmental Center Associate Director Michelle Gabrieloff-Parish. The focus is a food justice advocacy tour they organized and participated in Spring 2018 in the Denver region. This chapter extends Phaedra's earlier research on advocacy tours as tactics for change across time and place, as well as extends that work into the specific context of food justice. Engaging questions of cartography, presence, justice, and regeneration, the analysis aims to amplify frontline community voices that are articulating or linking food with racial (in)justice, public health, and ecological interconnections.

Co-Director Prof. Rebecca Safran is getting ready to launch the 12th offering of the Film and Climate Change class, now titled 'the Art of Science Communication'. She started with 10 students in 2009, working intensively in a classroom together in the basement of the ATLAS building. This fall, Safran will teach this class online, via zoom to nearly 40 students who will be tuning in from all over the world.

Co-Director Prof. Beth Osnes was invited by the Canadian Association of Theatre Research to participate in a roundtable on Theatre and Climate Change for their annual conference in July of 2020. From that event, connections were made between the Vancouver-based performance organization, The Only Animal, and Inside the Greenhouse. On the climate comedy front, Beth is working with the youth organizing team at Earth Day to facilitate a training event for students to empower



Pictured is Beverly Grant of Mo' Betta Green providing a tour for CU Boulder students of Denver food justice initiatives. She is pointing out and sharing the nasturtium, an edible flower growing.

themselves to communicate climate in creative and humorous ways. This is will be taking place online near National Voter Registration Day on Sept. 22. Fridays on Beth's front porch this summer were a workshop for creating a wide variety of bird puppets and costumes for the Inside the Greenhouse collaboration with SPEAK, for young women's vocal empowerment, and Boulder's Open Space Mountain Parks. These birds will be used



Lerato Osnes, Chelsea Hackett, and Sarah Fahmy manipulate a crow puppet created by Beth Osnes.

ANNOUNCEMENTS



Chelsea Hackett paints a paper mache headpiece for a barn swallow costume.



Chelsea Hackett in the barn swallow costume at our research location on East Campus.

Creative Climate Communication and Behavior Change (C3BC) Center

Beginning in Fall 2020, Inside the Greenhouse will become part of a new center we're anticipating launching titled: Creative Climate Communication and Behavior Change (C3BC). At its launch, Leaf Van Boven (Psychology) and our own Phaedra Pezzullo (Communication) will co-direct this new initiative. The vision will be to confront the climate crisis by creatively communicating and changing human behaviors. The goals will include behavior change, creative storytelling, just transition, and media coverage. Anticipate more news as the launch occurs and we try to expand our interdisciplinary research and our reach.

Warming Signs

Kait Parker interviewed **INSIDE THE GREENHOUSE** co-directors Max Boykoff and Beth Osnes about their research on humor and climate change for her *Warming Signs* podcast through The Weather Channel. The episode entitled *Why Climate Communicators Are Turning Talking Points into Punchlines* highlights the effective use of comedy for breaking through barriers to climate engagement. Parker notes that bringing levity to such a heavy moment in history is essential. She also appreciated that Inside the Greenhouse is doing the research to learn that young people need a break from despair in order to sustain their engagement with this issue and maintain hope. She notes that looking at climate through the lens of comedy can open up new spaces for consideration, understanding, and action. Listen here: <https://inthisclimate.libsyn.com/engaging-with-climate-through-art>



Chelsea Hackett and Sarah Fahmy in the chickadee costume and Chelsea Hackett in the barn swallow costume at our research location on East Campus.

for youth-led art hikes in our beautiful open space hikes in which the stories of interspecies friendship between birds and humans will be explored and expressed for charting an equitable, survivable, and thrive-able future.

Co-Director Prof. Max Boykoff spoke at Colorado School of Mines (virtually), to participants in the Colorado Science and Engineering Policy Fellowship Program (virtually) and in the Society for the Social Studies of Science annual meeting (virtually) in Prague, Czech Republic as well as continuing with research collaborations through the Media and Climate Change Observatory. Max was also recently promoted to full professor and now is director of the Environmental Studies Program at CU Boulder.

ANNOUNCEMENTS



Beth Osnes and Max Boykoff presenting for CU Boulder *Where You Are*.

CU Where You Are

As part of the chancellor's summer series highlighting teaching, research and innovation on the CU Boulder campus, Max Boykoff and Beth Osnes were invited to present Stand Up for Climate Change: Using the Power of Humor to Start the Conversation (<https://www.colorado.edu/chancellor/cu-boulder-where-you-are-stand-climate-change-using-power-humor-start-conversation>). Each standing in a marked off quadrant for social distancing, Max and Beth enjoyed conversation about climate comedy with the chancellor in a near empty CU Events Center, save for the technical crew recording the event. It was exhilarating to actually be in a public venue, even if nearly all 11,000 seats were empty. The series was live-streamed to an audience of CU alum across the globe.

From the INSIDE THE GREENHOUSE Vaults: Reflecting on Lives Lost

The first ever iteration of **INSIDETHEGREENHOUSE** co-director Becca Safran's Climate Change and Film class in 2009 was co-taught with Professor Kendi Davies (Department of Ecology and Evolutionary Biology) and a very talented videographer, Michael Liguori (<https://weloveyoumikeliguori.weebly.com>).



Becca owes much of what she learned about teaching film-making to Michael Liguori, who recently passed away in Fall 2019 at too young an age after a long and difficult fight with cancer. Here, we share a film that Michael Liguori put together after our first successful semester of the class; the inspiration from students that first semester are still keeping the fires lit as Becca readies this class for its 12th offering in midst of a pandemic: <https://insidethegreenhouse.org/media/university-colorado-boulder-climate-change-and-film-class-2009>.



Dr. Konrad Steffen, Bianca Perren (his wife), Simon Steffen (his son), and Derek Houtz. Photo: Grey Davis.

All of the students during that first class were special. One stands out as reminding us of the power of storytelling and art to bring people and science together: Simon Steffen.

At that time, Simon's father, Professor Konrad Steffen ['Koni'] was Director of the Cooperative Institute for Research in Environmental Sciences (CIRES) here at the University of Colorado Boulder. Koni visited Safran's class numerous times to tell stories about his work on the Greenland Ice Sheet, helped as a judge in film festivals, and made time to meet with Safran over the years. They kept in touch after he departed for his new position in Switzerland in 2011.

For his final project, Simon chose to work on a film about his dad: <https://insidethegreenhouse.org/media/sleeping-giant-simon-steffen>. He was often angry and confused as to why his dad was not around much during his childhood. In this beautiful piece, Simon and Koni talk about the difficulties of climate change work on one's family. Simon came to appreciate his father's important work and began to join him for research expeditions to Greenland. Tragically, Koni died during an accident on their most recent trip together (<https://www.nytimes.com/2020/08/13/climate/konrad-steffen-dead.html>).

We all in the **INSIDE THE GREENHOUSE** community remember Koni with deep admiration and sincere thanks for his life's work and for his support in our endeavors.

Generous Contribution

This summer **INSIDE THE GREENHOUSE** received a gift from Rose Ann Bershanyi for our ongoing work in creative climate communication. Rose Ann is a double Buff with a BA (1966) and MA (1969) in Fine Arts. Her love of the beautiful Boulder environment, her love of learning, and her late mother's work at the National Oceanic and Atmospheric Administration (NOAA) inspired her to support the creative programming at Inside the Greenhouse.

Going forward, you can also follow us via Twitter (@ITG_Boulder),
Instagram ('everydayclimate') and Facebook:
<https://www.facebook.com/Inside-the-Greenhouse-at-CU-Boulder-1267256946701231>

More information can be found on our website:
<http://insidethegreenhouse.org>

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ABOUT US

Creative framing and storytelling of issues surrounding climate change through video, theatre, dance, and writing can connect a wider audience to the deep and pressing need to address climate change. Project leaders Max Boykoff (Associate Professor, Environmental Studies; CIRES Fellow), Rebecca Safran (Associate Professor, Ecology and Evolutionary Biology), Beth Osnes (Associate Professor, Department of Theater and Dance) and Phaedra Pezzullo (Associate Professor, Department of Communication) have

been producing events and classes over the past six years under the banner of the 'Inside the Greenhouse'. Support for this work catalyzes creative climate communication and builds capacity among CU Boulder undergraduate and graduate students in particular. Our efforts to engage our students, those working at the science-policy interface, and the public alike seek to help concerned make climate change meaningful in the lives of everyday people. Students are involved directly and collaboratively connecting work in the classroom to applied contexts.



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