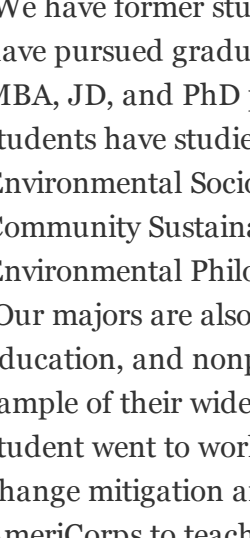
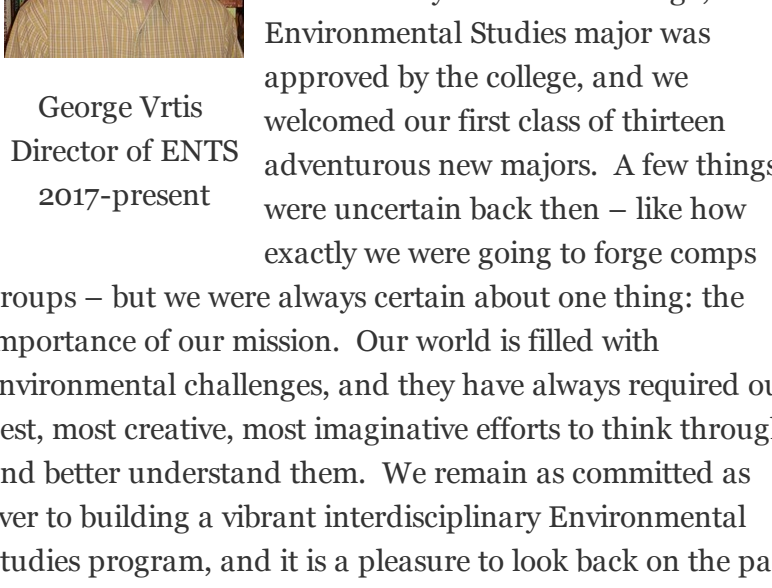


Annual Newsletter 2018-2019



Carleton



Letter from the Director

It's been ten years. A decade ago, the Environmental Studies major was approved by the college, and we welcomed our first class of thirteen adventurous new majors. A few things were uncertain back then – like how exactly we were going to forge comps groups – but we were always certain about one thing: the importance of our mission. Our world is filled with environmental challenges, and they have always required our best, most creative, most imaginative efforts to think through and better understand them. We remain as committed as ever to building a vibrant interdisciplinary Environmental Studies program, and it is a pleasure to look back on the past ten years and reflect a bit on our accomplishments.

The center of our attention has always been our students, and we have now graduated 131 Environmental Studies majors. We have former students doing all kinds of things. Many have pursued graduate degrees, including MA, MS, MPH, MBA, JD, and PhD programs. Among the diverse fields our students have studied are Natural Resource Policy, Environmental Sociology, Environmental Management, Community Sustainability, Ecology, Environmental Studies, Environmental Philosophy, Journalism, and Bioinformatics. Our majors are also hard at work in government, industry, education, and nonprofit organizations. To offer but a small sample of their wide-ranging service to society, one former student went to work for Lockheed Martin to work on climate change mitigation and renewable energy; another joined AmeriCorps to teach gardening and nutrition; another works for Minnesota's Save the Boundary Waters as a campaign director; others have joined the National Park Service as rangers; still others have lent their talents to the Peace Corps as teachers; and we even have one alum who has worked with the Truckee Hotshots fighting western wildfires. Wherever they have gone, our fervent hope is that all of our alumni are finding meaningful and rewarding ways to engage the world around them and help nudge it onto a more sustainable footing.

Before there was a major, of course, there was a long-standing concentration in Environmental and Technology Studies, and I want all of our concentrators to know we haven't forgotten you. From its establishment in 1996 to its discontinuation when the new major was created, 257 students completed the concentration. Like our majors, our concentrators have distinguished themselves in many ways, and their legacy lives on every day back on campus. The concentration was the proving ground for the major, and it helped our faculty lay much of the intellectual foundation for the major. And today, the Environmental Studies program still remains best known by its old acronym – ENTS – a living testament to the concentration, and one of the bonds tying generations of faculty and students together.

While many wonderful students have come and gone, some things have stayed the same. The program is still housed in venerable old Goodsell Observatory and its bathroom remains vintage 19th century. The faculty are still creating innovative new courses, and they continue to push forward the frontiers of their research. We still invite renowned speakers to campus, like this year's Wurttele Distinguished Visitor in Environmental Studies, Peter Kareiva, Director of the Institute of the Environment and Sustainability at UCLA. We continue to draw inspiration and insight from time spent in the arb. And, we still have our annual spring picnic once the snow gives way to warm sunshine and to the first purple and yellow crocuses that dare to poke above ground. Come home and see us.

Alumni Updates

Spotlight on Landscape Architecture

What can you do with an Environmental Studies major? Like most liberal arts majors, the environmental studies major prepares students for a wide range of careers, including public policy and politics, business, land management, teaching, journalism, law, and the health professions. But one of the more common career paths for Carleton's growing cadre of environmental studies majors begins with a degree in Landscape Architecture. We asked some recent grads to tell us what their graduate landscape architecture program covers and why they chose it. Here are their answers (edited for length):

Anna Cich (ENTS '16):
Perhaps my favorite aspect of the environmental studies major is its interdisciplinary scope. I also majored in studio art, so I've spent the last few years searching for fields that combine my interest in functional, sculptural design with the public health and social justice components of environmental studies. Landscape architecture seems to balance these interests nicely.

Because I am in the midst of applications, I can't speak to the specifics of a program or professional practice. However, I have been busy with informational interviews since graduation and have come to understand landscape architecture as the design of spaces between buildings. Landscape architecture can range from private to public. It includes residential planting design, large-scale shoreline and habitat restoration, and public spaces like plazas. The latter is what interests me most. I hope to focus on street-level design, to use scale and materials to diversify public spaces and increase neighborhood connectivity. Well-designed public spaces can support mental health through sensory variety and can encourage us to spend time outside, move our bodies, and engage with our neighbors.

People with landscape architecture degrees are qualified for work in a variety of fields. Graduates often seek accreditation and practice in firms. They might also work in the public realm, such as the parks department of a city. People with landscape architecture degrees might also pursue research, public art, community engagement, or nonprofit work. Many also balance research or a design practice with teaching. Landscape architects also work alongside a wide variety of people, since projects often require input from residents, cities, architects, transportation planners, designers, artists, engineers, and contractors.

Sarah Lukins (ENTS '15):
My interest [in landscape architecture] started with a conversation with Dave LeClergue, another Carl, who works for the City of Seattle in stormwater management and who has an MLA [Masters Degree in Landscape Architecture]. After more research, I realized that landscape architecture would not only allow me to do meaningful work, but cohered really closely with the way I wanted to spend my time while working.

Landscape architecture requires the same sort of multidisciplinary approach that is emphasized in the Carleton Environmental Studies Program. Whether you're designing a park or stormwater infrastructure, you need to consider questions like: how it will perform ecologically, whether that ecological performance will be legible to users, how it will be used by different groups of stakeholders, and how your project integrates into the broader landscape and its history and culture. This gives rise to a different type of problem solving, where ideally every solution resolves a number of different problems. In my program, I take classes in urban planning, ecological restoration, art history, and other subject areas and then I have a studio each term applying that subject matter through site design.

For me, landscape architecture checks of a lot of boxes that I've come to view as important in a job. I get to work creatively. I get to work at multiple scales -- thinking about both the minutiae of what plant to put where and how a project fits into its local or regional context. I get to do stakeholder engagement work, and at the end of the day (hopefully) create tangible spaces and places that make communities stronger and better places to live.

Morgan Vought (ENTS '17)
I became interested in landscape design as a way to create productive spaces that conveyed both social and ecological narratives. After fighting my way through a semester-long crash course in landscape architecture at CIEE's Global Architecture and Design program in Berlin, I was hooked on the difficult, yet incredibly fulfilling, field! [The MLA program at Harvard] will focus on the process of designing both small and large sites, thinking about both the aesthetics and the ecological, culture, and economic health of the space. The program starts with a series of core classes focused on visual representation, the history of landscape design, and landscape ecology, and becomes more flexible as the program progresses over the course of three years. I hope to conclude the program by completing a thesis on urban agriculture in the third year.

I plan to use the skills I gain during my master's program to integrate community voices into the design process. After spending the past year designing nature play events at the Phoenix Zoo, I am specifically interested in uniting urban communities around nature play spaces, as well as edible landscapes. I am excited to delve into this interdisciplinary and dynamic field and hope to work globally to engage communities with public space.

Spotlight on the EPA: Dean Ingemansen (GEO '84)

You've heard of the EPA (Environmental Protection Agency), but what do you really know about it? More importantly, what do you know about pursuing a career at the EPA?

Recently we interviewed Dean Ingemansen, a 1984 graduate of Carleton College who is currently a Supervising Attorney at the EPA in Seattle, Washington. Dean was a Geology major, and he went on to get an MS in Geology then a JD. As Dean explained, "I attended an environmental careers conference that was held in Seattle in 1986. I was so impressed with the EPA speakers that I decided to change my career goals of being an exploration geologist to being an environmental attorney!"

As Supervising Attorney, Dean oversees the work of 10 EPA attorneys "who all work on legal issues involving implementation and enforcement of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund")." Dean's team is responsible for managing all aspects of Superfund sites, from investigating suspected contamination and contaminants to negotiating legal agreements with responsible parties, up to and including both criminal and civil referrals to the US Department of Justice. Although most attorneys at the EPA have some type of science degree, many attorneys majored in non-science fields as well. However, as he put it, "all of our attorneys have a strong interest in environmental issues."

Before you get the impression that everyone at the EPA is an attorney, that definitely is not the case. There are over 18,000 employees in the EPA. Many have (or are pursuing) graduate degrees, but not all. In fact, Dean's team of attorneys have daily interactions with project managers, policy coordinators, community relations specialists, environmental engineers, political appointees in Washington, D.C.

Dean also emphasizes that the EPA seeks people dedicated environmental issues. He says that a great way to show that dedication is to do internships with environmental interest groups such as the Sierra Club, Environmental Defense Fund, The Nature Conservancy, and the Natural Resources Defense Council.

As Dean sees it, an ENTS major is a perfectly suited "to prepare you for the kinds of policy issues that the EPA deals with on a daily basis in all of our programs."

[Read Other Alumni Profiles!](#)

Off Campus Studies

Visions of California

This winter, Professor of English and Environmental Studies Mike Kowalewski led a group of Carleton students to California for an immersive exploration of the Golden State's history, literature, environment, art, and culture. The program focused on place-based learning through visits to literary and historical sites, featuring guest speakers ranging from writers and artists to winemakers and surfers. Goals of the program included understanding the importance of "place" in forming identity and understanding how California's culture, landscape, and history intersect and relate to modern American culture.

Students delved into writing and cinema pertaining to California as both a place and a metaphor as well as the relationship between art and popular conceptions of California. The program's field trips focused on California's history, literature, and environment, and included visits to Yosemite National Park, Sutter's Fort, El Teatro Campesino, Silicon Valley, Joshua Tree, and more.

Kenneth Laster (CAMS '20) was an enthusiastic participant: "I really enjoyed learning about what California's history has been and what California's future will be in terms of the environment and economy," he comments. "We talked a lot about the power of nature, which we saw in action on various field trips." One of his favorite experiences was "visiting Mount Shasta and being ankle deep in snow in the morning but in spring weather by the afternoon."

Conservation, Geology, and Natural History in Tasmania
Over winter break Professor of Geology Mary Savina and Director of Cowling Arboretum Nancy Braker traveled with ten students to Tasmania as part of a two-week field study program. The program is designed to help students to understand the natural history of Tasmania, learn about Tasmanian conservation efforts, and compare these efforts to those used in the American Midwest.

To prepare for the trip, students learned about the natural history of, aboriginal influences on, and conservation issues in Tasmania. They also investigated the biological and geologic relevance of Tasmania to the supercontinent of Gondwana. Using this knowledge, students developed field research projects to be carried out in Tasmania.

Kait Libby (Biology '19) was drawn to the Tasmania program because of her love of being outside, studying natural history, and learning about conservation. During the trip, the group went on an excursion to a site called Tesselated Pavement. For Kait, this was a highlight of the trip. In her words, Tesselated Pavement is "a bench of sandstone along the shore in the Tasman Peninsula that has these bizarre cross sections that looked like city streets or pavement, but it was all totally natural!" She and many other students were captivated by the vibrant kelp forests they saw along the shorelines, and the "beautiful tide pools filled with anemone, urchins, and mussels" (Libby '19).

Sustainable Energy Principles and Practices in India

Professor of Physics Arjendu Pattanayak took 12 Carleton students on a 14-day winter break program in India. This program focused on giving students hands-on experience in understanding global energy issues, policies, and practices.

Students started their journey with a Fall term course, Sustainable Energy Principles and Design. This physics-based course aimed at understanding the basic design principles and policy implications of sustainable engineering. Students worked to design their own renewable energy civic engagement project, which they will continue to work on in the Winter term.

While in India, the students traveled to an array of locations, including Delhi, Jaipur, Tilonia, Chennai, Pondicherry, and Auroville. At each stop, the group participated in activities designed to engage and increase their understanding of the complexities of developing, implementing, and maintaining sustainable energy. For example, they attended a conference in Delhi on evaluating the issues and costs of government-provided free electricity. In Tilonia, they learned how the Barefoot College is providing rural women with economic opportunities such as solar engineering. And in Auroville, the students helped to install solar panels. Despite the 90 degree heat, Anthony Cho ('21) found the project very rewarding: "We actually got the solar panels to pump water uphill. We were able to offset our carbon output during our travel by setting up the panels, which really is cool."

Overall, the students on the program were happy with the experiences and the first-hand knowledge they walked away with. Emily Schwartz (Physics '19) reflected that "I knew going into it that it would be a transformative experience and I was right. As cliché as it is, I view the world in a different way now...I am very conscious of my plastic usage and I have cut about 90% of my beef and lamb consumption." She went on to explain that the program really drove home the statistics she had learned for the program, such as 300 million people in the state of Uttar Pradesh are without power, the gender ratio in India is 927 women to 1000 men. She has also experienced first-hand India's most polluted cities. Anthony Cho explained how surprised he was to learn that man-made methods of harnessing energy are so much less efficient than their natural counterparts. During winter term Anthony hosted an upcycling workshop aimed at taking concepts learned through his time abroad to build awareness of waste management issues back at Carleton.

ENTS EvENTS

Peter Kareiva: Distinguished Wurttele Visitor

This fall the Carleton Environmental Studies Program welcomed Peter Kareiva as its 2018 Distinguished Wurttele Visitor. Trained in ecology and applied mathematics, Peter Kareiva is Director of the Institute for Environment and Sustainability. His long career includes service as the head scientist at The Nature Conservancy and director of the Division of Conservation Biology at NOAA's Seattle fishery lab. Today, he focuses on promoting interdisciplinary approaches to environmental problems. His most recent book is *Effective Conservation Science: Data not Dogma* (Oxford University Press, 2017).

While on campus, Professor Kareiva visited several classes and engaged students in small scale discussions, had dinner with faculty, and gave a campus-wide presentation. His public talk focused on the need for environmentalists to move past the negative, as he called "the doom and gloom" narrative of climate change, and find ways to promote public interest through more positive, action-inducing stories. Professor Kareiva also emphasized the importance of consumer power to pressure businesses into curbing emissions and helping fight climate change. He believes the next step in the environmental movement is to build environmental initiatives into the framework of large-scale corporations.

Spotlight on Climate Action Week 2019

Every winter, the Sustainability Office hosts Climate Action Week, a series of weekend events highlighting sustainability efforts on campus. The theme of this year's Climate Action Week was "We Are Water," chosen to honor Northfield's decision to declare 2019 the "Year of Water." Events included a State of the Cannon River presentation, a water policy panel, and a film festival in partnership with the Cannon River Watershed Partnership.

The week kicked off with a festival in the Great Hall aimed at engaging students in sustainability. Organizations represented included Northfield's Climate Action Plan Committee, Divest Carleton, Student Advocates for Reproductive Choice, Fellowship in Christ, Carls for the Boundary Waters, ECO (Environmental Carls Organized), and MN350. Another popular event was a water-themed trivia night at the Cave, which offered a fun and interactive way to learn about water issues on a local and global level.

Climate Action Week also featured the Water Challenge, in which residence halls competed to reduce water consumption. Throughout the week, Watson Hall and Davis Hall consumed the least water, winning an ice cream party for all residents!

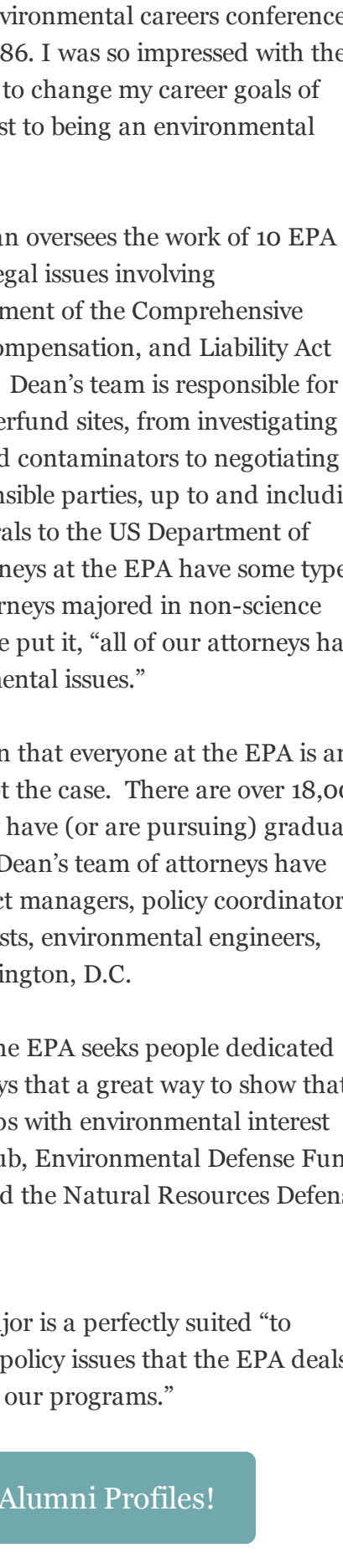
Student Internships

Caroline Hall: Unity Gardens

Every year, the Environmental Studies Program provides funds for our majors to do cool, unpaid summer internships. This past summer Caroline Hall (ENTS '20) worked as a volunteer for Unity Gardens, a nonprofit in South Bend, Indiana. This was Caroline's second year volunteering to promote food security and food justice. Throughout Caroline's 12-week internship, she tended gardens, worked at the local farmers' market, helped run community events, and served as a kids' camp counselor and instructor. Through the internship, Caroline developed skills in sustainable gardening, chicken and goat rearing, medicinal herbs, and insect identification.

Christian Nielsen: Conservation in Paris

Christian Nielsen (ENTS '19) spent two months of his summer working as a research assistant in Paris, France for CESCO (Centre d'Ecologie et des Sciences de la Conservation). His work included field research such as tagging birds and cataloging plants, geospatial statistical analysis, and editing/translating scientific articles from English to French.



Nasra Mohamed

Nasra Mohamed (ENTS '20) followed her interest in conservation to the African Ethnology Department of the American Natural History Museum, where she studied pharmaceutical companies in Arusha, Tanzania. Her work included compiling academic literature, evaluating bibliographies and requesting additional research materials. During this time Nasra also worked alongside high school students as part of a mentorship program pairing high schoolers with college students in science-based fields.

COMPS Symposium 2019

For their comprehensive exercises, the Class of 2019 focused on various environmental, social, and economic topics relating to this year's themes: Sustainability and Wildlife.

Topics:

- *"Tapping into Sustainability: How Local Craft Breweries an Ethic of Sustainability through Community Building and Development of Place-Based Identity"* by Mayte Aldrett, Emma Dempsey, and James Harren
- *"Tracking Newspaper Reporting on Wolves in Minnesota in the Years Immediately Following Their Listing and Delisting from the Endangered Species Act"* by Caroline Harvey, Christian Nielson, and Thu Nguyen

[Click here for a recap of each presentation along with a copy of the studies.](#)



Interview with Nancy Braker

Nancy Braker is a Biology '81 alumna and Arboretum Director at Carleton. She has been involved in the ENTS department since she came back to Carleton in 2007. We interviewed Nancy about her work with the Nature Conservancy, the classes she's taught at Carleton, and her current position managing the Arb and Naturalist program.

[Click her photo to read the interview!](#)

Looking to Next Year

New Courses

Next year Dan Maxbauer will be teaching three new classes in the Geology Department. His aim for these courses is to help students understand how natural forces and feedbacks can drive climate change and to use this understanding to frame decisions on energy consumption, land use changes, and sustainability.

Professor Maxbauer's Fall term course, "Carbon and Climate" (ENTS 220), will focus on modeling the Earth system with a view to understanding "how past changes in climate have lead to shifts in biogeochemical cycles, mostly in respects to carbon." This class will include a lab highlighting a local watershed as a system of study.

"Paleoclimate" (GEO 315) will be offered for the first time during winter term of 2020. Although modeled on his 100-level Climate Change and Geology course, students in advance course will work in conjunction with the [LacCore, Lake Core Research Center](#) at the University of Minnesota.

Spring term professor Maxbauer will teach the new introductory course "Introduction to Climate Science" (GEO 135), which will feature "exposure to aspects of paleoclimate and research." Throughout the term, students will take multiple field trips to the University of Minnesota and hear lectures from their professors on paleoclimate and related studies.

[Click here for the full interview with Geology Professor Dan Maxbauer on his career, the importance of Geology and his new courses.](#)

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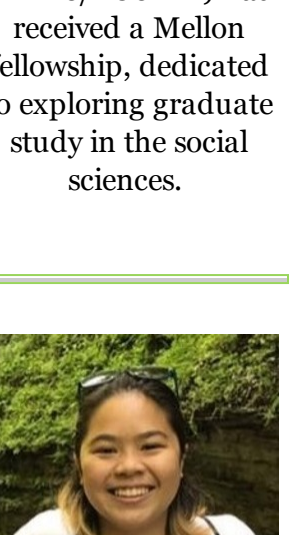
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Student Editors: Caroline Harvey & Caroline Hall

What's Inside?

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Student Awards



Casper Award
James Harren ('19) was awarded the ENTS Program's Mike Casper award. This award recognizes superior academic achievement and energy and leadership in support of understanding and protecting the environment. Click his photo to see past recipients.



Mellon Graduate School Exploration Fellowship
Andrew Farias (ENTS/POST '21) has received a Mellon fellowship, dedicated to exploring graduate study in the social sciences.



Ann Goodson Weiner Prize in Theater and Dance
Thu Nguyen (ENTS/DANCE '19) was honored for her creativity and contribution to the Theater & Dance Department.



Sarah F. Hamm-Alvarez '86 And R. Michael Alvarez '86 Award For Applied Research
Jack Schill ('21) was recognized for his GIS-based and joint student-faculty research.



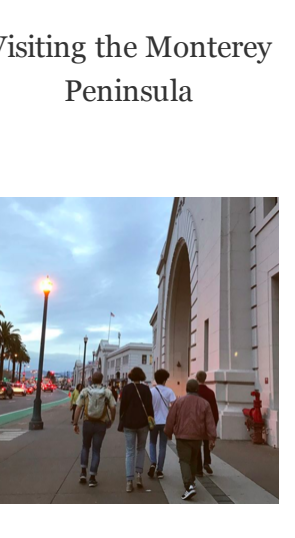
Visions of California
Winter 2019



Visiting the Monterey Peninsula



Carls exploring San Francisco, CA



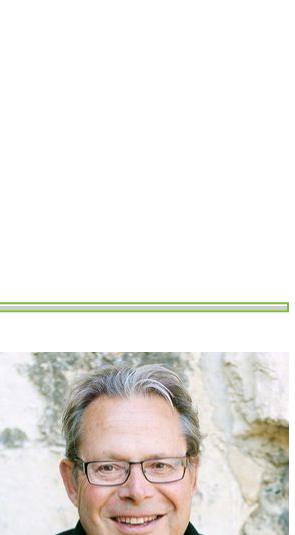
Conservation in Tasmania 2018-19



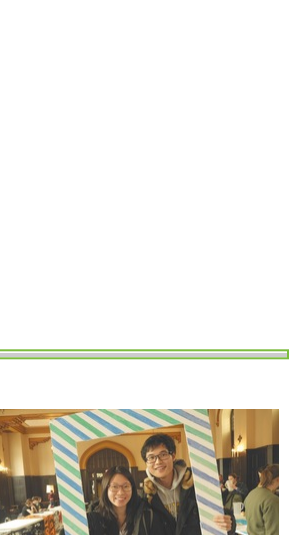
The Tesselated Pavement (Eaglehawk Neck, Tasmania)



Carls observing a tide pool



Sustainability in India 2018-19



Students at the Climate Action Week kickoff festival



The Climate Action Week Water Policy Panel

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