



AMERICAN MUSEUM  
OF NATURAL HISTORY

# CENTER FOR BIODIVERSITY AND CONSERVATION

## Student Conference on Conservation Science - New York

October 24-26, 2018

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American Museum of Natural History

The 2018 Student Conference on Conservation Science – New York is organized by the **Center for Biodiversity and Conservation** at the American Museum of Natural History.

Major funding for the 2018 Student Conference on Conservation Science has been provided by **Marshall M. Weinberg**.

*Conference partners:*



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Cambridge University Press

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Full presentation abstracts are available on the SCCS-NY website: [www.amnh.org/sccsny](http://www.amnh.org/sccsny)

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# **Student Conference on Conservation Science - New York**

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## **Acknowledgements**

The Student Conference on Conservation Science (SCCS) is the only international conference designed for graduate students, post-doctoral fellows, and early-career professionals pursuing or considering the field of conservation science. Interactions with established conservationists encourage collaborations and advance research.

The Student Conference on Conservation Science-New York 2018 (SCCS-NY) is a sister conference to the highly successful SCCS-Cambridge begun in 2000 by the University of Cambridge. Other SCCS conferences now include SCCS-Bangalore, SCCS-Australia, SCCS-Beijing, and SCCS-Hungary.

SCCS-NY 2018 is organized by the American Museum of Natural History's Center for Biodiversity and Conservation.

### **SCCS-NY Content and Logistics Coordination:**

Felicity Arengo  
Hellin Brink  
Kristin Douglas  
Margaret Law  
Ana Luz Porzecanski  
Eleanor Sterling

### **Technology Coordinators:**

Tony Alexander  
Pete Ersts

### **Program Design:**

Nadav Gazit

## General Information

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### **Photography and Film Recording Policies:**

SCCS-NY is designed to foster dialogue and collaboration between the students, postdoctoral fellows, early-career professionals, and established conservationists in attendance. We care deeply about preserving the integrity of the work, research, and personal interactions of our speakers, mentors, presenters, and attendees.

In order to find a balance between the expectations of presenters and attendees, and to make the meeting a safe and comfortable space for everyone, we have some basic guidelines.

Please keep in mind CBC's meeting Code of Conduct and apply it to your communication online (and in person!). Harassment, intimidation, or discrimination in any form will not be tolerated. Our speakers and presenters have invested considerable time and effort in the development of their material and copyright laws apply.

We encourage open discussion on social media and ask attendees to share the science and ideas presented at SCCS with their followers. However, we ask that you be especially cautious about discussing the work that is being presented. Due to the nature of this conference you may be hearing about new or unpublished work that may not be suitable for sharing.

If you choose to write about the conference following the scheduled sessions, you must gain approval from speakers/presenters prior to quoting, publishing, or otherwise referencing their research on the Internet or through other forms of media.

### **Wireless Internet Access:**

Please follow these steps to access the AMNH-GUEST network:

1. Open the menu of wireless networks on your device.
2. Select AMNH-GUEST from the networks presented and connect.
3. Your wireless device should automatically present you with a web page asking you to accept the terms and conditions for the use of AMNH-GUEST. Click on the "accept" button at the top right of the screen to complete your connection.
4. If the Terms and Conditions page is not automatically presented by your system, open your web browser and attempt to connect to a web page. Your browser will be redirected to the Terms and Conditions page. Click on the "accept" button at the top right of the screen to complete your connection.

Conference attendees receive a 10% discount in all museum shops with conference badge.

# Code of Conduct

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The Center for Biodiversity and Conservation (CBC) at the American Museum of Natural History (AMNH) works to promote a welcoming environment at its meetings that is safe, collaborative, supportive, and productive for all attendees, including volunteers, exhibitors, and service providers, and that values the diversity of views, expertise, opinions, backgrounds, and experiences reflected among the conference attendees. To that end, we expect all participants—attendees, speakers, mentors, and volunteers—to follow the **Code of Conduct** during the conference. This includes conference-related social events, and in related online communities and social media.

## Expected Behavior

- Treat everyone with respect and consideration.
- Communicate openly and thoughtfully with others and be considerate of the multitude of views and opinions that are different than your own.
- Be respectful in your critique of ideas.
- Be mindful of your surroundings and of your fellow participants. Alert CBC staff if you notice a dangerous situation or someone in distress.
- Respect the rules and policies of all venues associated with the meeting.
- Uphold and support the CBC's commitment and actions to improve the event's environmental and social impacts.
- Behave in accordance with professional standards and applicable laws.

## Unacceptable Behavior

- CBC and AMNH do not tolerate discrimination or harassment on the basis of race, creed, color, religion, age, disability, marital status, partnership status, gender, sex, sexual orientation, gender identity, gender expression, genetic information, pregnancy, alienage or citizenship status, current or former participation in the uniformed services, status as a veteran, or national or ethnic origin, or on account of any other basis prohibited by applicable City, State, or Federal law.
- Sexual language and imagery, or any other potentially harassing material or behavior including but not limited to verbal comments, intimidation, inappropriate physical contact or unwelcome sexual attention, are not permitted at the conference and may not be incorporated into the demos or presentations.
- Participants asked to stop any harassing behavior are expected to comply immediately and to not repeat their behavior, or may be required to leave the conference, in the CBC's sole discretion.
- Examples of unacceptable behavior include, but are not limited to inappropriate comments related to any of the categories listed above; harassing photography or recording; threatening, intimidating or stalking anyone at the conference as an attendee, staff, or presenter or otherwise disruption of talks at the conference or other associated events organized by the CBC.

## Consequences

- Anyone requested to stop unacceptable behavior is expected to comply immediately.
- CBC staff (or their designees) or Museum Security may take any action deemed necessary and appropriate, including immediate removal from the conference without warning or refund.
- The CBC reserves the right to prohibit attendance at any future meeting or conference organized by the CBC.



### Reporting Unacceptable Behavior

If you are the subject of unacceptable behavior, have witnessed any such behavior, or have any other concerns relating to unacceptable behavior, please immediately notify a CBC staff member on-site (in-person, by phone, or by email). CBC staff can be identified by the blue ribbon on their conference ID badge.

- Visit our information desk in the conference registration area.
- Call 212-769-5742.
- Email [biodiversity@amnh.org](mailto:biodiversity@amnh.org).
- Individuals may also report prohibited conduct confidentially or anonymously through the Museum's Compliance Hotline, by calling 1-800-620-5571. This 800-number is managed by an outside, independent service provider.

Conference staff can provide support, including but not limited to:

- Contacting AMNH security or local law enforcement.
- Contacting AMNH Title IX officers in Human Resources:
  - Tracey Bessellieu: 212-769-5462, [tbessellieu@amnh.org](mailto:tbessellieu@amnh.org)
  - Kala Harinarayanan: 212-769-5226, [kharinarayanan@amnh.org](mailto:kharinarayanan@amnh.org)
  - Daniel Scheiner: 212-769-5109, [dscheiner@amnh.org](mailto:dscheiner@amnh.org)
- Otherwise assisting those experiencing unacceptable behavior to ensure that they feel safe for the duration of the conference.

## Agenda: Wednesday, October 24<sup>th</sup>



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<b>8:00am</b>	<b>Registration and Volunteer Check-In Breakfast</b>	<i>77<sup>th</sup> Street Lobby Grand Gallery</i>
<b>9:00am</b>	<b>Welcome and Introduction</b>  <i>Ana Luz Porzecanski, Director, Center for Biodiversity and Conservation, American Museum of Natural History</i>	<i>Kaufmann Theater</i>
<b>9:15am</b>	<b>Plenary Address</b>  <i>Arturo Massol-Deyá, Executive Director of Casa Pueblo; Professor, University of Puerto Rico</i>	<i>Kaufmann / Linder Theaters</i>
<b>10:00am</b>	<b>Talk Session: Human Dimensions</b>  Session Chair: <i>Ana Luz Porzecanski, Director, Center for Biodiversity and Conservation, American Museum of Natural History</i>	<i>Kaufmann / Linder Theaters</i>
	<b>Hilary Byerly</b> <i>University of Vermont</i>	Are forest managers influenced by peers or peewees? Experimental evidence on social information and songbird habitat conservation
	<b>Urvi Gupta</b> <i>Wildlife Institute of India</i>	Life in cities: human-animal interface, perceptions, and co-existence
	<b>Shruti Mokashi</b> <i>State University of New York College of Environmental Science and Forestry</i>	Local perceptions of village sacred forests in Western India
<b>10:55am</b>	<b>Break</b>	<i>Hall of Human Origins</i>
<b>11:15am</b>	<b>Talk Session: Species-Based Conservation</b>  Session Chair: <i>Rae Wynn-Grant, Fellow, National Geographic; Visiting Scientist, Center for Biodiversity and Conservation, American Museum of Natural History</i>	<i>Kaufmann / Linder Theaters</i>
	<b>Danielle Brown</b> <i>George Mason University</i>	Sightings and vessel risk to humpback whales in the northwestern New York Bight
	<b>Zoliswa Nhleko</b> <i>University of Florida</i>	Effects of poaching, density & environmental conditions on white rhino survival rates
	<b>Maia Crews-Erjavec</b> <i>Augsburg University</i>	Phenology of Canada Darner ( <i>Aeshna canadensis</i> ) dragonflies in Minnesota
	<b>Pamela Narváez</b> <i>University of Calgary</i>	Effects of fires on lemur functional diversity and abundance in southeast Madagascar
<b>12:25pm</b>	<b>Group Photo</b>	<i>Front Steps, Central Park West</i>
<b>1:00pm</b>	<b>Lunch: Mentor-Hosted Tables</b>	<i>School Lunchrooms, Lower Level</i>

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**2:30pm**      **Speed Talk Session: Species and Habitats**      *Kaufmann / Linder Theaters*

Session Chair: **Patrick Shea**, *Ph.D. candidate, The Graduate Center, City University of New York*

<b>Christian Rivera</b> <i>University of Florida</i>	Assessing ecological and social success in a community-based sustainable harvest program
<b>A. Z. Andis Arietta</b> <i>Yale University</i>	Safe passage: a performance assessment of large mammal highway crossing structures
<b>Aishwarya Bhattacharjee</b> <i>Queens College, City University of New York</i>	Population dynamics of Old World vultures in the Annapurna Conservation Area, Nepal
<b>Abigail Johnson</b> <i>Hunter College</i>	The effects of hive protections on honey badger depredation of beehive fences
<b>Mary Dushay</b> <i>Sacred Heart University</i>	Horseshoe crab population decline, climate change and living shorelines
<b>Opeyemi Adedoja</b> <i>Stellenbosch University</i>	Insect-flower interaction networks among endemic pollinator over elevation gradient

**3:15pm**      **Speed Talk Session: Species Conservation**      *Kaufmann / Linder Theaters*

Session Chair: **Felicity Arengo**, *Associate Director, Center for Biodiversity and Conservation, American Museum of Natural History*

<b>Anne Clay</b> <i>George Mason University</i>	Compassion on the ark: balancing animal welfare with conservation in zoos
<b>Danielle Crain</b> <i>Baylor University</i>	Waxing nostalgic: 100+ years of pregnancies using whale earwax
<b>Pavan Khosla</b> <i>Hunter College, City University of New York</i>	Evolutionary relationships of subspecies within the Boa constrictor species complex
<b>Rebecca Brunner</b> <i>University of California, Berkeley</i>	Functional traits along a disturbance gradient: implications for Anuran conservation
<b>Mai Fahmy</b> <i>Fordham University</i>	iDNA from blood feeding leeches for assessing vertebrate diversity in Madagascar
<b>Amelia Bradley</b> <i>Manhattan College</i>	Investigating temporal trends in behavior and acoustics of the Antillean manatee

**3:50pm**      **Speed-Talk Discussion and Break**      *Hall of Human Origins*



**4:25pm**      **Talk Session: Genes and Diet**      *Kaufmann / Linder Theaters*

Session Chair: **Anthony Caragiulo**, *Assistant Director of Genomic Operations, Institute for Comparative Genomics, American Museum of Natural History*

**Justin Bernstein**  
*Rutgers University-Newark*      DNA barcoding of the endemic herpetofauna of the New Caledonia biodiversity hotspot

**Vanessa Van Deusen**  
*Barnard College of Columbia University*      A next generation approach to the diet analysis of green crab in the Gulf of Maine

**Evan Eskew**  
*EcoHealth Alliance*      Gene expression differs in susceptible and resistant frogs exposed to the pathogen Bd

**Cassandra Powell**  
*University of California, Santa Cruz*      Eating through acidification: how a diverse diet may be a buffer for Pinto abalone

**5:40pm-7:30pm**      **Poster Session, Resource and Career Fair + Pizza Reception**      *Milstein Hall of Ocean Life, 1<sup>st</sup> floor*

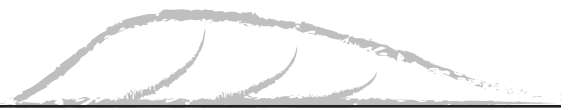
**Poster presenters are asked to be at their posters for in-depth discussion with mentors and attendees between 6:00-7:00pm.**

Network and gather information about future careers and resources in conservation science!

**Resource and Career Fair Exhibitors:**

- Applied Biomathematics
- Consortium for Inter-Disciplinary Environmental Research
- Conservation Leadership Programme
- City University of New York (CUNY) Ecology, Evolutionary Biology, and Behavior
- EcoHealth Alliance
- Environmental Defense Fund
- Environmental Leadership Program
- International Union for Conservation of Nature (IUCN)
- Island Press
- Lincoln Institute of Land Policy
- NASA DEVELOP
- National Geographic Society
- Network of Conservation Educators and Practitioners (NCEP)
- NYC Parks - Wildlife Unit
- Ocean Conservancy
- Point Blue Conservation Science
- RAY Fellowship
- Richard Gilder Graduate School (RGGS)
- Smithsonian Institution
- Society for Conservation Biology (SCB)
- Society for Marine Mammalogy (SMM) Student Chapter
- SPECIES
- Student Conservation Association (SCA)
- Turtle Conservancy
- University of Georgia - Center for Integrative Conservation Research
- Wildlife Conservation Society
- Wiley
- Women in Natural Sciences (WINS)
- Yale University Press

<b>8:00am</b>	<b>Breakfast and Registration</b>	<i>77<sup>th</sup> Street Lobby Grand Gallery</i>
<b>9:00am</b>	<b>Introduction</b> Eleanor Sterling, <i>Jaffe Chief Conservation Scientist, Center for Biodiversity and Conservation, American Museum of Natural History</i>	<i>Kaufmann Theater</i>
<b>9:15am</b>	<b>Plenary Address</b> Erika Svendsen, <i>Research Social Scientist, U.S. Forest Service</i>	<i>Kaufmann / Linder Theaters</i>
<b>9:50am</b>	<b>Talk Session: Economics</b> Session Chair: Eleanor Sterling, <i>Jaffe Chief Conservation Scientist, Center for Biodiversity and Conservation, American Museum of Natural History</i>	<i>Kaufmann / Linder Theaters</i>
	<b>Anubhav Vanamamalai</b> <i>Centre for Wildlife Studies, Bangalore</i>	Compensating for conflict: insights from India and a novel conservation intervention
	<b>Monique Sosnowski</b> <i>University of Bristol</i>	Ivory market price dynamics: determining trends and relevant factors since 1989
	<b>Babu Bhattarai</b> <i>Federation University</i>	The costs of big cat conservation for farming communities adjacent to tiger reserves
<b>10:40am</b>	<b>Break</b>	<i>Hall of Human Origins</i>
<b>11:00am</b>	<b>Talk Session: Managing Landscapes</b> Session Chair: Chandni Navalkha, <i>Program Manager, Land Conservation Programs, Lincoln Institute of Land Policy</i>	<i>Kaufmann / Linder Theaters</i>
	<b>Lauren Schmitt</b> <i>University of Michigan</i>	Shedding light on the shade: leaf litter decomposition in coffee agro-ecosystems
	<b>Clarice Borges Matos</b> <i>Universidade de São Paulo</i>	Caveats and limitations in testing the Habitat Amount Hypothesis
	<b>Chloe Debyser</b> <i>McGill University</i>	Prioritizing areas for forest connectivity and biodiversity conservation in Panama
<b>12:00pm</b>	<b>Lunch: Mentor-Hosted Tables</b>	<i>School Lunchrooms, Lower Level</i>



## 1:30pm **Speed Talk Session: Habitat Management** *Kaufmann / Linder Theaters*

Session Chair: **Alex Moore**, *Postdoctoral Conservation Research and Teaching Fellow, Center for Biodiversity and Conservation, American Museum of Natural History*

<b>Rafael Ramirez</b> <i>Comisión Nacional para el Conocimiento y Uso de la Biodiversidad</i>	Testing a new species risk assessment method using remaining habitat as proxy
<b>Catalina Zuluaga Rodríguez</b> <i>University of São Paulo</i>	Biomass for environmental planning: comparing remote sensed and field estimates
<b>Michael Allen</b> <i>Rutgers University</i>	Drivers of grassland bird population declines in the eastern United States
<b>Kaia Tombak</b> <i>Princeton University</i>	Managing PAs to support fitness-enhancing social behavior in an endangered zebra
<b>Anant Deshwal</b> <i>University of Arkansas</i>	Scrubland habitat degradation and effects on bird communities in Eastern Ghats, India
<b>Denise Spaan</b> <i>Universidad Michoacana de San Nicholas de Hidalgo</i>	Feeding tree basal area and forest loss determine spider monkey numbers on transects

## 2:15pm **Speed Talk Session: Social-Ecological Systems** *Kaufmann / Linder Theaters*

Session Chair: **Pua'ala Pascua**, *Biocultural Specialist and Biodiversity Scientist, Center for Biodiversity and Conservation, American Museum of Natural History*

<b>Diana Ruiz</b> <i>Pontificia Universidad Javeriana</i>	Community gardens: opportunity for the conservation of urban biodiversity?
<b>Amos Zerah</b> <i>University of California, Irvine</i>	Gathering firewood and data for sustainable forests and cultures
<b>Isabella Romitelli</b> <i>University of São Paulo</i>	Inverted edge effects on carbon stocks in human-dominated landscapes
<b>Hyeon Jeong Kim</b> <i>University of Washington</i>	Tracking the illegal pangolin trade with genetics, detection dogs, and museum samples
<b>Yichao Zeng</b> <i>University of Florida</i>	Modeling changes in giant panda distribution in a coupled human and natural system
<b>Rosiana Lagi</b> <i>The University of the South Pacific</i>	Koga puipui – conservation, food and human security
<b>Ganga Ram Regmi</b> <i>Global Primate Network and Snow Leopard Conservancy</i>	Piloting foxlights to promote coexistence of carnivores with local herders in Nepal

## 2:55pm **Speed-Talk Discussion and Break** *Hall of Human Origins*

**3:35pm**      **Talk Session: Managing Landscapes**      *Kaufmann / Linder Theaters*

Session Chair: **Pete Galante**, *Biodiversity Informatics Specialist, Center for Biodiversity and Conservation, American Museum of Natural History*

<b>Jenny Isaacs</b> <i>Rutgers University</i>	Conservation archipelago: tracing the Western Hemisphere Shorebird Reserve Network
<b>Paulo Quadri</b> <i>University of California, Santa Cruz</i>	Age and habitat driven responses to climate change in high altitude tropical pines
<b>Margit Bertalan</b> <i>University of North Carolina-Chapel Hill</i>	Fencing for conservation: wildlife, communities, and forests in Kenya
<b>Vanessa Kichline</b> <i>Bard College</i>	Strategies for enhancing carbon stocks in smallholder shade coffee systems
<b>Tehlu Singh</b> <i>Wildlife Institute of India</i>	Estimating the density and habitat use of ungulates in a unique tiger landscape

**5:20pm**      **Award Ceremony and Closing Reception**      *Wallach Orientation Center, 4<sup>th</sup> floor (The Titanosaur)*

Closing remarks and awards presentation for best talks, speed talks, and posters by **Ana Luz Porzecanski**, *Director, Center for Biodiversity and Conservation, American Museum of Natural History* and **Felicity Arengo**, *Associate Director, Center for Biodiversity and Conservation, American Museum of Natural History*.

*We thank Yale University Press, Island Press, Applied Biomathematics, Fauna & Flora International-Cambridge University Press and Oryx—The International Journal of Conservation for their generous donation of conference prizes.*

**6:30pm-8:00pm**      **Public Panel Event**      *Kaufmann Theater*  
**Mack Lipkin Man and Nature Series Panel Discussion**

**Conservation and Resilience: What Climate Change is Teaching Us**

With panelists:

- **Arturo A. Massol-Deyá**, *Professor, Department of Biology at the University of Puerto Rico; Associate Director, Casa Pueblo*
- **Erika Svendsen**, *Research Social Scientist, U.S. Forest Service*
- **Jennifer Bolstad**, *Landscape architect, an educator and a community organizer for social and environmental justice, Local Office*
- **Walter Meyer**, *Urban designer, Local Office*

Moderated by **Ana Luz Porzecanski**, *Director, Center for Biodiversity and Conservation, American Museum of Natural History*

## Agenda: Friday, October 26<sup>th</sup>: Workshops

Please check-in at the Kaufmann Desk at least 15 minutes before your workshop begins.  
There will be a short break at noon for independent lunch.

9:00am-  
12:00pm

### Workshop Session I

Led by:

**What Am I Doing With My Life?  
Career Planning for the Modern  
Conservationist**

*Kaufmann Theater*

**Mary Blair, Alex Moore, Camera Ford**, Center for Biodiversity and Conservation, American Museum of Natural History; **Alexandra Sutton Lawrence**, Duke University; **Christian Rivera**, University of Florida

**Fundraising 101: Developing a  
Fundraising Strategy for Grants and  
Scholarships**

*Portrait Room*

**Kate Mastro**, Graduate Scholarship Program, Wildlife Conservation Society; **Jill Spear, Julia Luthringer**, Early Career Grants, National Geographic Society

**Spatial Analysis in R**

*Rose Center Classroom 2*

**Vijay Ramesh**, Columbia University

**Hacking for Conservation**

*Calder Lab*

**Cassie Hoffman, Tom Quigley, Jay Sullivan**, Conservation X Labs

**Science Communication: Breaking  
Barriers and Building Bridges**

*Room 319*

**Sarah States, Maria Wheeler-Dubas**, Phipps Conservatory and Botanical Gardens

12:45pm-  
1:45pm

### Behind-the-Scenes Museum Collection Tours

*Meet at  
Kaufmann Desk*

2:00pm-  
5:00pm

### Workshop Session II

Led by:

**Confronting Harassment and Assault  
in the Field**

*Room 319*

**Erika Zavaleta**, Howard Hughes Medical Institute, University of California

**Designing, Applying, and Interpreting  
Conservation Genetics Studies**

*Calder Lab*

**Stephen Gaughran, Gisella Caccone**, Yale University; **Evon Hekkala**, Fordham University; **George Amato**, American Museum of Natural History

**Zooniverse and Wildbook—Starting  
With Computer Vision For Beginners**

*RGGGS Lab*

**Darya Chernikhova**, Gotham Green Software

**Species Distribution Modeling for  
Conservation in R and Wallace**

*Sackler Lab*

**Matthew Aiello-Lammens**, Pace University; **Jamie Kass, Andrea Paz, Gonzalo Pinilla Buitrago**, City University of New York

**Inspired Cover Letter, Meticulous  
Resume, and Impressive Interview  
Skills—Getting the Tools for Your  
Optimal Conservation Job!**

*Portrait Room*

**Sylvia Atsalis**, University of Chicago

**Stand Out for the Right Reasons:  
Designing Effective Posters and  
Presentations**

*Linder Theater*

**Nadav Gazit**, Center for Biodiversity and Conservation, American Museum of Natural History



## Arturo A. Massol-Deyá

*Executive Director of Casa Pueblo; Professor, University of Puerto Rico*

### **The role of conservation initiatives in Hurricane Maria response and energy transformation in Puerto Rico**

The Caribbean is considered a 'hotspot' for biodiversity, with its tropical forests harboring one of the most diverse plant communities on the Planet. Puerto Rico's forests have recovered in the last hundred years from extreme deforestation due to monocultures, reaching ~ 60% of forest cover. However, changes in land use threaten its successional progress.

Casa Pueblo is a community-based organization in the central mountains of Puerto responsible for protecting the region and its critical watersheds from an open pit mining proposal and a massive gas pipeline. We spearheaded the designation of new forest units, managed by communities, thus changing the Island's forestry policy and catalyzing an increase of protected areas from 4% to 8%. After Hurricane María in September 2017, our organization and community responded to the emergency aiming to change the energy landscape of our fossil fuel dependent country to one based on renewable energy sources.

Puerto Rico is 98% dependent on centralized power generation with imported fossil fuels. Hurricane María obliterated Puerto Rico's electric grid, leading to the longest power outage in U.S. history, disrupting medical care for thousands and contributing to more than 2,975 deaths.

Casa Pueblo has been operating with solar energy since 1999. After the hurricane, we served as an energy oasis, distributed over 14,000 solar lamps, installed dozens of solar refrigerators in rural communities, operated a radio station, founded a solar cinema, provided power to hospitals, classrooms, a barber shop, mini markets in the rural areas, and over 25 homes with solar energy.

Today, Casa Pueblo is promoting solar production throughout Puerto Rico with their 'Marcha del sol' (The Sun's March). We recognize the need for non-solar energy as well, and are working to develop a hybrid system that will use the byproducts of coffee and wood, which will meet the energy needs of rural communities. Puerto Rico can become a climate resilience hub embracing the renewable energy sources that abound in our Island (sun, wind, water, and biomass), and building robust micro-grids, hybrid systems and intelligent networks that can increase our resilience. Community management in the conservation of natural resources seeks to fulfill our global responsibility in facing climate change and social inequality.

## Erika Svendsen

*Research Social Scientist, U.S. Forest Service*

### **People as 'Agents of Change': understanding and supporting stewardship to enhance resilience**

In the context of climate change, including coastal flooding and extreme heat events, managers are increasingly turning to natural solutions as part of an integrated set of resiliency strategies to mitigate the effects of these disturbances. While green infrastructure—including engineered coastlines, wetlands, bioswales, trees, and woodlands—is seen as a crucial biophysical buffer as part of these systems, it is less often considered as a platform for social engagement that can, in turn, be turned to foster social resiliency. This talk shares methodologies and key findings for understanding and supporting stewardship in order to enhance our environment but also to foster social trust and resilience. In particular, I will share the Stewardship Mapping and Assessment (STEW-MAP) framework that was originally developed in New York City, and since has been replicated in approximately a dozen cities across the U.S. and the globe, as a means to analyze, visualize, and strengthen stewardship as a system.



**Lizbeth Aguirre-Jaimes**

*University of California, Santa Cruz*

Using stable isotopes to examine the diet of a climate-vulnerable alpine songbird

**Iftikar Ahmed**

*Stony Brook University*

Phenological change of local migratory bird populations

**Cullen Anderson**

*Auburn University*

Estimating fosa population parameters in the rainforests of Madagascar

**John Armstrong**

*University of California, Santa Cruz*

Biodiversity implications of urban solar energy

**Nathan Auyeung, Romilinda Cruz-Gonzalez**

*Science Research Mentoring Program, American Museum of Natural History*

Evaluating nest-predator excluder effectiveness with population viability analysis

**Joshua Barry**

*Pace University*

Pumas and other predators as ecosystem engineers for carrion-dependent invertebrates

**Angela Benton, Gabriella Sosa Medina**

*Science Research Mentoring Program, American Museum of Natural History*

Insights into bacterial gut, skin, and oral microbiomes of free-ranging bobcats

**Shazneka Blue**

*Kean University*

Assessment of dead wood fungi biodiversity in parks and reserves across New Jersey

**Louise Bodt**

*New York University*

Genetic diversity of the invasive European starling in North America

**Brandon Boxler**

*University of Maine*

Monarch butterfly roost site selection & viability east of the Appalachian Mountains

**Daniel Cárcamo**

*Universidad de Valparaíso*

Are the southern elephant seal extending the distribution in the southeast Pacific?

**Kristi Collom**

*Hunter College*

Passive acoustic monitoring of marine mammal habitats in Belize

**Sonia Dattaray**

*EcoHealth Alliance*

Valuation of ecosystem services in South East Asia: Malaysia, Indonesia, and Thailand

**Allison Devlin**

*State University of New York College of Environmental Science and Forestry*

Despots of the wetland: density, resource use & demography of jaguars (*Panthera onca*)

**Jessica Espinosa**

*Columbia University*

Life in plastic, it's (not) fantastic: impact of pollution on hermit crabs in Fiji

**Hanan Farah**

*University of Minnesota Twin Cities*

Narrowing the gene pool: assessing resistance to nutrient and drought stress in crop sunflower

**Adriana Fratz**

*EcoHealth Alliance*

Distribution of rabies within the geographic ranges of bat species in Canada

**Daniel Gurdak**

*State University of New York College of Environmental Science and Forestry*

Evaluating surrogate roles in resource management of the giant arapaima fish

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*Hofstra University*

Effects of nitrogen loading in Hudson River estuaries as shown by *Malaclemys terrapin*

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*San Francisco State University*

The relationship between *A. macrodactylum* and Bd: a retrospective analysis

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*Boston University*

Identifying resilient individuals of an endangered coral for reef restoration

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*Columbia University*

Genetic structuring of two Hawaiian corals, *Montipora capitata* and *Porites compressa*

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*State University of New York College of Environmental Science and Forestry*

A review of biogeographic zones for southern African freshwater fishes

**Vanessa Man, Ramon Pimentel**

*American Museum of Natural History, Science Research Mentoring Program*

eDNA: a promising tool for assessing mammalian biodiversity

**Camila Meneses**

*University of the Philippines Los Baños*

Herpetofaunal diversity along elevational gradients of MG2NP, Sibuyan Island

**Johanna Mitra, Jessica Estrada**

*American Museum of Natural History, Science Research Mentoring Program*

Visualizing evolutionary relationships and climate change in South American birds

**Katherine Murphy**

*Pace University*

Exploring the Bronx Zoo: ex-situ practices that best serve conservation stewardship

**Amanda Neal**

*St. Francis College*

Stable seasonal populations of seals in the urban marine environment of New York City

**Mohan Pandey**

*Society of Natural Resource Conservation and Management*

Transhumance practice: boon or bust for the conservation of Himalayan landscapes?

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*University of Arkansas*

Do acoustic indices reflect the characteristics of bird communities in Arkansas?

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*Princeton University*

An exploration of movement ecology and dietary niche partitioning in an African tortoise

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*Tufts University*

Food security and the bushmeat trade: an interdisciplinary approach

**Alexandrea Safiq**

*Rutgers University*

The role of bio-cultural homogenization in coral reef conservation

**Emily Scott**

*Johns Hopkins Bloomberg School of Public Health*

Is avian biodiversity at risk in the tropical Andes? 10-year monitoring study results

**Patrick Shea**

*The Graduate Center, City University of New York*

Biodiversity assessment of Hawaiian coral reefs by environmental DNA analysis

**Vallari Sheel**

*North Carolina State University*

Figs and semal: trees in an urban jungle

## Guide to Posters

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### **Yue Shi**

*University of Washington*

Maternal gut microbiota of Chiru populations  
shift during the perinatal period

### **Devyani Singh**

*Clemson University*

Understanding social contexts of conservation:  
insights from Indian tiger reserves

### **Marian Vargas**

*Hofstra University*

Polychlorinated biphenyls in Hudson River  
estuaries: a test with *Malaclemys terrapin*

### **Anna Vera**

*American Museum of Natural History, Science  
Research Mentoring Program*

Spatial Ecology of Urban Coyotes along the East  
Bronx Waterfront, NYC

### **Savanna Wooten**

*University of Tennessee at Chattanooga*

*Ex situ* conservation physiology of the rare white  
fringeless orchid

### **Catherine Zhou, Pablo De Castro Gomez**

*American Museum of Natural History, Science  
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Deforestation rates in Madagascar's eastern  
humid forests

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## SCCS-NY Advisors, Reviewers, Mentors

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**Martha Groom**  
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*Columbia University*

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*American Museum of Natural History*

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*Columbia University*

**Minh Le**  
*American Museum of Natural History*

**Dennis Liu**  
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**Julia Luthringer**  
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**Kimberly Russell**  
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**Jill Spear**  
*National Geographic Society*

**Eleanor Sterling**  
*American Museum of Natural History*

**Don Stewart**  
*State University of New York College of Environmental Science and Forestry*



**Morgan Tingley**

*University of Connecticut*

**Anne Toomey**

*Pace University*

**Mike Treglia**

*The Nature Conservancy*

**Lina Valencia**

*Global Wildlife Conservation*

**Erin Vogel**

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**Paige West**

*Barnard College; Columbia University*

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AMERICAN MUSEUM OF NATURAL HISTORY

# CENTER FOR BIODIVERSITY AND CONSERVATION

The Center for Biodiversity and Conservation (CBC) at the American Museum of Natural History was established in 1993 in response to concern among its scientists over rapid species loss and increasing ecosystem degradation around the world, and to leverage Museum resources to heighten public understanding and stewardship of biodiversity. Entering its third decade, the CBC transforms knowledge into conservation action through pioneering multidisciplinary collaborative research, capacity development, and by convening and connecting key actors. The CBC has developed a distinctive approach, fostering co-creative processes with strategic partners across all of our programs and projects. CBC staff members, including multiple conservation scientists and outreach specialists, work closely with communities and local partners to establish common goals and research priorities; design, implement, evaluate, and adaptively manage model conservation programs; and share results with people facing similar challenges. Thus our work spans the full cycle of conservation action, connecting diverse perspectives and sources of knowledge to conservation problems and solutions.