American Museum of Natural History

Center for Biodiversity and Conservation

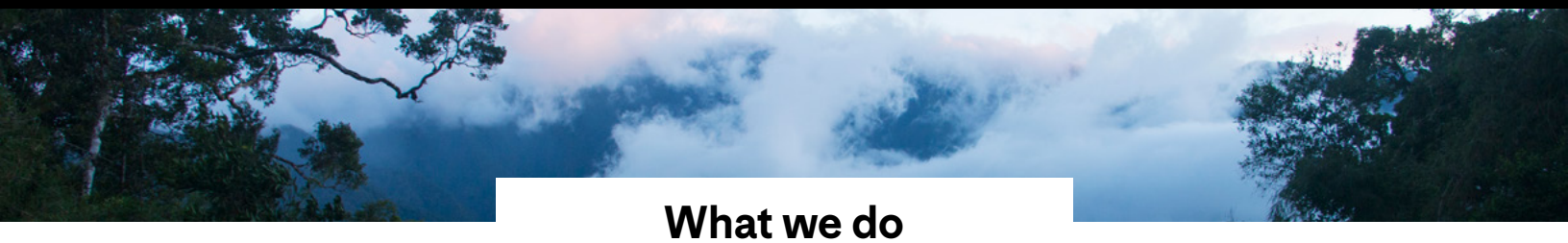


The common hoopoe (*Upupa epops*) near Tayma, Saudi Arabia
Photo: Yara Alshwairikh

Progress Update Fall 2026

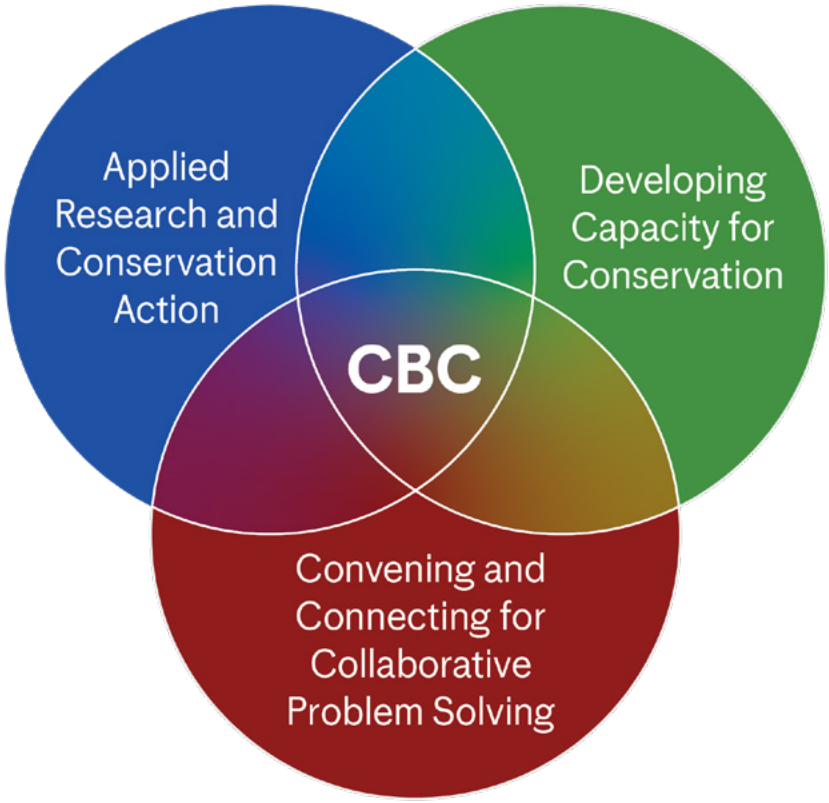
American Museum of Natural History

Center for Biodiversity and Conservation



What we do

For over 30 years, the Center for Biodiversity and Conservation (CBC) has been transforming knowledge into conservation action to sustain life on Earth. The challenge is both scientific and social, so we work by **connecting different strands of knowledge in our research**, **connecting different strands of knowledge in our research**, and **connecting people to each other**.



Both longstanding and new projects are helping us deepen synergies with other scientific work at the Museum, support decision-making under climate change, and contribute to local and regional biodiversity and climate resilience. We are pleased to share highlights from the Summer and Fall 2026 seasons through this progress report.

Appointments, Awards, and News

We are pleased to report that Dr. Angela Mejía has just joined the CBC as the Eleanor J. Sterling Postdoctoral Fellow, for a one-year period. The position was named in honor of former CBC Director and Jaffe Chief Conservation Scientist, the late Dr. Eleanor J. Sterling. Dr. Mejía, a geographer and spatial ecologist, has expertise in remote sensing, biodiversity, and conservation across the Americas. Through her work, she has collaborated with NGOs, Indigenous groups, and research institutions, emphasizing interdisciplinary, inclusive conservation aiming to support biodiversity and social well-being. For the fellowship, she has proposed a project that would be led in collaboration with the New York City Department of Parks and Recreation (NYC Parks) to design and test methodologies that incorporate community perspectives—through a participatory biocultural approach—into urban forest restoration initiatives across NYC Parks-managed lands. The project has strong connections to Dr. Sterling's scholarship, and current work at the CBC.



In addition, we are pleased to share that a third postdoctoral fellow, Dr. Matías Muñoz Sandoval, has joined the research team led by Museum Scientist Dr. Jesse Barber, Jaffe Chief Conservation Scientist and Curator of Conservation Science. Dr. Muñoz Sandoval studies animal behavior with a focus on the ecological and evolutionary aspects of animal vocal communication. He has studied frogs, insect vibro-acoustic communication, and the evolution of mammal and bird calls. He aims to lead bioacoustics and behavioral experiments in the field and the laboratory, keeping an evolutionary perspective ("tree thinking") in his research.



Dr. Mary Blair, CBC Associate Director, was invited to join the International Union for Conservation of Nature (IUCN) Commission on Ecosystem Management and the Species Survival Commission's Task Force on Inclusion. Through invitations to join key IUCN Thematic Groups, including on Cultural Practices and Ecosystem Management, these appointments will allow Dr. Blair to deepen her engagements in IUCN and further elevate the work of the CBC at the global level, especially our work in biocultural conservation.

Research

Our research illuminates ecological and biocultural relationships and generates valuable evidence for conservation planning and practice.

How can we mitigate the impacts of light and sound pollution on wildlife?

Dr. Barber's research program on how to mitigate the impacts of light and noise pollution on wildlife continues to grow through partnerships with several U.S. National Parks and the U.S. Forest Service.

Dr. Barber and colleagues from the U.S. Forest Service Rocky Mountain Research Station in Colorado, Colorado State University, and the University of Montana have collaborated over the last few years on work probing the response of wildlife to the sounds of human recreation. In previous publications, Dr. Barber and colleagues (Zeller et al. 2024) established that recreation sounds increased fleeing and vigilance and reduced subsequent wildlife detections, with large, vocal groups of hikers and mountain bikers eliciting the strongest immediate reactions. Ditmer et al. (2026) then showed that fleeing responses were 22 percent lower in areas with greater recent human use, consistent with habituation or the displacement of less tolerant individuals. The newest study (Daniell et al. 2026), published this past October, extends these findings by demonstrating that reduced wildlife use can persist for weeks to months under repeated noise exposure. Across two field seasons in Wyoming's Bridger-Teton National Forest, frequent recreation noise playbacks suppressed detections of large mammals other than mule deer throughout the 15-week study period, whereas mule deer detections returned to baseline by week six. Nonmotorized recreation noise also produced sustained avoidance: detections of mammals other than mule deer returned to baseline around week seven, while mule deer required nine weeks under infrequent playback and showed no detectable reduction under frequent playback. These contrasting responses reveal that apparent recovery across the mammal community can conceal persistent avoidance by less tolerant species. Together, these studies demonstrate that recreation noise alone can alter wildlife behavior. The findings support protecting quiet refuges and tailoring recreation timing, intensity, and access to species-specific sensitivities, rather than assuming wildlife will quickly adjust to continued disturbance.



A family of mule deer. Photo: richardseeley / Adobe Stock

These applied ecology research projects align with Dr. Barber's long-term interest in the management of public lands and protected areas. He is a member of the Bridger-Teton Forest Plan Revision Committee and works closely with leadership in the U.S. National Park System to implement sensory pollution mitigation efforts. His team, led by Jaffe Postdoctoral Fellow, Dr. Nigel Anderson, is currently analyzing six years of experimental light pollution data from Grand Teton, Acadia, and Great Smoky Mountain National Parks. This work aims to quantify the consequences of artificial light at night for insects, bats, and people in order to design effective mitigation strategies. This collaborative socioecological research shows that people support lighting that protects wildlife and natural darkness and that ecologically-friendly lighting can improve visitors' visual comfort and perceived safety. The results from this work—now being prepared for publication—will inform efforts to mitigate light pollution on public lands to protect biodiversity and enhance visitor experience.

Dr. Barber is also advancing state-of-the-art noise modeling to inform decision-making regarding the consequences of noise pollution for wildlife. CBC Biodiversity Specialist, Amanda Sigouin; Senior Software Developer, Pete Ersts; and Dr. Anderson are part of the team working on these efforts. Current projects are generating noise models of off-road vehicle use, especially under the upcoming removal of the Roadless Rule, and the acoustic footprint of data centers.

Finally, Dr. Barber's bat research facility has been completed at the Museum's Southwestern Research Station (SWRS). One of the first projects using the new flight chambers will study the outcomes of bat-insect battles under different types of artificial lighting, continuing his lab's efforts to recommend the best lighting for wildlife and people. This Summer, Postdoctoral Research Associate Dr. Soshi Yoshida, whose work is funded by the Japan Society for the Promotion of Science, studied light pollution, bats, and insects at SWRS. He erected an experimental streetlight, which allowed the color and intensity of the light to be altered, and used high-speed cameras and microphone arrays to collect data on the aerial battle between bats and insects. The resulting data are currently being prepared for publication.



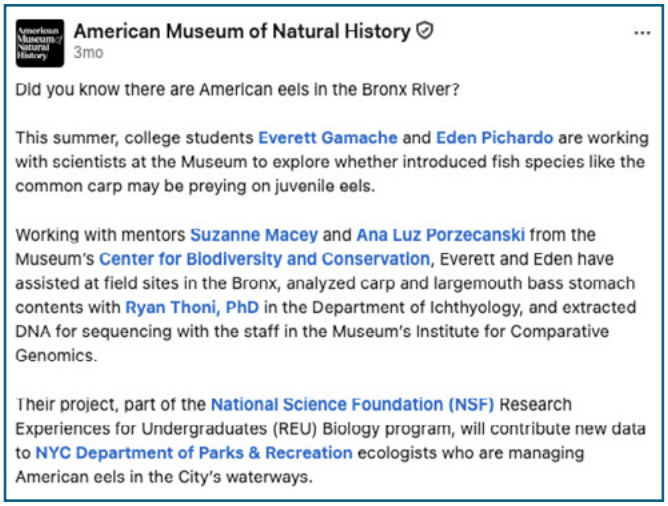
How can our research support communities and practitioners in the New York metropolitan region?

This Fall marked the completion of a Museum-wide project, funded by the National Oceanic and Atmospheric Administration (NOAA), to develop a Climate Impact Initiative to advance action, education and outreach, and scientific research around climate change resilience and biodiversity conservation in the New York metropolitan region. CBC Director Dr. Ana Porzecanski acted as co-Investigator and worked closely with the project's Principal Investigator, Dr. Ro Kinzler, Senior Director of Science Education. Dr. Porzecanski oversaw the co-design and launch of a diverse set of local research activities in collaboration with local partners, including NYC Parks and the Bronx River Alliance (BxRA).

In response to questions shared by these partners, we have produced new water quality evidence for Bronx River community stewards that can inform adaptation to a changing climate, new research on the impacts of predatory fish on translocated American eel (*Anguilla rostrata*), a species of conservation concern in New York State and considered endangered by the IUCN. We have also expanded research on the environmental history and status of the American eel in NYC, and advanced our understanding of the status of Eastern box turtles, another species of conservation concern in the NYC region. In addition, collaborations with CBC experts have improved analysis methods for NYC Parks data and enhanced their fish detection systems. Key research questions included:

Do predatory fish in the Bronx River consume translocated juvenile eels above the 182nd Street dam?

To begin to answer this question, Dr. Suzanne Macey (Assistant Director for Capacity Development, CBC) led a new project to sample stomach contents of predatory fish and environmental DNA (eDNA) in the Bronx River and analyze species composition using genomic techniques. The project team included Dr. Adam Jadhav (Rizavi Innovation in Conservation Fellow, CBC) and Dr. Ryan Thoni (Affiliated Scientist and Curatorial Associate, Ichthyology), as well as two National Science Foundation-supported Research Experiences for Undergraduates (REU) students. During Summer 2026, they fished for, collected, and extracted DNA from the gut contents of two introduced predatory fish species: the common carp (*Cyprinus carpio*) and the largemouth bass (*Micropterus salmoides*). Preliminary results show no traces of eel DNA within the carp gut samples, but eel DNA was found within the stomach contents of largemouth bass and in some of the water samples. This new evidence will inform conservation decisions made by NYC Parks and the BxRA regarding introduced species. The project leveraged multiple areas of Museum expertise and facilities, including conservation, ichthyology, geography, and genomics.


American Museum of Natural History
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Did you know there are American eels in the Bronx River?

This summer, college students Everett Gamache and Eden Pichardo are working with scientists at the Museum to explore whether introduced fish species like the common carp may be preying on juvenile eels.

Working with mentors Suzanne Macey and Ana Luz Porzecanski from the Museum's Center for Biodiversity and Conservation, Everett and Eden have assisted at field sites in the Bronx, analyzed carp and largemouth bass stomach contents with Ryan Thoni, PhD in the Department of Ichthyology, and extracted DNA for sequencing with the staff in the Museum's Institute for Comparative Genomics.

Their project, part of the National Science Foundation (NSF) Research Experiences for Undergraduates (REU) Biology program, will contribute new data to NYC Department of Parks & Recreation ecologists who are managing American eels in the City's waterways.



How does rainfall affect water quality in the Bronx River, and what can this tell us about protecting communities in a changing climate?

To answer this question, Dr. Porzecanski partnered with the BxRA to investigate how bacterial contamination changes with rainfall. Building on their longstanding monitoring and restoration efforts, the team collected daily water samples to measure *Enterococcus* bacteria over 25 consecutive days in Fall 2025 and repeated the effort in Summer 2026, with assistance from an early-career researcher. While drought conditions limited insights from the first sampling period, Summer 2026 data revealed that contamination increases rapidly following rainfall, but it also declines more quickly than previously suspected. These patterns closely track river water levels but vary across sites. This new evidence is helping the BxRA make decisions about recreational programming to protect participants and advocate for infrastructure improvements through the Bronx River Intermunicipal Watershed Management Plan. The findings have also generated new hypotheses about the effects of upstream precipitation on downstream ecosystems and communities, which we aim to investigate through new grants for continued collaborative research.

How have American eel populations in NYC changed over time, and what can their history tell us about urban biodiversity?

To answer these questions, Dr. Jadhav and collaborators are integrating contemporary field research with genomics, ecotoxicology, and environmental history, leveraging our extensive historical collections and expertise. Dr. Jadhav and his team have sequenced whole genomes from 14 contemporary eel samples and—in collaboration with the Museum's Institute for Comparative Genomics and Dr. Stephen Gaughran (Assistant Adjunct Professor, University of California Berkeley)—prepared over 50 historical specimens for sequencing. Preliminary results are promising and could greatly expand available genomic data for understanding population changes over time. The project has also enabled the launch of eDNA sampling across NYC waterways, including Jamaica Bay, the Bronx, Staten Island, and the New York Bight, to better document eel distribution. In addition, the team collected eel and other fish specimens for a comparative ecotoxicology study, establishing a new collaboration with Dr. Cara Love (Postdoctoral Research Associate, Princeton University). Together, these efforts will provide new evidence on historical and contemporary eel populations, environmental contamination, and urban biodiversity to inform local conservation and management decisions.



American eel (*Anguilla rostrata*). Photo: RLS Photo / Adobe Stock

How do environmental conditions influence American eel movements in the Bronx River, and how can monitoring and translocation efforts be improved?

Dr. Suzanne Macey collaborated with NYC Parks to analyze 10 years of eel monitoring data, finding no clear relationships with environmental variables but identifying a recurring peak in eel numbers during late summer. These findings informed changes to NYC Parks' monitoring and translocation protocols in 2026, including expanded late-summer efforts, which will be evaluated to improve future management practices.

How can machine learning improve fish monitoring in the Bronx River while reducing the time required to review video footage?

Peter Ersts (Senior Software Developer, CBC) partnered with NYC Parks to develop automated fish detection tools, applying a machine learning model to the 2025 video archive, and creating a customized species-level training dataset. This collaboration aims to streamline video analysis through automated detection and human review, improving the efficiency of annual fish counts at the Bronx River fishway.

How is urbanization affecting eastern box turtle (*Terrapene carolina carolina*) populations in the NYC region?

Dr. Anna Thonis (Visiting Scientist, CBC) and her conservation partners launched a long-term monitoring program across NYC, Long Island, and Westchester County in 2025 to address this question. The team has located, sampled, marked, and released more than 240 turtles, engaging over 100 local volunteers and a wildlife detection dog team. In the past year, the team also initiated genomic and population genetic analyses, preparing over 150 samples for sequencing in collaboration with Dr. Macey. These data will help assess whether urbanization and habitat fragmentation reduce genetic diversity, informing conservation and land management across one of the species' most urbanized range areas.





Additional CBC Postdoctoral Fellows have also been busy leading research on multiple fronts:

Dr. Nigel Anderson started his position as Jaffe Postdoctoral Fellow in May 2026. He is working with Grand Teton, Acadia, and Great Smoky Mountain National Parks to assess the impacts of light pollution on bat and moth populations. This Fall, he visited the SWRS and collected data on bats catching moths under different colored streetlights.



In September 2026, CBC Postdoctoral Fellow and Affiliated Scientist Dr. Yara Alshwairikh partnered with the King Salman Royal Natural Reserve (KSRNR) in Saudi Arabia to conduct fieldwork within the reserve and collect tissue samples from both target species of her postdoctoral research: the spiny-tailed lizard (*Uromastyx aegyptia*) and the Arabian toad-headed agama (*Phrynocephalus arabicus)*.





Before her departure this Summer, Visiting Scientist Dr. Gawel and collaborators published a letter to *Science*, voicing their concerns about U.S. federal government decisions affecting the island territory of Guam. These include a massive military buildup and firing range complex that resulted in the clearing of native forest and harm to endangered species, in addition to plans for deep-sea mineral extraction. The latter could impact both nearshore and offshore environments. The letter calls for transparency and local consultation, as well as enforced compliance with conservation measures.

How can conservation be improved and accelerated through Indigenous guardianship and local knowledge?

The CBC supports and advances biocultural approaches to conservation through interdisciplinary research, evidence synthesis, and knowledge exchange. As part of this work, in October, Dr. Blair attended the Arctic Circle Assembly, the largest annual international gathering focused on the future of the Arctic and the planet, in Reykjavík, Iceland. Founded in 2013 by former Icelandic President Ólafur Ragnar Grímsson and others, it operates as a nonprofit organization to supplement the intergovernmental Arctic Council and attracts more than 2,000 participants—including heads of state, government ministers, scientists, Indigenous leaders, business executives, and environmentalists—from over 70 countries. Participation in this gathering allowed Dr. Blair to further the CBC's NASA-funded project on reindeer herding and resilience in response to global change. She met with project partners from the International Centre for Reindeer Husbandry (ICR) and the Woodwell Climate Research Center to discuss the new expanded scope of the project to include knowledge exchange activities with Inupiaq and other Indigenous Alaskan communities who have histories of reindeer herding. In addition, during Climate Week NYC, she was an invited panelist, along with NASA project collaborator and Secretary General of World Reindeer Herders, Anders Oskal. The event was titled "Where the Herds Lead Us: Pastoralism, Rangelands and the Future We Choose," and was hosted by Impact Kenya and the Henry Luce Foundation. The first product of the project, a paper about the history of circumpolar reindeer husbandry, was also recently accepted by Harvard University's The Business History Review and will be published this Fall.



The CBC continues to strengthen our collaboration with Nia Tero, an organization supporting the vital role of Indigenous Peoples in maintaining a healthy planet, to understand the practices of Indigenous Peoples' Guardianship and their potential to accelerate conservation. Our work to date has focused on advancing how we measure and share the contributions of Indigenous Peoples to humanity and planetary health. Beginning this Summer, the CBC partnered with Nia Tero on a rapid evidence review on Indigenous Peoples' guardianship and its relationship to biodiversity outcomes in East Africa, specifically Kenya, Tanzania, and Uganda. Our project team, led by Dr. Porzecanski, Dr. Blair, and Erin Betley (CBC Biodiversity Specialist) also includes subject matter expert, Dr. Mathew Bukhi Mabele, a conservation social scientist at the University of Dodoma in Tanzania. Our synthesis draws from peer-reviewed literature and project interviews, with accompanying case studies on the guardianship of the Loita Maasai, Ogiek, Hadzabe, Sukuma, and Soo peoples. Our study found that Indigenous Peoples' guardianship offers a credible pathway to biodiversity conservation in East Africa, yet ongoing erosion of guardianship threatens both conservation and human rights. We are preparing a final report, which will identify research gaps and pathways for conservation actors in East Africa to pursue equitable conservation strategies that take into consideration the wellbeing of all people in these places, the land, wildlife, and their varied relationships.

How can museum collections and tools inform conservation strategies today?

The CBC continues to lead research on how museum specimens can be used to monitor biodiversity or examine the evolution and genetic diversity of species over time, advancing the field of conservation museomics.

CBC work was cited in a new Position Statement from the IUCN Species Survival Commission about the importance of natural history collections for conservation, calling for collections to be recognized and funded as critical infrastructure, and urging practitioners and governments to link them to field monitoring, genomic research, and international policy.

Dr. Blair visited Vietnam this Summer and met with key long-term partners such as Fauna and Flora, who are monitoring one of the world's smallest ape populations, that ofthe Cao Vit gibbon in Northern Vietnam and China, informed by our previous research on how climate change will affect these critically endangered apes. Dr. Blair is further contributing to wildlife conservation in Vietnam as a formal reviewer of the first ever "National Plan on Rewilding in Vietnam to 2035, with a Vision to 2050," which is soon to be signed by the Prime Minister. Focused on accelerating the restoration of wild species populations, the plan represents a major step in Vietnam's plan to achieve the targets of both the Global Biodiversity Framework and the country's National Biodiversity Strategy.



Cao Vit gibbon. Photo: Nguyen Duc Tho (Fauna & Flora)

Our long-term partnerships in Vietnam continue to have lasting impacts. Museum specimens were integral to the description of a new species of slow loris, the Northern pigmy loris, by Dr. Blair and collaborators in 2023, and this identification continues to advance conservation efforts. Like other species in this primate group, Northern pygmy lorises are threatened by habitat loss, wildlife trade, and demand for animal parts for use in traditional medicine. A new population of this endangered loris species was recently discovered in Guangxi Province, China—roughly doubling the country's known population, which was previously thought to live almost exclusively in Vietnam and Laos. Dr. Blair was quoted in a media feature (Mongabay, 22 September 2026) describing its significance. Recently, a new species of frog, *Amolops orlovi*, was described by Vietnamese scientists, distributed along a similar biogeographic barrier (Hai Van Pass) as the new loris species. The finding builds on CBC inventories and work describing other new vertebrate species in Vietnam in the 2000s and suggests the possibility of a common driver of speciation in this region. These CBC-led inventories also produced fish collections, and based on these specimens, Dr. Thoni described a new fish species, *Supradiscus varidiscus*, in 2025.

Dr. Thoni, Dr. Jadhav, and a New York fisher, Stephen Quinones, recently co-authored and published a new record of the cutlassfish, *Trichiurus lepturus*, for Jamaica Bay. The fish, a rare occurrence in NYC waters, was caught by Mr. Quinones on a July fishing charter, where Dr. Thoni and Dr. Jadhav accompanied two dozen other recreational fishers to document local biodiversity, as part of the CBC Affiliated Scientist program. The specimen is now preserved in the Museum's Ichthyology collections, and a note about the observation appeared in *Zootaxa*, demonstrating the potential of community collaboration in CBC and Museum science and conservation.

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A new record of the cutlassfish, *Trichiurus lepturus* Linnaeus, 1758, from Jamaica Bay, New York

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Trichiurus lepturus Linnaeus, 1758 is an elongate, laterally compressed fish species belonging to the family Trichiuridae Rafinesque, 1810. It is known for its large canine teeth and bright silvery, swordlike appearance. This cosmopolitan species has a nearly global oceanic distribution in tropical and temperate waters (Nakamura 1986). It is a common commercial fish in much of the Asian Pacific, Western Atlantic and Mediterranean Sea (Collette *et al.* 2015). It typically inhabits depths up to 350 m but is found seasonally in shallower waters in some parts of the world (Nakamura 1986). There are multiple records of *T. lepturus* along the Atlantic coast of the United States, particularly in the south, from Florida to Chesapeake Bay. North of Cape May, New Jersey, however, records become sparse, but still exist as far north as Nova Scotia, Canada (www.GBIF.org). In New York, a few records exist from coastal waters around the New York Bight, and Long Island Sound (Pers. Comm. Tom Lake NYSDEC, www.GBIF.org). The American Museum of Natural History Ichthyology Collection (AMNH) has two records from within the New York Harbor, both from Gravesend Bay, from 1897 (AMNH 667) and 1901 (AMNH 1664), while the New York State Museum (NYSM) has one record from the Poletti Power Plant in the East River from 2001. Despite long-term monitoring efforts by the New York State Department of Environmental Conservation (1984–present day), as well as several other biological surveys, and decades of commercial and sport fishing, no records have ever been made of *Trichiurus lepturus* in Jamaica Bay (Briggs and Waldman, 2002, www.GBIF.org, www.iNaturalist.org).



FIGURE 1. Author S.Q. (left), and deckhand (right) holding *Trichiurus lepturus* caught on July 18, 2026; AMNH 286387, 942 mm total length.

Our research tools continue to generate valuable evidence for conservation action.

In Colombia, Dr. Blair and CBC Biodiversity Informatics Specialist, Daniel Lopez, are in the final stages of a NASA-funded project with the Colombia Biodiversity Observation Network and the Alexander von Humboldt Institute to create an integrated biodiversity monitoring system for Colombia's National Protected Areas. The system is called SIM-SINAP and is in the final stages of launching in a public-facing portal, scheduled for December of this year. The system will be updated annually and serve as the primary way that the government of Colombia tracks and shares the status of biodiversity in its protected areas.

CBC software tools are used daily to support research and education and have been cited in thousands of peer-reviewed articles, as well as government reports.

Maxent, the CBC-hosted software for modeling species niches and distributions, is used worldwide and has now been used in studies more than 28,500 times. In the last six months, for example, *Maxent* has been used to study the implications of land-intensive carbon dioxide removal, such as forestation and carbon capture, calling attention to important trade-offs with nature conservation. Other studies have used this tool to predict nonnative fish invasion risk for U.S. streams and inland lakes; prioritizing areas for wolf management in Austria; and assessing landslide susceptibility in Himalaya and Kashmir, India.



Grey wolf (*Canis lupus*)
Photo: AB Photographyr/Adobe Stock



Photo: Iwona/Adobe Stock

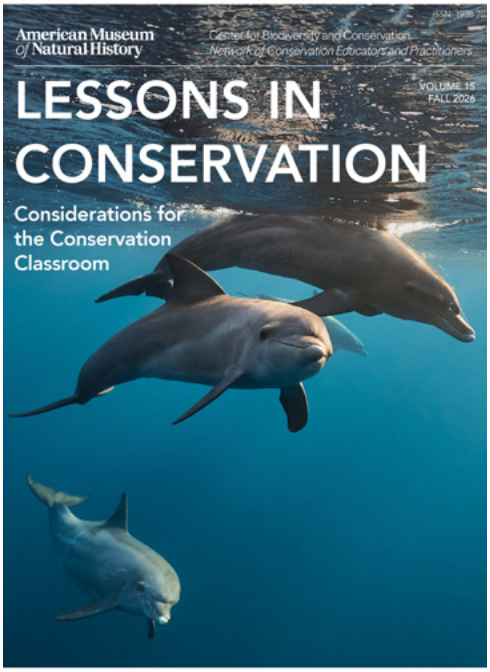
Wallace, another software tool co-developed by the CBC, has been downloaded more than 145,000 times and is also being used for many conservation studies. In just the last six months, for example, it has been used to predict the spread of an insect pest threatening pine trees, assess wild felid (ocelot, tiger cat, margay) distributions in northern Argentina with camera trap data, identify refugia and corridors for dung beetle conservation under climate change in Brazil, and estimate climate-linked expansion of a pest vector for a rice virus that threatens global food security. The *Wallace* team recently presented at the IUCN Red List New Technologies Workshop, highlighting how Wallace can expand the number and quality of species assessments and improve integration of climate change threats. Following this presentation, the team was invited to present to Canada's ministry in charge of red-listing in Quebec, to IUCN assessors in Venezuela, and at an upcoming IUCN climate change workshop in December.

Capacity Development

The CBC is creating resources and spaces to train and empower conservationists everywhere.

In everything we do, we continue to prioritize open access learning resources and the creation of environments where all academics, students, professionals, and community members can contribute solutions to urgent conservation problems.

The CBC's Network of Conservation Educators and Practitioners (NCEP) published the 15th issue of *Lessons in Conservation*, themed "Considerations for the Conservation Classroom." The volume includes a new article format: a "Conversation" piece between two educators on learning about and teaching systems thinking. It ties in with a perspective and exercise on using drawing as a systems thinking tool to understand how a One Health approach can be used to advance human, animal, and environmental health. Additionally, the issue includes an exercise that incorporates poetry writing in the classroom, a case study on dolphin conservation in Panama that highlights sound monitoring and noise pollution, and an exercise and linked perspective on fostering and promoting allyship in the conservation field. In early Summer, the CBC hosted a "Lunch & Learn" webinar highlighting the systems thinking exercise in this latest issue, and in the coming months, we will host more in this series to highlight the rest of the materials.



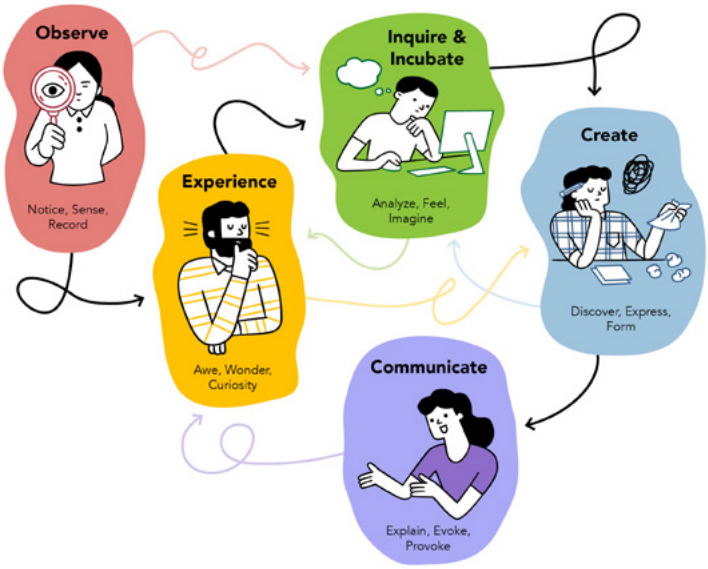


Figure 1 from the exercise "Poetry Writing for Conservation": Parallel inquiry and practice in poetry and sciences. Adapted from Wonham et al. 2025 by Nadav Gazit using jesadaphorn illustrations via Adobe Stock Photo/Standard License

We are also excited to announce that we will be working together with the Society for Conservation Biology North America's Education Committee to create two accompanying issues of *Lessons in Conservation* for The Nature Record. The Nature Record, initiated by a presidential executive order in 2022 and now sustained through private funding, is an upcoming assessment of the status and trends of nature (e.g., biodiversity declines, ecosystem health) in the U.S. and territories. We are in the early stages of writing materials based on this assessment, and the first special issue is slated to be published this Spring. Additional educational materials based on the assessment will be designed for the Museum's *Ology* website to reach even younger audiences, as well as K-12 educators, and the CBC will be collaborating closely with the Education Department on this aspect of the work. The work will be funded by the Resources Legacy Fund.

The 17th annual Student Conference on Conservation Science-New York 2026 (SCCS-NY), the CBC's annual signature conference for students and early-career professionals, was held from October 14 through 16 in partnership with the Yale School of the Environment. We received nearly 450 conference applications from 43 countries and 30 U.S. states. Over 270 participants joined us at the Museum and online during three days of workshops, presentations, and events. Nearly 90 advisors, reviewers, and mentors provided feedback to participants at various stages of their experience, from helping participants prepare conference applications to offering advice during the conference's dedicated networking sessions. The conference workshops also convene experts from a diverse array of fields; this year, a workshop led by scientists from NASA's Jet Propulsion Laboratory and the City University of New York also catalyzed further collaborations with the Museum's Science Visualization team, Hayden Planetarium, and the Education Department.







Conference photos by: Alvaro Keding & Daniel Kim/© AMNH

Dr. Barber was this year's keynote speaker. In his talk, titled "Sensory Ecology as a Window into Conservation," he discussed how looking through the eyes and ears of wildlife can help us quantify the costs of noise and light pollution for animals and point to solutions to increase coexistence with people.





The conference closed with the panel "Conservation Pathways: Science, Art, and Community," which featured Dr. Porzecanski in conversation with two artists whose practice intertwines with science. The panel event was introduced by Museum President, Sean M. Decatur. More than 50 high school students from the Museum's Science Research Mentoring Program also joined the conference for this panel discussion.





We were excited to continue the Artist-in-Residence program this year, which featured Dr. Melanie Zurba, an artist and Associate Professor with the School for Resource and Environmental Studies at Dalhousie University. Dr. Zurba created a hand-painted river, a shared canvas for reflection, where participants will interact by inscribing messages for the future of biodiversity conservation onto handmade papers that are then folded into small paper boats and set adrift on the river. Others shaped clay into figures of plants, animals, or other presences that represent the "conservation witnesses" that sit along the banks of the river. On the final day of the conference, the messages were revealed and collaged alongside the water, making a landscape that holds the river and the witnesses.







This year, we were able to support five presenters thanks to a grant from the Global Vistas Foundation.

"What I appreciated most is the positive and encouraging environment throughout the conference. Everyone was approachable, willing to share their knowledge, interested in others' research, and generous with their suggestions. I particularly enjoyed the discussions on how good scientific research questions develop, why understanding the ecological context matters, and how research should be designed to address meaningful scientific questions rather than simply applying methods. I returned from the conference with new ideas, different perspectives on my research, and greater motivation to pursue them."

- Early career professional and Global Vistas Foundation awardee

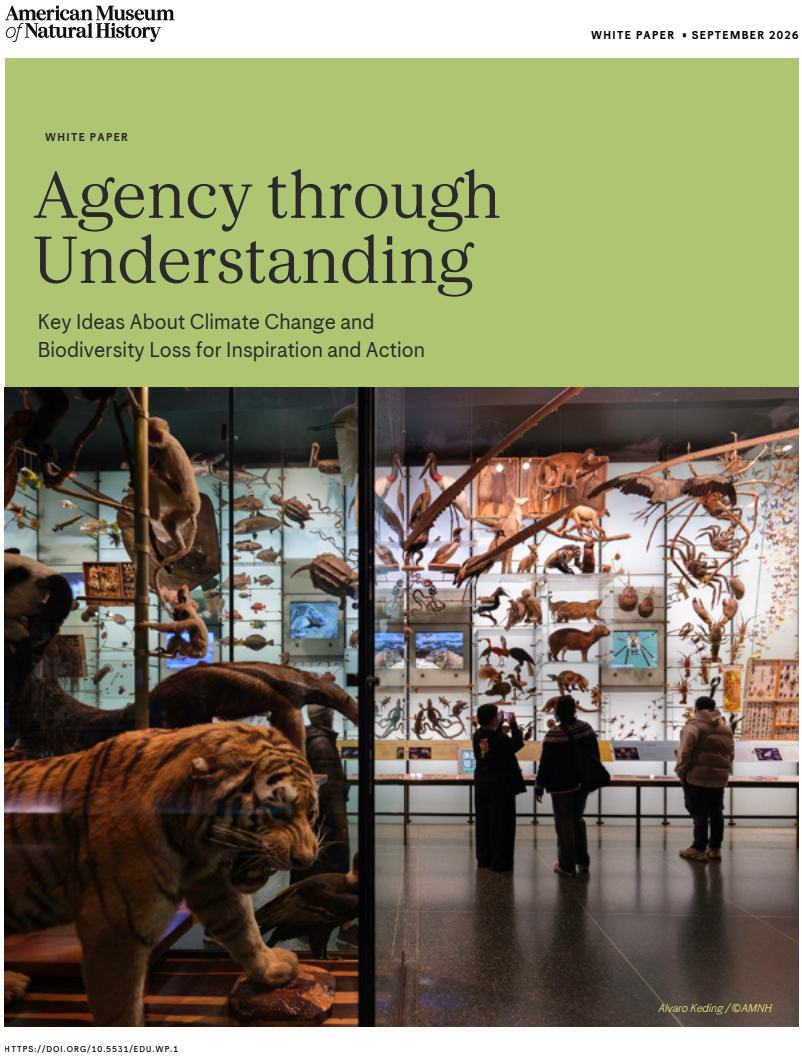
"I just wanted to reach out and thank you for such a wonderful event. This was my first time attending the conference, and I greatly enjoyed it. I felt like it was a thoughtful and meaningful praxis of everything I learned in my conservation education; the art, humanities, and science intersections were all very intentional and meaningful. I look forward to engaging more in the conservation community of AMNH and beyond."

- Masters student participant

Convening and Connecting

The CBC catalyzes connections across actors working on biodiversity conservation and climate resilience to learn from each other, synthesize evidence, and explore solutions.

Dr. Barber and Dr. Porzecanski were part of a team of Museum experts who coauthored a new white paper or guide, titled Agency through Understanding, designed as a practical resource for staff across science, education, exhibitions, and public engagement. The publication draws on the natural, social, and learning sciences—including new data collected by our Education department about Museum audiences—to distill the key ideas on climate and biodiversity, guidance on what we want audiences to understand about these linked crises, and how the Museum can help build understanding, agency, and action. The cross-departmental working group that authored this resource also included Dr. Nathalie Goodkin (Chair and Curator, Division of Physical Sciences), Dr. Debra Everett-Lane (Director, Exhibition Initiatives), and Dr. Karen Hammerness (Senior Director, Educational Research and Evaluation). The guide launched internally in the Fall and is already informing programs and resources across the Museum.



Dr. Blair and Dr. Thonis, along with members of the CBC-hosted NY Species Distribution Modeling working group, organized a symposium in September, titled *Emerging Frontiers: AI, Genomics & Community Science in Biogeography*. The event was co-led and hosted with Columbia University's new master's program in Biodiversity Data Analytics. The event convened 90 students and researchers across the tri-state area and beyond to discuss innovative ways forward in the exciting area of species distribution models (SDMs) in conservation science. At the event, Dr. Blair spoke about how to build better SDMs with community data, including both the challenges and opportunities of Indigenous data sovereignty in ecological modeling.





Finally, in September, the CBC once again co-hosted a convening of the Funders Aligned for Sustainability Transformations (FAST) Forum, a community of now over 80 global sustainability funders that aims to pioneer new models of collaborative funding. This year's event focused on lessons learned from alignment with private sector funding and featured a panel discussion exploring funding gaps and investment opportunities for sustainability innovations. It also highlighted how cross-sector partnerships and collaboration among private, public, and philanthropic capital can responsibly support innovators, bridge the gap between early-stage ideas and scaling, and align missions and resources to accelerate climate and biodiversity solutions. The CBC was represented by Dr. Porzecanski, Dr. Blair, and Amanda Sigouin, CBC Biodiversity Specialist.



Exhibitions and Outreach

Catch the CBC online or onsite!

Dr. Barber and Dr. Porzecanski were featured in *True Stories, Wild Things*, a program exploring the science of entomology, urban ecology, and conservation held at the Museum in July during National Moth Week. Moderated by Dr. Porzecanski, a panel discussion brought together Museum scientists and external researchers to explore the causes of insect declines, what they reveal about urban ecosystem health, and the important role moths play in the city's ecology. The event concluded with an opportunity for participants to observe moths and experience urban biodiversity firsthand on the Museum steps, featuring real insect sampling methods demonstrations from Dr. Barber and Dr. Jessica Ware, Chair and Curator, Invertebrate Zoology.



Photo: Beth Eisgrau-Heller

Leading up to Climate Week NYC, the Museum hosted *Poetry for Our Planet*, an event exploring how artistic expression can deepen climate change awareness and engagement. The evening featured readings by poets, Jane Hirshfield, Kimiko Hahn, and Brandon Kilbourne, followed by a panel discussion with the poets; Dr. Porzecanski; and director of The Climate Museum, Miranda Massie. Participants concluded by writing "pledge" poems expressing their connections to the Earth and commitments to its future, demonstrating how art and science can foster understanding, bridge divides, and inspire environmental action. The event was a collaboration of Kent State University's Wick Poetry Center, The Climate Museum, and the American Museum of Natural History's Gottesman Research Library and Learning Center.

In addition to public programming, CBC scientists and specialists regularly collaborate with and support Museum exhibitions work. Dr. Barber was the curator for *When I am Among the Trees*, a special installation in the Museum's North Galleria that launched on Friday, September 22, during Climate Week NYC. The installation extends the Arthur Ross Terrace indoors with live native trees, benches, a birdsong soundscape, information about New York City's urban forests, and profiles of those taking action to protect and grow the city's canopy.

We continue to share our work through social media, you can find us on LinkedIn and Facebook!

Fall 2026

Publications

Anderson, J.F., Ortiz, H.D., & **Barber, J.R.** (2026). Waterfall infrasound. The Journal of the Acoustical Society of America, 159(6), 5566–5577 https://doi.org/10.1121/10.0044144

Daniell, J.N.D., Ditmer, M.A., Rice, W.L., Wilder, J., Gerber B.D., Smith, S., Reynolds, E., **Barber, J.R.**, & Zeller K.A. (2026). Experimentally quantifying how long recreation noise displaces mammals: Recovery over weeks to months varies by disturbance type and species tolerance. Biological Conservation, 323. https://doi.org/10.1016/j.biocon.2026.112084

Hammerness, K., **Barber, J.R.**, Everett-Lane, D., Goodkin, N.F., Kinzler, R., MacPherson, A., **Porzecanski, A.L.**, Snyder, K., Silverman, A., & Summerhays, E. (2026, September). Agency through understanding: Key ideas about climate change and biodiversity loss for inspiration and action. [White Paper]. American Museum of Natural History. https://doi.org/10.5531/edu.wp.1

Jackson, J.B.C.* (2026). Reflections on the prospects for western Atlantic coral reefs. Frontiers in Marine Science, 13(1946988). https://doi.org/10.3389/fmars.2026.1946988

Goodman, A., Tolman, E.R., Beatty, C.D., **Blair, M.E**., ... Ware, J.L. (2026). The Great Dividing Range as a driver of genetic divergence in a low-dispersing dragonfly. Ecological Entomology, 51(5), 1002-1016. http://doi.org/10.1111/een.70109

Thoni, R.J.*, & Arrindell, R. (2025). *Supradiscus varidiscus*, a new species of sucker-mouthed hillstream fish (Cypriniformes: Cyprinidae) from the Lo River Basin, Northern Vietnam. American Museum Novitates, 2025 (4042), 1-8. https://doi.org/10.1206/4042.1

Thoni, R.J.*, Quinones, S., & **Jadhav, A.** (2026). A new record of the cutlassfish, *Trichiurus lepturus* Linnaeus, 1758, from Jamaica Bay, New York. Zootaxa, 5884 (1), 198-200. https://doi.org/10.11646/zootaxa.5884.1.12

Wang, L., & **Betley, E.** (2026). Draw with me! Using systems thinking tools to examine interconnected health systems. Exercise and Exercise Notes. Network of Conservation Educators and Practitioners. Available from: https://doi.org/10.5531/cbc.ncep.0191.

Presentations & Workshops Led

Alshwairikh, Y.A. 2026. Projected Habitat Loss from Climate Change for Two Arabian Peninsula Lizards and the Role of National Protected Areas in Conservation. Joint Meeting of Ichthyologists and Herpetologists (JMIH), New Orleans, LA, USA. 10 July 2026.

Alshwairikh, Y.A. 2026. Projected Habitat Loss from Climate Change for Two Arabian Peninsula Lizards and the Role of National Protected Areas in Conservation. Biological and Environmental Science and Engineering (BESE) Graduate Student Seminar. King Abdullah University of Science and Technology, Thuwal, Saudi Arabia. Sept 2026.

Betley, E.B., **Sigouin, A.**, **Gomez, A.***, Li, X., Martino. R.M., Carlson, S., Kane, J. Zerbock, O., & **Porzecanski, A.L.** What makes change transformative? A rapid evidence review and framework to guide practice for biodiversity conservation. Poster presented at the North American Congress for Conservation and Restoration. Milwaukee, WI. 14 July 2026.

Blair, M.E. 2026. "Concepts of Biodiversity at the Global Level and the contributions of Indigenous Peoples." Invited lecture to the Sami University of Applied Sciences [Virtual]. Kautokeino, Norway. Sep 8, 2026.

Blair, M.E. and Popescu, V. 2026. Building better Species Distribution Models with community data: frontiers and applications. Invited talk to the NY-SDM Emerging Frontiers Symposium: AI, Genomics & Community Science in Biogeography. Columbia University, New York, NY. Sep 19, 2026.

Blair, M.E. 2026. Where the Herds Lead Us: Pastoralism, Rangelands and the Future We Choose., Invited Panelist, Symposium, Impact Kenya, New York Climate Week. The Henry Luce Foundation, New York, NY. Sep 22, 2026.

Groom, M., **Porzecanski, A.L.**, **Betley, E.B.**, Pratt, J., & **Macey, S.** Building emotional resilience among conservation students. Workshop presented at the North American Congress for Conservation and Restoration. Milwaukee, WI. 14 July 2026.

Jackson, J.B.C.* Ocean Health in a Changing Planet: Interacting Stressors, Emerging Thresholds, and Scientific Frontiers. Invited panelist. Special symposium at the 163rd Annual Meeting of the National Academy of Sciences. 25 April 2026.

Porzecanski, A.L. Poetry for our Planet. Invited Panelist. Moderator: Miranda Massie, Director, Climate Museum. Presented by the Gottesman Research Library and Learning Center in collaboration with Climate Museum and the Wick Poetry Center's Poets for Science initiative, Kent State University. American Museum of Natural History (AMNH), New York, NY. 15 September 2026.

Porzecanski, A.L., & **Blair, M.E.** From Intelligence to Impact: Lessons Learned from Alignment with Private Sector Funding. Workshop Co-organizers. Funders Aligned for Sustainability Transformation (FAST) Forum. Climate Week NYC. American Museum of Natural History (AMNH), New York, NY. 24 September 2026.

Porzecanski, A.L. Subnational Approaches to Biodiversity, Climate Action, and Environmental Justice. Invited panelist. Moderator, Jesse Rodenbiker, Rutgers University. Event hosted by National Committee on U.S.-China Relations (NCUSCR). Climate Week NYC. American Museum of Natural History (AMNH). New York, NY. 25 September 2026.

Porzecanski, A.L. Truth is a Climate Issue: Defending Science, Information and Democracy. Moderator, panel on Climate Democracy Frontiers. 6th Annual BIPOC Climate Justice Summit & ClimateFest, American Museum of Natural History (AMNH), New York, NY. 26 September 2026.

Porzecanski, A.L, **Betley, E.B.**, **Sigouin, A.** & **Blair, M.E.** Indigenous Peoples' guardianship in East Africa: a rapid evidence review. Facilitator and presenters, experts workshop (virtual). 23 September 2026.

Porzecanski, A.L. True Stories, Wild Things: A Celebration of National Moth Week. Moderator. Panel discussion with Jessica Ware, Jesse Barber, Yahel Ben-Zvi and Andrew Quitmeyer, on declining insect populations and the health of urban ecosystems. Moth Week at the American Museum of Natural History (AMNH). New York, NY. 23 July 2026.

Paz, A., Cruz-Rodriguez, C., Lopez-Gallego, C., & **Blair, M.E.** 2026. Expansion of Wallace EcoMod species distribution modeling software for national red list assessments. Invited talk to the IUCN Red List of Threatened Species New Technologies Workshop. [Virtual] 28 May 2026.

Wang, L., & **Betley, E.B.** Lunch and Learn: Draw with Me! Invited virtual presentation to the Network of Conservation Educators and Practitioners. 30 June 2026.

Media & Outreach

Blair, M.E. 2026. "Strategic Priorities and Guidance for Gibbon Conservation in Vietnam under Climate Change." Featured Piece in the August 2026 IUCN Section of Small Apes Newsletter. https://www.canva.com/design/DAHRWowPusU/SmHbaPUspRksJBoL49SUyA/view 9 August 2026.

Burkhart, M. 2026. Featuring **M.E. Blair**. A rare slow loris may have a much larger population in China than scientists thought. Mongabay. https://news.mongabay.com/2026/09/a-rare-slow-loris-may-have-a-much-larger-population-in-china-than-scientists-thought/ 22 September 2026.

Emerson, R. 2026. Featuring **M.E. Blair**. Emerging Frontiers Symposium Explores the Future of Biodiversity Research. https://sps.columbia.edu/news/emerging-frontiers-symposium-explores-future-biodiversity-research?program_id=15373 15 October 2026.

Mejía, A.* Collective lands: Colombia's key to conservation. Invited speaker. ¡Vamos! A Celebration of Latin and Caribbean Cultures. American Museum of Natural History (AMNH), New York, NY. 17 July 2026.

Thonis, A.* Turtle Time With Anna. Public lecture. ClimateFest, American Museum of Natural History (AMNH), New York, NY. 26 September 2026.

Wynn-Grant, R.* You Belong in the Wild. Book reading. ClimateFest, American Museum of Natural History (AMNH), New York, NY. 26 September 2026.

Media & Outreach

Blair, M.E., Oskal, A. "Reindeer and Resilience". Invited lecturer at American Museum of Natural History SciCafe. New York, NY. https://www.amnh.org/learn-teach/adults/scicafe/sami-resilience 7 Jan, 2026.

Blair, M.E. "Arctic Transformations: Resilience, Partnership, and Lessons from a Warming World". Invited panelist at The Spring Lunch: Science, Society, and Our Environment. American Museum of Natural History, New York, NY. 22 Apr, 2026.

Jadhav, A. 2026. Eels: A fishy tale. Invited public talk at the American Museum of Natural History's Earthfest. New York, NY. 18 April 2026.

Jadhav, A. 2026. The science of listening to eels. Invited public talk at the Henry L. Ferguson Museum. Fishers Island, NY. 26 July 2026.

Porzecanski, A.L. Mending the Living World. Inaugural event for the Albertine Conservation series: Invited panelist on biodiversity decline and ecological resilience, featured with experts in environmental ethics and conservation. Moderated by Sarah Sax, in partnership with the Columbia Climate School. Maison Français, Columbia University. New York, NY. 28 Jan, 2026.

Porzecanski, A.L. The 100 Club. Invited speaker. Discussion and Q & A about Dr. Porzecanski's work at the American Museum of Natural History (AMNH). New York, NY. 12 Feb, 2026.

Porzecanski, A.L. Carnival at the Museum. Moderator for closing panel at the American Museum of Natural History. Public event exploring extreme weather, green space losses, adaptation and community-led innovation in the Caribbean islands and also New York City. American Museum of Natural History. New York, NY. 19 Feb, 2026.