





National Park Service
MOSAICS in Science

MOSAICS IN SCIENCE
Diversity Internship Program

2024 Annual Report

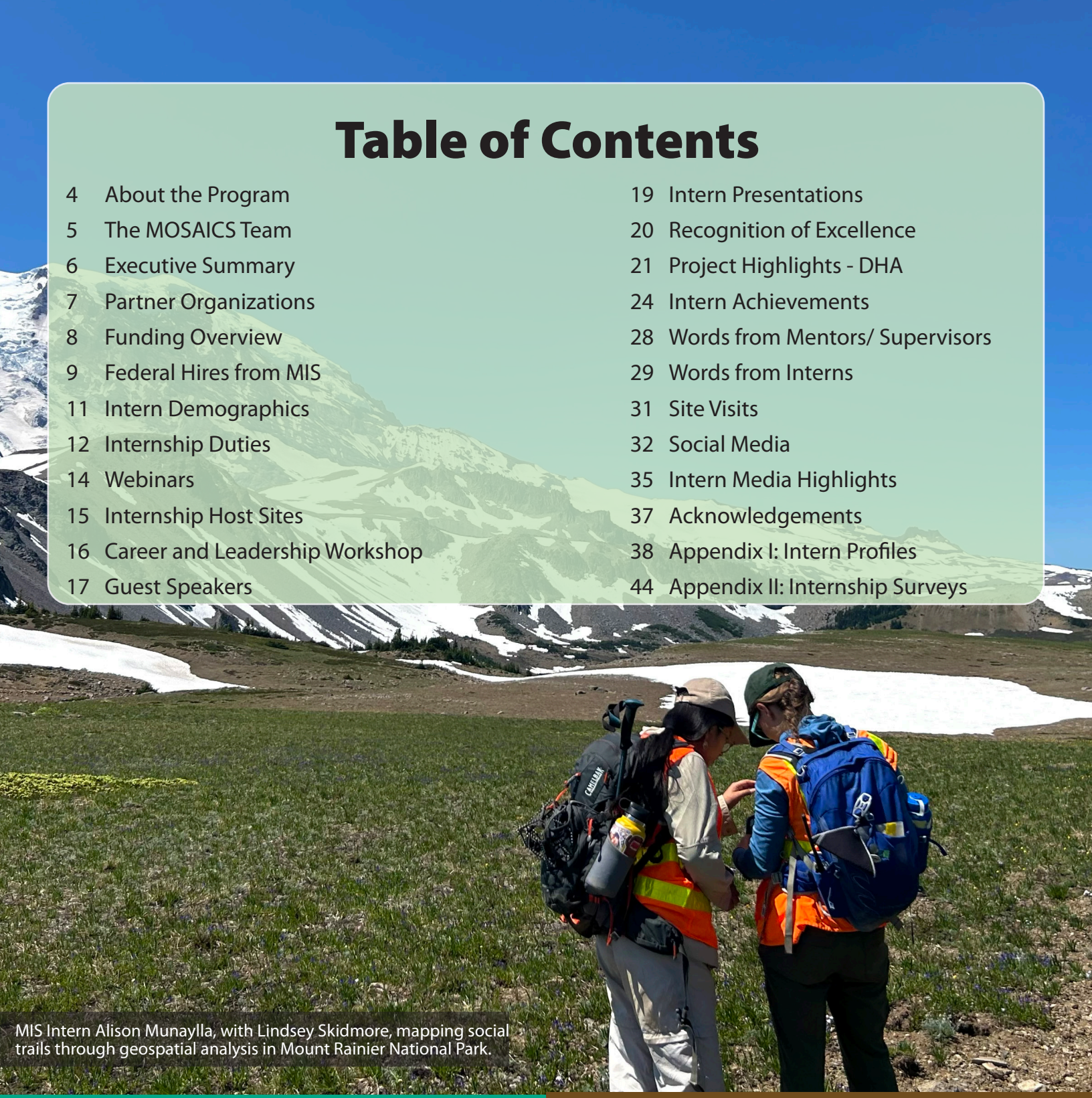
Environment for the Americas

SCIENTISTS IN PARKS
NATIONAL PARK SERVICE

NATIONAL PARK SERVICE

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MIS Intern Alison Munaylla, with Lindsey Skidmore, mapping social trails through geospatial analysis in Mount Rainier National Park.

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Environment for the Americas (EFTA)
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About the Program

MOSAICS in SCIENCE

The Mosaics in Science Diversity Internship Program provides youth underrepresented in natural resource science career fields (e.g., Latino, Black or African American, Asian, Native American/Alaskan Native, and Pacific Islander/ Native Hawaiian) with meaningful, on-the-ground work experience with the National Park Service.

Natural resource science disciplines covered in the Mosaics in Science Diversity Internship Program include air resources, biological resources, geologic resources, natural sounds, night skies, and water resources. For more information about Mosaics in Science, visit our websites at go.nps.gov/MIS or mosaicsinscience.org

Program Objectives

Mosaics in Science (MIS) connects students and recent graduates to valuable opportunities to learn the science skills they need. From gathering and recording data to conducting analyses, each new tool helps interns become more confident and proficient. MIS accomplishes the following:

- Provides meaningful and relevant science-based internships for racially and ethnically diverse undergraduate/graduate students and recent graduates, allowing the NPS to increase relevance, diversity, and inclusion
- Supports high-priority resource management and visitor education and interpretation projects in national parks
- Promotes the National Park Service mission

Our primary goals are to provide meaningful and relevant science-based internships for racially and ethnically diverse undergraduates, recent graduates, and graduate students, and to support the NPS mission.

History of MOSAICS

The Mosaics in Science Diversity Internship Program was created in 2013 as a collaboration between the NPS Natural Resource Stewardship and Science Directorate and the Youth Programs Division. During its inaugural year, the Youth Programs Division secured funding to place twelve interns in parks. The NPS partnered with the Geological Society of America during its first three years.

From 2016 to 2020, the program partnered with Environment for the Americas and Greening Youth Foundation. In 2021, EFTA became the sole program partner for the Mosaics in Science Diversity Internship Program. In 2024, we placed twenty interns in parks representing almost every region of the National Park Service.

The MOSAICS Team



Jamie Crispin
Youth Programs Manager,
National Park Service



Ernestine White
National Youth Employment Programs Coordinator and NPS LHIP POC
National Park Service



Kiersten Jarvis
SIP Program Manager,
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SIP Partnership Lead,
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Sheylda Díaz-Méndez
Internship Manager,
Environment for the Americas



Stephanie Loredo
Internship Project Lead,
Environment for the Americas



Carina Ruiz
Associate Director,
Environment for the Americas



Paulina Gutierrez
Internship Assistant,
Environment for the Americas

Executive Summary

The Mosaics in Science Diversity Internship Program continues to attract exceptional college students, recent graduates, graduate students, and individuals up to age 35 who are pursuing careers in the sciences. These participants contribute to a diverse array of projects at national parks, including inventory and monitoring, science communication, and education.

In 2024, we proudly hosted 20 talented interns. Half of them completed an intensive 12-week program, while the other 10 participated in a 20-week program. Together, they contributed an impressive 320 weeks of service, totaling over 12,800 hours of work. We also celebrated key milestones, including visits to 15 parks in California, Colorado, Massachusetts, Ohio, Oregon, South Carolina, Virginia, and Washington, where we connected with interns and their supervisors or mentors.

A standout feature of the program is the Career and Leadership Workshop, which provides training and facilitates connections between interns and National Park Service leaders. This workshop also offers interns a chance to engage with their peers and gain a deeper understanding of their work.

Environment for the Americas is proud to partner with the National Park Service to develop and host the Mosaics in Science program. We extend our heartfelt gratitude to the park supervisors and mentors who inspire interns with their passion for science, as well as to our staff who provide guidance and mentorship throughout the program.

Sincerely,

Susan Bonfield

Executive Director



The Mosaics team during the Career and Leadership Workshop in Washington, D.C.

Partner Organizations

NPS Natural Resource Stewardship and Science Directorate (NRSS)

The NPS Natural Resource Stewardship and Science Directorate provides scientific, technical, and administrative support to national parks for the management of natural resources. NRSS has a strong commitment to providing science-based on-the-ground youth career development opportunities through the management of the Scientists in Parks Program, which includes the Mosaics in Science Diversity Internship Program.

NPS Youth Programs Division (YPD)

The NPS manages youth programs with diverse missions and responsibilities. These programs aim to enhance the connection between young people and the natural and cultural resources of the NPS, while also cultivating a strong work ethic among the youth of our nation.

Environment for the Americas (EFTA)

EFTA is a nonprofit organization dedicated to bridging the gap between underrepresented individuals and conservation through research, education, and outreach. Our mission is to connect diverse people to nature and birds. Through programs like Mosaics in Science, we help to preserve quality public lands and wildlife habitat for the generations to come.

One of our key initiatives is providing opportunities for youth to engage in science and natural resource careers. By empowering young minds, we are ensuring the longevity of our natural environment. We are also passionate about increasing participation in environmental education and promoting outdoor recreation among all demographics.

For over a decade, our internship programs, including MIS, have played a vital role in reducing barriers to participation in conservation efforts. Through these programs, we have been able to cultivate a diverse and talented workforce that is committed to preserving our natural resources.

environmentamericas.org

MIS Summary: 2013–2024

Mosaics in Science has had a tremendous impact on interns, the work of the National Park Service, and the many parks that have participated.

263
Interns across the country

> 134,080
Hours of Service

131
NPS Units (3 new in 2024)







Funding Overview

Program Support	$425,000
IRA - Youth Resilience - Travel Scholarships for 2024 season	$2,000
IRA - Youth Resilience - R&R-focused positions for 2024 season	$40,000
Travel for position at Yosemite National Park	$600
GRAND TOTAL	**$467,600**

Federal Hires from MIS

Since 2013, 30 Mosaics in Science (MIS) program interns have secured permanent, seasonal, or term federal positions. Notably, our last intern was hired in 2023 by the National Park Service (NPS) after earning Direct Hire Authority-Resource Assistant status through the program. The MIS program offers professional training and resources to help participants build strong federal resumes. Environment for the Americas continues to support MIS alumni by sharing job opportunities with the NPS and other federal agencies, tracking their career successes, and providing real-world examples of how to embark on a career in conservation.

Name / Year of Internship	Position	Hire Term
Amani Canada / 2020	Outdoor Recreation Planner, San Antonio Missions National Historical Park	Permanent
Brenna Rodriguez / 2017	Haleakalā National Park, USFWS	Permanent
Brooke Su / 2021	Wildlife Biologist, USFWS	Permanent
Chelsea N Collins / 2016	Natural Resource Specialist, Bureau of Land Management	Permanent
Dominique Sanchez / 2018	Park Guide, Mammoth Cave National Park	Permanent
Fabiane Barato-Speyrer / 2016	Biological Science Technician, National Park Service	Permanent
Howasta (Howie) Tahir / 2016	Hydrogeologist with Environmental Protection Agency	Permanent
Jay Stevenson Kim / 2013	Land, Chemicals, and Redevelopment Division with EPA	Permanent
Jeanie Lai / 2018	Wildlife Biologist (GIS) for Habitat and Population Evaluation Team (HAPET), USFWS in Bismarck, ND	Permanent
Katherine (Kat) Ko / 2018	Biologist for Air Resources Division (ARD), National Park Service	Permanent
Kayla Fermin / 2017	Natural Resources & GIS Program Manager, Lewis and Clark National Historical Park	Permanent
Liliana N. Calderon / 2016	Wildlife Biologist, USFWS Portland Regional Office	Permanent
Rhys Reynaldo Placido Joaquin / 2018	Lead Interpretive Ranger and Trails & Rails Program Coordinator, Mississippi National River and Recreation Area (MN)	Permanent
Ricardo Escobar / 2017	Park Manager, BLM Coos Bay District Office	Permanent
Richard Duenas / 2015	Business Intelligence Analyst, U.S. Department of the Interior	Permanent
Sebastian Guillermo Alvarez Espinoza / 2018	Physical Scientist with EPA in California	Permanent
Sophia Bass-Werner / 2017	Cartographic Technician, NPS Boston Harbor Islands	Permanent
Stephen Roethle / 2014	Biologist, U.S. Army Corps of Engineers	Permanent
Gabi Rossetto-Harris / 2014	Paleontologist, Florissant Fossil Beds National Monument	Permanent
Taro Katayama / 2020	Biologist, Cabrillo National Monument	Permanent

Name / Year of Internship	Position	Hire Term
Christian Knutson / 2019	Ranger, Badlands National Park	Seasonal
Cory Steven Zaller-Edmonds / 2020	Mount Rainier National Park	Seasonal
Diego Antonio Morales / 2019	Paralegal with EPA in California	Seasonal
Elizabeth Rico / 2017	Natural Resource Specialist, BLM Palm Springs South Coast Field Office	Seasonal
Julia Dahlquist / 2022	Engagement Coordinator, Mt. Baker-Snoqualmie National Forest	Seasonal
Laura Palma / 2017	Biological Science Technician, Everglades National Park	Seasonal
Liza (Elizabeth) Hafner /2022	Seasonal Interpretive Ranger, Yosemite National Park	Seasonal
Maaz Fareedi / 2018	Yellowstone National Park	Seasonal
Marissa Reis / 2013	Lead Interpretive Ranger, Sequoia National Park	Seasonal
Salvador (Eddie) Silahua / 2015	Biogical Science Technician, Olympic National Park	Seasonal
William (Will) Hansell Tsai / 2021	Interpretive Park Ranger, Yosemite National Park	Seasonal

Federal Hires from MIS 2013–2024

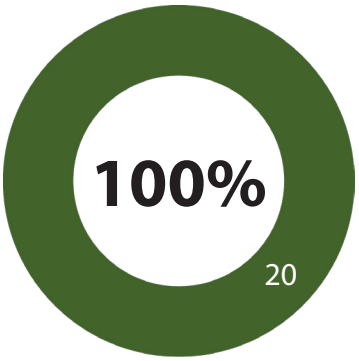
Permanent: 21 | Seasonal: 11



Amani Canada (2020 MIS alumni) and Sheylda Diaz-Mendez at San Antonio Missions National Park

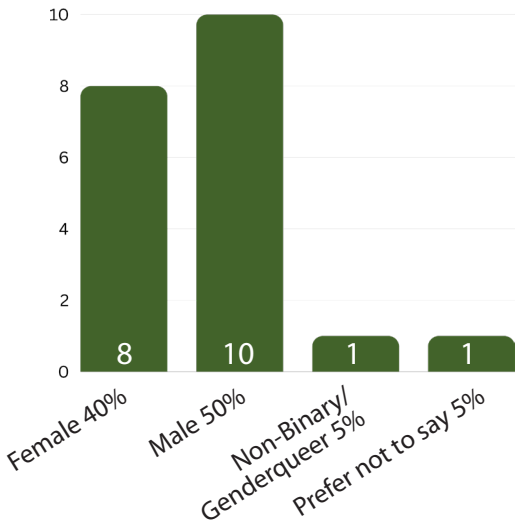
Intern Demographics

Age

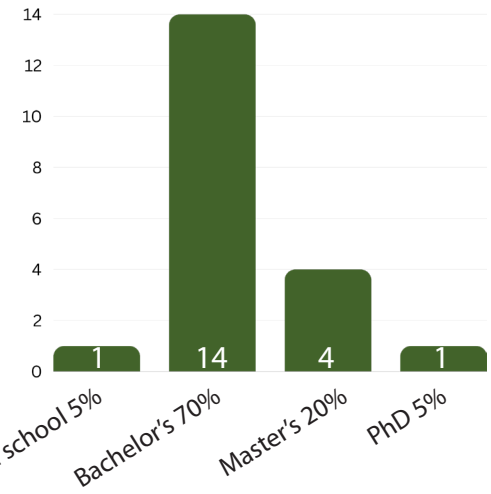


18–25

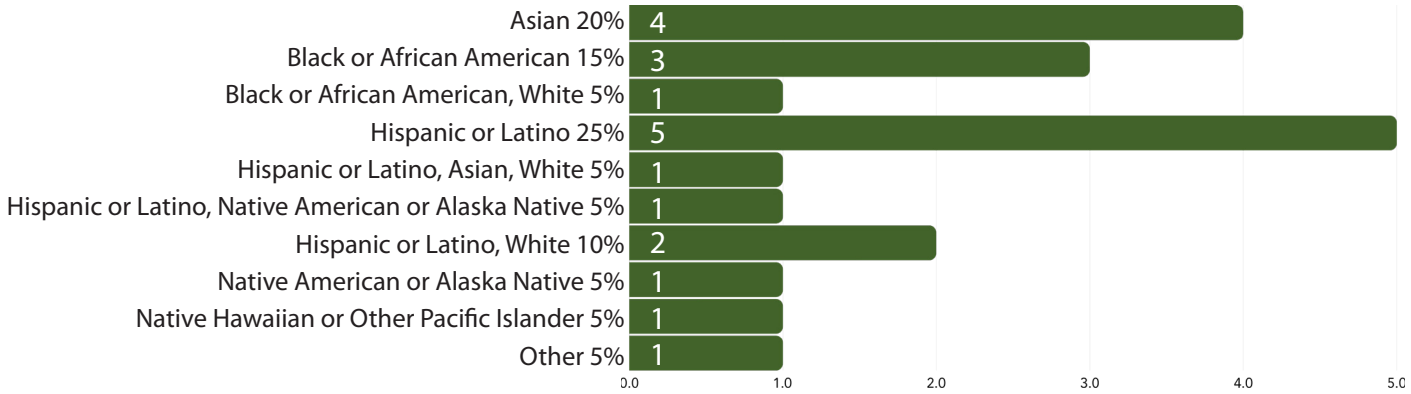
Gender



Education



Race / Ethnicity



NPS Regions

12 Interior Region Names Based on Watersheds



Region 1 North Atlantic-Appalachian= 3
Region 2 South Atlantic-Gulf=2
Region 3 Great Lakes= 2
Region 4 Mississippi Basin=0
Region 5 Missouri Basin=0
Region 6 Arkansas-Rio Grande-Texas-Gulf=3
Region 7 Upper Colorado Basin=1
Region 9 Columbia-Pacific Northwest=3
Region 10 California-Great Basin=5
Region 11 Alaska=0
Region 12 Guam=1

Internship Duties

Research

- Field work to understand factors associated with population declines of synchronous fireflies and predicting peak synchroneity. In addition, the position will research methods and tools to be used to better manage visitor use, mitigate impacts, set up a monitoring program and protocol for future use, and be a liaison to improve our Citizen Science Program. The position will do so by using, and/or developing on their own, a variety of research and monitoring techniques including but not limited to visual encounter surveys, soil probe measurements, visitor impacts surveys and minimization.-CONG
- Carried out a joint National Park Service – United States Geological Survey study on toxigenic benthic cyanobacteria in Yosemite National Park.-YOSE HYD
- Manage impacts of an invasive zoonotic disease (plague, *Yersinia pestis*) upon small mammal populations within the park, assisting with an ongoing marked-recapture study of small mammals at trapping plots located across an elevational range within the park. Handling, tagging, and vaccinating small mammals, navigating cross-country using GPS and compass, field data collection, and data entry.-LAVO

Inventory and Monitoring

- Assessing fisheries resources in light of recent changes in fishing regulations at Biscayne National Park in Florida. Contribute to the overall resource management.-BISC
- Working on vegetation, wildlife, and physical science projects, using wildlife cameras to determine habitat use and distribution of mammals, surveying sensitive and endangered species such as peregrine falcons and yellow-billed cuckoos, assisting the physical science and interpretation program in night sky surveys, and vegetation surveys.-BIBE
- The primary focus was assisting wildlife monitoring projects including a Monitoring Avian Productivity and Survivorship (MAPS) bird banding station, surveys to confirm breeding status and location of birds of conservation concern in the park, deploying and managing autonomous recording units (ARU) to detect birds and bats, and deploying and managing adapted-Hunt drift fence technique (AHDriFT) arrays.-CUVA BS
- Plant phenology monitoring and herbarium digitization. The SIP will work with park staff to monitor the phenology of Joshua trees and associated species to identify populations suitable for seed collections.The SIP will also gain experience working with natural history collections by contributing to the park's herbarium digitization project.-DEVA
- Identifying sensitive vascular plant species (rare or endemic, of protected status, or projected to be at increasing risk from habitat change or loss) at MORA and protecting existing populations.-MORA BS
- Forest vegetation monitoring as part of a five-person field crew. As a member of the crew, they will visit 40 long-term forest monitoring plots throughout the park backcountry and learn backcountry safety and travel skills, woody plant sampling methods, and plant identification. The intern will be responsible for working as part of the crew to complete forest plot documentation and monitoring tasks within each 24 x 24 m plot.-SHEN
- Use small, manual tools and consolidant and adhesives to clean and repair these bones. The intern will learn the process of labeling and recording new specimens for the Interior Collections Management System. All details will also be updated in the field notebook 30% Fossil jacket preparation including exhibit preparation.-WACO
- Survey the shallow water reef flat ecosystem. Surveys will be conducted on snorkel and will involve swimming transects to document fish species abundance and biomass, benthic diversity and percent cover, and coral bleaching. Interns will learn how to identify Guam's fish, coral, invertebrates, and marine plants. They will learn common marine research techniques including use of transects, photo-quadrants, Coral Watch bleaching color card, estimating size underwater, and analyzing benthic data in Coral Net.-WAPA

GIS and other technologies

- A variety of methods used to study turtles by conservation biologists; these techniques include turtle trapping, catch-mark-recapture, morphometric measurement of individuals, radio telemetry tracking, invasive species removal, exposure to conservation scent detection using dogs, and more.-YOSE BS
- Assisting with visitor use indicator monitoring will include both frontcountry and backcountry field work, data collection using GIS platforms, handheld tablets and high-accuracy GPS units, data management, analysis, and leading Volunteers-In-Parks (VIPs) in data collection efforts. Other general duties of the Visitor Use Management (VUM) Assistant may include data cleanup, formatting, processing, and reporting of these important data for park management.-ROMO

Education / Interpretation

- Working as a science communication assistant with a component of field work, developing science/media communications, and videography/photography at Golden Gate/John Muir/Pinnacles/Point Reyes in California.-GOGA
- Developing and refining science communication materials, scientific media development, presentations/interpretive programs for visitors, and occasionally working with field scientists at Boston Harbor Islands.-BOHA
- Assist with the development, training, and implementation of Dark Sky programming at Lyndon B. Johnson National Park and audience ready for highly successful dark sky programs, and the incumbent in this position will provide the expert knowledge and skills needed by the interpretive staff to engage the visiting public.-LYJO
- Enhance natural and cultural resource content via Glacier National Park's digital platforms by assisting both Glacier National Park's Interpretive Media Team and the Crown of the Continent Research Learning Center's Science Communication Program. Duties include updating and adding new content to Glacier's website and app; assisting with research and story creation for the park's award-winning Headwaters Podcast; creating engaging social media posts highlighting science and research; and writing multi-media articles on natural and cultural resources for online audiences. -GLAC
- Development and facilitation of formal and informal interpretation/education for diverse park visitors. Such interpretation expects to impact a minimum of 6,000 visitors regarding the value of preserving park resources.-MORA Comms

Multi-faceted

- Assist with the collection of data in support of a research project focused on assessing the drivers of large-scale seagrass loss at Cape Cod National Seashore, and factors preventing its recovery. Other duties will include equipment maintenance and repair, data entry, and data quality/assurance control. A majority of the field work will be conducted via snorkel and boat surveys.-CACO
- Assisted aquatic resources projects including monitoring freshwater mussels, fish surveys, water quality sampling, and large woody debris monitoring. The SIP Mosaics intern will be supervised by park biologists and will help park staff to collect a variety of river-related data, assist with the management of volunteers, and communicate with park visitors. -CUVA Aquatic



MIS Intern Alexis Rodriguez assists in the Congaree National Park Dragonfly Mercury Sampling.

Webinars

Environment for the Americas (EFTA) delivers training to interns through webinars, which serve as a key method of direct communication with both interns and their supervisors. These webinars enable us to reach our target audience, providing convenient and cost-effective professional development without the need for physical travel. Additionally, they allow EFTA staff to monitor attendance and respond to questions in real-time. We continuously refine our webinars based on feedback from previous cohorts, ensuring an enhanced experience for future interns. We carefully select speakers who resonate with our interns and share relevant experiences, making these webinars a highly valued component of the Mosaics program.

Date	Topic
May 16	Orientation for Conservation Fellows (Direct Hire Authority - Resource Assistant for DHA-RA Interns only) [NPS run]
May 23	Workplace Harassment Orientation [NPS run]
May 30	Public Lands Corps Non-Competitive Hiring Authority Overview for Interns [NPS run]
May 21	Diversity, Equity, and Inclusion
June 6	Federal Resumes
June 13	Networking: advocating for your professional growth
June 20	Interns' Presentation Preparation
June 27	Workshop Preparation



MIS Intern Vincent Hart, collecting vegetation data with the team at Shenandoah National Park.

Internship Host Sites



Map not to scale

DHA-RA

- Biscayne National Park / Florida
- Boston Harbor Islands National Recreation Area / Massachusetts
- Rocky Mountain National Park / Colorado

PLC

- Big Bend National Park / Texas
- Cape Cod National Seashore, Northeast Coastal and Barrier Network / Massachusetts
- Congaree National Park / South Carolina
- Cuyahoga Valley National Park / Ohio: 2
- Death Valley National Park / California
- Glacier National Park / Montana
- Golden Gate National Recreation Area, John Muir National Historic Site, Pinnacles National Park, Point Reyes National Seashore / California
- Lassen Volcanic National Park / California
- Lyndon B. Johnson National Historical Park / Texas
- Mount Rainier National Park / Washington: 2
- Shenandoah National Park / Virginia
- Waco Mammoth National Monument / Texas
- War in the Pacific National Historical Park / Guam
- Yosemite National Park / California: 2

Career and Leadership Workshop

- **Monday, August 5 – Friday, August 9**
- **Stewart Lee Udall Department of the Interior Building**
  1849 C Street N.W., Washington DC 20240

The Youth Programs Office of the Department of the Interior hosted the annual Career and Leadership Workshop in Washington, D.C., bringing together 87 interns from the HBCUI, InternXL, Mosaics in Science, Latino Heritage Internship, and Golden Gate Internship programs. These talented students and early-career professionals collaborated with National Park Service leadership, gaining hands-on experience while contributing to key projects. During the workshop, interns presented their work and engaged in networking opportunities, equipping themselves for the next steps in their careers.



Interns from Mosaics in Science, Latino Heritage Internship Program, Golden Gate, Interns XL and Historically Black Colleges and Universities (HBCU) at the Career and Leadership Workshop in the Department of the Interior, Washington D.C.

Guest Speakers

Speakers

- Amani Canada, Outdoor Recreation Planner, San Antonio Missions National Historical Park
- Brenda Mallory, Chair of the Council of Environmental Quality (CEQ), White House
- Candice Price, SODAS Life
- Charles F. "Chuck" Sams III, Director, National Park Service
- Crystal Gailes, Human Resources Specialist, National Park Service
- David Vela, Former Deputy/Acting Director, National Park Service
- Deb Haaland, Secretary, Department of the Interior
- Fran P. Mainella, 16th NPS Director, National Park Service
- Glenn Hook, Lead Recruiter, National Park Service
- Isha M. Renta López, Research Transitions and Evaluations Lead, National Oceanic and Atmospheric Administration, Weather Program Office
- Jamie Crispin, Youth Programs Manager, National Park Service
- Jeremee "JT" Tate, Recruiting and Outreach Specialist, National Park Service
- Kelly Kim, Recruitment Specialist, Department of the Interior
- Lashauntya Moore, Friends Corps Director, Friends of Anacostia Park
- P. Daniel Smith, Former Deputy/Acting Director, National Park Service
- Raisa "Ray" Barrera, Program Manager for the National Capital Region, Student Conservation Association
- Ray Sauvajot, Associate Director of the Natural Resource Stewardship and Science Directorate, National Park Service
- Rita Moss, Associate Director, Workforce & Inclusion, National Park Service
- Robert G. Stanton, 15th Director, National Park Service
- Sandy Scott, Senior Advisor, Office of Strategic Partnerships, AmeriCorps
- Tandy Bolling, Human Resources Specialist, National Park Service
- Tracy L. Baetz, Chief Curator, Department of the Interior Museum
- Trevino Henderson, Recruiter, National Park Service
- Yasmeen Shaheen-McConnell, Senior Advisor for the American Climate Corps, AmeriCorps

Moderators

- Alexia Yau, Connected Communities Advanced Fellow, U.S. Fish and Wildlife Service
- Chloe Q. Leaverton, U.S. Fish and Wildlife Service Special Assistant
- Deanna Hayden, Historically Black Colleges and Universities, NPS Partnerships & Philanthropic Stewardship
- Dr. Eboni Preston Goddard, Historically Black Colleges and Universities Internship Program Lead, SODAS Life
- Dr. Ryan Valdez, Senior Director of Conservation Science, National Parks Conservation Association
- Eduardo Chaidez, Acting Supervisory Park Ranger | Interpretation, National Park Service
- George McDonald, U.S. Department of the Interior Senior Advisor-Youth Programs, Office of the Assistant Secretary, Policy, Management and Budget
- Mikeriya K. Bond, Associate Director of Programs, Greening Youth Foundation
- Nicole Segnini, Digital Content Producer (former LHIP), The Wilderness Society
- William (Will) Hansell Tsai / 2021 Interpretive Park Ranger, Yosemite National Park Seasonal

Program Evaluator

- Dr. Lisa Collins, Evaluator, Education Through Engagement



From left to right: Deb Haaland, Secretary of the Department of the Interior; Brenda Mallory, Chair of the Council on Environmental Quality (CEQ), White House; Charles F. "Chuck" Sams III, Director of the National Park Service (NPS)



Intern Presentations

Mosaics in Science interns share their work at the Career and Leadership Workshop through either an oral or poster presentation. This gives the interns experience communicating their research and results as they would at a professional conference. It is also an opportunity for them to demonstrate their skills, personality, and ambition to Department of the Interior leadership and employees.

Oral presentations

Mosaics who worked on Direct Hire Authority projects showcased their summer experience during oral presentations at the Yates Auditorium on Tuesday, August 6. Presentations ranged from climate change effects in vegetation and beavers, bird population changes in an Alaskan ecosystem, vegetation management in the Pacific Northwest, and fisheries management in the Atlantic Ocean. Presentations were live-streamed and recorded in the Environment for the Americas social media.

Poster presentations

Mosaics who worked on Public Land Corp hiring authority projects exhibited their scientific findings in posters at the Department of the Interior on Wednesday, August 7. Posters highlighted what interns worked on, ranging from vegetation monitoring in national parks like Death Valley and Yosemite to education and outreach at Golden Gate NRA and Glacier National Park. A total of 17 interns presented, engaged, and networked with distinguished scientists and peers.



Interns (Pranneil, Gavin, Alexis, Jacque, and Ray) during oral and poster presentations.

Recognition of Excellence

Excellent Mentorship



Catherine Fong
Yosemite National Park



Thomas Athens
Big Bend National Park

Outstanding Intern Performance



Terence Borja
War in the Pacific National Historical Park



Anita Garg
Yosemite National Park

Standout Internship Digital Communications



Alison Munaylla-Bohorquez
Mount Rainier National Park



Sophia Britto
Glacier National Park

Excellent Mentorship

Catherine supported Mosaics in Science intern Anita Garg, offering life-changing experiences. Anita's 40-mile backpacking trip into the Yosemite wilderness exemplified the passion and engagement fostered by Catherine's mentorship, going above and beyond the call of duty to engage and develop interns.

Thomas created a positive work environment for intern Jeremiah Wright, promoting work-life balance. He provided professional training that included a fire refresher course, preparing Jeremiah for a type 2 wildlife firefighter role. Thomas' support and care for interns' safety and well-being are greatly appreciated.

Outstanding Intern Performance

Terence, a Mosaics in Science intern in Guam, always met deadlines and demonstrated competence in identifying marine life, completing training, and engaging in fieldwork. His courteous and respectful demeanor, despite the demanding field work, made him an exceptional intern.

Anita, nominated by her supervisor, excelled in commitment, leadership, communication, and teamwork. She consistently met or exceeded expectations, delivering outstanding project results and displaying a strong team spirit.

Standout Internship Digital Communications

Alison's exceptional communication skills are evident in her poetic blogs and captivating photos, providing a vivid experience of Mount Rainier. She is awarded for her outstanding social media communication.

Sophia, recognized for her professionalism and innovation, contributed significantly to the media team. Her effective digital communication content resonated well with the park's audience.

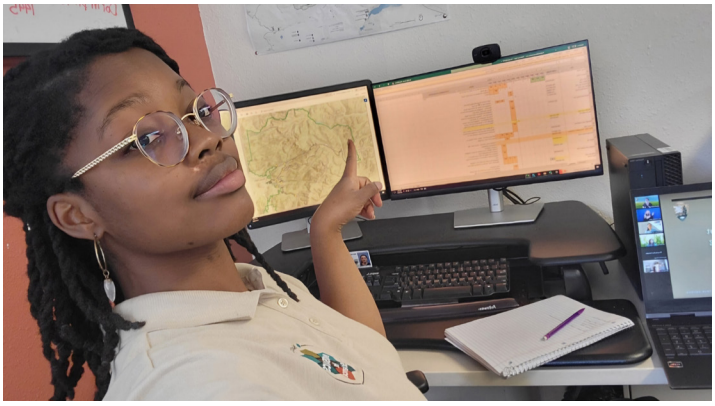
Project Highlights - DHA

Tonya Messam

Visitor Use Management Assistant, Rocky Mountain National Park

Tonya Messam admires the resilience of Rocky Mountain National Park (RMNP). Established in 1915, the park's mission is to preserve the high-elevation ecosystems of the Southern Rocky Mountains in Colorado. Unfortunately, in 2020 and 2021, nine percent of the park was affected by the East Troublesome and Cameron Peak wildfires. As Tonya walks through the blackened earth, she sees new life emerging in the form of dandelions, grass, and wild strawberries, slowly making their return.

To aid in the preservation of the park, Tonya is working with the Visitor Use Management (VUM) team at the RMNP Research Learning Center (RLC). Together, they are tackling the challenges parks face in balancing visitor enjoyment with wildlife conservation. Some techniques used to collect data include installing traffic and trail counters to better understand visitor usage in the park and adjust the management plan accordingly. She and her team use this data to create a report that helps the park understand visitor influxes throughout the year. VUM uses Geographical Information Systems (GIS) to pinpoint remote trails for data collection. Tonya's project focuses on factors contributing to these visitor influxes, such as access to transportation, parking, social media, advertisements, and reviews. At the end of her internship, Tonya will give the park useful information on how to manage visitor traffic now and in the future.



Finding Connection Between Traffic & Trails Use

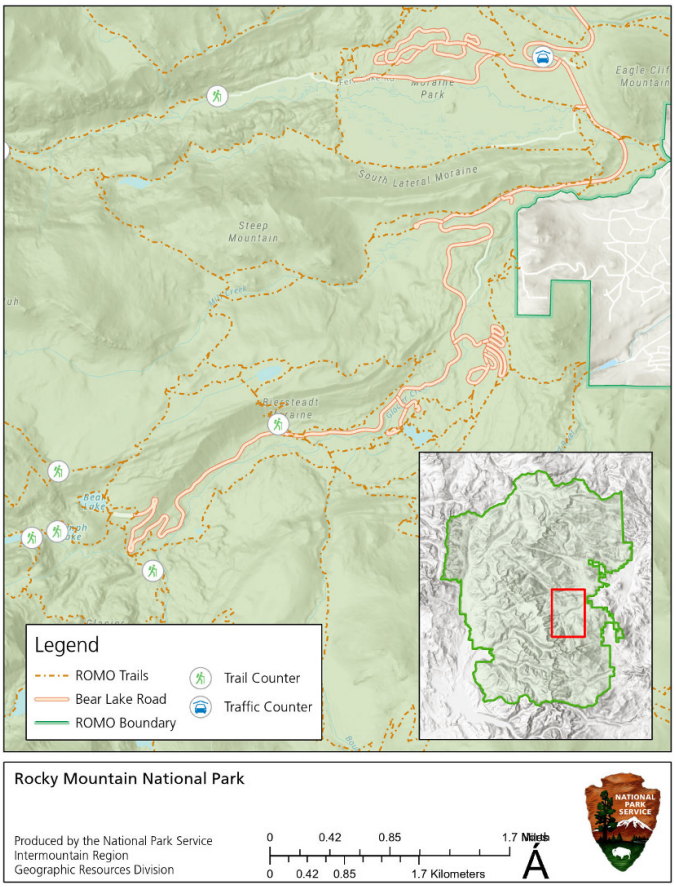
Additional Analysis Considered, but Dismissed

- Correlation of Traffic/Trail Patterns to Ecological Disturbance
- Parking Distances to Trailhead
- Transportation (Shuttle) Use
- Social Media Influences on Visitation



Methods Used

- Omega X3 Timestamp
- Processor (Data Downloads; Traffic)
- Trafx Doc G4 (Data Downloads Trails)
- Google Maps
- Excel
- Linear Regression



Trail and Traffic Counters of the Bear Lake Road Corridor Map

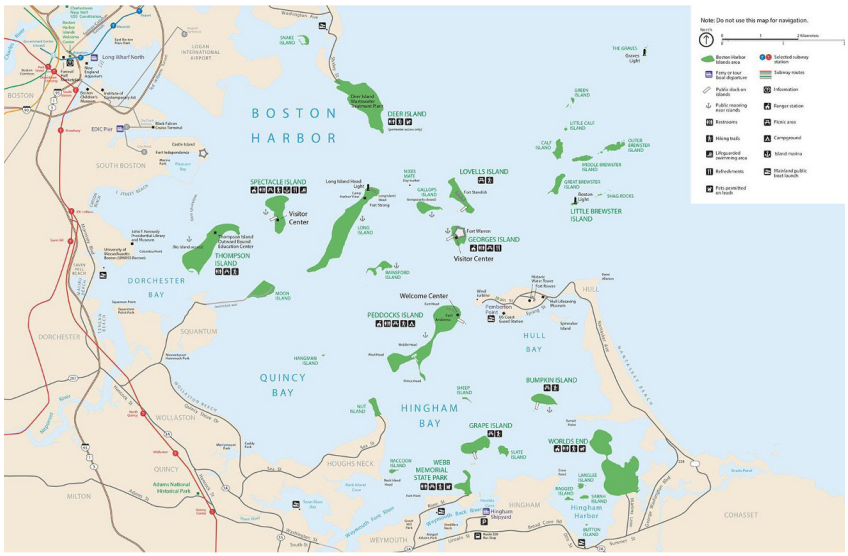
Project Highlights - DHA

Pranneil Thankavel

Science Communication Assistant, Boston Harbor Islands National Recreation Area

This summer, Pranneil Thankavel traded Wisconsin's Lake Michigan and Lake Superior for the Atlantic Ocean, moving to the Boston Harbor Islands National and State Park in Massachusetts. Getting to the park requires a boat ride from Boston Harbor to one of its 34 islands. The first inhabitants of these islands were the Massachusett tribe, who used the area's resources during the summer thousands of years before European settlers arrived.
Over the years, erosion has significantly impacted salt marsh ecosystems, causing parts of the islands to wash away. Invasive species like mile-a-minute, roundleaf bittersweet, and garlic mustard have also altered the islands' landscapes. Pranneil's internship involves educating the public about these invasive plants and their effects on the islands, as well as working weekly with the invasive plant management team.

Pranneil's personal mission is to "help the public celebrate what is already theirs, public land and Nature's universal biological and ecological art." Through his internship, he has actively participated in weekly events and partnerships. On Wednesdays, he collaborates with Climate Conservation Corps interns to create and run programs about climate change. Fridays are dedicated to enhancing science communication in the park with pop-up events on topics like bivalve identification, marine invasive species monitoring, and using iNaturalist. On Stewardship Saturdays, Pranneil works with the public to improve the park's beauty and health, often by removing invasive plant species. He is also creating a resource guide with ecological sources and suggestions for better science communication in the park.





> "Yes, invasive species harm an entire ecosystem, sometimes outcompeting all native plants in this same landscape; however, we are taught as Indigenous peoples that regardless of whether this plant belongs there or not, we must ask its spirit for permission. We acknowledge them as displaced relatives rather than invasive species, since at the end of the day, they are also someone's plant relatives.



Invasive mile-a-minute vine discovered with signs of herbivory, evidence that a bio-control weevil has appeared on the island — exciting stuff!

Project Highlights - DHA

Michael Borbolla

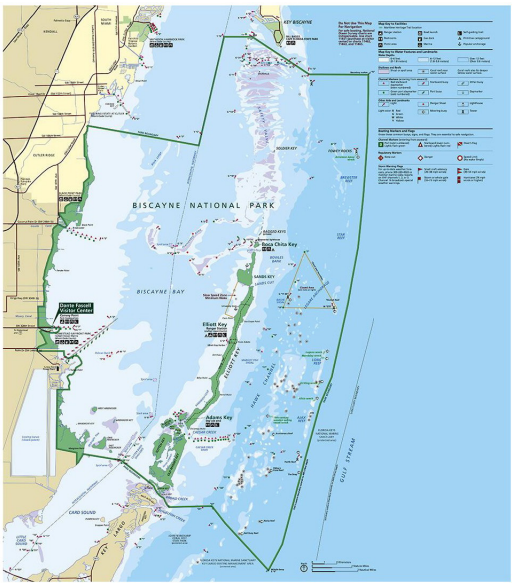
Natural Resource Management Assistant, Biscayne National Park

Michael Borbolla grew up in the mangroves, seagrass, and coral reefs that make up Biscayne National Park and its surrounding Southern Florida areas. This early exposure to the largest marine reserve in the United States created a desire to be part of the efforts to study and protect this ecosystem and its cultural history. Dating back to 10,000 years, the Tequesta people were the "original caretakers of Southeast Florida and Biscayne Bay." Michael is ecstatic to be part of the National Park Service team that helps in the preservation of their history and the natural and ecological importance this area holds for all of its inhabitants both in and out of the ocean.

His favorite part of his internship consists of public outreach, discussing with visitors and locals the importance of conservation of the area for fishing, turtle nesting, and the number of aquatic animals that use different areas of this ecosystem in its life cycle. As a member of the resource management team, Michael assists in monitoring various aquatic and terrestrial ecosystems; these consist of coastal mangroves and beaches, turtle nesting, coral reefs, and seagrass meadows. The main internship focus is on the monitoring of recreational fishing; this is done by way of CREEL surveying, where Michael interviews fishermen, many of whom are locals, and uses this opportunity to do some educational outreach. Additionally, he contributes to marine debris removal, lionfish removal, buoy installation efforts, and analyzing the effectiveness of recent fishing regulations from the CREEL surveys collected. The continuous interactions Michael has had while working on land or out at sea further support his view that this area is unique and we should continue "conserving these spaces so future generations can have the same experiences" he is so grateful to have had.



Protecting a fresh turtle nest on the beaches of Elliot Key



What exactly do CREEL surveys measure?

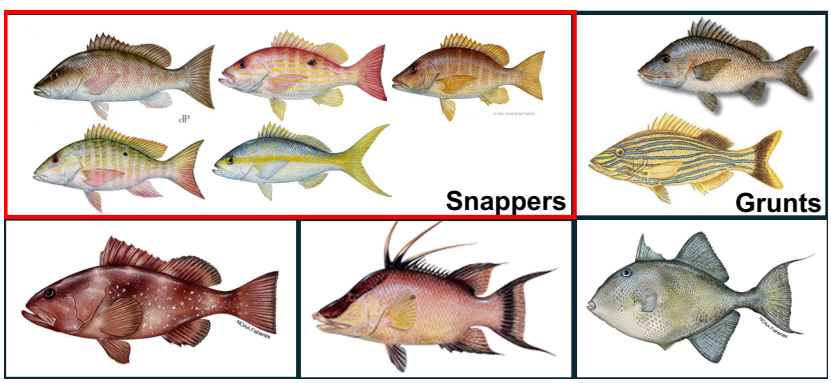
Ecological Data
- Total Fish Caught
- Total Fish Released
- Fish Measurements
- Effort Spent Fishing

Social Data
- Captain's Residence
- Satisfaction
- Party Composition
- Knowledge of Regulations



Measuring a Hogfish during a CREEL survey at Homestead Bayfront Park

What they catch: Biscayne NP Tier 1 Fish Species



Intern Achievements

Jeremiah Wright

Big Bend National Park
Natural Resource Management Assistant

The western Yellow-billed Cuckoo is a threatened species impacted by habitat loss and fragmentation. Over 900 acres of habitat critical to this species burned in 2019, and Jeremiah contributed to a long-term study that examines the cuckoo's use of burned versus unburned areas. In addition to using avian research techniques, he participated in water monitoring and used GIS to plot where cuckoos were found. The results of the study show that this bird depends on water availability and is present more frequently in unburned sites. This information will inform the park's land managers who are working to protect this beautiful bird.



Alexis Rodriguez

Congaree National Park
Biology Assistant

The Snappy Single Sync (Photuris frontalis) is one of three North American firefly species that synchronizes its flashes of light. Alexis worked on understanding population declines of the "snappy syncs," named for the rapid rhythm of their flashes, and better predicting when they appear. Using probes to record soil and air temperatures, researchers can consider the influence of changing temperatures on firefly emergence. In addition, Alexis researched methods and tools to better manage visitor use and mitigate the impacts of visitors on fireflies. In 2024, peak emergence was May 13–27.



Intern Achievements

Vincent Hart

Shenandoah National Park
Ecology Assistant

Shenandoah National Park encompasses diverse habitats that include meadows, streams, and lush forests. Vincent participated in forest vegetation monitoring to examine tree defoliation caused by the spongy moth (Lymantria dispar). As a member of the field crew, he visited 40 long-term forest monitoring plots throughout the park's backcountry while learning woody plant sampling methods and plant identification. The study demonstrated that tree mortality is influenced by the intensity and extent of spongy moth defoliation.



Kta'n Paul

Cape Cod National Seashore, Northeast Coastal and Barrier Network
Biology Assistant

Eelgrass is a critical part of the ocean ecosystem off Cape Cod. It creates shelter for clams, oysters, and other marine life and helps to prevent erosion. Unfortunately, eelgrass is threatened by a number of activities, including dredging, construction, and pollution. As a member of the Cape's Mashpee Wampanoag Tribe, Kta'n has a strong connection to the land and a desire to protect it. He collected eelgrass seeds at six sites, separated viable from nonviable seeds, and planted seeds in restoration areas. His effort contributed to the park's goal of assessing the drivers of large-scale seagrass loss at the park.



Intern Achievements

Terence Borja

War in the Pacific National Historical Park
Natural Resource Management Assistant

Climate change impacts Guam's reef systems, and in 2022, the park launched a study to determine changes in its reefs caused by warming waters. Terence surveyed the shallow water reef flat ecosystem at two sites, gathering data at 20 points, such as the types of fish that use the area. He also assisted with coral reef restoration, including installing a coral nursery, cleaning nursery structures, and outplanting corals onto local reefs. Although it will be some time before the data are analyzed, Terence believes that the reefs are in danger.



Alison Munaylla-Bohorquez

Mount Rainier National Park
Biology Assistant

Mount Rainier is rich in plant life and is home to 17 globally sensitive vascular plant species, which includes flowering plants, ferns, and conifers. Alison improved park location records of plants by mapping their potential locations using location data gathered from previous observations. The project is informed by iNaturalist and herbarium collections in the state. Alison also developed resources for park staff to identify the species of concern and completed data management and specimen vouchering protocols for NPS and research.



Intern Achievements

Jacque McKay

Lassen Volcanic National Park
Natural Resource Management Assistant

Jacque worked on the "Pikas and Plague" research project. They assisted with an ongoing marked-recapture study of small mammals at trapping plots located across an elevational range within the park. Jacque contributed to vaccination of small mammals in order to prevent zoonotic disease (plague, *Yersinia pestis*). In addition, they contributed to water quality data collection at Crater Lake National Park.



Anita Garg

Yosemite National Park
Biology Assistant

Anita worked on a toxigenic benthic cyanobacteria study and identified benthic cyanobacteria producing toxins in Yosemite's waterways using visual surveys as well as passive toxin collectors. Anita described the spatial and temporal distribution of toxigenic benthic cyanobacteria at the park and researched the environmental factors associated with its presence and abundance.



Words From Mentor / Supervisor

Mentor / Supervisor Carson Lillard / Congaree National Park

"Alexis has been an amazing and critical part in our work here at Congaree. The synchronous fireflies that call Congaree home are one of the most valued resources in our Park and community. Without Alexis's significant contributions to the research and monitoring of these fireflies, we could see significant declines and have no understanding of why. Alexis dove in headfirst to research the ecology of these amazing creatures, and her contributions cannot be emphasized enough!"





MIS Intern Alexis Rodriguez, facilitating an interpretation table on firefly conservation at Congaree National Park.

Words From Interns

Jacque McKay / Lassen Volcanic National Park

I have had an amazing time exploring terrestrial field methods. As a marine scientist, the bulk of my experience has been aquatic. Being able to tromp around in the forest, surveying for pika and owls, and setting camera traps for black bears has been amazing! I am grateful to learn about a new ecosystem and apply ecological principles broadly.

Michael Borbolla / Biscayne National Park

I like how the level of communication can be controlled by the interns. Other programs tend to be a bit too hands-on, and I appreciate that EFTA has been providing us with some freedom to work independently.

Anita Garg / Yosemite National Park

I feel supported in the internship. I am learning a lot about hydrology, algae, and fieldwork. My supervisor is supportive and creates a comfortable and safe work environment. I am making friends in the local community.

Sophia Britto / Glacier National Park

I've loved my experience at Glacier National Park! Learning about conservation, climate change, and science communication to the public has been extremely valuable to me.

Rachel Jalbert / Cuyahoga Valley National Park

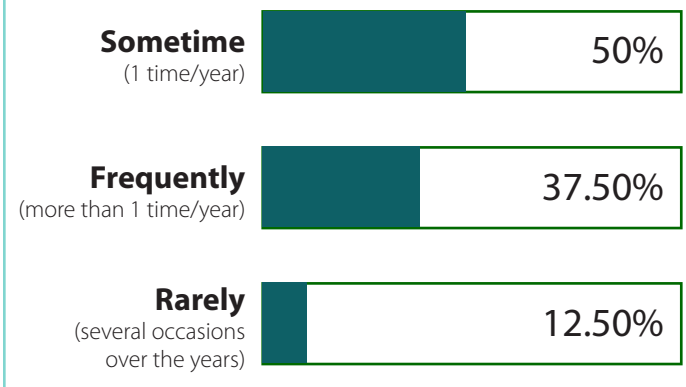
From interns to technicians to biologists, I have been able to learn so much from everyone here. When meeting people with different interests than mine, I try to be like a sponge, absorbing everything I can. This sponge has absorbed everything from herpetofauna, invertebrates, birds, mollusks, and plants. Along with learning about the park itself, I have had the opportunity to assist with bird banding, plant identification, native mussel relocating, and butterfly identification.

Alexis Rodriguez / Congaree National Park

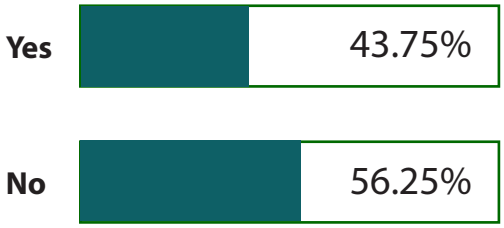
My favorite part of this internship was seeing how the knowledge I gained during my undergrad, in combination with what I learned in the Congaree office, was translated into actual fieldwork. It is extremely rewarding to work in an environment where what I learned is applied to what I do.

MIS Intern Vincent Hart, assessing habitat conditions and substrate types, Shenandoah National Park.

Prior to this internship, have you ever visited a national park, national forest, national wildlife refuge or other public land?



Prior to applying for this program, have you ever applied for a position with your host organization (National Park Service, U.S. Forest Service, U.S. Fish & Wildlife Service)





MIS Intern Alison Munaylla-Bohorquez, capturing photographic documentation of vascular plants on a glacier, Mount Rainier National Park.

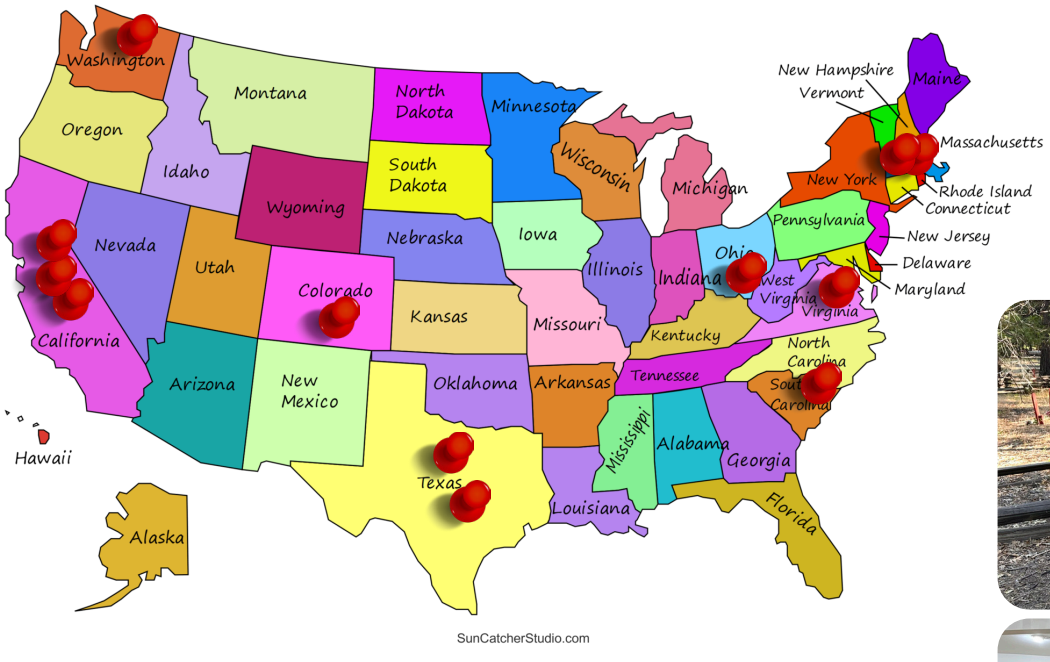
Site Visits

Enhancing Internship Experience and Understanding

Site visits to national parks provide opportunities for Environment for the Americas staff to meet face-to-face with interns to learn about their activities, successes, and challenges during their internships. We also have the opportunity to meet with supervisors/mentors and learn about the park. Each site visit provides us with information that we use to improve the experience for future interns.

Connecting with Interns Across National Parks

In 2024, Environment for the Americas and NPS staff completed a total of twelve in-person site visits. These included Golden Gate National Recreation Area, Cuyahoga Valley National Park, Mount Rainier National Park, Yosemite National Park, Rocky Mountain National Park, Boston Harbor Islands National Recreation Area, Congaree National Park, Waco Mammoth National Monument, Shenandoah National Park, Cape Cod National Seashore, Northeast Coastal and Barrier Network, Death Valley National Park, and Lyndon B. Johnson National Historical Park.



12

in-person site visits







Addressing Challenges

We identified a variety of issues during site visits that ranged from logistical challenges to concerns about expenses and work. For example, interns at Shenandoah and Yosemite faced a communications challenge with the lack of Wi-Fi in many areas. Environment for the Americas addressed the situation by providing the interns with a stipend to purchase a hot spot they could use to complete their work and communicate with their family and friends. The intern at Cape Cod National Seashore needed a computer to complete blogs, and our EFTA staff promptly sent him a Chromebook.

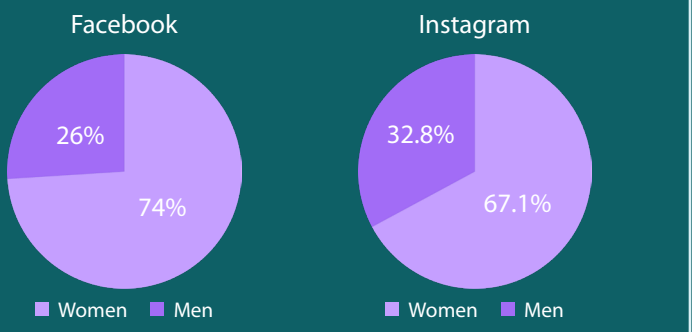
Meeting interns and their supervisors also helps us to build relationships, demonstrate our support for the interns, and strengthen the program for future participants.

Social Media

Follow Us on Social Media

In 2024, MIS's efforts resulted in a significant increase in diverse and professional media content, all aimed at advancing the program's goals, engaging past and present interns, and involving program partners. The growth, reach, visits, and interactions on MIS's social media platforms saw a notable improvement compared to the previous year.

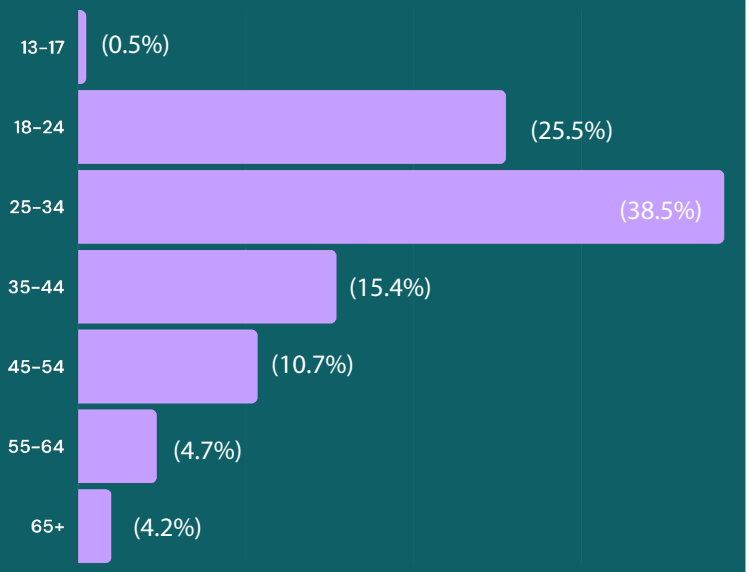
Users by gender



Top cities engaged

- Saginaw, MI (1.9%)
- New York, NY (1.8%)
- San Juan, Puerto Rico (1.3%)
- San Diego, CA (1.2%)
- Atlanta, GA (0.9%)
- Martinsville, VA (0.9%)
- Utuado, Puerto Rico (0.9%)
- San Franciso, CA (0.8%)
- Portland, OR (0.6%)
- Tucson, AZ (0.6%)

Main age range



Facebook: MosaicsInScienceInternship

Instagram: @mosaicsinscience_nps

Twitter: @Mosaics_NPS

Website: mosaicsinscience.org

NPS website: go.nps.gov/mis

Facebook

Instagram

Website

NPS Website

Social Media Statistics

User Growth Percentage

Facebook

Followers	Page reach	Page visits	Page likes
717	+58%	+86%	+72%

Instagram

Followers	Page reach	Page visits	Page likes
1220	+94%	+94.2%	+83%



MIS Intern Evan Cerna at his dig site in Waco Mammoth National Monument, Texas.

Highlight Social Media Posts

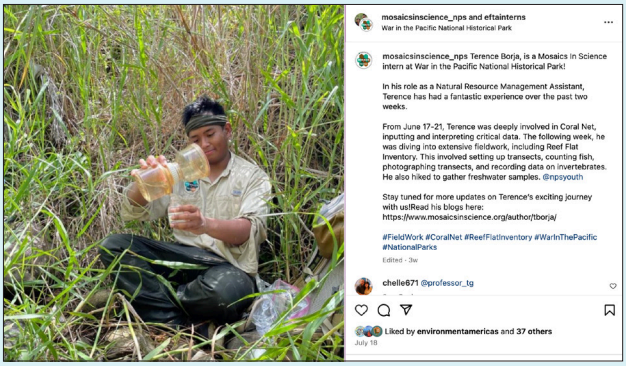


Tonya Messam
Rocky Mountain National Park
Visitor Use Management Assistant

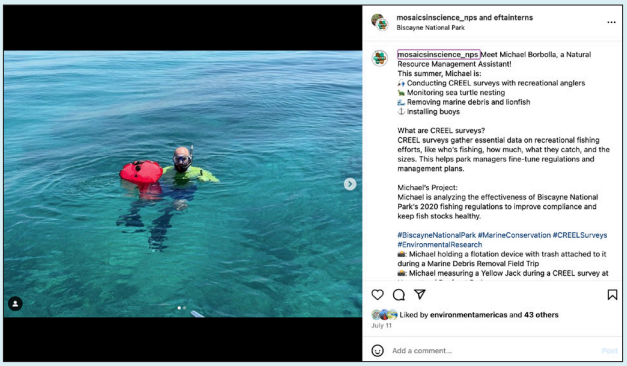
Scan the QR code to read more.



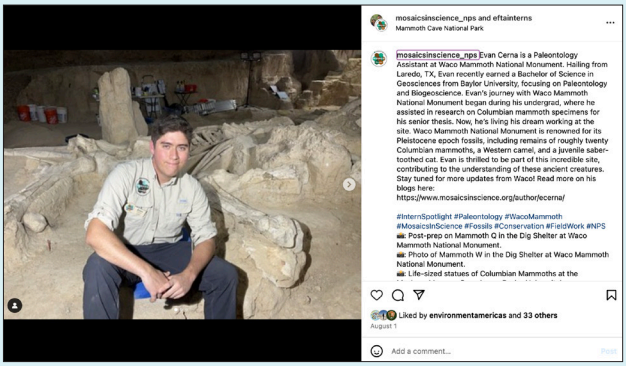
Kyra Bassett
Cuyahoga Valley National Park
Natural Resource Management Assistant



Terence Borja
War in the Pacific National Historical Park
Natural Resource Management Assistant



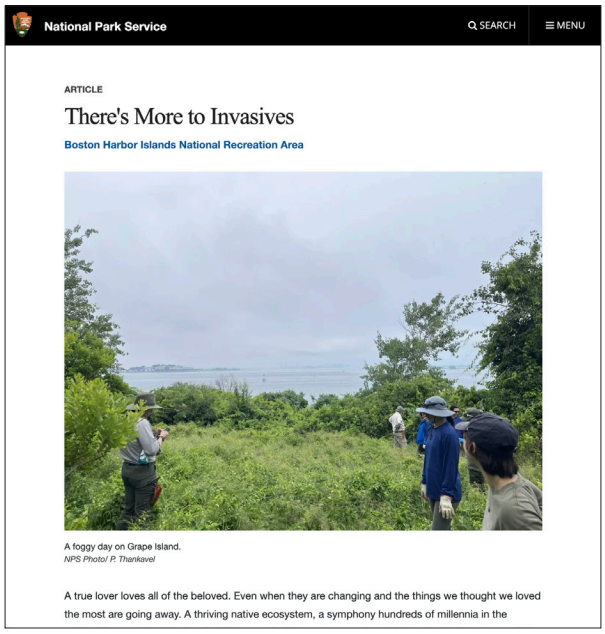
Michael Borbolla
Biscayne National Park
Natural Resource Management Assistant



Evan Cerna
Waco Mammoth National Monument
Paleontology Assistant

Intern Media Highlights

Articles


National Park Service SEARCH MENU

ARTICLE

There's More to Invasives

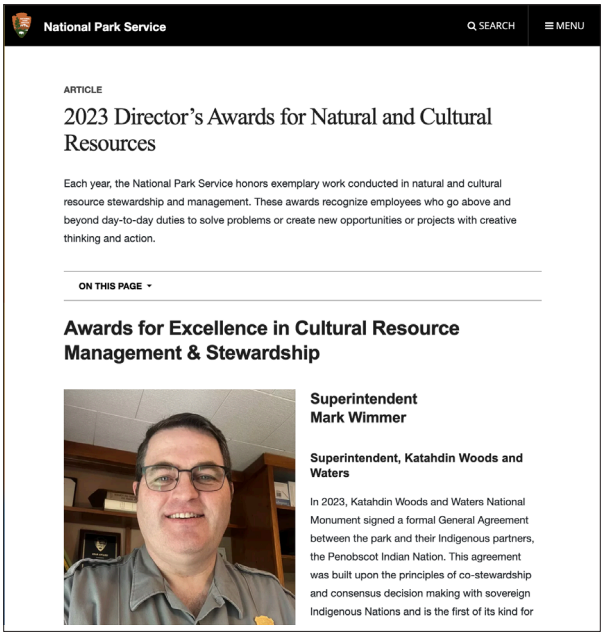
Boston Harbor Islands National Recreation Area

A foggy day on Grape Island.
NPS Photo/ P. Thankavel

A true lover loves all of the beloved. Even when they are changing and the things we thought we loved the most are going away. A thriving native ecosystem, a symphony hundreds of millennia in the

- **There's More to Invasives**

Boston Harbor Islands National Recreation Area
Yes, invasive species harm an entire ecosystem, sometimes outcompeting all native plants in this same landscape; however, we are taught as Indigenous peoples that regardless of whether this plant belongs there or not, we must ask its spirit for permission. We acknowledge them as displaced relatives rather than invasive species, since at the end of the day, they are also someone's plant relatives.


National Park Service SEARCH MENU

ARTICLE

2023 Director's Awards for Natural and Cultural Resources

Each year, the National Park Service honors exemplary work conducted in natural and cultural resource stewardship and management. These awards recognize employees who go above and beyond day-to-day duties to solve problems or create new opportunities or projects with creative thinking and action.

ON THIS PAGE

Awards for Excellence in Cultural Resource Management & Stewardship

Superintendent Mark Wimmer

Superintendent, Katahdin Woods and Waters

In 2023, Katahdin Woods and Waters National Monument signed a formal General Agreement between the park and their Indigenous partners, the Penobscot Indian Nation. This agreement was built upon the principles of co-stewardship and consensus decision making with sovereign Indigenous Nations and is the first of its kind for

- **2023 Director's Awards for Natural and Cultural Resources**

Each year, the National Park Service honors exemplary work conducted in natural and cultural resource stewardship and management. These awards recognize employees who go above and beyond day-to-day duties to solve problems or create new opportunities or projects with creative thinking and action.

Former intern success

Natural Resource Management in a Small Park

Kayla Fermin

Natural Resource Program Manager, Lewis and Clark National Historical Park



Kayla Fermin, Winner of 2023 Director's Awards for Excellence in Natural Resource Management in a Small Park

In 2023, Kayla Fermin had an extraordinarily outstanding year in the realm of professionalism and partnerships. When the Integrated Resources Program Lead left for a detail, she represented the park with both established and new partners, including attending various partnership meetings on behalf of the park. In addition, she demonstrated unwavering dedication to the park's relationship with local community colleges and Employee Resource Groups. Kayla consistently provided strong and meaningful mentorship to Northwest Youth Corps interns, seasonals, YCC, visiting interns from network parks, and local high school youth. Kayla assisted the Visitor Services program and co-led a hike and a kayak tour with NPS Director and Regional Director during their visit. At the Director's suggestion, Kayla encouraged the Integrated Resources Lead to reach out to the Ancestral Lands Corps to begin coordinating a new indigenous-focused internship program at the park. Kayla's professionalism, teamwork, and leadership were exemplary and invaluable to the success of the park.

Acknowledgements

This program could not have happened without the vision and dedication of our many partners. We gratefully acknowledge the work and support of the following:

Recruiting Partners

- Baylor University
- California State University - Monterey Bay*
- Clemson University
- College Station, Texas A&M University
- Emory University**
- Florida International University*
- Mangilao, University of Guam**
- Marymount University
- New York University**
- Ohio State University
- Sandwich High School
- Southeastern Louisiana University
- Stanford University
- University of California - Berkeley**
- University of Maine
- University of South Carolina
- University of Wisconsin
- West Texas A&M University
- Western Connecticut State University

**Hispanic Serving Institution*
***Asian American and Native American Pacific Islander-AANAPISI*

MIS Host Sites

- Big Bend National Park
- Biscayne National Park
- Boston Harbor Islands National Recreation Area
- Cape Cod National Seashore, Northeast Coastal and Barrier Network
- Congaree National Park
- Cuyahoga Valley National Park
- Death Valley National Park
- Glacier National Park
- Golden Gate NRA, John Muir NHS, Pinnacles NP, Point Reyes NS
- Lassen Volcanic National Park
- Lyndon B. Johnson National Historical Park
- Mount Rainier National Park-BA
- Mount Rainier National Park-IA
- Rocky Mountain National Park
- Shenandoah National Park
- Waco Mammoth National Monument
- War in the Pacific National Historical Park
- Yosemite National Park-cyanobacteria study
- Yosemite National Park-turtle crew



MIS Intern Micheal Borbolla contributes to seagrass meadow monitoring in Biscayne National Park.

Appendix I: Intern Profiles



Simon Aceto
California State University - Monterey Bay
Interpretive Assistant, Mount Rainier National Park
Simon Aceto is deeply passionate about environmental protection and stewardship, studying environmental studies with a focus on sustainable communities at CSUMB. Engaging in various enriching courses and experiences during his time there, he has gained practical skills for real-world scenarios. CSUMB has been pivotal in shaping his perspective and paving the way for opportunities. One such opportunity is the Mosaics in Science Internship Program. As an aspiring environmentalist and former Fish & Feathers Intern, Simon values being selected for this program at Mt. Rainier. This internship represents a milestone in his career towards making a tangible impact on the environment. Collaborating with the National Park Service, exploring diverse ecosystems, and contributing to environmental conservation inspires Simon. He wants to make a positive impact on local and global scales through policy advocacy, community engagement, or sustainable development initiatives. Simon believes that the Mosaics program and Environment for the Americas will be instrumental in helping him achieve his goals.



Kyra Bassett
Clemson University
Natural Resource Management Assistant (Aquatic Resources), Cuyahoga National Park
Kyra Bassett earned a bachelor of arts in biology from Florida International University and a master of wildlife and fisheries resources degree from Clemson University. Her love for animals started early and grew into a deep passion for nature. In her free time, she volunteers with various animals like pelicans, owl monkeys, and opossums. This hands-on experience with wildlife fueled her desire to make a meaningful impact, shaping her career path. Kyra's dream is to work as a wildlife biologist, focusing on reintroducing species to their natural habitats. Witnessing the environmental harm caused by human activities and the extinction of diverse plant and animal species, she is committed to supporting conservation efforts. Her dedication has led her to programs like Mosaics. Participating in this summer internship will enhance her knowledge of environmental processes, furthering her growth both personally and professionally as a scientist.



Michael Borbolla
Florida International University
Natural Resource Management Assistant, Biscayne National Park
During his undergrad, Michael researched various areas, such as mercury's effects on bull sharks in the Florida Everglades, turf algae impact on coral reefs, commensal species in gopher tortoise burrows, and invasive peafowl in urban Miami. Additionally, Michael interned with the National Park Service's South Florida Caribbean Network, aiding in ecological monitoring at sites like Big Cypress National Preserve and Biscayne National Park. Currently, Michael works in the Tropical Rivers Lab under Dr. Elizabeth Anderson's guidance. His Ph.D. research focuses on aquatic resource management and human-wildlife interactions, especially in fishing. Rooted in childhood fishing experiences and engaging with diverse South Florida communities, Michael blends environmental justice, ecotoxicology, and aquatic resource management. His ongoing studies on fishing practices and ecotoxicology in the Miami River offer essential insights to FIU's CREST Center for ecosystem assessments. In addition to his academic and research roles, Michael serves as an Emerge Fellow for the Society for Freshwater Science, promoting diversity, equity, and inclusion in freshwater science. He also volunteers with Skype-A-Scientist, giving educational talks on biology, ecology, and conservation to students from kindergarten to high school, highlighting his dedication to education and community engagement.



Terence Borja
Mangilao, University of Guam
Natural Resource Management Assistant, War in the Pacific National Historical Park
Terence is dedicated to specializing in history, with aspirations to establish himself as a Pacific historian. His passion lies in immersive fieldwork, favoring it over laboratory settings, yet he is keen on honing lab techniques. Particularly intrigued by coral surveying and snorkeling for data collection on coral bleaching during fieldwork, he is also eager to partake in outdoor pursuits like hiking, kayaking, and camping to deepen his environmental insights. With dreams of a career within the National Park focusing on history, Terence eagerly anticipates engaging in fieldwork, drawing from past hiking experiences on the island. His passion for historical research has evolved into a personal hobby, especially during the pandemic. He has extensively explored trails, showing a particular fondness for the challenging Sasalaguan trail. Terence's proficiency in water-related endeavors like swimming and snorkeling align with roles in the National Park Service, reflecting a well-rounded passion for the environment.



Sophia Britto
Texas A&M University
Science Communication Assistant, Glacier National Park
Sophia holds a bachelor of science in digital communication and media with a minor in advertising and public relations from West Texas A&M University. She is passionate about expanding her knowledge of nature, conservation, and environmentalism through her upcoming internship experience. In her professional pursuits, she specializes in graphic design, copywriting, and photography. As she anticipates her internship, she is eager to dive into understanding ADA accessibility practices and embracing a variety of storytelling techniques to enhance her skill set.



Evan Cerna
Baylor University
Paleontology Assistant, Waco Mammoth National Monument
Evan Cerna is currently in his final semester at Baylor University in Waco, TX, pursuing a major in geosciences with a focus on paleontology/biogeosciences. During his time at Baylor, Evan has collaborated with undergraduate students on research involving Columbian mammoth (Mammuthus columbi) specimens from the Waco Mammoth National Monument. He is enthusiastic about contributing to the preservation of these ancient giants' remains and supporting ongoing research at the site. Evan is eager to establish a professional career in vertebrate paleontology and has aspirations of pursuing a Ph.D. soon. His enduring love for vertebrate paleontology, cultivated since childhood by visits to natural history museums across Texas like the Witte Museum in San Antonio and the Houston Museum of Natural Science, drives his ambition. With a profound passion for the field and a dedication to preserving natural sciences, Evan believes that his role as a paleontology assistant at the Waco Mammoth National Monument will offer invaluable experience in vertebrate paleontology. It is a realization of his lifelong aspiration to work with the remains of the colossal creatures that once roamed Texas.



Anita Garg
Stanford University
Biology Assistant (Cyanobacteria Study), Yosemite National Park
Anita Garg is currently pursuing a master's degree in management science and engineering (MS&E) at Stanford University, having previously earned her bachelor's degree in the same field from the institution. Passionate about the outdoors, Anita has a strong background in environmental research, specifically in restoring native coastal sage scrub in southern California. Her interests lie in ecology and conservation, with a desire to collaborate with the National Park Service. Looking ahead, she envisions further academic pursuits and a career focused on environmental science and conservation.



Vincent Hart
Southeastern Louisiana University
Ecology Assistant, Shenandoah National Park

Vincent's roots in Louisiana influence his love for coastal and estuarine science. A pivotal moment for Vincent was when a teacher revealed how Louisiana loses wetlands at an alarming rate – about a football field every 100 minutes. This revelation ignited his passion for nature conservation. His studies highlighted the invaluable roles natural environments play locally and globally, serving as carbon sinks, habitats, food sources, and shields against storm surges. Vincent's undergraduate journey heightened his awareness of the adverse impacts of runoff, dredging, and coastal development on these ecosystems. Driven to effect change, he pursued a master's degree, focusing on restoring submerged aquatic vegetation in the Pontchartrain Estuary of Louisiana. His goal is to help preserve crucial coastal and estuarine elements while pursuing a career in conservation. In his work, Vincent notices a lack of African American representation, making it difficult to connect with mentors and peers due to cultural disparities. Despite feeling like an outsider at times, Vincent draws hope from initiatives like Mosaics in Science.



Gavin Healy
University of California - Berkeley
Science Communication Assistant, Golden Gate National Recreation Area

Gavin is from Roseville, a suburb in the Sacramento Valley near the diverse landscapes of Northern California. His academic path began at Sierra College, where he explored political science and natural sciences, inspired by his influential high school experiences and outdoor adventures. With two associate degrees, he entered UC Berkeley, majoring in political science and specializing in conservation and resource studies. His studies spanned political and identity politics, geography, microbiology, ecology, and more, focusing on public understanding of climate change. Driven by his interest in framing and communication's role in addressing climate change, he joined a science communication team in the Bay Area. Committed to making climate impacts understandable and actionable, he wants to drive positive changes in voting and consumption patterns. While considering future paths like climate journalism or advocacy, communication and research will remain central. The internship allows him to hone these skills while immersed in California's natural beauty.



Amanda Hernandez
New York University
Natural Resource Management Assistant, Death Valley National Park

Amanda Hernandez is set to complete her bachelor of arts in biology with a focus on ecology in May 2024. With a deep love for the outdoors inherited from her family, she has cherished nature since childhood. Her fascination with plants stems from their diversity, resilience, and vital role in ecosystems. Amanda's passion for ecology grew through field courses and mentorship from dedicated professors. These experiences inspired her to pursue a career as a natural resource manager/field biologist. As a first-generation Hispanic American, she was initially hesitant to enter a field lacking diversity. However, the Mosaics in Science Internship program offered a perfect opportunity to gain field experience and promote diversity in natural resource professions. During this internship, Amanda hopes to improve her field research and wilderness skills, enhance her botanical knowledge, and build her confidence. She plans to use this experience to pursue a master's in natural resource management, aiming for a research career or a role as a field biologist/natural resource manager in the National Parks system.



Ray Jalbert
University of Maine
Natural Resource Management Assistant (Wildlife & Citizen Science), Cuyahoga Valley National Park

Ray earned a degree in wildlife ecology with a focus on wildlife science and management from the University of Maine, driven by a passion to enhance diversity in STEM. Despite growing up and studying in predominantly white environments, Ray hoped for more diversity in their field post-graduation. However, job hunting was clouded by safety concerns as a person of color, pushing them to seek inclusive workplaces. This journey inspired Ray's current goal: to create or partner with a non-profit providing natural resource opportunities to underserved communities locally. Their current internship resonates with this goal, allowing them to nurture their love for teaching and community involvement in science. They also aspire to become a master bird bander. While Ray's interests span acoustic ecology, data science, and improving access for underserved groups, pinpointing a focus is challenging due to the wealth of experiences available. Nevertheless, they embrace their career journey with a thirst for knowledge and exploration in their field.



Jacque McKay
California State University - Monterey Bay
Natural Resource Management Assistant, Lassen Volcanic National Park
Jacque, a first-generation university graduate from California State University - Monterey Bay, holds a bachelor of science in marine science and hopes to pursue a career in wildlife biology. Their passion is community conservation and promoting diversity in science. They strongly advocate for involving all communities in protecting natural and public lands. Jacque enthusiastically seeks to join a network that nurtures connections between communities and the natural sciences.



Tonya Messam
Ohio State University
Visitor Use Management Assistant, Rocky Mountain National Park
Tonya is currently pursuing a bachelor's degree in environmental science, specializing in ecological restoration. Originally from the east side of Cleveland, Ohio, Tonya's interest in environmental conservation was ignited by their mother, who instilled a deep love for nature by exploring green spaces in the city. Tonya's dream is to turn her passion into a career through more education. Dedicated to advancing ecological restoration and sustainable practices, she aims to expand her GIS expertise for better visitor experiences at Rocky Mountain National Park. Tonya has explored animal science, urban farming, environmental education, equine management, water science, restoration, nonprofit management, and sustainability on their academic journey. These varied experiences have provided foundational skills for each new role. Drawing from a diverse academic background, Tonya is dedicated to furthering Rocky Mountain National Park's mission of preserving the ecosystem in the southern Rocky Mountains. She seeks to champion initiatives like the Mosaics in Science Diversity Internship Program to raise awareness. Beyond graduation, Tonya aspires to take on roles as an ecological restoration specialist or environmental consultant, actively contributing to large-scale environmental conservation and restoration endeavors. In the future, Tonya plans to create a nonprofit that links urban areas with nature, cultivating a stronger love for outdoor spaces and promoting sustainable living. This journey reflects a devotion to constant growth and a strong dedication to environmental stewardship, with the goal of making a lasting impact in ecological restoration and more.



Alison Munaylla-Bohorquez
Marymount University
Biology Assistant, Mount Rainier National Park
Alison holds a bachelor's degree in biology with a specialization in sustainability. Her professional passion lies in uncovering the ecological impacts of fungi to aid in preserving wooded ecosystems. Post-graduation, she hopes to improve her research skills and pursue a doctorate in fungal plant pathology or entomopathogenic fungi. Alison's commitment to conservation comes from observing environmental issues in Peru and disparities upon relocating to the U.S. Participating in programs like the American Conservation Experience and Youth Conservation Corps in 2019, Alison forged connections with environmental organizations. Despite initial doubts, these experiences fueled her interest in a conservation career as a first-generation immigrant. In 2022, Alison joined UC Santa Cruz's Doris Duke Conservation Scholars Program, where she discovered her passion for mycology. Her work in the CLIMUSH project at the University of Oregon and with the USDA focused on fungal responses to climate change and plant sample diagnosis. Despite challenges as a first-generation student, Alison's mycology passion thrives. Programs like EFTA, supporting students of color in conservation, inspire her to advocate for inclusivity. Through EFTA, she aims to empower other students of color in conservation efforts, confident in the support to excel in education, participation, and protection.



Alexis Rodriguez
University of South Carolina
Biology Assistant, Congaree National Park

Alexis, a recent graduate from the University of South Carolina, earned a bachelor of science in environmental science with distinction, recognized for research leadership. During an undergraduate lab course, Alexis visited Congaree National Park, where she saw synchronous fireflies and studied the impact of sunscreen oxybenzone on phytoplankton physiology. This marked her entry into environmental research. The study of phytoplankton clarified Alexis's career aspirations, focusing on fieldwork techniques and organisms. Motivated by this, she actively sought ways to contribute to conservation efforts. Post-graduation, she found Environment for the Americas, attracted by its mission to inspire a diverse conservation community. The opportunity to merge conservation passion with a diverse work environment was irresistible. Participation in this program aligns with Alexis's personal and career goals, providing practical experience and serving as a foundation for future endeavors. Alexis plans to pursue a master's degree in fish and wildlife conservation, concentrating on environmental toxicology. Her goal is to study the impact of human-induced chemicals and nutrients on marine and wildlife organisms. She also aims to secure a position with respected organizations like the National Park Service or the Environmental Protection Agency.



Gabriella Silva
Western Connecticut State University
Biology Assistant (Turtle Crew), Yosemite National Park

Gabriella recently graduated from Western Connecticut State University, where she excelled in her biology major. Driven by a deep passion for unraveling the complexities of life, she eagerly seeks to further explore the realm of biological sciences. Her pursuit of advanced education in graduate school is motivated by a thirst to study a wide array of species and develop a broad set of technical skills. She envisions this internship as a transformative opportunity for personal and professional development.



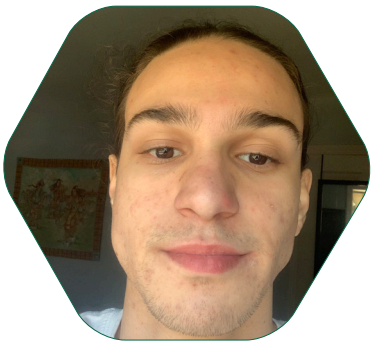
Pranneil Thankavel
University of Wisconsin
Science Communication Assistant, Boston Harbor Islands National Recreation Area

Pranneil Thankavel is a conservation biology student at the University of Wisconsin, also holding a certificate in global health. The Mosaics program resonates with his dual interests in conservation and community health. Pranneil is enthusiastic about enhancing human lives and the planet's well-being. He is particularly excited about exploring the rich history, scenic beauty, and diverse ecosystem of the Boston coast. Professionally, Pranneil hopes to motivate individuals to contribute to the restoration of nature and themselves.



Kiran Topiwala
Emory University
Night Skies Assistant, Lyndon B. Johnson National Historical Park

Kiran is an artist and designer focused on regeneration, exploring humanity's ideal relationship with Earth. Their daily routine includes meditation, making breakfast tacos, and photography. Kiran holds a B.S. in industrial and systems engineering from Texas A&M and a master's in development practice from Emory University. Having seen Austin's growth and the fading night sky, Kiran is passionate about dark sky conservation. As a bioregionalist dedicated to Earth regeneration, they have worked with CARE USA on sustainable development projects in Morocco, Ghana, Zimbabwe, and Bangladesh. Kiran has also freelanced as a consultant for sustainable development organizations and conservation foundations in India. Kiran's love for astronomy, quantum mechanics, sustainable development, conservation, and ecology drives their desire for a role that supports long-term dark sky conservation efforts in Texas.



Kta'n Weedon
Sandwich High School
Biology Assistant, Cape Cod National Seashore, Northeast Coastal and Barrier Network
Kta'n, a dedicated environmentalist, is deeply involved in the conservation and restoration efforts of eelgrass in the picturesque bays of Cape Cod. His passion for this cause stems from a desire to aid the National Seashore in unraveling the mysteries behind the decline of eelgrass. Through this program, his goal is to not only revitalize eelgrass in the Seashore but also broaden his influence to multiple locations throughout the breathtaking expanse of Cape Cod.



Jeremiah Wright
College Station, Texas A&M University
Natural Resource Management Assistant, Big Bend National Park
Jeremiah Wright, a fourth-year undergraduate student at Texas A&M University, is pursuing a bachelor of science degree in wildlife and fisheries science. This summer, he will be immersed in a valuable experience at Big Bend National Park. Jeremiah's profound love for the natural world, especially birds (Aves) and bats (Chiroptera), drives his passion. His future aspirations involve conducting research on either bat morphology or foraging habits.



The Mosaics group exploring historic sites in Washington, D.C.

Appendix II: Internship Surveys

Pre-Internship Survey

Please rate your understanding of job opportunities available in the following career paths

Private Industry

6.25%	No Understanding
25%	Not very
37.5%	Neutral
25%	Somewhat Understanding
6.25%	Strong Understanding

Academics

0%	No Understanding
18.75%	Not very
18.75%	Neutral
25%	Somewhat Understanding
37.5%	Strong Understanding

Non-Profit/Charity

12.5%	No Understanding
12.5%	Not very
43.75%	Neutral
18.75%	Somewhat Understanding
12.5%	Strong Understanding

Federal Agencies

12.5%	No Understanding
6.25%	Not very
18.75%	Neutral
50%	Somewhat Understanding
12.5%	Strong Understanding

State & Local Government Agencies

12.5%	No Understanding
12.5%	Not very
18.75%	Neutral
37.5%	Somewhat Understanding
18.75%	Strong Understanding

How did you hear about this internship program?

* Environment for the Americas (EFTA) website
* Job board
* Social Media
* Email
* Professor or Mentor
* Government Agency Website (National Park Service, U.S. Forest Service, etc.)
* From a past intern

Please rate your level of interest in pursuing a career with state or federal public land agencies

12.5%	32.25%	56.25%
Not Very interested	Somewhat interested	Very interested

Are you a first generation college student/ graduate?

37.5%	62.5%
YES	NO

How do you rate EFTA's communication with you prior to beginning your internship?



What do you anticipate will be the biggest challenges of your internship?

Learning the ins and outs of water quality.

I think one of the biggest challenges will be adjusting to living in a more remote environment, which is not something I have done before. Another challenge will be creating a network of social support, since I do not know anyone else who will be at the park I will be in.

Adapting to the new environment.

The heat, being that Big Bend NP is in the desert. The environment can be difficult, if not prepared for it.

Learning about the tech and different methods of collecting data.

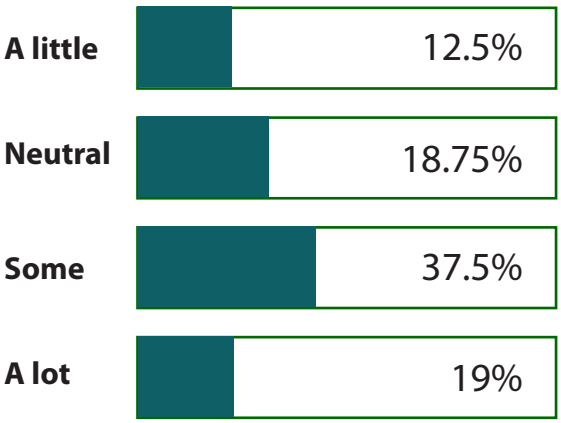
Learning the new skills in the office, to which I am excited to learn.

My biggest challenge will be designing a reserach project within the limits of the organization, the time I have, and the resources available.

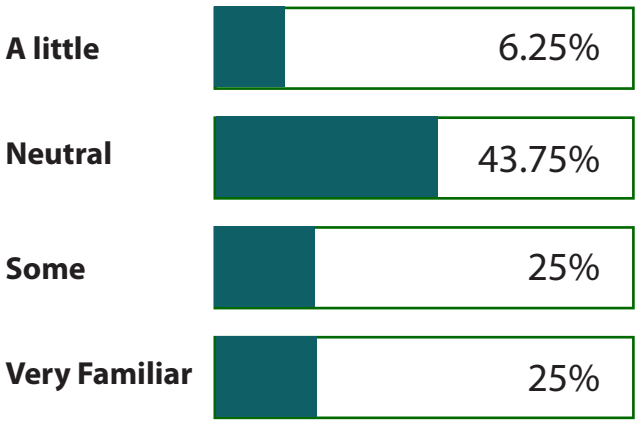
I do not expect any serious challenges I am extremely excited and optimistic about my position and internship. I expect to have some minor challenges like living situations in the Park or adjusting to living in Washington but I don't expect anything to distract me from my main focus of preforming my best for this program.

I honestly do not know what my biggest challenge will be this summer, aside from moving out of my current apartment a day or two before my internship's start date (ha).

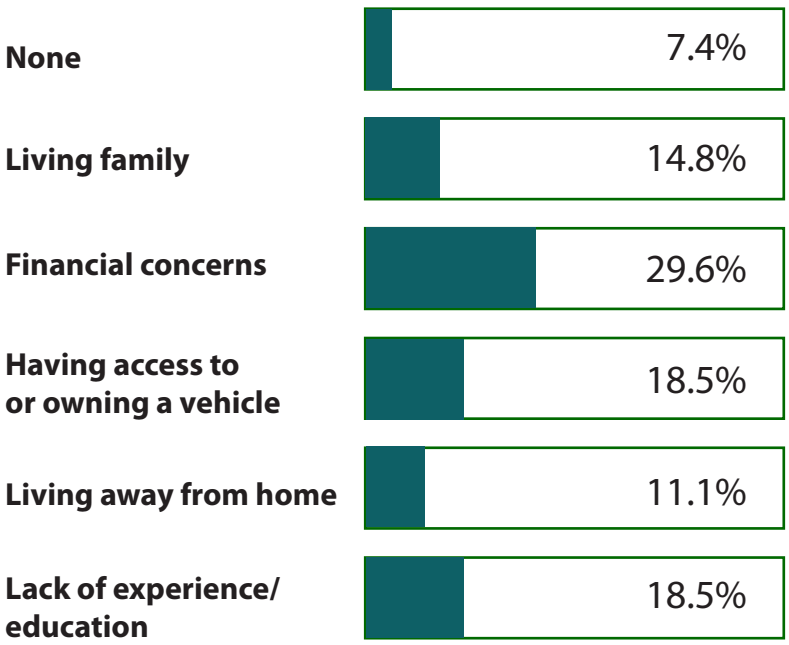
How much practical, hands-on experience have you had in your field of study?



How familiar are you with the work of your host organization (National Park Service, U.S. Forest Service, U.S. Fish & Wildlife Service).



What barriers, if any, did you face prior to applying for this internship program? Check all that apply. - Selected Choice



Please describe what you hope to gain from your internship

I hope to gain field experience, writing experience, and experience working in a National Park

I hope to learn about what it is like to work for the NPS, to learn more about biology and conservation research, and to connect with other like-minded students of color and start building a professional network in the conservation field.

My goal for this internship is to expand my network and gain valuable experience to start building my career before or after I graduate.

PLC and experience with more field work

I hope to have made some progress conserving and restoring the eel grass around Cape Cod.

I hope to be a leader in bringing diverse people and perspectives into the field of conservation. I also hope to gain more nuanced skills in communicating science, bringing nature to urban populations, and growing as a leader generally.

I hope to gain more experience working in the field of paleontology, grow as a scientific researcher and gain some conference experience, and work on a staff ready to preserve WMNM.

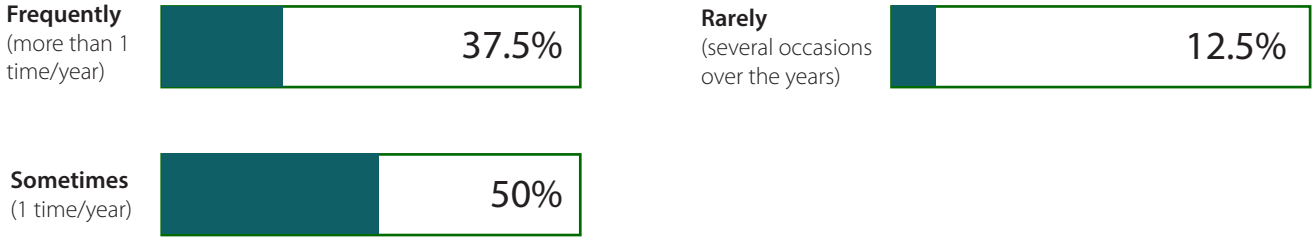
I better understanding of the scientific process in the field and in the office. Networking is another benefit I hope to gain.

Experience for my career with the National Historic Park.

Prior to applying for this program, have you ever applied for a position with your host organization (National Park Service, U.S. Forest Service, U.S. Fish & Wildlife Service)



Prior to this internship, have you ever visited a national park, national forest, national wildlife refuge or other public land?



Have you visited the site where you will be working?



Would you like to share any more comments, concerns, or thoughts you have had prior to beginning your internship?

I still have not heard from HQ about housing arrangements or setting up an arrival appointment.

I have had nothing but positive thoughts and excitement since I was accepted to be a Mosaics in Science intern at Mt. Rainier NP. I am looking forward to an incredible and once-in-a-lifetime experience and I am fully ready and confident to put my best foot forward and be a good representation of the Mosaics in Science program.

Not especially, I was a bit nervous and had a few questions but once the materials were provided I felt immensely better.

Mid-Internship Survey

Please rate how your internship is going so far.

I have truly enjoyed working at Congaree and feel I've learned a great deal, however I do think this internship spot should start earlier in the year. Due to the fireflies season, I find myself having less work now that it's over. I think for next time the intern should start in early March, in order to start collecting necessary data and just overall have more work to do to have a more fulfilling experience.

I feel supported in the internship. I am learning a lot about hydrology, algae, and field work. My supervisor is supportive and creates a comfortable and safe work environment. I am making friends in the local community.

Although our IACUC has yet to be approved, Natural Resources has ensured that I have plenty of opportunities for cross training and exploring the parks. It has been outstanding gaining camera trapping, owl survey, and vegetation experience! I gave the experience a 4 instead of a 5 because my project lead is a bit distant and difficult to approach. This is her third season on the project, she is my age, and I believe this is her first time leading. Although I think she is surely capable, there are some areas for improvement. Interpersonally the Pika team has been a bit exclusionary, but after our first week out in the field helping lava beds, it has been much better. I keep reminding myself that we work well together, and that is what is most important! Moreover, Lassen held a "Juneteenth" Lassen Research Symposium, I found it very inappropriate for a myriad of reasons. I discussed my discomfort with Stephanie, and later brought it up to the Chief of Cultural and Natural Resources. I completed an After Action Review and hope my concerns are heard. Overall I am very happy with the experience, I have grown a lot, but there is always room for improvement!

We are currently still waiting for the donation of Waco Mammoth fossil material to the NPS to go through, halting cataloging, which was supposed to be my project. Other than that, everything's great, my supervisor, Dr. Lindsey Yann is Great, and I am handling everything well I think

I rated my internship a 4 because it's ever learned a lot since I've been here and met a lot of cool people but I wish there was a bit more organization in the first few weeks. I was a bit over whelmed.



"

I wish it was longer.

Please share successes and challenges with your internship.

One of my successes was creating materials Congaree can use in future events, far beyond my time here. It's rewarding knowing that although I may not see my work in action this summer, others will get ample use of it. One of the challegens I have found is more so a personal one, than related to the content of my work. It took a while for me to understand that I didn't need a fully finished project! I think I put a great deal of pressure on myself to start and complete a full reserach project when in reality, I think my purpose was better served in continuing on current research and getting Congaree a solid foundation for future research.

Successes include learning how to take water quality measurements such as dissolved oxygen and specific conductivity, as well as how to filter major ion water quality samples in the field. Another success is gaining experience identifying various algal and cyanobacterial species, and collecting samples in the field. A challenge is setting aside time to attend webinars and write blogs. Another challenge is that I would like to learn more about GIS.

I have expressed a great interest in Spotted Owl Surveys, I have been a recorder on multiple surveys. This week I am leading the final Hike and Hoot survey! It has been such a fantastic learning experience. Challenges have been exclusively interpersonally. The other members of the Pika Crew mesh a bit better and I have been a bit lonely. The former LHIP intern, Paola, and I are close, we knew each other before my internship. She has been a great friend and mentor. I am collaborating with Interpretation and Education to create a Pika Program for both general audiences and for classroom groups. Paola has shared a plethora of resources and introduced my to the friendly interpretation staff.

I have had the challenge of being quite independent, meaning I have to manage my time and effort well. I feel that I have been successful in creating some decent programming.

I have gotten valuable insight into working in the park service and have been able to cross train with various departments. Challenges of the internship are mainly just the remoteness I'm faced with living in park housing and having no internet within housing.

I have been pretty successful in learning and understanding new things. Something that's been challenging is keeping up with things on the internet.

Keeping up with blogs is a struggle

Successes: Contributed to social media posts, videos, story planning, research, and photography need. Challenges: Organizing two different workspaces with two different workflows for myself to keep track of.

Please rate the level of contact you are receiving from Environment for the Americas.



I enjoy the weekly updates and newsletters. I makes me feel connected.

Communication is going great! I feel very much informed on what is happening, what needs to be done, and what is coming up. The team is also very responsive and quick to answer questions.

I think the communication is great. Monday newsletters and the GroupMe help me keep track of everything. I'm also a fan of the Happy Hour, in theory because I haven't been able to join one yet. We don't have good service at the mammoth site and I'm usually there on Fridays.

I am grateful for the consistent communication I receive from MIS. The friendly reminders, webinars, and newsletters are very helpful. Stephanie in particular has been a fantastic resource and mentor throughout my internship. I am concerned about my blogs because I am often out of the office, in the field, or without internet. I have been struggling with Wordpress as well.

Please rate the level of new information/skills learned since beginning the internship.



I have developed skills in identifying algal species, collecting biological samples for DNA, toxin, and microscopy analysis, and preparing and viewing microscopy slides. I have also gained skills in taking water quality and characteristic measurements such as pH, specific conductivity, dissolved oxygen, and temperature using a YSI Sonde sensor. I am acquiring experience conducting field work in rivers and streams in frontcountry and backcountry settings.

Many of these skills I feel like I already had or have worked on in the past, so none are new to me. I do feel like I'm improving those skills in being here though. Skills so far include: photography, story planning, videography, file organization, group work, and strategic planning.

I have had an amazing time exploring terrestrial field methods. As a marine scientist, the bulk of my experience has been aquatic. Being able to tromp around in the forest, surveying for pika, owls, and setting camera traps for black bears has been amazing! I am grateful to learn about a new ecosystem and apply ecological principles broadly. I gave a 4 out of a 5 because some of the EFTA webinars are providing information I have received through different internships. I believe the information is extremely valuable, especially for interns without prior experience! However, I am interested in programs specifically surrounded on working in government as a person of color. I found the federal resume workshop and PLC overview extremely helpful!

Have you learned something you didn't know before?

Yes! I learned so much on fireflies, especially coming from a background of little knowledge. I also learned how to apply knowledge I learned in the office to out in the field practices.

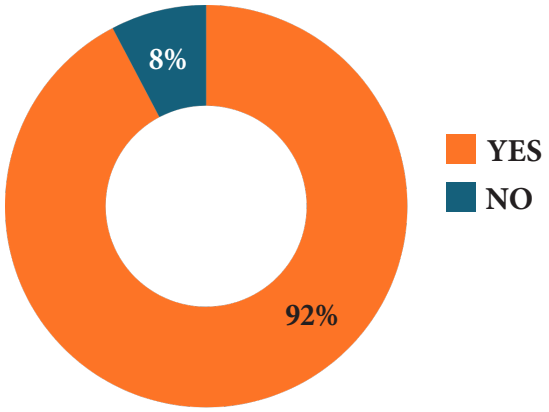
I am learning how to find and build community in a rural area, which is a new environment for me.

I'm learning all sorts of things about nature, conservation, and science communication. It's a lot of fun learning about a new field of my career that I've never considered before.

Absolutely! Each day in the field is a wonderful learning experience! I learned about speaking up against things you find inappropriate, the "Juneteenth" Symposium, in a professional and personable way. I didn't want to point fingers, I wanted to encourage growth, and I believe I achieved that.

I've learned new fossil preparation techniques, including some new experimental ones. I've learned more than that too, but I'm blanking at the moment.

I did not realize that there are so many pathways and opportunities to work in the national park system and whatever job you do you still get to enjoy the beautiful scenery



What has been most interesting to you?

The most intersting part of this experience was getting to witness what daily life could look like in a National Park environment. Working alongside personnel who have been working for NPS for a long time and those who recently started, was something I valued. I think seeing people in action at all stages gave me a better understanding of where I want to see myself in the future.

Most interesting to me has been learning about the different kinds of cyanobacteria, and the biological characteristics, mechanisms, and ecological interactions of cyanobacteria.

Working in terrestrial settings has been an amazing opportunity. I am grateful for the exposure and experience. Moreover, I am grateful to experience working on a small field crew. We live in close quarters and work together consistently. I pride myself in being able to work with anybody. I have been able to successfully and fluidly work on this team. Although we may not click outside of work, I think it is an extremely important learning opportunity for me.

The most interesting thing learned has been the positive impacts of beach pollution cleanup on turtle nesting rates.

Please comment on your webinar rankings.

I felt the webinars were overall very informative and answered the questions I had going into the internship. There were some that felt redundant, but I also feel that's just part of starting a new position.

I found all of my attended webinars extremely helpful. I did not attend the PLC because I'm a DHA intern.

The DE&I webinar felt like it was a generic presentation given during any HR training. It didn't feel relevant to a group of young people of color because it felt like a lot of messaging we already knew or experience firsthand.
I really enjoyed the Workplace Harassment webinar though. That felt more relevant and the others were also helpful.

I have watched multiple recordings and the PLC and presentation ones have helped the most.

I touched on some of the topics being explored in previous internships. However I find the federal specific webinars extremely helpful.

Some webinar seemed a little common sense oriented and I'd rather them have been more in depth rather than staying at the surface level of a topic.

I just ranked them based off of how intriguing the topic was and how I remember the speaker being. Some of those webinars were a while ago, and remembering specific details without going back to rewatch the recordings is a little hard.

The main beneficial webinar was the Federal Resume. Some interns stated that some of the speakers felt condenscending in the different webinars, other than the Federal resume, it wsa not expressed what other ones. Some interns believed the DE&I training was surface level and would have rather had more in-depth discussion since they are already a group of diverse individuals.

Is there anything you would like to change about your experience so far?

It would be cool to have a list of alumni contacts who live in the park.

The only thing I would change is something I mentioned in the beginning of this survey, and that is starting the role earlier. I find myself struggling to find work now that the season has started to slow down, and feel it would be a more benefical experience if the next intern started closer to the start of firefly season (early March).

Only a few minor personal stuff but again this is a dream internship for me. Ever since last summer as a F&F intern I had dreamed about being a mosaics intern and I wish it lasted forever

Less blogs, I would rather be working on my main project than scheduling a day for writing a blog. The week blogs are due I am always over hours but prioritize my field work over blogs. All programs should have a type of financial literacy webinar for filing these taxes. Uniforms have caused issues while working with other internship programs.

Some webinar seemed a little common sense oriented and I'd rather them have been more in depth rather than staying at the surface level of a topic.

I think it's been a great experience. Despite some interpersonal struggles, I think that's part of life. I am grateful to experience it while apart of an internship that provides support. I have learned how important team fluidity is. I was unable to speak with my project lead prior to beginning, and I may advocate to do so in the future. Overall it is an outstanding experience!

What do you want senior officials in your agency to know about your experience?

This experience is preparing for mid level positions.

Similar to what I have already mentioned, the internship is a great experience for anyone to have but I think it needs to start earlier to be more effective.

I have plenty of experience between two national parks and I am extremely confident in my ability to always be the best for the job

I've loved my experience at Glacier National Park! Learning about conservation and climate change as well as science communication to the public has been extremely valuable to me.

I want them to know about my passion for Waco Mammoth National Monument and my perseverance to do great work here despite setbacks.

I would like better communication with mentors or other seniors.

Post-Internship Survey

If you could make one recommendation on how your agency (National Park Service, U.S. Forest Service, etc.) can better connect with young people/adults what would you say?

They can have those that work in fields that the interns want to work in speak to us.

I think young adults are unaware of the positions available at the parks and often think all they can do is become a park ranger. I believe it would be benefical of the NPS to create a career path finder, similar to the DOI, to help others understand just how many jobs are available within the agency.

I would increase the number of paid opportunities if they are trying to increase participation and/or active work. However, if its just fostering connection, the best way would be to increase social media presence or create a documentary series.

Reaching out to college students - especially in rural communities.

What other jobs/career fields would you be interested in learning more about?

Private industry and non-profits

My research field, paleontology, is already a very "niche" field, but, I would be interested in learning more about jobs within the National Parks Service that revolve around the physical sciences (geology, volcanology, paleontology).

Science communication roles

Public Health, Policy around environmental stuff, lab research too

Do you feel as if your work made a contribution towards the mission of your host agency (National Park Service, U.S. Forest Service, etc.) How or why not?

I do feel I made a great contribution to my host agency. Starting the program with little knowledge, both individually and as a park, I think the work I did provided that understanding we were looking for. I also think what I left the park with will be used in future events and outreach programs.

I feel like my work could make a major difference to my host agency if they listen to my findings. My project showed that existing methodologies are flawed and/or not that useful to managers.

I strongly believe that my work at Waco Mammoth National Monument contributed to the site's goal of conserving and preserving fossil material. I spent a good chunk of my time cleaning fossils, reassembling fossils, and even uncovering new bone that may help give future researchers better insights into the site's past. I only wish that I could have contributed more.

Why are national forests and other federally protected lands important to you, or not important to you?

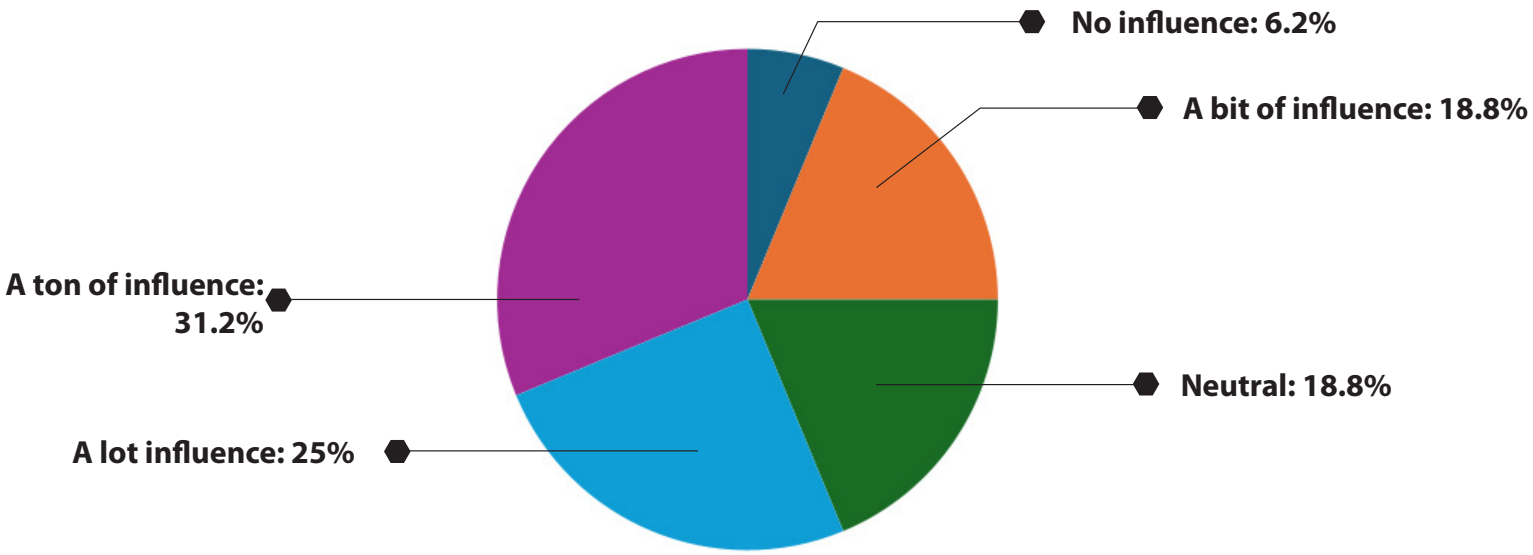
They are important because they allow the environment to do what it is made to do. Without having these areas protected, we would be living in a world of concrete.

I think we all feel a sense of comfort and relaxation when on federally protected lands, but I also think they serve as a way for people to see just why they need protection. It's often challenging translating scientific information to non-scientific audiences, but a national park is evidence enough! Having a space for people of all ages to come appreciate the beauty and diversity of wildlife, is an incredible tool towards helping the public understand the work we do. It allows them to see why they should make efforts to protect these lands, even if they don't want to be involved in the NPS.

They're important to me because there's not enough of them. They're the few places where natural resources are preserved and undeveloped.

They provide an opportunity for marginalized communities to have access to the natural world.

How much influence did your internship have on your last answer?



Did your internship experience influence your career goals in any way? How?

Yes. The way it did was it showed me that working on the federal level is not living up to the hype.

Definitely. The option of using direct hire authority has significantly lessened stress levels for post-graduation life and has exposed me to a vast number of opportunities.

My internship strengthened my aspirations for pursuing a career in vertebrate paleontology. After spending time working for an NPS paleontologist, who was an incredible mentor and whom I hope to work with again in the future, I think a career as a paleontologist within the National Parks Service would be my preferred career goal, but those positions are extremely limited.

Please provide any additional feedback about the program or your experience.

The speakers for the DC conference could have been better. Many were either giving PR speeches or being condescending.

The only feedback I have is in regards to the workshop convention at the DOI. I was excited for the week, and did enjoy most of what I experienced, however I do feel it could have been structured in a way that would emphasize networking. A majority of the time was spent listening to presentations and although they were informative, it didn't feel like there was a chance to converse with them. In the same way the poster presentation time slot was a bit short, and I was slightly dissappointed in the number of people I was able to speak with. I think it would be helpful to create a day in the event where NPS employees from all types of positions could come in, setup a table or poster, and give the interns the opportunity to walk around and see the options would be a great start.

I want to note that Lindsey Yann, Park Paleontologist at Waco Mammoth National Monument, was consistently an exceptional supervisor throughout the entirety of my internship. Lindsey was great mentor for both operating the NPS and the realm of paleontology, and I hope that I can work with her again in the future at some point.

There was minimal representation for people who were not Latino, or Black. Have the DC trip be more in touch with the interests of the interns...rather than having nepo hires talk to us or just sitting to listen to oblivious, out of touch, employees give PR talks.

I had an excellent time throughout this past summer. I very much hope to participate again (in another park hopefully!)!

What are your plans for after this internship?

My plans are to look for internships on the federal level and possibly find a job in an environmental consulting firm.

I do plan on taking a year off to live at home and save up as much as possible, before returning to school to pursue a master's degree in fish, wildlife, and conservation biology at Colorado State University. I have aspirations of working as an ecologist for the NPS and hopefully, one day, acting as the director.

I plan on continuing my PhD program and hopefully graduating within the next 2 years. I will possibly apply for another summer of internship work. After graduating, I hope to secure employment within the department of the interior using my Direct Hire Authority.

I start graduate school at Baylor University, where I will be mapping dinosaur tracks. The following summer, I intend on applying for another internship with the NPS if spots are available.

Graduate and use my DHA certification

continuing my work with my non-profit



MIS Intern Tonya Messam takes a break after work at the beautiful Rocky Mountains National Park.

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