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50

*fifty people
changing the world*

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2021

the explorers club 50

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membership in THE EXPLORERS CLUB



FOUNDED IN 1904 BY A GROUP OF AMERICA'S LEADING EXPLORERS, THE EXPLORERS CLUB IS A MULTI-DISCIPLINARY PROFESSIONAL SOCIETY DEDICATED TO THE ADVANCEMENT OF FIELD RESEARCH, SCIENTIFIC EXPLORATION, AND THE IDEAL THAT IT IS VITAL TO PRESERVE THE INSTINCT TO EXPLORE. THE CLUB'S STEADFAST MISSION HAS BEEN TO ENCOURAGE AND PROMOTE

SCIENTIFIC EXPLORATION OF LAND, SEA, AIR, AND SPACE, WITH AN EMPHASIS ON THE PHYSICAL AND BIOLOGICAL SCIENCES. AS A PRIMARY AND PRESTIGIOUS CENTER FOR EXPLORATION AND EXPEDITION PLANNING, THE CLUB IS A FOCAL POINT AND UNIFYING FORCE FOR EXPLORERS AND SCIENTISTS WORLDWIDE, WITH 33 CHAPTERS SPANNING THE GLOBE.

For information regarding categories of membership—Fellow, Member, Friend, Term, and Student—and the process of election to The Explorers Club, visit us at www.explorers.org. The downloadable appli-

cation sets forth qualifications for all levels of membership. Additionally, inquiries pertaining to sponsorship and local chapters may be made directly through the Club's Membership Office, 212-628-8383, ext. 23.

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The Explorers Club 50® (ISBN: 978-0-578-84855-6) is published by The Explorers Club, 46 East 70th Street, New York, NY 10021. Periodicals postage paid at New York, NY, and additional mailing offices. Postmaster: Send address changes to The Explorers Club 50, 46 East 70th Street, New York, NY 10021.

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Printed in Canada



introduction

THE EXPLORERS CLUB FIFTY

RICHARD WIESE FN'89
PRESIDENT

People have reflected on the question of “who are we?” over centuries of introspection, and that question became the jumping off point for this project: Who are we as an institution? More importantly, who do we want to be? We have over 100 years of exploration legacy behind us, empowered by the most extraordinary accomplishments: first to the North Pole, first to the South Pole, first to the summit of Mount Everest, first to the deepest point in the ocean, first to the surface of the moon—all successes by our members. With that in mind, the question became, what will the future of The Explorers Club and the next 100 years of exploration look like?

To answer that question we are proud to launch, *The Explorers 50: Fifty People Changing the World that You Should Know About*. Every honoree featured here, as well as the hundreds of other nominees, are exploring, inspiring, and creating the future – the future of the planet, the future of food security, of paleontology, of biology, of what our communities should look like, and so much more. The EC50 was established not only to reflect the great diversity of exploration but to give a voice to these trailblazing explorers, scientists, and activists and their incredible work.

I could not be more pleased with the group selected to represent this first class. Over 400 nominations were received from 48 countries. Over 46 countries of work are represented by the winners from 17 countries of residence. The judges' panel was composed of twelve esteemed international Explorers Club members who were tasked with thinking big. They were guided by

the following questions: *Does this candidate's work involve an outstanding, innovative, and impactful mode of exploration and inspire the greater understanding of the world around us? Does their work impact the communities they live in, in innovative ways? Would this recognition help expand the definition of exploration and further promote the Club's mission?*

New projects may be difficult to get off the ground, especially in the midst of a global pandemic, but The Explorers Club has had an incredible team behind this initiative. Thank you to Joe Rohde, EC50 Chair, who, in his elegant and imaginative way, gave life to this idea. J.R.Harris, chair of our Diversity and Inclusion initiative, helped us think critically about how to broaden our community and welcome the many faces of exploration from around the globe. Richard Garriott and Dan Kobal, whose early support gave this initiative the momentum it needed to get off the ground. To our editorial team, who realized the potential in this project and these incredible individuals - thank you. Most importantly, thank you to the EC50 honorees themselves for their creativity, passion, bravery, for pushing boundaries, and setting the bar so high.

The EC50 will be transformative in the composition of the Club, changing the face of our membership, challenging the way we have traditionally thought about exploration, and ultimately changing who we are for the better and bolstering our mission. I am proud of this project, humbled by the winners, and excited to see the future of exploration in the years to come.



RICHARD WIESE IN THE DANAKIL DEPRESSION, ETHIOPIA'S AFAR TRIANGLE; CONSIDERED THE HOTTEST PLACE ON EARTH

fifty explorers to know

JOSEPH M. ROHDE FN'10
CHAIR, EXPLORERS 50 COMMITTEE

Our freshly inaugurated Explorers 50 program is aimed at expanding frontiers. Exploration assumes a place that is known, from which we go forth into the unknown. We do this in order to discover, to learn, to teach, and frankly, because we are seized by curiosity. But what is known and what is unknown depends in part on who holds knowledge and where they stand. By reaching out and embracing new explorers, many of whom are entirely new to The Explorers Club, we accomplish two things.

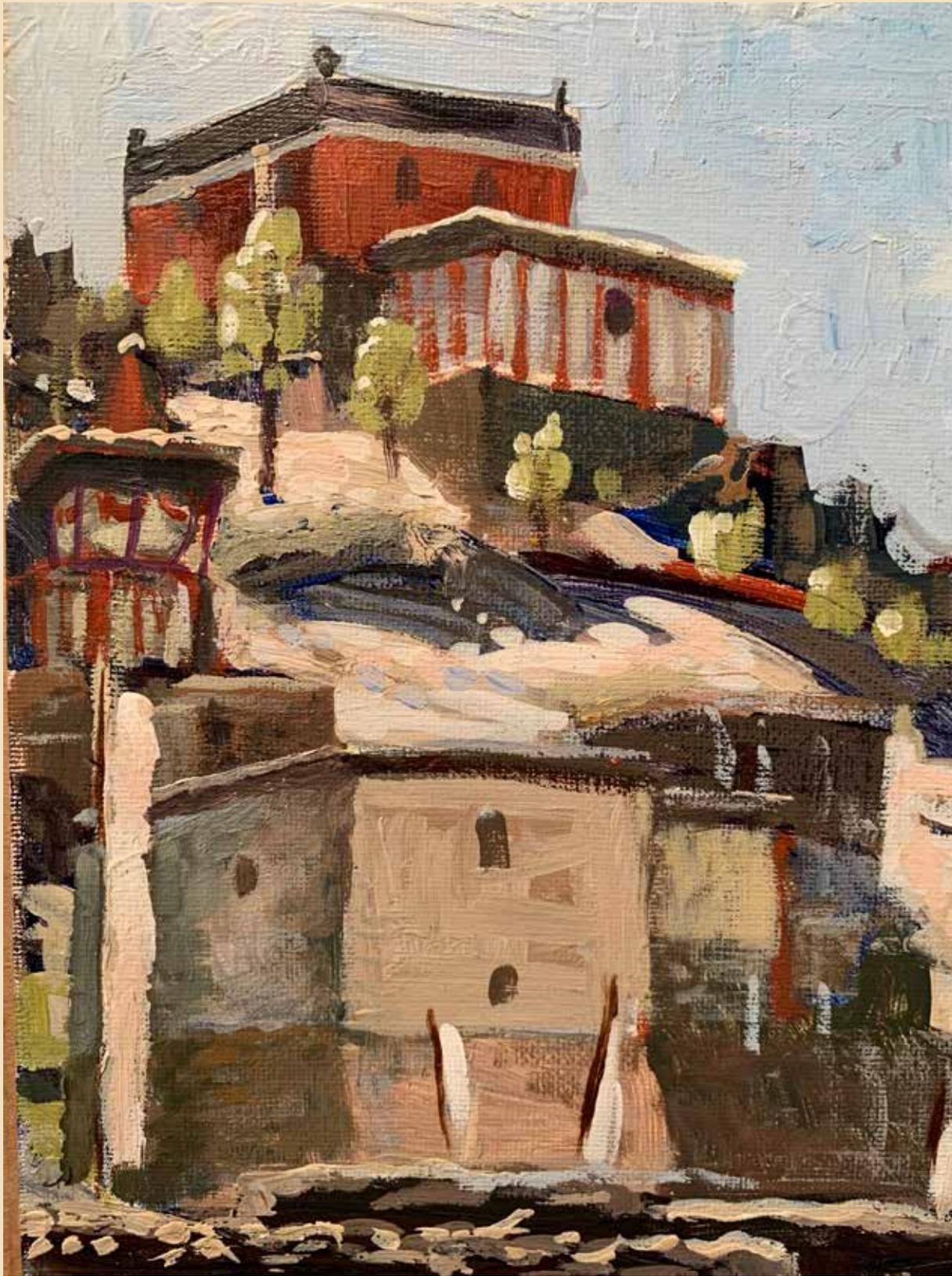
First, we expand our own exposure to the world by including new eyes and all that they have seen. We increase our common share of worlds to explore, because these new explorers bring with them new fields and new perspectives on familiar fields. We increase our common wisdom by embracing new insights, new points of view, new areas of study, and new experiences of the life of exploration.

But the second frontier is even more intriguing. By welcoming new explorers into our midst, especially those least expected, from regions or areas of study we may be less familiar with, we expand our own understanding of who we ourselves are, of what The

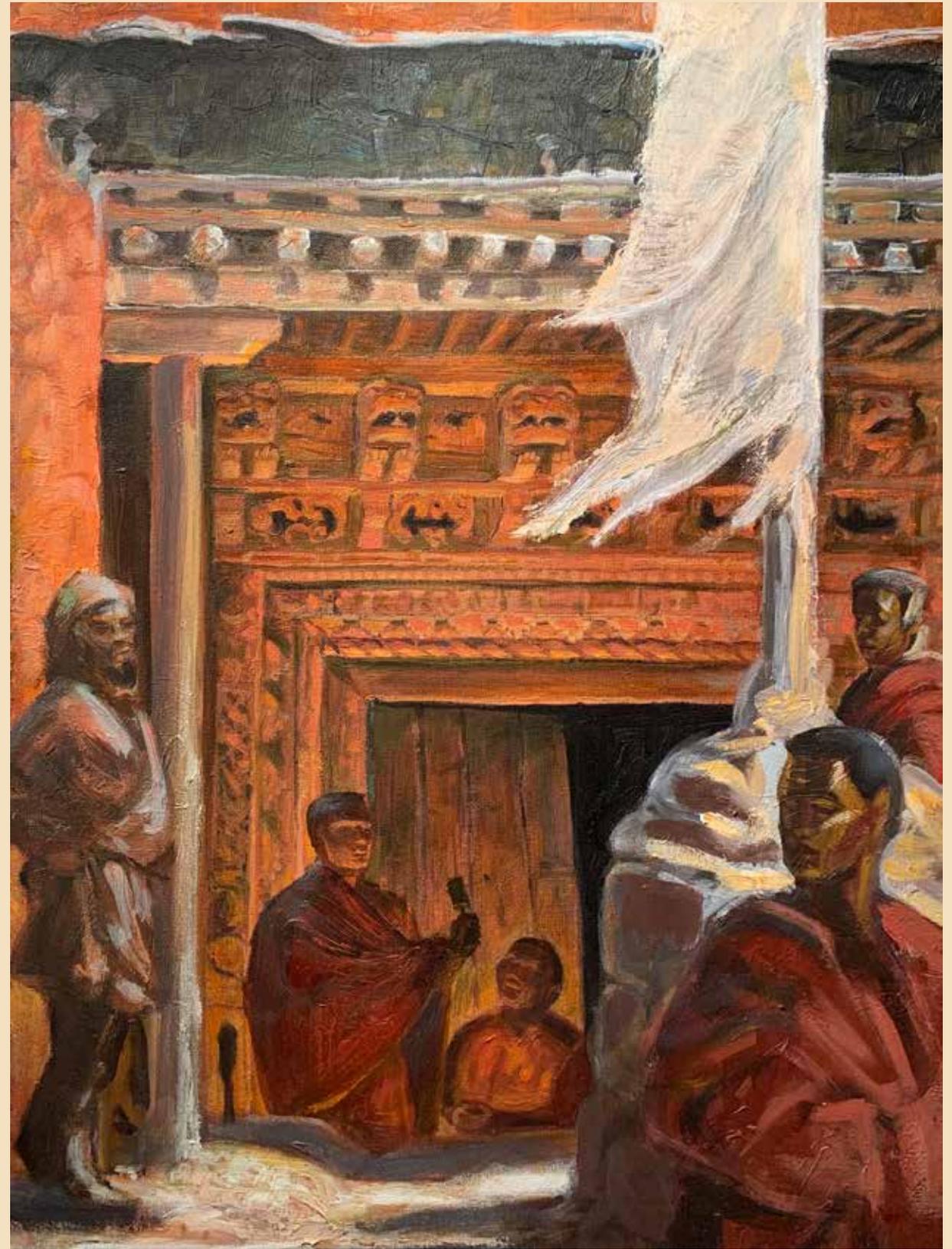
Explorers Club is, and of what it may become. We see ourselves anew through these new eyes, and because of this our own habits and beliefs, the ideas, practices, and places most familiar to us of all, can become undiscovered frontiers of new possibilities. And as explorers all, how could we resist the challenge of new frontiers?

Judging the submissions was a thoughtful, provocative, and inspiring process. It was also difficult to choose between so many who are so deserving. But difficulty is the price we pay for big rewards. These 50 explorers are not only here to be celebrated for their accomplishments. They are here to engage and transform us, to make The Explorers Club itself a world worthy of exploration and full of the promise of new discovery. For that we not only welcome the recipients of the Explorers 50 awards, we thank them.

JOSEPH M. ROHDE PAINTING IN MONGOLIA PHOTO: LANE MERRIFIELD FROM THE LEOPARD IN THE LAND FLAG EXPEDITION 2013. ROHDE TRAVELED BY CAMEL FOR A MONTH PAINTING LARGE LANDSCAPES OF SNOW LEOPARD HABITATS IN THE ALTAI MOUNTAINS OF MONGOLIA.



ACROPOLIS OF GHILING, MUSTANG, NEPAL 1992 | THIS ROHDE PAINTING WAS EXECUTED FROM THE ROOF OF A FAMILY HOME ALONG THE EDGE OF THE TOWN OF GHILING.



MONKS OUTSIDE THE THUBCHEN GOMPA. MUSTANG, NEPAL. 1992 | ROHDE PAINTED THIS FROM LIFE WHILE SET UP IN THE STREET OF THE CAPITAL OF MUSTANG, LO MONTHANG. PAINTING IN THIS WAY CREATES A PUBLIC ARENA FOR COMMENTARY SO THE PAINTINGS ARE AS MUCH BY THE SURROUNDING CROWD AS BY THE ARTIST

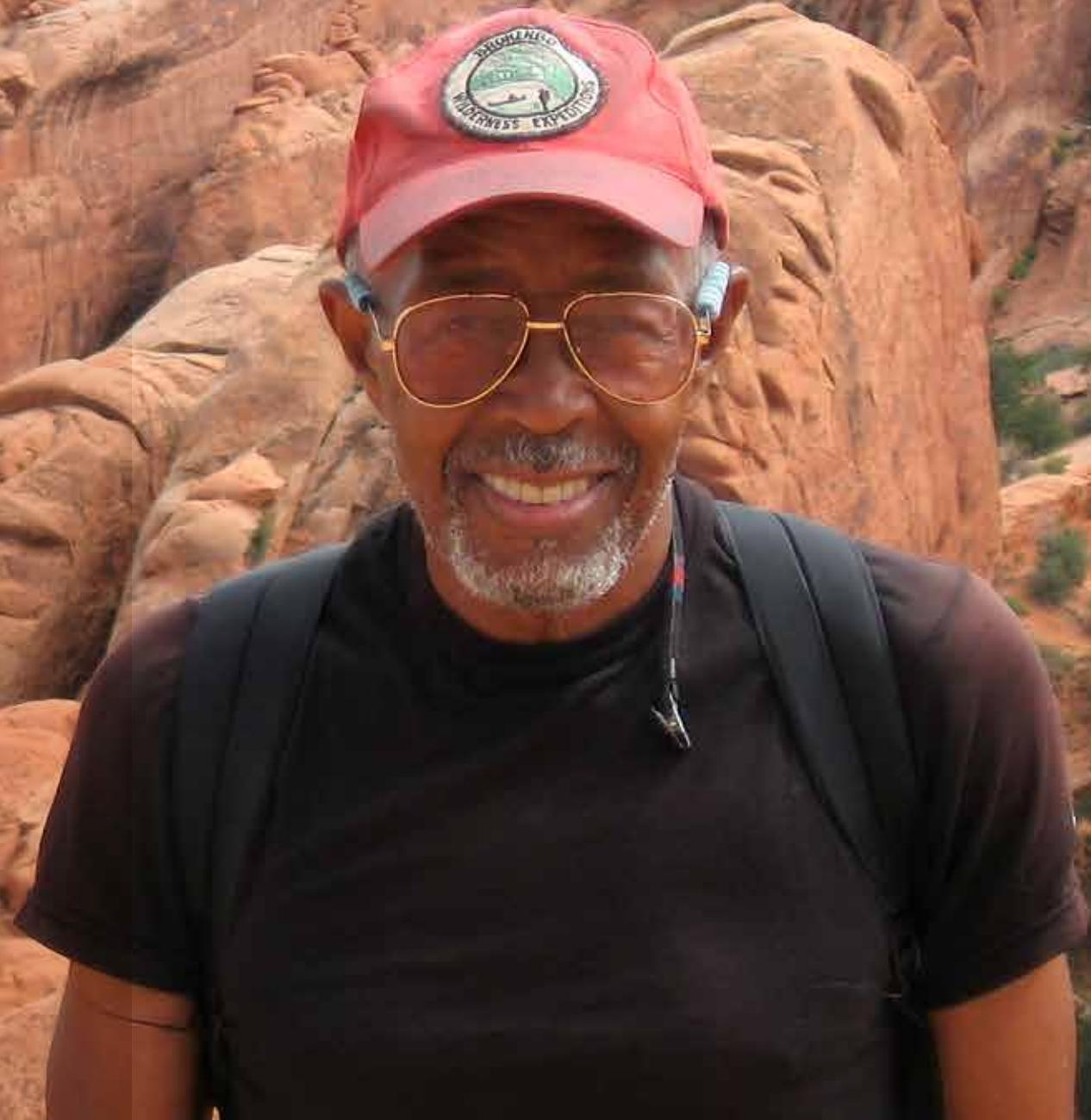
explorers changing the world

*WHO THE WORLD NEEDS
TO KNOW ABOUT*

J. ROBERT "J.R." HARRIS ME'93

THIS IS SUCH A GREAT IDEA. ALTHOUGH I NEVER GAVE IT MUCH DELIBERATE THOUGHT, I HAVE ALWAYS BEEN AWARE THAT THERE ARE EXPLORERS OUT THERE WHO ARE DOING REMARKABLE THINGS BUT ARE UNDER THE RADAR. I IMAGINED THAT MOST ARE FULFILLED BY THE WORK THEY ARE DOING AND ARE NOT RESENTFUL OF THOSE WHO HAVE ACHIEVED CELEBRITY STATUS. BUT WHEN I HEARD ABOUT THE

EXPLORERS CLUB 50 INITIATIVE, IT OCCURRED TO ME THAT EVEN IF THESE RELATIVELY UNKNOWN EXPLORERS WERE NOT SEEKING THE LIMELIGHT, THE PUBLIC SHOULD BE MADE MORE AWARE THAT GOOD THINGS ARE BEING DONE IN EXPLORATION, EDUCATION, AND FIELD SCIENCE. THUS, WHEN THE PROGRAM WAS PROPOSED, I WAS HAPPY TO VOLUNTEER AS A JUDGE.



While sifting through the hundreds of nominations, there were two things that really impressed me.

The first was the extraordinary range of creative, dynamic, unusual, yet totally relevant and important things that people are doing. For example, there is a gentleman who is conducting research on wildlife populations, sea ice, plastics, etc. in the Arctic, and collecting climate and other environmental data from his fishing vessel. There is also a female geoscientist who communicates and engages with kids and women of color to stimulate and encourage their interest in space exploration. She also published a Meals for Mars Cookbook. Another woman, working in southeast Asia, trains wildlife law enforcement officers and supports operations against animal and human traffickers. And what about the guy who is a dogsled guide, a photographer, and a former special forces soldier whose interest is extreme medicine? He takes medical professionals on his expeditions to train them on wilderness medical procedures.

This is just a small sample of the innovative and inspiring work being done by dedicated but largely unknown scientists and explorers. All of the 400+ outstanding individuals who were considered for this recognition are doing exemplary work. Selecting the final fifty was an extremely difficult yet uplifting process.

The second thing that impressed me was the diversity of this group. It was obvious that many of these individuals did not fit the male Caucasian image of the typical explorer. Instead, they cover a range of diversities, including race, culture, gender, age, sexual orientation, geography, and socio-economic level. Diversity was not a specific selection criterion, so it was very gratifying to see this outcome and to showcase this heterogeneous aspect of today's explorers. From my perspective as Chair of the Club's Diversity, Equity, and Inclusion (DEI) Committee, this multiplicity is also something that "the world needs to know about."

When I joined the Explorers Club in 1993, I would come to the headquarters building for the public lectures and other events and never see anyone who looked like me. There were those who refused to believe I was a member and demanded that I show my membership card when I entered the building. I was told not to bother joining a committee, and that I would never be entrusted with a flag for any of my expeditions.

When I went to the ECAD, the only African Americans I saw were carrying a tray or wearing an apron.

The Explorers Club was different back then, but times have changed. I never imagined I would be on the Board of Directors or chairing a committee, especially one on diversity, but that, I believe, is why the diversity of these EC50 explorers is so meaningful. By presenting them as people the world needs to know about, and by granting them membership status, The Explorers Club is taking the bold yet rightful step of acknowledging that the previously accepted profile of the explorer no longer exists. Further, it recognizes that the range of perspectives and viewpoints that these men and women bring are beneficial not only to The Explorers Club but also to our planet and the broader universe they explore.

EC50 serves as a model of how an organization can enhance its mission and realize its objectives by accepting potential members from different backgrounds and points of view. The Club's DEI plan seeks to expand this model by actively recruiting explorers from all of the population segments mentioned above. The plan is forward-focused, so it will not denigrate or disparage our early members for their views on race or ethnicity, as other organizations have done. It is also inner-focused, so it will consciously avoid being political and will not become involved with any particular social movement or philosophy. The initiative's goal, quite simply, is for The Explorers Club to benefit from the wider range of input and perceptions that a more diverse membership will provide.

I really enjoyed being a member of the EC50 Committee, and I hope that in time I will have an opportunity to meet some of those who the world will now know about. I also congratulate all the applicants who were not among the top 50. Each of them is doing admirable work and should be proud of their efforts. I hope we do this again in the future.

PREVIOUS SPREAD: J. R. HARRIS IN THE ARCHES NATIONAL MONUMENT, MOAB, UTAH. A VETERAN OF OVER FIFTY MULTI-WEEK HIKES THROUGHOUT THE WORLD, HE IS FOUNDER AND PRESIDENT OF JRH MARKETING SERVICES, THE OLDEST AFRICAN AMERICAN-OWNED RESEARCH AND CONSULTING FIRM IN THE UNITED STATES AND THE AUTHOR OF "WAY OUT THERE: ADVENTURES OF A WILDERNESS TREKKER."

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Robert Ashton, James H. Alexander, John G. Alexander, Darlene T. Anderson, Jeanne D. Andlinger, Barbara Annan, Robert J. Aresty, Atlanta Chapter, Robert J. Atwater, Norman L. Baker, Andreas Bender, Josh Bernstein, John Bierley, Bruce Blanchard, John R. Bockstoce, Brian M. Boom, John R. Boreske Jr., Gary W. Bowersox, Lawson W. Brigham, Diane Britz-Lotti, Julianne M. Chase, James M. Clash, Allen S. Counter, Evan T. Davies, Constance Difede, Michael F. Diggles, Helen Dolan, James M. Edwards, Richard M. Elkus, William T. Ellison, Barbara Engel, James R. Enterline, Julian M. Evans, Lesley Carol Ewing, Explorers Club Great Lakes

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the explorers club fifty process

KIM N. FRANK FN'18

ANOTHER WORLD IS NOT ONLY POSSIBLE, SHE IS ON HER WAY.
ON A QUIET DAY, I CAN HEAR HER BREATHING.
— ARUNDHATI ROY



We are living a historic moment, amid a pandemic and seismic changes across our planet. Bearing witness to both a metaphoric and, in many places, literal sweeping wildfires that irreparably alter the landscape as we know it. Yet only the disturbance of a raging fire can melt the resin and release pinecone seeds into the wind, spreading the sources of new life. First a riot of wildflowers—rare golden fire poppies and wild hollyhocks blanket the charred ground where the sprouts from exploded pinecones begin to rebuild the forest. In time, the surviving old growth trees shelter new saplings, and the ecosystem evolves to create a freshly restored balance. Disruption opens pathways for fresh possibilities.

With 2020 grounding many of us at home, new opportunities exist for discovering the treasures in our own backyards. What riches are illuminated when our lives slow down to such a degree that we can take in our surroundings, have time to reassess our actions and mindsets, and take a more thoughtful look.

Seeing the events of 2020 as an opening for growth and celebration, Explorers Club President, Richard Wiess had the idea to create an “Explorers 50” award, which seeks to amplify the achievements of 50 individuals who are making a significant impact within their communities across the globe, with little recognition for their tireless efforts. The establishment of this award takes to heart The Explorers Club’s commitment to exploration and discovery with a focus inward, seeking to expand our lungs with fresh breath.

The “Explorers 50” judging committee was composed of twelve Explorers Club members, representing a diverse combination of exploration experience, leadership, field work, expertise, and creativity. The process began with a call for nominations. The criteria, kept intentionally broad, sought to celebrate 50 explorers whose work is effecting change within their communities and respective fields; diverse in exploration, culture, and location, and who are largely unsung. We received over 400 nominations.

The judges, under the leadership of Joe Rohde FN’10, met twice to discuss the vision behind this award and the process we would undertake. Judges and applications were divided into four groups. Each group was given a folder containing one-quarter of

the applicants to review, complete with the nomination letters and corresponding supplemental materials. Judges worked from a matrix that had five categories speaking to the criteria, each requiring a numerical score. The final column was open for additional notes from each judge. After each judge scored and commented, Lacey Flint, who is an organizational maestro, in addition to her expertise as The Club’s archivist, tallied all scores for each judge group, then delivered a ranked list for each group to discuss and confirm their collectively ranked top 25.

To ensure the highest degree of impartiality and fairness, the judging groups then received the candidate rankings from one other group to review and discuss. In our final meeting, all twelve judges met to discuss and agree on the final combined numerical winners of the Explorers Club 50. In this way, every judge reviewed the top scoring candidates with a numerical value, written comments, and discussion. The final candidates represent the top numerical scores from the judging groups, with full group consensus over a process that included multiple layers of ranking.

If “exploration is curiosity put into action,” (Don Walsh HON’61), The Explorers 50 awardees, whose work spans 46 countries, are contributing to exploration with innovation driven by inquisitiveness, committed to meaningful change. From artists to astrophysicists, indigenous advocates, archeologists, environmental leaders, marine scientists, and geologists, most are also engaged in education and outreach, furthering their impact. Our committee is extremely proud to present these extraordinary individuals to you. We are eager to embrace and cultivate this myriad of new relationships. With so much to share between us, our strength and ability to create a better planet multiplies. Please join us in welcoming the inaugural winners of the Explorers 50.

PREVIOUS SPREAD: KIM FRANK IN NORTHEAST INDIA RESEARCHING CONSERVATION EFFORTS OF THE WEST BENGAL FOREST DEPARTMENT MAHOUTS AND ELEPHANTS.

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 EXPLORERS CLUB 50 LOCATION

 EXPLORERS CLUB CHAPTER LOCATION

THE HONOREES CONDUCT HIS OR HER EXPLORATIONS THROUGHOUT THE WORLD. ONE LOCATION WHERE EACH HAS ACCOMPLISHED SIGNIFICANT WORK IS PLOTTED TO SHOW THE EXTENT OF THEIR EFFORTS.

IN ADDITION, THE BASE LOCATIONS FOR EACH OF THE 33 CHAPTERS OF THE EXPLORERS CLUB ARE SHOWN.

AYANA OMILADE FLEWELLEN

ARCHAEOLOGIST

Nominated by **NANCY NENOW MN'04**



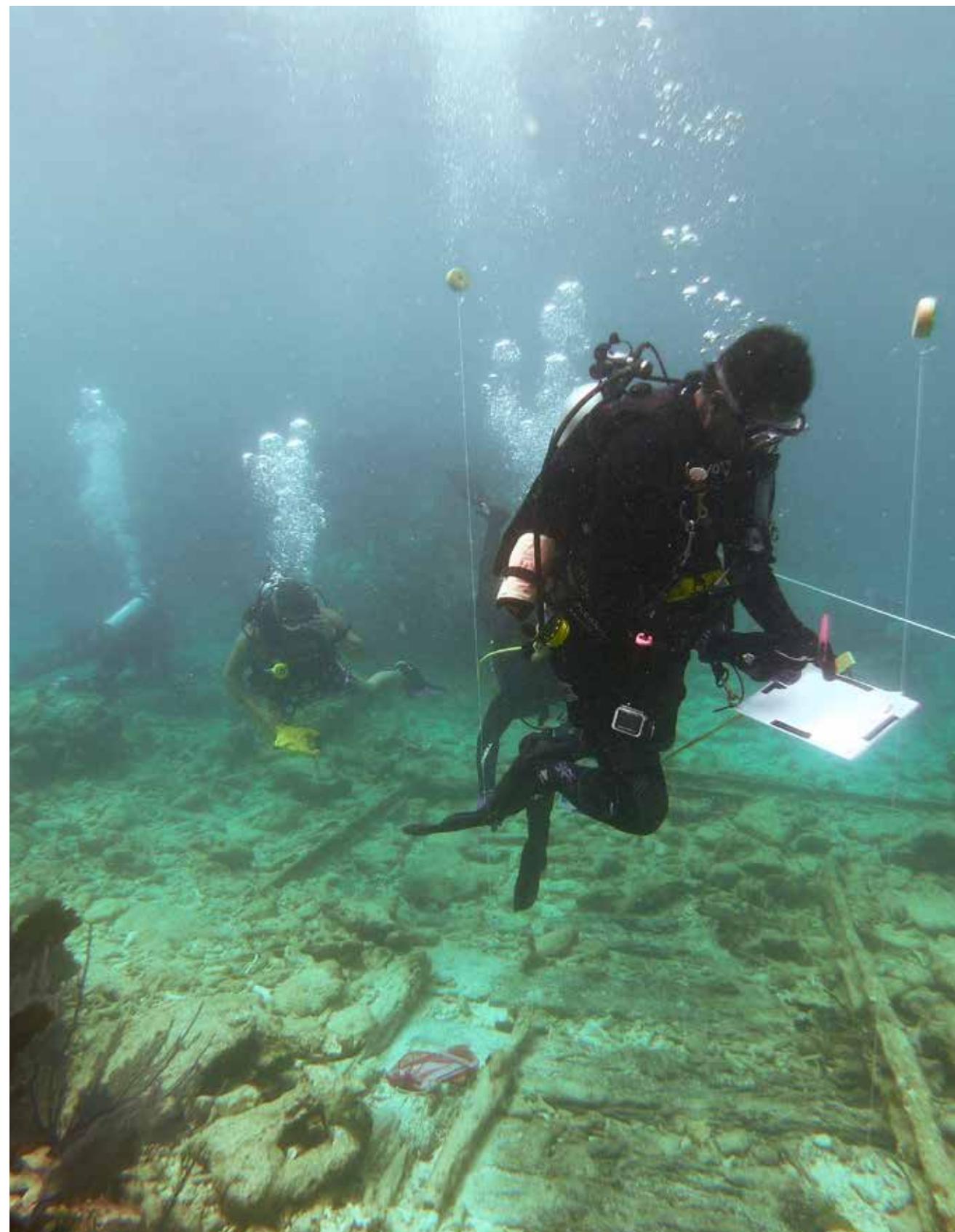
A BLACK FEMINIST, AN ARCHAEOLOGIST, A STORYTELLER, AND AN ARTIST, AYANA IS THE CO-FOUNDER AND PRESIDENT-ELECT OF THE SOCIETY OF BLACK ARCHAEOLOGISTS AND SITS ON THE BOARD OF DIVING WITH A PURPOSE. AN ASSISTANT PROFESSOR IN THE DEPARTMENT OF ANTHROPOLOGY AT THE UNIVERSITY OF CALIFORNIA, RIVERSIDE, HER RESEARCH AND TEACHING INTERESTS ARE SHAPED BLACK FEMINIST THEORY, HISTORICAL ARCHAEOLOGY, MARITIME HERITAGE CONSERVATION, PUBLIC AND COMMUNITY-ENGAGED ARCHAEOLOGY, PROCESSES OF IDENTITY FORMATIONS, AND REPRESENTATIONS OF SLAVERY.

The most meaningful aspect of my work has been working in African descendant communities. In February 2020, I traveled to Port Huron, Michigan, to work with Diving With a Purpose (DWP). I spoke with first graders about recovering a Tuskegee Airman's submerged aircraft that crashed in the Great Lakes during a WWII training mission. Speaking to students in a rural town was heartwarming. It's in these moments, where there are no cameras, where the work does not 'count' toward promotion or tenure, that I find value. Sharing uncovered histories to grade-schoolers opens their eyes. Similarly, with Historically Black Colleges and Universities (HBCU) students who I work with at the Estate Little Princess field school at St. Croix, USVI, I get to introduce a field they did not have exposure to at their home institutions. These students get the opportunity to think more broadly about the research they want to pursue, without limitations.

I remember my mother taking me to the Smithsonian's American History Museum, spending hours with the exhibits. These experiences set my love for history; I wanted to explore the world around me and touch history. After the course "Archaeology of African American Life" I have had a trowel in my pocket ever since. There is something deeply impactful about recovering the history of people through the materials they left behind when the written record of their existence often works to deny their humanity.

I do this because the land we walk on and the ocean that surrounds us hold so many stories about our past, and within those stories are the lessons for how to live a better today and how to envision a brighter tomorrow.

ABOVE: AYANA OMILADE FLEWELLEN
FACING PAGE: UNDERTAKING UNDERSEA ARCHAEOLOGY, IN CARRIBEAN



DANIELLE N. LEE

BIOLOGIST

Nominated by ALEXANADRA SUTTON LAWRENCE TM'14



DANIELLE N. LEE STUDIES NUISANCE ANIMAL ETHOLOGY, EXAMINING THE NATURAL HISTORY, BEHAVIORAL BIOLOGY, AND MORPHOMETRIC TRAITS OF FIELD MICE AND GIANT POUCHED RATS ACROSS URBAN GRADIENTS IN METRO ST. LOUIS, MISSOURI AND TANZANIA. FROM MEMPHIS, TENNESSEE, SHE STARTED EXPLORING IN LOCAL PARKS. IN GRADUATE SCHOOL, SHE ENGAGED STUDENTS IN EXPERIENTIAL LESSONS IN LIFE SCIENCES, ENVIRONMENTAL SCIENCE, AND URBAN ECOLOGY. SHE SHARES HER SCIENCE EXPERIENCES VIA SOCIAL MEDIA TO INCREASE MINORITY PARTICIPATION IN THE SCIENCES AND IS AN ASSISTANT PROFESSOR IN THE DEPARTMENT OF BIOLOGICAL SCIENCES AT SOUTHERN ILLINOIS UNIVERSITY EDWARDSVILLE.

Nuisance rodents are the most innovative commensal animals known. Various species of field rats and field mice have successfully made a living off of humans for thousands of millennia. Some of the biggest public health challenges on the horizon will likely center nuisance rodents as vectors of disease and illness. My students and I do basic science and provide information in the service of applied research interests useful to communities in ongoing pest management battles, to public health researchers, and specifically to applied psychologists who train pouched rats to detect landmine explosives and diagnose tuberculosis exposure in patients.

In 2012, as a post-doctorate researcher eager to make a name for myself studying African giant pouched rats in Tanzania, I soon realized that if I really wanted to understand pouched rat behavior and

ecology, I needed to re-evaluate how I conducted myself and science. I was a guest and a learner first and foremost, and learning means listening. From local residents and Tanzanian scientists, I learned much about the natural history of this species.

The privilege of working internationally comes with the responsibility of preparing other Western scientists to do science that centers on respect, patience and justice, especially with regard to Indigenous peoples. I am committed to training students, guided by the principles of Service Scholarship. I model, instruct, and mentor students to evaluate traditional field-science practices. As we examine life history traits, ecology and the behavior of wild animals, we integrate and demonstrate the value of the contributions from all scientific practitioners and knowledge keepers, regardless of age or credentials. This improves the quality of the research we produce and enriches the fields of science overall. It invigorates the intellectual promotion and economic stability of disenfranchised communities and developing nations.

ABOVE: DANIELLE N. LEE PHOTO: BRET HARTMAN (TED 2019)

FACING PAGE: LEE WITH POUCHED RAT ON SHOULDER; WITH FIELD FLAGS
PHOTOS: DANIELLE N. LEE ARCHIVES



SUPRAJA DHARINI

CONSERVATIONIST

Nominated by **JOE ROHDE FN'10**



A COMMITTED SEA TURTLE CONSERVATIONIST ALONG THE INDIAN EAST COAST FOR THE LAST 18 YEARS, SHE IS EXEMPLARY FOR HER MULTI-DISCIPLINARY APPROACH. SHE HAS A TEAM OF 363 'SEA TURTLE PROTECTION FORCE (STPF)' MEMBERS FROM 222 MARGINALIZED ARTISANAL FISHING VILLAGES IN TAMIL NADU, ANDHRA, AND ODISHA. THEY HAVE PROTECTED TENS OF THOUSANDS OF OLIVE RIDLEY NESTS IN HATCHERIES, WHICH HAS RESULTED IN THE SAFE RELEASE OF MILLIONS OF HATCHLINGS BACK TO THE SEA. STPF MEMBERS EDUCATE OTHER FISHERS IN THEIR VILLAGES ABOUT THE IMPORTANCE OF CONSERVING TURTLES, RETRIEVING GHOST NETS, REDUCING POLLUTION, AND CARING MORE FOR THEIR OCEAN ENVIRONMENT IN GENERAL.

Through establishing the STPF program, the TREE Foundation (Trust for Education and Environment) has given artisanal fishers a secure long-term alternative income to fishing that allows them to plan a future for their families. As a conservation program founded on the principles of community involvement and stewardship, members are the backbone of TREE Foundation's conservation work. Being a STPF member gives the fisherman and his family a secure future income. Succeeding in my goal of protecting sea turtles while improving the lives of people in economically backward and maligned communities has been very rewarding.

The same people who may have once intentionally hunted and killed turtles or poached eggs are now working to protect the very species they once harmed. This shows that with the right attitude and hard work the seeming impossible can be made possible. Today, all fishermen release turtles entangled in fishing gear, and our members organize coastal cleanups and community welfare programs throughout the project areas.

In December 2001, whilst walking along my local beach, I came across the body of a dead Olive Ridley sea turtle. My encounter reminded me of Dr. Jane Goodall's words, "*Every individual can make a difference.*" With this in mind, I was determined to dedicate myself to protecting these sea turtles. I was honoured to meet and spend time with Jane, the person who has most inspired me and motivated me to grow an internationally recognized and respected conservation NGO with 363 members in three east-coast Indian states.

I believe the TREE Foundation's biggest and lasting legacy will be the lives protected and saved today and in the future, and one of hope and a renewed compassion for nature.

ABOVE: NESTING TURTLE OBSERVED BY COMMUNITY AND SUPRAJA DHARINI
FACING PAGE: DHARINI AND PARTICIPANTS OBSERVING SILENCE AND SENDING POSITIVE ENERGY TO THE TURTLES IN THE OCEAN; HATCHLING RELEASE



MARK HANNAFORD

EXTREME MEDICINE PIONEER

Nominated by SHAWNA PANDAYA FI'19



MARK IS THE FOUNDER OF WORLD EXTREME MEDICINE, ACROSS THE DIVIDE EXPEDITIONS, MSC EXTREME MEDICINE (EXETER UNIVERSITY) AND THE WORLD'S LARGEST SUBJECT MATTER CONFERENCE. AN INNOVATIVE AND ENTREPRENEURIAL LEADER, MARK'S PASSION IS TO BRING INSPIRATIONAL PEOPLE TOGETHER TO BUILD NETWORKS IN REMOTE, DISASTER, AND HUMANITARIAN MEDICINE TO IMPROVE STANDARDS. A FORMER SPECIAL FORCES RESERVE SOLDIER INVOLVED WITH EXPEDITIONS FOR OVER 30 YEARS, HE IS AN AWARD-WINNING PHOTOGRAPHER.

I have wanted to explore since I was a young child. It has been a burning imperative from the moors of Dartmoor to Patagonia in my late teens. Working as a trekking guide for Lindblad National Geographic Expeditions in North Africa, Syria and Jordan, I embarked on a five-continent expeditionary career, leading to my own expedition company 'Across the Divide Expeditions.'

To train a cohort of skilled expedition medics to support our ventures we established a robust internal training program which eventually became a public course. We built an amazing network of maverick medics who want to impact society positively, go on adventures, and care for people. With our academic

program, we are now producing original research and pushing at the boundaries of knowledge. World Extreme Medicine (WEM) bridges fields of medicine in Space & Aviation, Disaster & Humanitarian efforts, Expeditions, and Military & Special Forces. At the very heart of WEM's offering is an annual not-for-profit conference to encourage peer-to-peer learning.

MSc Extreme Medicine is a robust academic and practical program I co-created with Exeter University to prepare medical professionals for operations in austere, low-resource environments. Our community has free access to a forward-thinking digital learning platform and to the physical Academy of Extreme Medicine with a world-class faculty.

For me each day brings new challenges and excitement. I get to contribute to our world plus I get to work with some of the most enthusiastic, bright, no-barriers, outstanding folk in the world! I love my work!

ABOVE: MARK DELVING INTO THE CATACOMES OF PARIS
FACING PAGE: DELIVERING MEDICINE IN POLAR CLIMES



JOEY ANGNATOK

SOCIAL ENTREPRENEUR

Nominated by JASON EDMUNDS MI'15



AN INUK FROM NAIN, NUNATSIAVUT, JOEY IS A UNIQUE BLEND OF SOCIAL ENTREPRENEUR, EXPERT KNOWLEDGE HOLDER, RESEARCHER, ROLE MODEL, HUSBAND AND FATHER. JOEY, A COMMERCIAL FISHERMAN, IS TRUSTED BY COMMUNITY MEMBERS AND AN ALL-INUIT CREW ONBOARD HIS 65-FOOT *MV WHAT'S HAPPENING*. THIS VESSEL IS USED FOR COMMERCIAL FISHING AND FOR MARINE RESEARCH FROM GOOSE BAY IN THE EASTERN SUBARCTIC TO RESOLUTE, NUNAVUT. HE HAS BECOME A RELIABLE RESOURCE FOR COMMUNITY MEMBERS, GOVERNMENTS, AND ACADEMIA TO BETTER UNDERSTAND THE UNIQUE ENVIRONMENT IN WHICH HE LIVES AND WORKS.

As an Inuit hunter, trapper and fisherman, I have had the opportunity to explore the Coast of Labrador by snowmobile and boat during all seasons. Over several decades, I have witnessed the ever-changing climate first hand; these changes include shrinking icebergs, changes in sea ice formation and thickness, warming weather temperatures in all seasons, a decrease of cold water species, shrubs growing in the North, and the decline of the George River Caribou herd. I have witnessed the introduction of new species such as killer whales and cormorants, and parasites present in different species. I have also witnessed the change of animals' abilities to adapt to survive such as polar bears fishing in rivers like grizzlies and seals feeding in freshwater lakes.

This gathered knowledge of land and sea allows me to contribute to our own local knowledge and to the work of Western researchers and others on adaptation to this changing world.

During a very impactful two-week trip for fieldwork, one goal was to determine if Greenland sharks were present in the Northwest Passage. Our findings were astonishing. The answer was an overwhelming yes.

Any fieldwork completed in Resolute Bay requires there to be an Inuk present with researchers. On one occasion because of being Inuit from another region, a special meeting was held to determine whether or not it was still required. While steaming into the harbour of Igloolik, the beach was full of people. We met with the mayor who told us that the news of our fieldwork was spreading from town to town. The message from the elders was that we had inspired members of these communities to see that there are no limitations to what Inuit people can do.

ABOVE: JOEY ANGNATOK AND HIS *MV WHAT'S HAPPENING*

FACING PAGE: BANDING SUBDUED CARIBOU; JOEY AND TANKER *MV ARCTIC*



MICHEL STROGOFF

FILMMAKER

Nominated by TRAVIS STEFFENS FN'14



"GOFF" STROGOFF IS A FORMER SHARK, TURTLE, AND SEA CUCUMBER FISHERMAN WHO BECAME AN ENVIRONMENTAL FILMMAKER, PHOTOGRAPHER, AND ADVENTURER. HIS LIFE CHANGED WHEN THE BRITISH NGO BLUE VENTURES STARTED WORKING IN HIS SMALL FISHING VILLAGE AND HE LEARNED ABOUT CONSERVATION AND MARINE PROTECTION. IN 2014, BY CHANCE HE MET AN ENVIRONMENTAL FILMMAKER WHO TAUGHT HIM TO FILM AND PHOTOGRAPH. HE NOW TRAVELS TO SOME OF THE MOST REMOTE PLACES IN MADAGASCAR AND DIVES DEEP INTO UNCHARTED CAVE SYSTEMS, FILMS THE RELOCATION OF MADAGASCAR'S LARGEST LEMUR, AND GOES UNDERCOVER TO EXPOSE THE ILLEGAL TORTOISE AND TURTLE TRADES.

The most meaningful aspect of my work is to document the realities of what is happening to the environment in Madagascar. By opening peoples' eyes, change and solutions can be found. This is what happened to me! My first job in broadcast TV was to go further out to sea than I had ever been with the Malagasy Coast Guard. We boarded huge industrial vessels to witness the enormous bycatch and waste. As a local fisher, this made me angry and inspired me to try and help protect our oceans. By showing people imagery of this, I hope that others will be inspired to join me to protect our planet.

I take risks by going undercover to expose wildlife crimes. If we don't do something now, it will be too late. People must know the consequences of their actions or they will not stop! To expose the illegal tortoise trade in Madagascar, we posed as buyers with hidden cameras and managed to infiltrate a group of illegal tortoise traders who were selling critically endangered species. They are now in jail for their crimes, and I hope this will stop other people from becoming involved in this trade.

On a recent expedition, one highlight was filming giant whale sharks and green turtles by swimming with them. As a former shark fisherman, I had always been very afraid of sharks. On our last day of filming we needed footage. I spotted the most curious shark which swam right up and circled me and the snorkelers. The interaction was incredible as the shark really seemed to connect with us. I managed to get some best ever shots!

ABOVE: MICHEL "GOFF" STROGOFF PHOTO: LOUISE JAPSER/BLUE VENTURES
FACING PAGE: STROGOFF PHOTOGRAPHING DRYING SHARK FINS, NW
MADAGASCAR. PHOTO: CHRIS SCARFFE

JIM PRIGOFF

ART HISTORIAN

Nominated by LEE LANGAN MED'99



JIM PRIGOFF IS AN IMPORTANT PHOTOGRAPHER OF STREET AND URBAN ART. HE IS CREDITED FOR GIVING DIGNITY AND CREDIBILITY TO AN ART FORM THAT ONCE WAS CONSIDERED TO BE ONLY VANDALISM. A TRIBUTE TO HIS RELATIONSHIP WITH ARTISTS, WHO WERE TEENS WHEN FIRST DOCUMENTED, IS THE FRIENDSHIP HE HAS MAINTAINED THROUGHOUT THEIR LIVES. HIS CO-AUTHORED BOOK, *SPRAYCAN ART*, COVERS THE ART MOVEMENT AROUND THE WORLD. IN LOS ANGELES IN APRIL 2010, THE *ESTRIA* FOUNDATION NAMED HIM AN URBAN LEGEND.

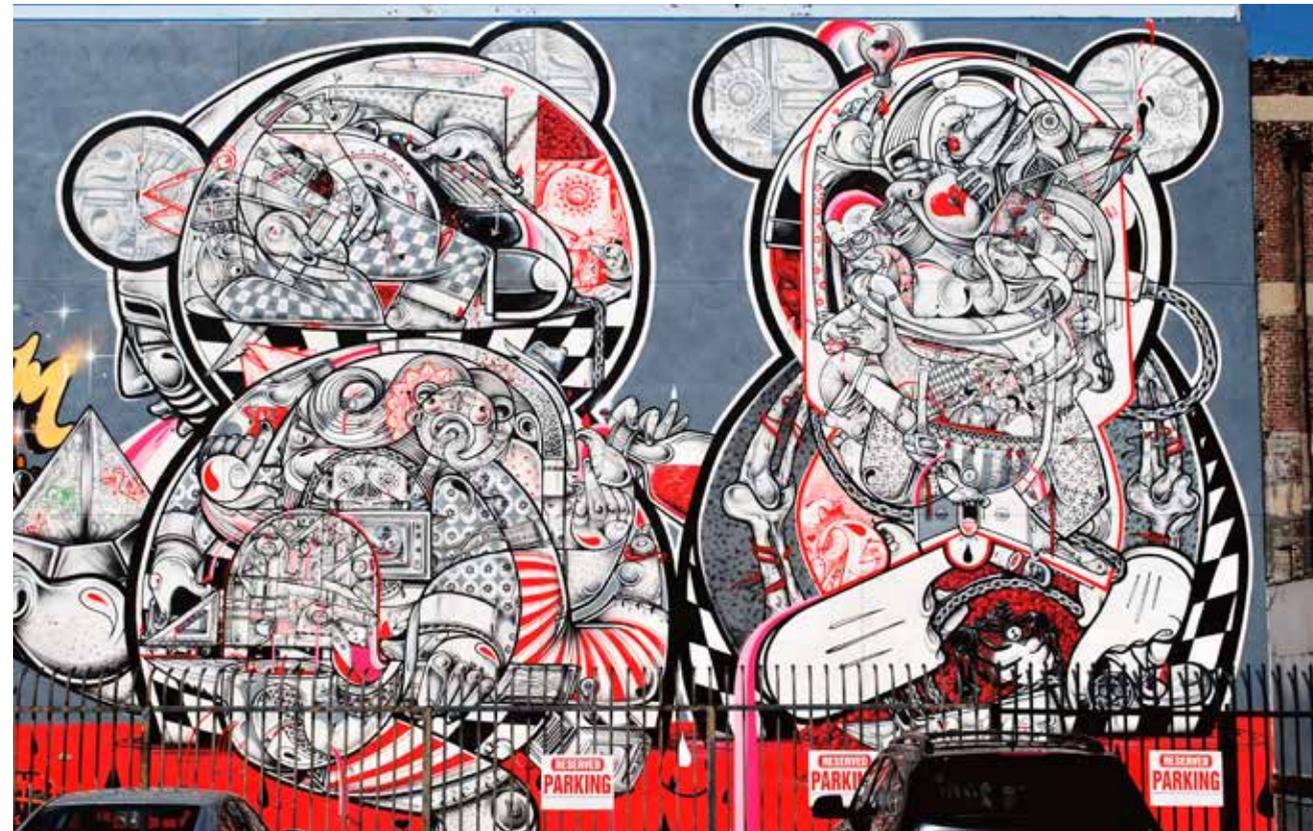
Graffiti is as ancient as man/womankind. Markings can be traced back to 60,000 BCE. In notable places like Altamira, Spain, and Lascaux, France, outstanding animal images painted in caves date back to 15,000 BCE. In 1804, French soldiers wrote their names on the ruins at Angkor Wat. In 1609, conquistadores left their names on New Mexico's Inscription Rock.

Modern examples appeared as rudimentary tags in the late 1960s. As the images came out of the subway tunnels and proliferated above ground, I recognized that something significant was happening that needed to be documented. Starting the project in 1984, the resulting book *Spraycan Art* was published in 1987. It has sold over 250,000 copies. What started as simple tags developed into highly skilled productions. Today artists have a following amongst collectors and museums.

My exploration to locate and document these images satisfied a number of my interests. These include the hunt to find the images, the challenge to photograph them, meeting local community people & artists, and lecturing. Many of the people that I have met have become friends for life.

In the beginning, tags were equated with vandalism. "Is it art or vandalism?" was a common discussion. Through my shows, and my involvements as a lecturer, author, and photographer, I have been credited as a major force in giving dignity and credibility to an art form that has become one of the most important art movements in the past forty years. The street artist Basquiat's tag was SAMO at first, yet a later day canvas sold for \$110 million at auction. I call it "From Tags to Riches."

ABOVE: JIM PRIGOFF BY SPRAY-CAN ARTIST: BRETT COOK AKA DIZNEY
 FACING PAGE: THIS MURAL IS IN THE LA ARTISTS DISTRICT, PAINTED BY HOW AND NOSM, TWIN BROTHERS WHO CAME FROM GERMANY AT AGE 13. THEY HAVE PAINTED LARGE WALLS IN OVER 70 COUNTRIES AND PUBLISHED A BOOK OF THEIR WORK FOR WHICH I WROTE THE FOREWORD; THE BLADE WALL WAS AT THE FRONT OF THE GEFGEN MUSEUM IN LA FOR THE 2011 "ART IN THE STREETS SHOW." BLADE PAINTED 5,000 TRAINS IN NYC OVER MANY YEARS AND IS RECOGNIZED AS THE KING OF GRAFFITI. HE IS IN THE PICTURE WITH HIS WIFE PORTIA. THE MURAL IS MORE TRADITIONAL OF THE GRAFFITI MOVEMENT USING CHARACTERS AND NAMES.



KAARE RAY SIKUAQ ERICKSON

ANTHROPOLOGIST

Nominated by **TIMOTHY JACOB MN'20**



AN INDIGENOUS ANTHROPOLOGIST FROM NORTHERN ALASKA, ERICKSON SPECIALIZES IN HELPING ARCTIC RESEARCHERS WHO DO NOT LIVE THERE TO BETTER GET ALONG WITH PEOPLE WHO DO. HE IS THE OUTREACH AND ENGAGEMENT MANAGER FOR THE UKPEAGVIK INUPIAT CORPORATION SCIENCE IN UTQIAGVIK, ALASKA. HE WAS RAISED IN SEVERAL VILLAGES ALONG THE BERING SEA COAST INCLUDING SAVOONGA, SAINT MICHAELS, AND UNALAKLEET. HIS FATHER, JEFF, IS A SCANDINAVIAN FISHERMAN AND SCHOOL TEACHER AND HIS MOTHER, DONNA SAURQA, IS A CULTURAL LEADER RAISED IN UTQIAGVIK. FOR OVER A DECADE HE HAS BEEN IMMERSSED IN ANTHROPOLOGICAL PROJECTS AND STUDYING ALASKA NATIVE HISTORY.

The mission of our organization is to utilize our Indigenous and local knowledge to assist Arctic researchers. I help engage Arctic researchers with Arctic residents. As explorers, I believe that it is extremely important that that we take the time to understand that what may seem as exotic worlds to us are not exotic to the people who live there. Properly engaging with local people by learning about local history and customs is the most important aspect of exploration.

Alaska is so huge that one can live an entire life exploring these lands and the coastal waters and never leave the state. My multicultural, rural upbringing has

allowed me to live in many different areas of the state. I hunt, gather, and fish which requires my family to travel long distances across Alaska. My schooling and career has allowed me to travel to villages and regional hubs to engage with local residents.

From the rainforests in South America to the far reaches of the Arctic, humans have lived in most of Planet Earth's finite space, other than the deep sea and Antarctica. In my life, I have never been anywhere that did not have Indigenous and local peoples.

As an Indigenous Anthropologist, I believe that it is always extremely important to consider and learn about Indigenous and local people when exploring their lands, and to communicate with them. A pristine and untouched place for one person to explore might just be someone's backyard!

ABOVE: KAARE WHILE WOLF HUNTING IN 2020
FACING PAGE: 3 OUT 5 OF THE ERICKSON FAMILY



PETER RENGESA LALAMPAA

CONSERVATIONIST

Nominated by **JOE ROHDE FN'10**



THE SON OF PASTORALIST KINEMPE LALAMPAA AND NOOMUNGEN LALAMPAA, PETER HAD THE PRIVILEGE OF BEING RAISED IN A HUMBLE BACKGROUND OF PASTORALISM IN SAMBURU, KENYA, WHERE THE MAIN STAY IS DEPENDENCE ON LIVESTOCK. DURING THESE HERDING ACTIVITIES, PETER CONNECTED WITH NATURE AND DECIDED TO PURSUE A CAREER IN CONSERVATION. HE CONVINCED HIS PARENTS TO ALLOW HIM TO ATTEND SCHOOL TO ACHIEVE A DEGREE IN ENVIRONMENTAL SCIENCE AT KENYATTA UNIVERSITY. HE JOINED GREVY'S ZEBRA TRUST THEREAFTER AND RECEIVED A MASTERS WITH UNIVERSITY OF KENT, DURRELL INSTITUTE OF CONSERVATION AND ECOLOGY.

My initial role with Grevy's Zebra Trust was training field staff including scouts, ambassadors, and warriors. The data that they collected informed conservation action for the endangered Grevy's zebra in northern Kenya. I was able to drive community campaigns to create awareness on wildlife plight and healthy biodiversity.

I have led community training for optimum rangeland management practices and have connected that to Indigenous wisdom. We have been able to restore over 1000 hectares of degraded areas at a learning site that can sustain over 560 herds of cattle for four months.

I have closely worked with Save the Elephant, Ewaso Lion, and Kenya Wildlife Service to build synergy for their work as well strengthening collaboration for effective resource utilization. Worldwide, I have been instrumental in shaping Grevy's zebra national conservation strategy.

Grevy's Zebra Trust employs 90% of employees from the local communities that host Grevy's zebra. Women are in the forefront, monitoring Grevy's zebra, working as scouts. These scouts engage community members and create awareness on the plight of wildlife.

We live in a region that is filled with breathtaking scenic beauty and different ethnic groups with a mosaic of cultures and traditions. My hope is that the future will bring healthy rangeland with lots of perennial grasses, a working water cycle, diversity of wildlife, a healthy Grevy's zebra population, and a balanced ecosystem that supports community livelihood.

ABOVE: PETER RENGESA LALAMPAA PHOTO: MARTIN VARON
FACING PAGE: RADIO TRAINING TO KEEP RANGERS IN TOUCH; SUPPLEMENTARY FEEDING FOR GREVY'S ZEBRAS



DR. RUBEN ANTONIO ALEMAN LUCERO

VETERINARIAN

Nominated by BUFFY REDSECKER MR'19



A ZOOTECHNICAL VETERINARIAN FROM TULCAN, ECUADOR, DR. ALEMAN LUCERO INITIALLY WORKED IN THE GALAPAGOS. HE HAS DIRECTED A MASSIVE STERILIZATION PROGRAM FOR MORE THAN 10,000 DOGS AND CATS, HAS PROTECTED MANGROVES, AND HAS IMPROVED HUMAN LIVES BY INTRODUCING SUSTAINABLE CRAB PRODUCTION TECHNIQUES. REGAINING MOBILITY SUBSEQUENT TO AN IMMOBILIZING KNEE DISEASE, HE BECAME A RANGER AT MACHALILLA NATIONAL PARK AND CREATED THE CENTER FOR THE REHABILITATION OF MARINE FAUNA, EDUCATION, AND WHALE RESCUE.

In my town of Puerto Lopez, thanks to the creation of the Rehabilitation Center, people have become interested in the conservation of sea turtles in Ecuador. They care about the animals individually and talk about that issue as a community. Educating the people in a way that makes them care about their wild neighbors is very important.

Now that science has identified the causes of wildlife mortality and stranding, I hope that governments around the world will work to create regulations that can help. Banning certain kinds of fishing gear and creating more marine protected areas is a good start. Reducing ocean noise and developing effective enforcement strategies to make marine protected areas more secure are a more advanced plan.

People should stop choosing single-use plastics. Sea turtles think plastic bags are jellyfish, and they choke on the bags. A marine animal that is terrified of deep water is a very terrible thing. The only thing that heals their trauma is time. Our turtles spend many months in shallow pools so that their flippers can touch the bottom. We test them in deeper water for a short amount of time, but often they panic for months.

My potential legacy is the creation of the Rehabilitation Center that I built brick by brick. It is my footprint in the community that I love for the conservation of a species that I love— the sea turtles of Manabi, Ecuador.

My hope for the future is that all people become kinder and more responsible for their pets and for the wild animals of our planet. I am proud to be someone who lives my life in kindness and hope that others will do the same in their hometowns.

ABOVE: DR. RUBEN ANTONIO ALEMAN LUCERO AS ANIME

FACING PAGE: DR. RUBEN ANTONIO ALEMAN LUCERO CARING FOR A PELICAN

SATEESH VENKATESH

CONSERVATION BIOLOGIST

Nominated by ANN PASSER MR'13



SATEESH IS A CONSERVATION BIOLOGIST WORKING TO IMPROVE KNOWLEDGE OF ANIMAL BEHAVIOR IN ORDER TO MITIGATE HUMAN-WILDLIFE CONFLICT AROUND THE WORLD. THIS WORK HAS INCLUDED ELEPHANTS IN A SMALL VILLAGE OF NORTHERN THAILAND, SAVANNA ECOLOGY IN SOUTH AFRICA, AND JAGUARS IN COSTA RICA. CURRENTLY, HIS RESEARCH FOCUSES ON ELEPHANT PERSONALITY DIFFERENCES TO UNDERSTAND BETTER HOW DIFFERENT ELEPHANT PERSONALITIES MAY INFLUENCE THEIR MOVEMENT PATTERNS AND INTERACTIONS WITH THEIR HABITAT.

While I have worked on research projects with volunteers, I found that it is possible to involve and engage anyone in conservation. Doing so with local people is essential for any conservation efforts. What I would like to promote in my future work is inclusion and support for more diverse viewpoints. I hope this will allow more opportunities for people at the local level to control and influence conservation efforts in their areas.

For decades the separate fields of conservation and animal behavior have both been developing solutions to complex wildlife problems. Though these fields have often studied the same species in the past, they view issues from different but parallel perspectives that don't often overlap. My current work combines both conservation and animal behavior techniques, aiming to use information from both fields to solve problems. My current research tests variations in personality

within a group of 31 semi-wild Myanmar elephants. We do this by presenting them with a novel puzzle box, designed to withstand an elephant. Very few studies use puzzle boxes to examine elephant personality. This particular group of elephants has allowed us to measure their movements in a wild habitat. The ultimate goal of the study is to link personality traits to potential crop-raiding behavior, investigating some of the possible drivers of human-elephant conflict. This study is one of the first when researchers have been able to combine robust animal behavior techniques in this way with conservation practices to develop holistic solutions that could benefit elephants worldwide.

ABOVE: SATEESH VENKATESH AT THE EXPLORERS CLUB PHOTO: FELIX KUNZE
FACING PAGE: SNAKE IN GUYANA PHOTO: CAMILLE VENIER;
ELEPHANT TEAM, THAILAND PHOTO: PATRICIA DEBOW



BOLORTSETSEG MINJIN, PHD

PALEONTOLOGIST

Nominated by **JULIE CHASE MED'97**



A PALEONTOLOGIST WHO FOCUSES ON THE PROTECTION OF FOSSILS IN HER NATIVE COUNTRY, MONGOLIA, DR. MINJIN RECEIVED HER DOCTORATE FROM A JOINT PROGRAM BETWEEN THE AMERICAN MUSEUM OF NATURAL HISTORY AND THE CITY UNIVERSITY OF NEW YORK. SHORTLY THEREAFTER, SHE FOUNDED THE INSTITUTE FOR THE STUDY OF MONGOLIAN DINOSAURS (ISMD). BOLORTSETSEG HAS WORKED TO REVEAL ILLEGAL MARKETS IN MONGOLIAN FOSSILS, MANY OF WHICH HAVE SUBSEQUENTLY BEEN SHUT DOWN. IN 2012, SHE HELPED ESTABLISH THE CENTRAL MUSEUM OF MONGOLIAN DINOSAURS.

I have always focused on getting young Mongolians excited about the natural treasures of their country. Locating the 1920's campsite of Roy Chapman Andrews Central Asiatic Expeditions (CAE), where members briefly mentioned a single petroglyph on a nearby mountain and included a figure of it marked on a map, we were not prepared for what we found on the summit. We found numerous ancient petroglyphs depicting animals of the desert and many stone tombs. There were so many petroglyphs that we were not able to find the sole one mentioned by the CAE. We discovered that, even here, someone had defaced this priceless art with graffiti. This emphasizes how important it

is to discover Mongolia's archaeological treasures that can be protected for future generations.

When I became a paleontologist, I was struck by how few Mongolians were interested in this profession, even though my country has some of the richest fossil beds in the world. Most Mongolian paleontologists were nearing retirement. They focused on collaborating with foreign scientists. Through the Institute for the Study of Mongolian Dinosaurs (ISMD), we have conducted numerous outreach projects in the Gobi Desert. K-12 students, who once thought that dinosaurs were mythical animals, have learned about the amazing discoveries in their own backyard. Our paleontological expeditions have provided unique field and research opportunities to Mongolian undergraduate and graduate students. I am confident that the future of Mongolian paleontology is a bright one, where scientists will find a vibrant and growing community with whom to collaborate.

ABOVE: MINJI AT DINOSAUR MUSEUM PHOTO: DULGUUN BATBAYAR

FACING PAGE: BOLORTSETSEG MINJIN IN THE FIELD;

MINJIN TEACHING PHOTOS: BATTUR JANCHIV



ONKURI MAJUMDAR

CONSERVATIONIST

Nominated by DAMIEN LELOUP FI'10



A WILDLIFE CONSERVATIONIST FOCUSING ON ENDING WILDLIFE TRAFFICKING BY TRAINING AND SUPPORTING GOVERNMENTS AND THE PRIVATE SECTOR, ONKURI HAS PROVIDED INVESTIGATIVE SUPPORT TO LAW ENFORCEMENT THROUGH ANALYSIS AND INTELLIGENCE GATHERING ON TIGER, PANGOLIN, IVORY, AND EXOTIC PET TRAFFICKING SYNDICATES. SHE IS CURRENTLY WORKING ON A SMARTPHONE APPLICATION WITH INFORMATION ON 600+ TRAFFICKED SPECIES FOR USE BY BORDER AND TRANSPORT OFFICIALS AND THE GENERAL PUBLIC. ONKURI STRONGLY BELIEVES THAT WILDLIFE AND NATURE HAVE A RIGHT TO THRIVE, AND SHOULD NOT HAVE TO 'PAY' FOR THEIR CONTINUED EXISTENCE BY BEING USEFUL TO HUMANS.

My work has focused on wildlife crime, and my stakeholders have been government officers and corporations, since private individuals typically do not have the power to act against criminals. An important facet is to ensure that people mandated with stopping wildlife trafficking are informed and trained. My experience with hands-on training for forest and police officers, and airline and bank employees, opened my eyes to how inadequately many of them are trained to even recognize wildlife trafficking, let alone stop it. Over a career spanning nearly 20 years, I have trained over 900 officials in Asia and Africa.

I love the experience of being in the field, embedded with an agency in a national park or at a training academy, training on investigation techniques and learning unique challenges. Often I've received feedback that the training has changed careers by learning effective techniques. We have seen agencies take down international syndicates and seize their assets, repatriate live animals, and upgrade legislations to strengthen nature protection laws.

Ultimately, I would like to involve more people in wildlife conservation, and therefore we have been expanding a smartphone application that allows anyone to identify and report wildlife trafficking. The more people who feel invested in nature protection, the safer our world gets.

My overall hope is that through my work and resulting media stories, there may ultimately be a sea change in how people see the natural world. Currently, the attitude (even among many conservationists) is that nature must justify its right to existence by being useful to humans via environmental services or commercial exploitation. I hope for a future when the right of wildlife to thrive simply because they exist is recognized universally.

ABOVE: ONKURI MAJUMDAR IN ISTANBUL PRESENTATION.
FACING PAGE: ONKURI LECTURING TO RANGERS, KAZIANGA NATIONAL PARK, GOLAGAT, INDIA; SHOWING EVIDENCE, ALAUNGDAW KATHAPA PAGODA, MYANMAR. PHOTOS: FREELAND.



JOHN HOUSTON

*INUIT ART SPECIALIST
& ARCTIC FILMMAKER*

Nominated by JASON EDMUNDS MI'15



JOHN'S LIFE IS A STORY OF THE ARCTIC AND NOVA SCOTIA. HE OWES HIS STORYTELLING TO THE INUIT AMONG WHOM HE WAS RAISED WHILE HIS PARENTS JAMES AND ALMA HOUSTON DEVELOPED WHAT THE WORLD NOW KNOWS AS INUIT ART. AFTER GRADUATING FROM YALE UNIVERSITY JOHN BECAME ART ADVISOR TO THE INUIT COMMUNITY OF PANGNIRTUNG, REGAINING HIS CHILDHOOD FLUENCY IN INUKTITUT. HE IS ALSO FLUENT IN FRENCH. HIS FIRST SIX FILMS ARE ALL WINNERS OF INTERNATIONAL AND DOMESTIC AWARDS. HE NOW ALSO PRODUCES WITH INDIGENOUS PARTNERS.

My idea is nothing new. Inuit say "*Tumivut nanitu-innavut*" – "our footsteps are everywhere." Since long before Columbus "discovered" what he called the New World, there were few places on earth that Indigenous peoples had not already visited or inhabited. Instead of denying or sidestepping that realization, my work embodies it. I model "Two-eyed Seeing," the concept that Indigenous and Western perspectives need one another to get the full picture.

The United Nations Foundation recently initiated a study based on my vision that Indigenous

peoples gain increased access to online broadcasting through mentorship and training backed up by corporate and foundational sponsorship. My hope is Indigenous and non-native peoples in Arctic Canada and all over the world will learn to see and hear each other and move forward in a sustainable way, with arms linked and both sets of eyes fixed on a better future.

I hope my work welcomes departure from the world view fostering identity politics, laws, regulations and funding criteria that continue to have the effect of keeping groups of people separated. I understand that from a governmental point of view, there is a practical side to drawing a line around people by race, creed, nationality, etc., in order to better administer them. But, I believe there should be substantive countervailing measures designed to encourage collaborations and mentorships between all different kinds of people. Otherwise we foster prejudice, even as we espouse its eradication.

ABOVE: JOHN HOUSTON RETURNS "FIRST CARIBOU," ACKNOWLEDGED TO BE THE FIRST PIECE OF CONTEMPORARY INUIT ART, GIVEN TO HIS LATE FATHER BY ITS CARVER, CONLUCY NAYOUMEALOOK (1891 - 1958) PHOTO: JOHN HOUSTON, ATAUTSIKUT PRODUCTION LTD

FACING PAGE: HOUSTON INTERVIEWS BOBBY "SNOWBALL" APUTIARJUK WHILE MOTORING UP KUUJJUAQ RIVER, NUNAVIK. PHOTO: SCOTT BERRINGTON, ATAUTSIKUT PRODUCTION LTD

MARIO RIGBY

ADVOCATE

Nominated by **GEORGE KOUROUNIS FI'09**, **ANNE JACKSON TM'15**, **BOB ATWATER LF'05**



MARIO RIGBY IS AN EXPLORER AND ADVOCATE OF INCLUSION AND DIVERSITY IN THE OUTDOORS. HE ENCOURAGES PEOPLE TO EXPLORE SUSTAINABLY. BORN IN TURKS & CAICOS ISLANDS, HE SPENT HIS CHILDHOOD IN GERMANY AND THEN MOVED TO TORONTO, CANADA, AS A TEENAGER. IN 2018, MARIO COMPLETED A TWO-YEAR TREK CROSSING AFRICA BY WALKING AND KAYAKING FROM CAPE TOWN, SOUTH AFRICA, TO CAIRO, EGYPT. THIS EXPEDITION ALLOWED HIM TO CONNECT WITH COMMUNITIES AND SHARE THEIR STORIES. HIS GOAL WAS TO INSPIRE PEOPLE LOCALLY AND GLOBALLY TO BE BRAVE AND GET OUT TO SEE THE WORLD. HIS STORIES ARE GRIPPING AND THOUGHT-PROVOKING AS HE LEARNS ABOUT HUMANITY AND OVERCOMING FEAR.

My ultimate vision is to push the advancement of humanity with adventuring and storytelling through sustainable, human-powered expeditions that promote social and environmental justice. I believe that life lessons are worth sharing, and I hope to inspire others to have more courage while addressing global issues that affect us all.

My hope for the Crossing Africa expedition was to find authenticity through humanity. I wanted to see what it meant to be away from superficial materialism. Not only was it an exploration of vast terrain, but an exploration of genuine interest in the people who lived there. To learn from them and to show Africa in a way that is unique, I wanted to take on a modern challenge by walking side-by-side with Africans and staying where they stay.

Africans are ingenious and creative. What I found was a beautiful array of diversity – from

the way they live to their religious and cultural practices and communities. To show our commonalities with everyday African people through their perspectives, the best and most authentic way to do this was to walk. This allowed me to encounter so many different people and to give voice to their story. Another part of my journey was the awe-inspiring encounters that I had with wildlife across the magnificent terrain.

Ultimately, the more diversity in the exploration world, the more people will be interested in nature and the outdoors. Having multiple expeditions under my belt, I feel that I am now paving the way for a new era of diverse explorers.

ABOVE: MARIO RIGBY, KAYAKER

FACING PAGE: MARIO DURING HIS SOUTH-TO-NORTH 2-YEAR AFRICAN TREK



BILLY GAUTHIER

*INUIT ARTIST,
ENVIRONMENTALIST*

Nominated by MILBRY POLK MED'95



BORN IN HAPPY VALLEY-GOOSE BAY, LABRADOR, BILLY IS A SELF-TAUGHT ARTIST WHO CARVES SERPENTINE, ANHYDRITE, IVORY, ANTLER AND BONE. EXHIBITING SINCE 2007, HE SECURED INTERNATIONAL ATTENTION IN 2010 WITH *BILLY GAUTHIER: VISIONS FROM LABRADOR IN VANCOUVER*. HIS INNOVATIVE AND PERSONAL STYLE HAS ESTABLISHED HIM AS ONE OF THE DEFINITIVE INUIT ARTISTS OF HIS GENERATION. HIS INTEREST IN CONSERVATION INSPIRED HIM TO BECOME A PEACEFUL ACTIVIST TRYING TO PROTECT HIS ENVIRONMENT, INCLUDING DEMONSTRATIONS AND HUNGER STRIKES PROTESTING THE MUSKRAT FALLS DAM PROJECT AND THE METHYLMERCURY POISONING OF LAKE MELVILLE THAT THREATENS THE TRADITIONAL INUIT WAY OF LIFE.

As an artist and culturalist, my work explores the beauty and traditional practices of my Inuit culture and the issues that arise in our homelands. My sculptures are often images of animals, the northern landscape and its people. They aim to show how Inuit are not just close to the land and animals, instead they are a part of us.

I realize that we can never go back to the way we were before "first contact." However, I believe that reconnecting to our lands is the best medicine for my people. I want more people to explore nature, to

protect our last truly wild places, and to rebuild others. With my work as a culturalist, I've been able to share my knowledge with people that do not have the chance to speak with an Inuk. There are many things we can teach each other to be a bridge for my people and the rest of the world.

My work is often fanatically detailed and with fluid lines to capture the attention of the viewer so hopefully they begin to connect with the piece and gain an appreciation for the subject. I've always considered art an exploration of beauty and truths. I believe good art is art that inspires, art that opens our eyes to new ideas and makes us want to push ourselves a little further. I hope that my hand and chisel leaves a positive mark for humanity on this tiny planet.

ABOVE: BILLY GAUTHIER IN LABRADOR
FACING PAGE: EXAMPLES OF THE ARTIST'S CARVINGS

BRANDI DECARLI

ENTREPRENEUR

Nominated by LEE LANGAN MED'99



BRANDI DECARLI IS THE FOUNDING PARTNER OF *FARM FROM A BOX*, A CLEANTECH-POWERED INFRASTRUCTURE FOR COMMUNITY-BASED LOCAL FOOD PRODUCTION. SHE IS CURRENTLY A SHEEO VENTURE, A BOARD MEMBER OF JORDANIAN AGRITECH ACCELERATOR HASSAD, AND A RISING TALENT WITH THE WOMEN'S FORUM. SHE IS A FREQUENT GLOBAL SPEAKER ON TECHNOLOGY'S ROLE IN CLIMATE RESILIENCE, ECONOMIC EMPOWERMENT, AND WOMEN'S LEADERSHIP, INCLUDING HER TEDX TALK, "HOW TECHNOLOGY AND TOGETHERNESS CAN TRANSFORM OUR WORLD." BRANDI IS PASSIONATE ABOUT REJECTING OLD RULES AND DRIVING POSITIVE CHANGE IN THE WORLD THROUGH INNOVATION, COMPASSION, AND CONNECTION.

Everyone should have access to healthy food produced in a way that benefits the land and regenerates life. We failed to meet the foundational need of food for almost 700 million people last year. This trajectory will have 840 million people chronically hungry by 2030. Local farms, the ecological gatekeepers of our future, are our greatest asset towards achieving zero hunger and average about two acres. Our goal is to revolutionize local food production and enable communities to grow their own nutritious food with clean technology.

Farm from a Box is designed as a modular, plug and play infrastructure that provides independent solar power, water efficient drip irrigation, cold storage, connectivity, and a data platform that can optimize efficiencies and provide remote support. This technology can help us grow more efficiently at the community level while conserving resources and reducing our impact.

Rather than directing advances in technology towards furthering an extractive industry, we uplift local and regional food production with a regenerative modular system designed to increase production sustainability

and efficiency. Instead of mass production, our mission is to empower production by the masses.

Just outside of the Nyagaruso refugee settlement in Tanzania, we arrived at a field covered in shrubs and trees, without a clearing in site. I asked those who assembled to gather every tool they had. I walked the field parameter, trailed by curious laughing children, counting my paces. As I grabbed a machete and started chopping the nearest shrub, everyone burst into action. The villagers of Kalimungoma had named the farm "*Ushirikiano*," which is Swahili for "the spirit of working together." True to its name, that field was the spirit of working together. This simple but powerful moment showed me just how much can be achieved through collective action. Across language and culture, acting with togetherness is ultimately how we make great things happen.

ABOVE: BRANDI DECARLI ON SITE OF TANZANIA DELIVERY & INSTALLATION FOLLOWING PAGE, LEFT: VILLAGE MEETING, RIFT VALLEY; CONCESSA, TANZANIA

SCOTT STEWART THOMPSON

ENTREPRENEUR

Nominated by LEE LANGAN MED'99



SCOTT THOMPSON'S LIFE HAS ALWAYS BEEN ABOUT BEING A RESIDENT OF THE WORLD. AFTER COLLEGE, HE BECAME A GOLF PRO IN GENEVA WHERE THE CONSULATE GENERALS TAUGHT HIM WHAT THE REST OF THE WORLD IS AND HAS DONE. RETURNING TO CALIFORNIA AFTER THREE YEARS IN OSLO, NORWAY, HE FOUNDED THE SAN FRANCISCO SPORTS COUNSEL. THIS LED TO RUNNING THE 2008 INTERNATIONAL CHILDREN'S GAMES BRINGING 1650 YOUNG ATHLETES FROM 82 CITIES AND 41 COUNTRIES. IT BECAME OBVIOUS THAT CREATING A NEW COMPANY AND LIFESTYLE COULD HELP THE WORLD: HE CO-FOUNDED *FARM FROM A BOX*.

The work that *Farm from a Box* offers should have impact for centuries. To grow food in a manner that allows people to maximize yields in a small area using sustainable power and careful use of precious water will only enhance the ability of all humans to eat better food and optimize resources needed to live a better life. Thus far we are a presence in several locations around the world. This includes supporting veterans learning farming skills at Mt Vernon, a village in a host community around the largest refugee camp on the Tanzanian/Congo border, resettled refugees with the IRC in West Sacramento, and the Lakota Sioux in South Dakota on the Pine Ridge Reservation. The

ABOVE: AVID GOLFER SCOTT THOMPSON FOLLOWING PAGE, RIGHT: LAKOTA SIOUX FFAB SITE, SD; INSTALLATION, TANZANIA

intention is to continue to provide challenged communities with an off-grid agricultural infrastructure that can bridge the food and poverty divide.

We are taking technology to the far reaches of the world, forging new frontiers for all manners of need. From refugee camps to Indigenous Native American reservations, to urban settings, to South Pacific crisis alleviation in recovery, there are few corners of the world that our efforts are not applicable so long as soil and water are present.

We have two goals that we will earn. First, creating the vision and applying it to our planet while on our watch. Second, convincing youth on the planet that if you work hard enough and do not give up you can achieve what may have once seemed impossible. For those who tell you it is *not* possible, proving that it *is* possible to the benefit of mankind is quite a legacy!



JUSTIN DUNNAVANT, PHD

ANTHROPOLOGIST

Nominated by **TREVOR WALLACE MN'13**



A POSTDOCTORAL FELLOW AT VANDERBILT UNIVERSITY'S SPATIAL ANALYSIS RESEARCH LABORATORY, DR. DUNNAVANT WILL JOIN UCLA'S ANTHROPOLOGY DEPARTMENT IN 2021. HIS FORMER RESEARCH INTERROGATED THE HISTORY AND REPRESENTATION OF MINORITY GROUPS IN SOUTHERN ETHIOPIA. CURRENTLY HE WORKS IN THE US VIRGIN ISLANDS INVESTIGATING THE RELATIONSHIP BETWEEN ECOLOGY AND ENSLAVEMENT IN THE FORMER DANISH WEST INDIES. JUSTIN IS DEVELOPING HIS SKILLS IN MARITIME ARCHAEOLOGY AND HAS ASSISTED WITH THE DOCUMENTATION OF THE *SLOBODNA* AND *ACORN* WRECKS AS WELL AS THE SEARCH FOR THE SLAVE SHIP *GUERRERO*.

My research explores the relationship between the historic transatlantic slave trade and the environment. I unpack the connections between the dehumanizing system of slavery and commodification and environmental degradation of land in the Americas. Tracing these to the fifteenth century, I find the ramifications of these processes are still felt today.

Moving beyond the role of a traditional academic, I undertake conservation work to offer some form of redress for the environmental legacies of slavery. Engaging in these restorative practices allows me to gain a better understanding of how we can become better stewards of the natural world.

Beyond my academic research, I am an AAUS Scientific SCUBA Diver and I consult for the Smithsonian's National Museum of African American History and Culture. My work in co-founding the Society of Black Archaeologists continues to advocate

on behalf of African and African Diaspora artifacts and heritages, while encouraging and supporting more people of African descent to enter the field of archaeology. I hope that more people will engage in the deliberate study of contemporary issues and take it upon themselves to think of new and creative ways to solve them.

Travel, adventure, and recovery of history compel me to spend weeks excavating in the hot Caribbean sun and diving for sunken shipwrecks. I hope the work my colleagues and I do will inspire the next generation of heritage professionals. Collectively, we must remember, remind, and restore to make this world a better place.

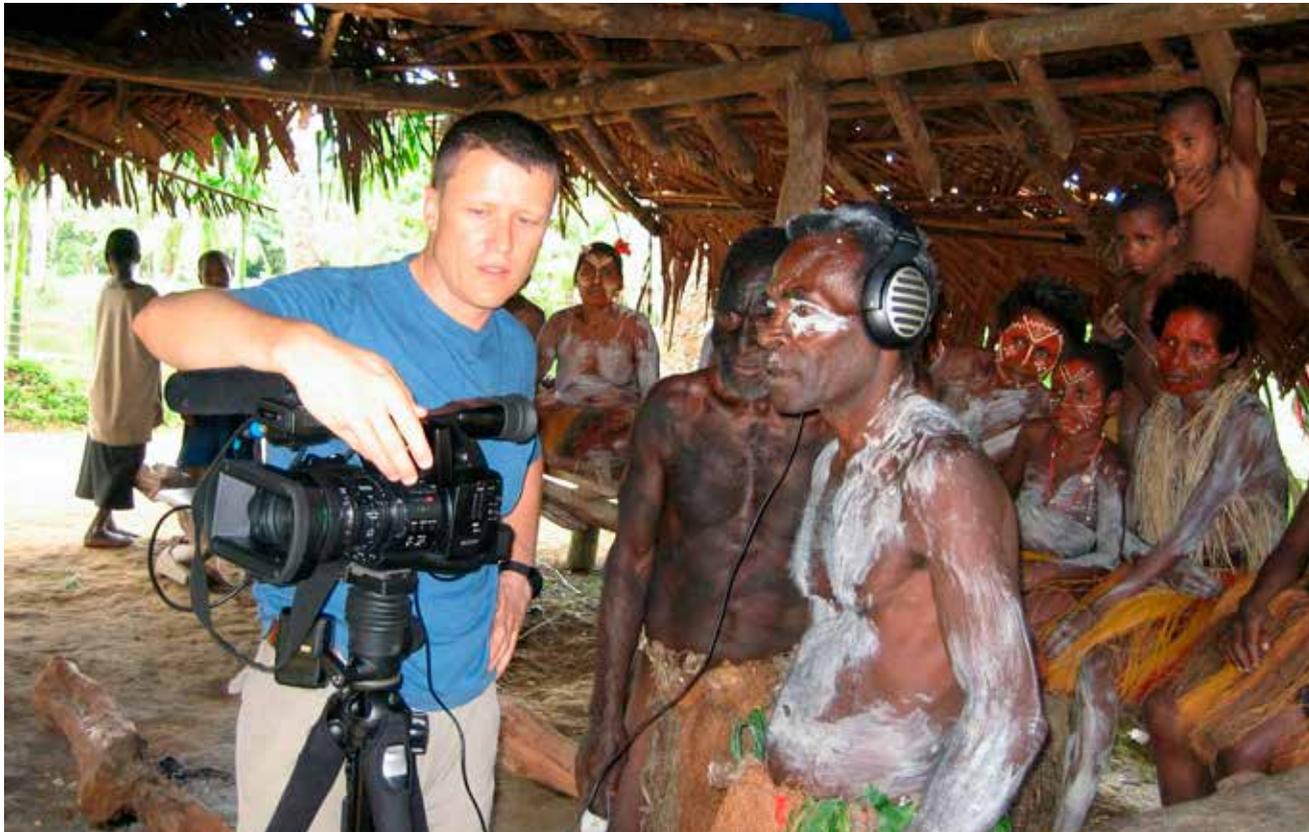
ABOVE: JUSTIN DUNNAVANT PHOTO: SUSAN URMY, VANDERBILT UNIVERSITY. FACING PAGE: UNDERWATER ARCHAEOLOGY, BISCAYNE NATIONAL PARK PHOTO: DR. AYANA FLEWELLEN; MAPPING A SHIPWRECK, KEY LARGO PHOTO: DIVING WITH A PURPOSE.



K. DAVID HARRISON, PHD

LINGUIST

Nominated by JACK DAULTON MN'19



K. DAVID HARRISON, A PROFESSOR AT SWARTHMORE COLLEGE, IS AN ANTHROPOLOGIST AND LINGUIST PASSIONATELY DEVOTED TO EXPLORING AND PROTECTING THE WORLD'S LINGUISTIC DIVERSITY. HE TRAVELS WIDELY TO RECORD THE LAST SPEAKERS OF THE WORLD'S MOST ENDANGERED LANGUAGES. FOR HIS DOCTORAL DISSERTATION AT YALE, HE SPENT A YEAR LIVING WITH YAK-HERDING NOMADS IN SIBERIA, LEARNING THEIR LANGUAGE AND ABSORBING THEIR CULTURE. IN 2008, HE CREATED THE TALKING DICTIONARY PLATFORM, WHICH HAS PROVIDED THE FIRST-EVER INTERNET PRESENCE FOR MORE THAN 200 ENDANGERED LANGUAGES.

Harrison's 2012 book, *The Last Speakers: The Quest to Save the World's Endangered Languages*, investigates the scientific consequences of language loss, including his poignant encounters with last speakers in remote corners of the globe. Proclaiming that no culture has a monopoly on human genius, he is a passionate advocate for the value in preserving these languages and the human knowledge they encode, inspiring local communities and the world at large.

David created a conceptual framework called, "Language Hotspots" to describe regions with the greatest language diversity and endangerment and

with the least-studied languages. It is now an influential tool to visualize and track language diversity and loss worldwide. He also coined the nomenclature "environmental linguistics" to highlight the important relationship between local languages and the environment.

He has led 25 expeditions to communities in twenty countries with endangered languages, in many cases making the first-ever language recordings. David co-led the Enduring Voices Project at National Geographic, which undertook expeditions to record many last speakers and conducting workshops to train communities in language preservation. On one of those expeditions, he co-discovered Koro, a language new to science in remote northeast India. David continues this work as the Director of Research at The Living Tongues Institute for Endangered Languages.

ABOVE: K. DAVID HARRISON PHOTO: KHIEM TANG
FACING PAGE: HARRISON AND NICK WAIKAI PHOTO: CHRIS RAINIER;
HARRISON AND ABAMU DEGIO PHOTO: JEREMY FAHRINGER

AVIJAN SAHA

JOURNALIST

Nominated by KIM FRANK FN'18



AVIJAN SAHA IS FROM SILIGURI, WEST BENGAL, INDIA. HE LOVES TO WORK IN JOURNALISM AND POINT OUT THE ENVIRONMENTAL MATTER THAT DEFINES OUR TIME. HIS SPECIAL INTEREST IS IN ELEPHANTS. HIS FATHER, HIS HERO, BOUGHT HIM HIS FIRST CAMERA AND SAID, "JUST GO ON AND TRY TO MAKE A BRIDGE BETWEEN THE HUMAN AND NATURAL WORLD." HIS HOMETOWN IS SURROUNDED BY SEVERAL FORESTS, THE HOME OF MANY ENDANGERED SPECIES. DOCUMENTING EVERY SITUATION THAT RELATES TO ELEPHANTS AND PEOPLE WHO ARE LIVING WITH ELEPHANTS, AVIJAN'S PHOTOGRAPHS ARE PUBLISHED WIDELY.

I have been working in a landscape called *Terai*, a mosaic and fragmented region covered by forests, tea gardens, human habitations, and industries. It is also a renowned zone with a history of elephant concentration. Every year more than ten people die by elephants and three to five elephants are killed by retaliation. Conflicts are increasing by both humans and elephants.

Elephant's habitat and passage are shrinking. My photojournalism is not creating sufficient positive awareness in the local communities. I have started directing my efforts to children. Bringing education is the only key to developing a positive vibe through young generations who have a vital role to change the face of the highlighted word called, "Conflict." I believe that education will change this Conflict to "Togetherness." I hope this relationship will be sustainable for both of these species.

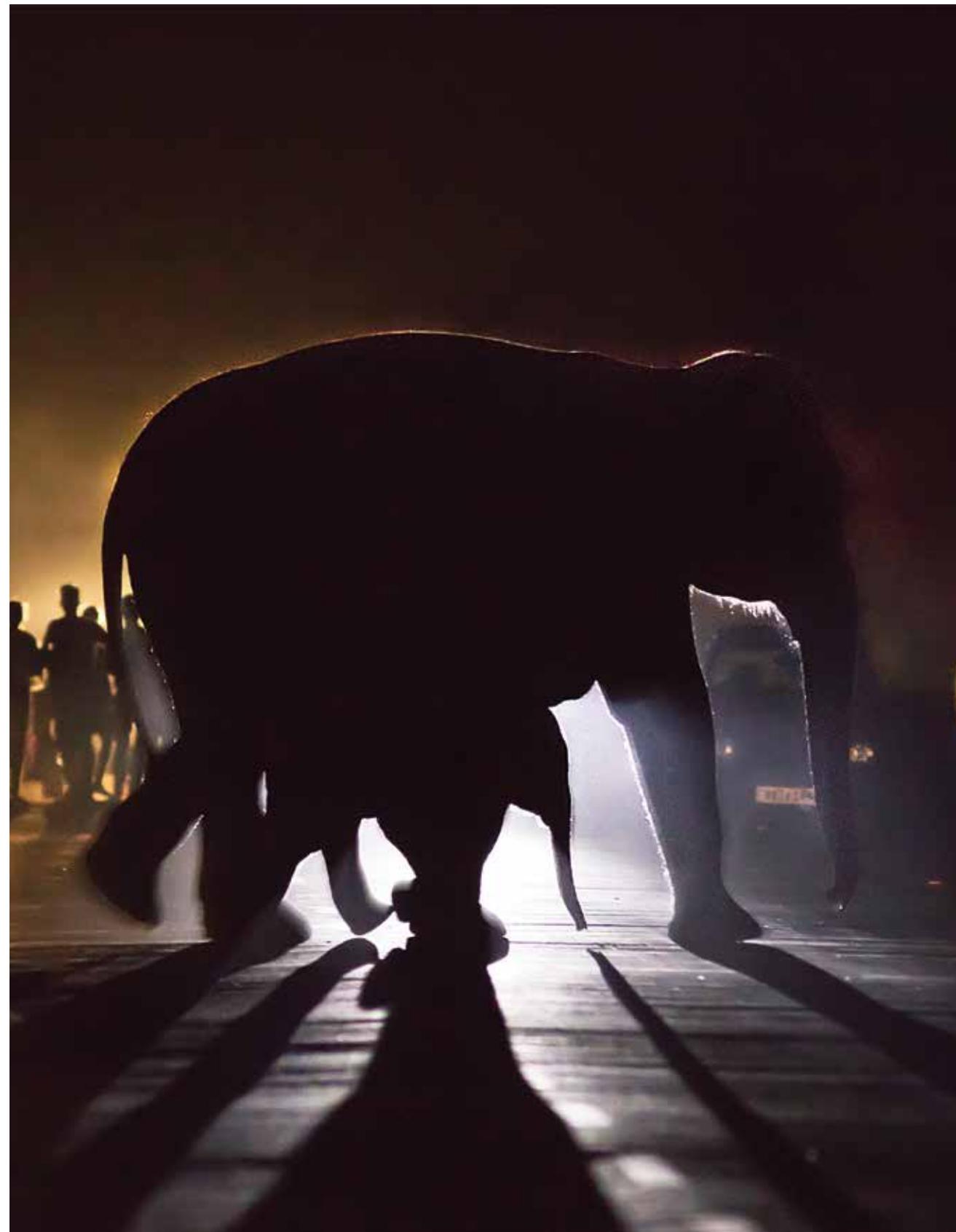
When I was an editor and photographer in our Siliguri town-based area, I faced questions about elephants and their conservation basis. A perfect resolution was not obvious. Following my news work I covered the

conflict zone, asking people about elephants and their problems. My story is simple: explore the ground facts about what is going on. Is it always conflict or are there any positive stories about elephants and their mahout?

To investigate, I documented solitary elephants, mostly bulls, and most of them engage in conflicts with humans. I used my camera to observe their behavior. In 2015, I made an identification book about those solitary bulls that focuses upon our landscape's problems. This was a basic book for those people who are struggling with elephants every single day, losing property and even life. The book told them what they really need to do: individual elephant identification which is needed to avoid conflicts and casualties.

ABOVE: AVIJAN SAHA

FACING PAGE: A MOTHER AND HER CALF CROSS THE SILIGURI-NAXALBARI HIGHWAY NEAR THE KIRAN CHANDRA TEA GARDEN AREA. ELEPHANTS MIGRATE THROUGH ANCIENT ROUTES AND CONTINUE TO TRAVEL THESE PATHS EVEN WHEN THEY ARE INTERRUPTED BY DENSE POPULATION CENTERS AND BUSY HIGHWAYS.



LATONIA HARTERY, PHD

ARCHAEOLOGIST

Nominated by **SCOTT C. FORSYTH FI'16**



AN ARCHAEOLOGIST AND FILMMAKER, DR. HARTERY IS THE DIRECTOR OF THE BIRD COVE ARCHAEOLOGY PROJECT IN NORTHERN NEWFOUNDLAND. LATONIA HAS WORKED WITH COLLEAGUES TO RECONSTRUCT 5000 YEARS OF INDIGENOUS HISTORY IN THE REGION. LATONIA IS ALSO FOUNDER OF A CHARITY WHICH RESEARCHES, PRESERVES, AND PROMOTES ARCHAEOLOGY, CULTURAL HERITAGE AND ART IN NEWFOUNDLAND, LABRADOR AND THE ARCTIC, AND INFORMS THE PUBLIC ABOUT THESE TOPICS THROUGH EDUCATIONAL PROGRAMS. LATONIA'S PRODUCTION COMPANY, LJH FILMS, SPECIALIZES IN FILMS WHICH PROMOTE ADVENTURE AND STORIES OF WOMEN AND INDIGENOUS PEOPLE.

The Bird Cove Archaeology Project (BCAP) is a unique academic and community partnership, which includes elders as researchers, preserves fascinating northern Newfoundland rural traditions, and is a source of economic stabilization for the region through its associated tourism. It combines academics, exploration, and art with social change. In response to Newfoundland's cod-fishery collapse, over the last 15 years we have hired and trained 300 displaced rural workers as guides, researchers, and excavators to offset regional economic devastation.

I was the first person to use pioneering phytolith experiments to identify plant use among ancient Arctic Indigenous hunter-gatherers. These was important because it was counter to how people have viewed them.

To create change, I seek a blend of traditional and non-traditional forms of scholarship with traditional ways of knowing. This approach has inspired me to advocate for Indigenous sovereignty in storytelling. Through a collaboration with the National Film Board of Canada, four films are directed by Inuit about themselves and a Mi'kmaq version will follow. I hope for more Indigenous people, and everyone, to engage in exploration, to have greater agency in the story of their lives, and to participate in creating a future they are proud of.

I was inspired to pursue my chosen career by my family heritage. On the 1921 census of the remote south coast of Newfoundland where I am from, my great-grandmother's parents and brothers were listed as Mi'kmaq people, and she was not. Our government often did this to young women to prevent their future babies from inheriting this identity. I have chosen to rise up and reclaim my identity, in my own way, and completed a Ph.D. in the Indigenous archaeology of Newfoundland, Labrador and the Arctic.

ABOVE: LATONIA HARTERY PHOTO: DANIEL J CATT

FACING PAGE: DR. HARTERY AT KARRAT FJORD NW GREENLAND PHOTO: DANIEL J CATT; LATONIA DRIVING ZODIAC IN THE ARCTIC



SHELTON JOHNSON

PARK RANGER

Nominated by **RICHARD WIESE FN'89**



BORN AND RAISED IN DETROIT, MICHIGAN, SHELTON JOHNSON ATTENDED CASS TECH HIGH SCHOOL AND GRADUATED FROM THE UNIVERSITY OF MICHIGAN. HE SERVED IN THE PEACE CORPS IN KAKATA, LIBERIA, AND WEST AFRICA. THEN HE ATTENDED GRADUATE SCHOOL AT THE UNIVERSITY OF MICHIGAN. HE HAS WORKED FOR THE NATIONAL PARK SERVICE AS A PARK RANGER FOR WELL OVER 30 YEARS, SERVING IN YELLOWSTONE, WASHINGTON, D.C., GREAT BASIN, AND NOW YOSEMITE NATIONAL PARK.

My work is pushing boundaries because most of my career has been spent in wilderness parks such as Yellowstone and Yosemite. While most African Americans have their National Park Service careers in urban or rural areas, I became the chosen one to interpret the Buffalo Soldiers of the Sierra Nevada, which I used as a tool to connect African Americans culturally to their National Parks.

Over the last 20 years I have transformed a formerly forgotten history that was nationally and internationally significant to its rightful place in our consciousness. African American soldiers protected Yosemite and Sequoia in 1899, 1903, and 1904, over a decade before the creation of the National Park Service in 1916. These soldiers essentially served as some of the first "park rangers" in the world. This new awareness was created by using the media. In Ken Burns' PBS

documentary film, "The National Parks, America's Best Idea," we reached over 30 million Americans in its original 2009 national broadcast. I was invited to a special screening at the White House for President Barack Obama in September of 2009. A subsequent Oprah Winfrey Show reached over 40 million Americans.

I have proven that African Americans can excel in remote national parks, and through that success challenge stereotypes that are rooted more in fiction than in fact. My work has opened a door that other African Americans can walk through with fewer obstacles than what I encountered.

ABOVE: RANGER SHELTON JOHNSON PHOTO: GLENN NELSON
FACING PAGE: SHELTON AS BUFFALO SOLDIER. PHOTOS: GLENN NELSON;
CRAIG KOHLRUSS, FRESNO BEE/AP



AYANA ELIZABETH JOHNSON, PHD

MARINE BIOLOGIST

Nominated by **NANCY NENOW MN'04**



DR. JOHNSON IS A POLICY EXPERT AND BROOKLYN NATIVE, CO-FOUNDER OF URBAN OCEAN LAB, CO-FOUNDER OF THE ALL WE CAN SAVE PROJECT, AND CO-CREATOR AND CO-HOST OF THE PODCAST HOW TO SAVE A PLANET. SHE HAS BEEN EXECUTIVE DIRECTOR OF THE WAITT INSTITUTE, DEVELOPED POLICY AT THE EPA AND NOAA, A LEADER OF THE MARCH FOR SCIENCE, AND TAUGHT AT NEW YORK UNIVERSITY. SHE EARNED A BA FROM HARVARD UNIVERSITY IN ENVIRONMENTAL SCIENCE AND PUBLIC POLICY AND A PH.D. FROM SCRIPPS INSTITUTION OF OCEANOGRAPHY.



A significant impact of my work has been reframing the conversation around climate change to include the ocean and to focus on solutions. I persistently advocate to include the ocean in climate policy. More broadly are my commitments to science communication and welcoming more people into the climate movement. My approach emerges from a deep understanding that even though the problem is enormous, we still have a wide range of possible futures. Though I'm not really one for "hope," we certainly have endless opportunities to improve the outcome. I have effectively focused on emphasizing the solutions we already have, making it clearer to people how climate issues intersect with what they already deeply care about.

An aspect of building community around solutions is showing people all of the different ways there are to be a part of climate work. There are parallels between the unsustainability of the fashion industry and fossil fuels in the ways that both industries need to change what they're doing. This is key because it won't just be one thing. It's not just solar panels and electric cars – it's everything.

We need to transform our electricity sector, transportation, buildings, manufacturing, agriculture and our land use. This transformation will require all of us, which is why it's so important to build an inclusive community around climate work. Polling has shown that 49 percent of white people are concerned about climate change, compared to 57 percent of Black people and 70 percent of Latino people. Failing to prioritize the engagement of all people is a losing strategy; we must reach people who already care, who are already environmentalists.

ABOVE: AYANA ELIZABETH JOHNSON PHOTO: MARCUS BRANCH
FACING PAGE: OCEAN ZONING IN BARBUDA, BLUE HALO INITIATIVE PHOTO: WILL MCCLINTOCK; 2017 MARCH FOR SCIENCE PHOTO: KISHA BARI

ROBBIE HART, PHD

ETHNOBOTANIST

Nominated by K DAVID HARRISON FN'15



AS A SCIENTIST AT THE MISSOURI BOTANICAL GARDEN, ROBBIE HART DIRECTS THE WILLIAM L. BROWN CENTER. THIS TEAM OF RESEARCHERS IS DEDICATED TO THE STUDY OF USEFUL PLANTS, TO UNDERSTANDING THE RELATIONSHIPS BETWEEN HUMANS, PLANTS, AND THEIR ENVIRONMENT, TO THE CONSERVATION OF PLANT SPECIES, AND TO THE PRESERVATION OF TRADITIONAL KNOWLEDGE FOR THE BENEFIT OF FUTURE GENERATIONS. HART'S RESEARCH IS ON HIGH-ELEVATION PLANT ECOLOGY AND ETHNOBOTANY. HE WORKS WITH NEPALI, BHUTANESE, AND CHINESE COLLEAGUES TO ANSWER THE QUESTION OF HOW PLANTS ARE RESPONDING TO CLIMATE CHANGE.

Growing up on the Olympic Peninsula, where a long day's hike can begin at tide pools, pass through moss-draped temperate forests, and end in mile-high alpine meadows, the biological richness of mountain regions was easy to internalize. It inspired my training as an ecologist. In the belief that people must be included to build comprehensive understanding and to affect meaningful conservation, I've worked within both social science and natural science disciplines.

Through our ongoing projects, my colleagues and I seek to understand a different dimension of climate-induced change and how plant ranges shift vertically in elevation, up and down the mountain. I hope that data I collect will have a positive effect on the mountain people and the environments where I work. There's an undeniable appeal to my work, which requires me to hike up a slope, to see the landscape change as I gain elevation, and to break through the treeline to see the wide expanse of the alpine. It's a feeling that reminds me of home no matter where in the world I am.

Increasingly I have seen how institutions, colleagues, and mentors shape the science I do. Two important mentors, both avid explorers, have especially influenced me. David Harrison was the first to insist that I start international fieldwork if I wanted to be doing important, impactful science. Another is Jan Salick, a pioneer in ecological ethnobotany. Her work combines the rigorous experimental design, painstaking data collection and quantitative tests of ecology with the understanding that human agency and cultures are essential components of the natural world. She also introduced me to the potential of natural history collections as novel sources of information for understanding long-term processes such as climate change.

ABOVE: ROBBIE HART PHOTO: AUGUST JENNEWAIN
FACING PAGE: SURVEYING PLOT IN NEPAL'S KANCHENJUNGA VALLEY (YEGYA, JAMES, ROBBIE) PHOTO: ELSA HART



DONALD WARNE MD, MPH

ADVOCATE AND PHYSICIAN

Nominated by GOV. DOUG BURGUM MN'20



DR. DONALD WARNE IS THE ASSOCIATE DEAN OF DIVERSITY, EQUITY AND INCLUSION, THE DIRECTOR OF THE INDIANS INTO MEDICINE (INMED) AND PUBLIC HEALTH PROGRAMS, AND PROFESSOR OF FAMILY AND COMMUNITY MEDICINE AT THE SCHOOL OF MEDICINE AND HEALTH SCIENCES AT THE UNIVERSITY OF NORTH DAKOTA. HE IS THE SENIOR POLICY ADVISOR TO THE GREAT PLAINS TRIBAL LEADER'S HEALTH BOARD IN RAPID CITY, SOUTH DAKOTA. A MEMBER OF THE OGLALA LAKOTA TRIBE FROM PINE RIDGE, HE COMES FROM A LONG LINE OF TRADITIONAL HEALERS AND MEDICINE MEN.

The primary focus of my professional career is to improve health in Indigenous populations. I serve as a consultant and/or board member to a multitude of health agencies and advocacy organizations, including the national boards of March of Dimes, Public Health Foundation, and American Cancer Society, and several local and regional boards in North Dakota. In nearly all, I am the only American Indian person. At the University of North Dakota we offer the nation's only Indigenous Health PhD and the only Master of Public Health with an Indigenous health specialization.

I worked for several years as a primary care physician with the Gila River Health Care Corporation in Arizona, as a staff clinician with the National Institutes of Health, and on the Indian Legal Program Faculty with the Sandra Day O'Connor College of

Law at Arizona State University. I have also served as a Health Policy Research Director for the Inter Tribal Council of Arizona and Executive Director of the Great Plains Tribal Chairmen's Health Board.

While growing up, I was immersed in both traditional Lakota culture and contemporary education. Integrating Indigenous knowledge with modern science is both intriguing and an opportunity to develop innovative approaches to addressing health inequities. I blend my Stanford/Harvard education with the highest levels of traditional Lakota philosophy. Over the last decade, I have worked with and taught hundreds of public health and medical students innovative curricula.

My hope is that the lasting legacy will be reflected in the remarkable work of the next generation of health professionals who are well trained in Indigenous health and that the future will have Indigenous health interests well represented in all aspects of health systems and professional organizations. The long-term goal is to eliminate American Indian health disparities.

ABOVE: DR. DONALD WARNE

FACING PAGE: WARNE AT POW WOW 2019

LOSANG RABGEY, PHD

ANTHROPOLOGIST

Nominated by **REBECCA MARTIN FN'02**



BORN IN A TIBETAN REFUGEE SETTLEMENT IN INDIA AND RAISED IN CANADA, DR RABGEY HOLDS A PH.D. FROM THE UNIVERSITY OF LONDON AS THE FIRST TIBETAN WITH A GRADUATE DEGREE IN FEMINIST ANTHROPOLOGY. WITH HER SISTER DR. TASHI RABGEY, SHE CO-FOUNDED MACHIK, A NONPROFIT GROUP WITH A MISSION TO GROW A GLOBAL COMMUNITY OF CARE FOR A STRONGER FUTURE FOR TIBET. IN THE LAST 20+ YEARS, MACHIK HAS SUPPORTED EDUCATION FOR THOUSANDS OF RURAL STUDENTS AND YOUTH IN TIBET AND IN DIASPORA. GENDER EQUITY HAS ALWAYS BEEN A KEY FOCUS OF MACHIK

My work with Machik pushes the boundaries of exploration. Traditionally, and for a long time, the notion of explorers did not include groups such as Tibetan women. My sister, Dr. Tashi Rabgey, were born in a refugee settlement. We grew up among the working class in a small town in Canada. Tashi became the first Tibetan Rhodes Scholar, and I became the first Tibetan to be awarded a Commonwealth Scholarship. We are focused on exploring how to build understanding and empathy into human interactions in an increasingly interrelated and complex world.

Our work has created many new encounters among disparate communities that grow deeper understanding and trust. The journey began when our parents dedicated my father's retirement savings to build the first Tibetan-language primary school in his native village in Tibet. We have now grown this work to support education for over 4000 young people inside and

outside of Tibet. In Tibet, we have had the privilege of meeting incredible change makers who demonstrate what is possible. These conservationists, feminists, educators, and public health specialists, inspire us to work for change and long-term social justice. It is truly meaningful to create programs that convene people from very different cultural, linguistic, geographic and perspectival backgrounds to listen deeply and to engage with empathy in order to transform our communities and the world we all share.

I believe that now, more than ever, we need to strengthen our collective capacities to encourage this kind of empathy.

ABOVE: LOSANG RABGEY

FACING PAGE: RABGEY AND STUDENTS PHOTO: TASHI RABGEY;

RABGEY AT TSO NGONPO, AMDO, QINGHAI, CHINA PHOTO: KHASHEM GYAL



JOSHUA POWELL, CF

CONSERVATION BIOLOGIST

Nominated by MILBRY POLK MED'95



A CONSERVATION BIOLOGIST AND PH.D. CANDIDATE AT THE ZOOLOGICAL SOCIETY OF LONDON AND UNIVERSITY COLLEGE LONDON, JOSH IS THE FOUNDER OF RANGERS WITHOUT BORDERS AND A FOUNDING MEMBER OF THE WORLD WILDLIFE FUND #WWFVOICES CAMPAIGN. HE HAS FOCUSED ON CONSERVATION OF THE AMUR TIGER (*PANTHERA TIGRIS TIGRIS*) IN NE ASIA. HE HAS BEEN A CHURCHILL FELLOW ON ISLAND CONSERVATION POLICY IN NEW ZEALAND, AUSTRALIA, AND FIJI, HAS SERVED AS A POLICY ADVISOR FOR THE UNITED KINGDOM'S DEPARTMENT FOR ENVIRONMENT, FOOD & RURAL AFFAIRS, AND IS AN ADVISOR FOR THE QUEEN'S COMMONWEALTH TRUST ON ENVIRONMENT AND SOCIETY.

My work focuses on the intersection of science and conservation and on communicating that to policy makers and the wider public. Our research with Rangers Without Borders our research aims to document the training needs and capabilities of park rangers and communities about threatened wildlife. Some of my work focuses on providing an evidence base to policy makers. For example, the UK Overseas Territories host 94% of all known British endemic species. We contributed to the government's review on protecting biodiversity.

As a presenter and founding member of the World Wildlife Fund #WWFVoices campaign on global biodiversity, one example that impacted public thinking about the environment was Frozen Islands, Arctic Seas. This involved hosting a live Q&A on polar

science. 14,000 people watched plastic pollution documented in the High Arctic and films explaining the conservation status of polar bears and the double threats of hybridization and climate change.

This is exploration in a traditional sense. We know remarkably little about the natural world and endangered species. My work helps to learn about species distribution and to evaluate potential conservation interventions.. For example, I am currently exploring gaps in knowledge about the endangered Amur tiger (*Panthera tigris tigris*) and the critically endangered Amur leopard (*Panthera pardus orientalis*). We need more information about wildlife populations, and I am intrigued by the use of modern technology to better track their whereabouts.

My hope for the future is that, as a species, we can protect much of the Earth's amazing biodiversity and avert the threat of a sixth mass extinction. This will involve greater understanding as we learn how to better live with other species of the natural world.

ABOVE: JOSHUA POWELL

FACING PAGE: JOSHUA POWELL IN KYRGYZSTAN PHOTOS:STEPHANIE FOOTE

DOMINIQUE GONÇALVES

ECOLOGIST

Nominated by GREG CARR FN'16



I GREW UP IN BEIRA, NEAR GORONGOSA NATIONAL PARK IN MOZAMBIQUE, HEARING MY FATHER'S STORIES ABOUT THE PARK AND ITS WILDLIFE, ESPECIALLY THE ELEPHANTS. TODAY, I MANAGE GORONGOSA'S ELEPHANT ECOLOGY PROJECT. MY WORK IS A HOLISTIC BLEND OF ECOLOGY, CONSERVATION, AND HUMAN-ELEPHANT CONFLICT MITIGATION. I AM ALSO A PASSIONATE ADVOCATE FOR GIRLS' EDUCATION, TO HELP PREVENT EARLY MARRIAGE. IN 2019, I WAS NARRATOR AND MAIN CHARACTER OF THE AWARD-WINNING FILM *OUR GORONGOSA: A PARK FOR THE PEOPLE*.

I am one of the first Mozambican women to work in elephant ecology and conservation. My work focuses on the long-term monitoring of Gorongosa's elephant population and their habitat use (distribution, movement, and range expansion) to understand and mitigate human-elephant conflict (HEC). The project trains members of the Coexistence team in HEC solutions. With the Elephant Ecology Project I contribute toward achieving Gorongosa National Park's broader impact goals, aligning with the UN's Sustainable Development Goals, particularly zero hunger, gender equality and life on land. To help change the face of African conservation, I have appeared in many films.

I believe that empowering and educating girls is one of the greatest potential forces of positive change in the world today. I regularly visit schools in local communities, speaking about my personal experiences and encouraging girls to pursue their dreams. If girls

stay in schools, there will be less premature marriage, lower natality rates, more economic opportunities for girls, and more gender equality. Women from the communities who live around wild places have a direct and daily connection with nature, a powerful force that can lift their communities out of poverty,

My belief for the future is that the Greater Gorongosa landscape will be a place where healthy and happy people coexist with abundant wildlife. It will be a place where women and girls reach their full potential, a fundamental human right and a necessary foundation for a peaceful, prosperous and sustainable world.

ABOVE: DOMINIQUE GONCALVES PHOTO: BRETT KUXHAUSEN
FACING PAGE: GONÇALVES WORKING WITH GIRLS CLUB; GONÇALVES VIEWING ELEPHANTS PHOTOS: IVAN AGERTON, NATIONAL GEOGRAPHIC



PAIGE WEST, PHD

ANTHROPOLOGIST

Nominated by **ROB MCCALLUM FN'09**



DR. PAIGE WEST HOLDS THE CLAIRE TOW PROFESSORSHIP IN ANTHROPOLOGY AT BARNARD COLLEGE AND COLUMBIA UNIVERSITY WHERE SHE SERVES AS THE DIRECTOR OF COLUMBIA'S CENTER FOR THE STUDY OF SOCIAL DIFFERENCE. SHE HAS WORKED IN PAPUA NEW GUINEA SINCE 1996, TO UNDERSTAND THE BIODIVERSITY AND TRADITIONS OF INDIGENOUS PEOPLES AND TO HELP THEM CONSERVE THEIR CULTURES, LANGUAGES AND ENVIRONMENTS. SHE IS THE AUTHOR AND EDITOR OF NUMEROUS BOOKS AND THE CO-FOUNDER OF TWO NGOS THAT ARE CONSERVATION-FOCUSED.

Most cultural anthropologists work alone, a model that imagines the lone ethnographer entering to a field site to live among the natives and learn about their lives. During my first field research in the remote highlands of Papua New Guinea (PNG), I followed this model. Over several years I realized that, for me, that model was inadequate. For most of my career I have worked in partnership with other scholars, the majority of whom have been from PNG. I have also refused the other major assumption in my field which is to produce work that adds solely to the anthropological cannon. My primary goal is to strengthen Indigenous sovereignty over biodiversity and tradition and to develop new ways in which anthropological methods can add to this practice.

I've done this by cofounding a small NGO that creates the conditions of possibility for young scholars from PNG to go overseas and earn graduate degrees in ecology and conservation, by cofounding a school that teaches K-12 students at the nexus of Indigenous knowledge and scientific knowledge, and by fostering 23 small marine protected areas designed and implemented by Indigenous communities. I count over thirty graduates of our NGO as my colleagues in conservation. They are changing the face of conservation for the better, globally.

During this, I have continued as a professor who pushes my students to transform anthropological methods and their goals as anthropologists. I believe that my lasting legacy in anthropology is the development of a new generation of scholars that believes our field should be used to make the world better.

ABOVE: PAIGE WEST
FACING PAGE: IN PNG. PHOTOS: PATRICK NASON, J.C.SAYLOR,



DAWN WRIGHT, PHD

OCEANOGRAPHER

Nominated by ARNELLA TRENT MN'10



DAWN WRIGHT IS CHIEF SCIENTIST OF THE ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI) AND A PROFESSOR OF GEOGRAPHY AND OCEANOGRAPHY AT OREGON STATE UNIVERSITY, ON THE FACULTY SINCE 1995. SHE IS A LEADING AUTHORITY IN THE APPLICATION OF GEOGRAPHIC INFORMATION SYSTEM (GIS) DATA TO OCEAN AND COASTAL SCIENCE. RAISED ON MAUI, HAWAII, SHE HAS COMPLETED OCEANOGRAPHIC FIELDWORK IN THE EAST PACIFIC RISE, THE MID-ATLANTIC RIDGE, THE JUAN DE FUCA RIDGE, THE TONGA TRENCH, AND ON VOLCANOES UNDER THE JAPAN SEA, THE INDIAN OCEAN, AND IN AMERICAN SAMOA.

Early in my career I was fortunate to be involved in several important explorations of the fast-spreading East Pacific Rise. This included providing data management and mapping support for the discovery of the Tubeworm Barbecue, which in 1991 represented the closest that any scientific team had actually come to witnessing a deep-sea volcanic eruption. My subsequent doctoral thesis contributed new insights into how deep-sea hot spring communities are affected by undersea eruptions, and it pioneered new analytical techniques for mapping these areas.

In 1991, it was a great thrill to make my first dive in Woods Hole's *DSV Alvin*. As we descended through the translucent blue of the euphotic zone into complete darkness, we were treated to an underwater fireworks show as bioluminescent siphonophores danced and crashed into each other. Upon reaching the ocean floor, my excitement hit a crescendo as the

pilot suddenly turned on *Alvin's* lights to reveal an alien volcanic landscape that was so still it seemed we could just exit the sub and walk around.

In my professional career, I have experienced that scientists of color continue to live and struggle on a daily basis with a spectrum of challenges ranging from unconscious bias to overt racism. I worked not just at 100%, but 110%, 120%, or 150%, in part to debunk the questioning of skeptical colleagues. But, I've found that when you display integrity and excellence, and give yourself an opportunity to just sit down with people, we can all find a way to relate, regardless of background.

ABOVE: DAWN WRIGHT LECTURING
 FACING PAGE: DAWN AT SEA. PHOTO: GENEROUS FILMS;
 DAWN WRIGHT DIVING IN THE SUBMERSIBLE VEHICLE *PISCES V*





CRAIG MATHIESON

EDUCATOR

Nominated by LISA KEATING FCN'19; MARK WOOD FN'15



SCOTTISH EXPLORER CRAIG MATHIESON IS THE FOUNDER AND HEAD OF THE CHILDREN'S CHARITY THE POLAR ACADEMY. A VETERAN OF BOTH NORTH AND SOUTH POLE EXPEDITIONS, HE DEDICATES HIS TIME TO TRAINING AND INSPIRING THE NEXT GENERATION OF YOUNG PEOPLE TO SUCCEED IN LIFE, ESPECIALLY HELPING THOSE WHO ARE STRUGGLING. A VETERAN OF MANY EXPEDITIONS, HE PARTICIPATED IN THE FIRST DEDICATED SCOTTISH EXPEDITION TO THE SOUTH POLE IN 2004.



The Polar Academy participants train for 12 months in Scotland, before a 10-day sledge hauling expedition in Greenland. Schools that have supported their own Polar Academy pupils have seen an increase in interest of scientific studies and outdoor education. Once back from the Arctic, the teenagers are tasked with the public speaking circuit. Teenagers speaking to other teenagers is very powerful when they talk about overcoming adversities, working hard to succeed, and the importance of being kind to each other. The success of The Polar Academy is Craig's legacy. With each new explorer who graduates, his/her knowledge, inspiration and belief is shared with thousands of individuals, who then strive to be the best versions of themselves.

Craig Mathieson began his career in the military and has always had an affinity for the outdoors. In 2006, he successfully trained and accompanied a high-school pupil to complete an expedition to the North Pole. This expedition not only had a huge positive impact on the pupil but also on his family and local community. It led to the founding of the Polar Academy, an extremely challenging year-long training programme that instills the sense of pride and confidence needed to achieve in life.

All explorers know in their heart the magical benefits of spending time outdoors and the transformative side effects of pushing oneself to undertake and accomplish difficult tasks. The young explorers and their families are changed and their outlook on life is positively altered. Many choose to continue outdoor pursuits while others are determined to aim for professions they previously thought were beyond them.

ABOVE: CRAIG AT GLENMORE, SCOTLAND

FACING PAGE: 1ST POLAR ACADEMY TEAM; SEASIDE EXERCISE PULLING TIRES THROUGH THE SURF

YU JIAHUA

CONSERVATIONIST

Nominated by **KYLE OBERMANN MI'20**



YU JIAHUA, BORN IN CHINA'S SICHUAN PROVINCE ON THE SLOPES OF THE 4,969M JIUDING MOUNTAIN, IS A MEMBER OF THE QIANG ETHNIC MINORITY. AS A TEENAGER AT THE ONSET OF CHINA'S CULTURAL REVOLUTION, HE LEFT SCHOOL DUE TO POVERTY AND HUNTED WITH HIS FATHER TO SUPPORT HIS FAMILY. LATER HE RAISED YAKS. GRIEVED BY THE LOSS OF MOUNTAIN WILDLIFE, HE TOOK THE INITIATIVE TO STOP POACHING. YU JIAHUA ORGANIZED SICHUAN'S FIRST CONSERVATION GROUP WHICH NOW INVOLVES 13 VILLAGES RECRUITING 500 LOCAL RANGERS TO PROTECT 200KM² OF WILDERNESS AROUND MT. JIUDING.

I was born in the 1950s. In those times life was very hard. If one wanted to live a bit better they needed a special skill. When I was 14, I learned how to hunt from my elders which gave my family and me hope for living. In the 1960s and 1970s there was plenty of wildlife around Mt. Jiuding where our ancestors grew up. But later in the 1970s when state land was contracted to households, the number of poachers exploded from a very few to over one thousand. This was because everyone wanted to improve their lives. By the 1990s, many animal species around the mountain had significantly decreased. Poachers would bring days of provisions up in the mountains but return empty handed. After a period of this hardship and letdown, these poachers became more harsh. They organized into groups of seven people. Two would set fire to the base of the mountain while five others with guns would wait at the top to hunt the fleeing animals. In the span of a

few years, thousands of acres of Mt. Jiuding had been burned, and many species were locally extinct. When my brother and I realized this, we were moved to do something. We believed we had to act so that future generations could still have a life on Mt. Jiuding. This is how my brother and I started our work to persuade and stop poachers.

I was drawn to this work after seeing so many animals being shot and corpses burned. In the bottom of my heart this caused a deep, painful sadness. This was brutality beyond any sort of morality. I had to stop these actions, because this was the home of my ancestors.

ABOVE: YU JIAHUA PHOTO: KYLE OBERMANN

FACING PAGE: YU JIAHUA LEADING PATROL TEAM ON MT. JIUDING PHOTO: KYLE OBERMANN; REMOTE CAMERA PHOTO OF FIRST TAKIN SEEN IN 20+ YEARS



MARC Ó GRÍOFA, MD

BIOMEDICAL ENGINEER & PHYSICIAN

Nominated by SHAWNA PANDAYA FI'19



DR. GRIOFA IS THE MEDICAL DIRECTOR FOR THE LAS VEGAS RECUPERATIVE CARE CENTER AND ISO-Q FACILITY OVERSEEING HOMELESS DURING THE COVID HEALTHCARE PANDEMIC, WHILE DEVELOPING BIOMEDICAL TECHNOLOGY SOLUTIONS FOR REMOTE ENVIRONMENTS. HE HAS DESIGNED THE FIRST IRISH EXPERIMENT THAT FLEW ONBOARD THE ISS AND HAS SPENT FOUR YEARS AT KENNEDY SPACE CENTER AS A PHYSICIAN AND ENGINEER WORKING ON THE SPACE SHUTTLE. HE IS IRELAND'S FIRST AQUANAUT (NEEMO 21), A NOAA DMO, RESCUE DIVER AND SENIOR RESEARCHER/ENGINEER FOR THE NASA NEEMO MISSION ONBOARD THE AQUARIUS UNDERSEA HABITAT, AND IS THE DIVE-MEDICINE FACULTY LEAD FOR WORLD EXTREME MEDICINE.

I have sought to be involved in spaceflight and exploration since I can remember. Like many of my exploration-bound brethren I have fought hard against odds to seek out new adventures and ensure that my love for science and passion for exploration would somehow meld into opportunities to truly break new ground. I have been incredibly lucky to be able to pursue historic exploration class missions like NEEMO onboard Aquarius and to conduct medical research during microgravity in preparation for spaceflight.

My exploration journey as a diver, scientist and expedition physician has led me to some of the most extreme environments around the world. I have pursued this ethos for my entire life in an effort to be counted

amongst this generation's true explorers and proudly represent the storied history that has come before me.

I currently oversee healthcare for the homeless population of Las Vegas. Based on experience with Africa's Ebola pandemic, I am helping to develop medical protocols and technologies for the current COVID-19 healthcare crisis.

As a tactical and operational physician, I have been training, supporting and conducting research in combat medicine for 10+ years, prolonging field care.

I am passionate about education and am an award winning national STEM education presenter on The Hab Lessons series for the Quark Academy. Plato said, "If we are to have any hope for the future, those who have lanterns must pass them on to others." It is my hope to pass my passion and excitement for exploration on to future generations of explorers.

ABOVE: DR. MARC Ó GRÍOFA DNA SEQUENCING ON THE NEEMO MISSION
FACING PAGE: CORAL PLANTING ON THE NEEMO MISSION



MARGARET O'LEARY AMSLER

MARINE BIOLOGIST

Nominated by **JAMES BRUCE MCCLINTOCK FN'16**



MARGARET "MAGGIE" O'LEARY AMSLER IS A MARINE BIOLOGIST. HER RESEARCH INITIALLY FOCUSED ON THE ANTARCTIC KRILL. MORE RECENTLY SHE CONCENTRATES ON SUBTIDAL BENTHIC ECOLOGY, INVASIVE CRABS, AND THE CONSEQUENCES OF OCEAN ACIDIFICATION. MAGGIE HAS SPENT OVER 8 YEARS (30 EXPEDITIONS) IN ANTARCTICA ABOARD RESEARCH VESSELS OR AT RESEARCH STATIONS. SHE HAS MADE OVER 500 POLAR SCUBA DIVES AND 33 SUBMERSIBLE HOURS LOGGED DOWN TO 1000M IN POLAR WATERS.

I have a deep commitment to sharing scientific discoveries with the general public as well as the professional community. To me, science is an art form, a way of thinking and doing. I use Antarctica as my medium, a canvas to invite and engage understanding of the process of science. I weave science stories through every image of penguin antics, diving under a six-foot ice ceiling or peering out of submersible surrounded by krill that is so dense that there appears to be no water. I find no shortage of teachable moments with this cool subject. As a result, difficult scientific topics are often more approachable, like climate change.

My studies elucidated how the Antarctic krill maintains its extraordinarily abundant population in spite of heavy predation. Using high-resolution imaging, I have helped document the distribution, abundance, and life history of a potentially invasive deep-sea king

crab. My current research is on the impact of ocean acidification, predicted in the near future.

Five decades ago, my academic mentor struggled to have her ability and science recognized because of her gender. Ultimately, she broke into the male dominated environs of Antarctica, shattering the 'ice ceiling.' Among other firsts, she was the first female American chief scientist to overwinter in Antarctica. Years later, females in Antarctic science, and science in general, continued to be met with adversity, having their fundamental credibility questioned. My mentor inspired me to persevere and chip away those boundaries.

Happily, today women scientists are more likely to be celebrated.

ABOVE: POST-DIVE, ANTARCTICA. PHOTO: S. HEISER

FACING PAGE: ZODIAC PILOTING. PHOTO: J.B. MCCLINTOCK



CALLIE BROADDUS

CONSERVATIONIST

Nominated by **JOE GRABOWSKI FI'18**



CALLIE BROADDUS IS THE EXECUTIVE DIRECTOR OF RESERVA: THE YOUTH LAND TRUST, AN ORGANIZATION SHE ESTABLISHED IN 2019 TO BRIDGE THE GAP BETWEEN YOUTH ACTIVISM AND TRIED-AND-TRUE METHODS OF BIODIVERSITY CONSERVATION. THE FLAGSHIP INITIATIVE WAS TO CREATE THE WORLD'S FIRST ENTIRELY YOUTH-FUNDED NATURE RESERVE IN ECUADOR'S CHOCÓ CLOUD FOREST. HER TEAM OF YOUTH IS WORKING TO PROTECT AND SUPPORT LOCAL PARTNERS, DOCUMENTING DOZENS OF CRITICALLY ENDANGERED AND NEW-TO-SCIENCE SPECIES OF PLANTS AND ANIMALS. CALLIE SPENT SEVEN YEARS DESIGNING BOOKS AT NATIONAL GEOGRAPHIC KIDS.

There is a growing understanding that young people need to engage with those in power in order to influence decision-making for the Earth they will inherit. But I want to demonstrate that youth, who make up approximately half of the global population, also have an untapped ability to take direct action themselves. Through Reserva's Youth Council, I have trained youth to creatively channel their interests and skills into successful fundraising initiatives, demonstrating that what some young people may lack in their savings account can be replaced through passion, creativity, and grassroots organizing.

The Dracula Youth Reserve in Ecuador's Chocó cloud forest is home to critically endangered species including the Brown-headed Spider Monkey, the Black-and-chestnut Eagle, and many more, as well as iconic species such as the Spectacled Bear and Puma.

Through our storytelling programs, Reserva is amplifying the need for conservation on the global stage. We aim to create a network of similar youth-funded reserves around the world that will provide enduring protection for Earth's most fragile and biodiverse ecosystems.

By incorporating established organizations such as our partner, Rainforest Trust, into our strategy, we are able to offer them a form of youth engagement that changes their entire perception of youth. Our Ecuadorian partner, Fundación EcoMinga, has dedicated time to our creative youth storytelling initiative called the One Million Letters campaign to establish new and valuable working relationships with local governments and neighboring organizations.

I hope that this platform will help more diverse, passionate youth to grow into capable and experienced conservation leaders. Inviting youth to participate in these new and creative ways, I hope to make philanthropy more inviting to a large swath of the population not previously engaged in direct conservation action.

ABOVE: CALLIE BROADDUS PHOTO: WILL THOMPSON

FACING PAGE: RESERVA EXPEDITIONTEAM PHOTO: CALLIE BROADDUS;
DRACULA YOUTH RESERVE EXPEDITION 2020 PHOTO: NATALIA ESPINOZA



SIAN PROCTOR, PHD

GEOSCIENTIST

Nominated by **SHAWNA PANDAYA FI'19**



A GEOSCIENTIST, EXPLORER, SPACE ARTIST, AND SCIENCE COMMUNICATION SPECIALIST WITH A PASSION FOR SPACE EXPLORATION, DR. PROCTOR ENCOURAGES PEOPLE TO USE THEIR UNIQUE ONE-OF-A-KIND STRENGTHS TO INSPIRE THOSE WITHIN THEIR REACH AND BEYOND. SHE HAS COMPLETED FOUR ANALOG SPACE MISSIONS AND BELIEVES THAT WHEN WE SOLVE ISSUES FOR HUMAN SPACEFLIGHT, WE ALSO SOLVE ISSUES ON EARTH. SHE PROMOTES SUSTAINABLE FOOD PRESERVATION TECHNIQUES TO REDUCE FOOD WASTE ON EARTH. SHE JOINED JOIDES RESOLUTION EXPEDITION 383, WAS AN URBAN-SUSTAINABILITY-IN-INDIA FELLOW, A NOAA TEACHER AT SEA, AN ASTRONOMY IN CHILE EDUCATOR AMBASSADOR, AND A POLARTREC TEACHER.

As a geoscientist, it is generally expected that your research will focus on scientific discoveries in the field over science communication, but I have found true value in thinking about how knowledge is learned and successfully communicated. After a masters in geology, I pursued a doctorate in curriculum and instruction with an emphasis in science education. I wanted to be a good teacher.

During my 20+ years as a community college professor, I have traveled and taught around the world. I have given talks at CERN, the Adler Planetarium, and The Franklin Institute. I was the first community college professor invited to speak at the University of Minnesota's geology seminar. I am changing the perception of community college professors who can contribute as much as university professors.

Science communication has now become increasingly more popular due to social media. The real impact of this will be how we, as a science communication community, influence climate change

perception. Geoscientists at the forefront of this battle sense that the only way to obtain success is through solid research and well thought out communication strategies.

I use exploration to inspire people to explore our world and beyond. I share what I have learned with others. I lived in the NASA funded HI-SEAS habitat for four months investigating food strategies for long duration spaceflight. After living in the Mars simulation, I wrote the Meals for Mars Cookbook.

I get people to think differently about exploration, science communication, and open access to knowledge. I believe it is important to provide access to unique places that most people will never have a chance to experience. We accomplish this through digital technology and science communication.

ABOVE: SIAN PROCTOR AT SEA

FACING PAGE: PROCTOR AS A MARS ANALOG ASTRONAUT



SAMUEL E. SULEIMÁN RAMOS

MARINE BIOLOGIST

Nominated by KEVIN MCCAREY FN'19



A SCUBA INSTRUCTOR WITH A BIOLOGY EDUCATION FROM THE UNIVERSITY OF PUERTO RICO, SAMUEL RAMOS CREATED A SCUBA SCHOOL CALLED *AMBIENTE MARINO* WITH WHICH HE EXPLORES HIS COUNTRY ABOVE AND BELOW THE WATER. BRINGING HIS STUDENTS TOGETHER WITH OTHER DIVERS, THEY BEGAN TO REMOVE GARBAGE THAT THEY SAW ON LAND AND ON THE BOTTOM OF THE SEA. THEY CREATED *SOCIEDAD AMBIENTE MARINO* (SAM), A NONPROFIT ORGANIZATION THAT HAS ALLOWED THEM TO CONTINUE EXPLORING AND LEARNING ABOUT THEIR COUNTRY AND THE CARIBBEAN, WHILE ALSO GIVING OTHERS THE CHANCE TO DO SO.

Over the years, the work done by many volunteers at *Sociedad Ambiete Marino* has positively impacted the coral reefs offshore of the Municipality of Culebra Island. This is a model for other islands in the Caribbean as well as for other countries in Central and South America. The restoration work on the coral reef in Culebra has impacted the area environmentally and economically. For the future, I would like new generations to enjoy what was adversely impacted in the past.

I really love what I do. I love to travel and learn from different cultures and to look for answers while exploring new dimensions. The ocean provides an immense field to explore and an opportunity to have a better

world. I think my lasting legacy, or greatest contribution to my field, will be the understanding that everyone has a role. We must train and develop the people who have the passion and willingness to make the Earth better. Sometimes it is necessary to push a little harder. People have to compromise and take responsibility to provide for, and serve, others instead of themselves. We need collaboration without competition.

My biggest influence was my grandfather, a fisherman who taught me love and respect for the ocean. We watched adventures from National Geographic and the documentaries of Jacques Cousteau. We did not have the resources to go beyond the nearby reefs, but he allowed me to snorkel at five-years old. In 1985 my grandfather passed away, yet my expeditions continued with Puerto Rico's SCUBA Divers Association in the late 1980s and with SAM in 2001.

ABOVE: SAMUEL E. SULEIMÁN RAMOS

FACING PAGE: CORAL FRAGMENTING PHOTO: EDWIN HERNÁNDEZ



SUSAN R. EATON

GEOSCIENTIST

Nominated by BOB ATWATER LF'05, KATHRYN BRITNELL FI'19



A GEOSCIENTIST, JOURNALIST AND POLAR EXPLORER, SUSAN FOCUSES ON THE WORLD'S CHANGING OCEANS--FROM ANTARCTICA TO THE ARCTIC--IN THE SNORKEL ZONE, A UNIQUE LAND-SEA-ICE-AIR INTERFACE WHERE CHARISMATIC ANIMALS AND SNORKELERS COMMINGLE. SUSAN STUDIES THE INTERPLAY OF PLATE TECTONICS, OCEANS, GLACIERS, CLIMATE, AND LIFE IN POLAR REGIONS. SHE HAS PARTICIPATED IN EXPEDITIONS TO THE FALKLAND ISLANDS, SOUTH GEORGIA, ANTARCTICA, SVALBARD, GREENLAND, ICELAND, NORWAY, LABRADOR, AND NUNAVUT. SUSAN IS FOUNDER AND LEADER OF THE ALL-FEMALE, SEDNA EPIC EXPEDITION AND HAS BEEN INAUGURATED INTO THE WOMEN DIVERS HALL OF FAME.

My passion for scuba diving ended abruptly in Belize when I suffered a diving trauma. I emerged three days later, from a hyperbaric chamber as a non-diver. But I soon made the transition from scuba diver to snorkeler and fell in love with the ocean all over again.

During my snorkel expeditions to the Canadian Arctic, I realized that the Arctic was warming at a faster rate than Antarctica and that the Inuit were being adversely impacted by the changes. Inuit society is matriarchal in its structure, and women are the community leaders. In 2013, I founded the all-female, volunteer-run Sedna Epic Expedition to empower Inuit girls and young women in arctic communities and to inspire the next generation of Inuit women leaders to think big, equipping them with tools and skills to mitigate the impacts of climate change, ocean change and societal change in their remote communities.

From the very beginning, Inuit were explorers. In the winter they crossed the frozen ocean via dog sled. In the summer, they explored the Arctic via kayak. Their

feats of exploration and discovery have been passed down through oral stories, from generation to generation. Sadly, many of these stories are missing from our history books. From Greenland to Alaska, according to Inuit legend, Sedna is the Inuit goddess of the sea, and she is the mother of all marine mammals. The Sedna Epic is comprised of ocean scientists, artists and arctic explorers who are grappling with 21st-century issues.

Diversity is at the core of Sedna Epic's strength and success. We place Indigenous traditional knowledge that has developed over millennia alongside conventional scientific investigations. My hope for the future includes a world that achieves equity and equality for Indigenous and non-Indigenous women's voices.

ABOVE: SUSAN R. EATON

FACING PAGE: EATON WITH CURIOUS KING PENGUINS ON SALISBURY PLAIN, SOUTH GEORGIA ISLAND PHOTO: STEPHEN HENSHALL; SUSAN CHECKS OUT SNOWBALL GARNETS IN A GNEISS OUTCROP OFF THE SOUTHWEST COAST OF GREENLAND PHOTO: BECKY SCHOTT



MAMY RAZAFITSALAMA

CONSERVATIONIST

Nominated by TRAVIS STEFFENS FI'14



A DEDICATED CONSERVATIONIST AND RESEARCHER, MAMY RECEIVED HIS MAITRISE DE RECHERCHE IN BIOLOGICAL ANTHROPOLOGY (2008) AND HIS D'ETUDES APPROFONDIES IN PRIMATOLOGY (2013) FROM THE UNIVERSITY OF ANTANANARIVO. HIS RESEARCH FOCUS WAS ON THE IMPACT OF HABITUATION ON THE BEHAVIOR AND DIET OF NURSING COQUEREL'S SIFAKA (*PROPTHECUS COQUERELI*) IN ANKARAFANTSIKA NATIONAL PARK. AS THE IN-COUNTRY DIRECTOR OF PLANET MADAGASCAR, HIS OBJECTIVE IS TO HELP HIS COUNTRY SOLVE PROBLEMS AROUND A GROWING HUMANITARIAN AND CONSERVATION CRISIS. HIS AIM IS TO ASSIST COMMUNITIES THAT LIVE IN CONNECTION TO THE THREATENED SPECIES AND VULNERABLE ECOSYSTEMS AND TO CREATE SUSTAINABLE FORESTS.

The most meaningful aspect of my work is to help communities to save their own environment by providing permanent local full-time and part-time green jobs and to raise awareness and empower them to take ownership of the conservation issues facing the forest they rely upon. We help communities with immediate needs, but also help address problems faced by the next generation. Madagascar is a global biodiversity hotspot country, which means a country that has incredible biodiversity coupled with high pressure that may lead to species extinctions.

Madagascar is an underserved country suffering from a growing humanitarian and biodiversity crisis. Most people live in rural communities and rely on local resources to survive. Through employment in conservation and community development projects (e.g. fire management, forest restoration, and sustainable

business enterprises), my work directly affects three under-served communities with around 500 people within Planet Madagascar's management zone. We also work with additional communities surrounding Ankarafantsika National Parks. For example, we have conducted conservation education projects in forty communities. In these communities, we screened a film that we made aimed at raising awareness, protecting forest and animals from fire, and increasing hands on biodiversity conservation. This film serves as an important conservation tool to educate the next generation on how saving forest and animals benefits humans.

To improve my knowledge and ability to conduct conservation and community development programs, I recently trained in DESMAN 2020, a course run by Durrell Conservation Academy in Jersey, UK and the University of Kent.

For the future, I would like to see local communities take ownership of the conservation activities needed to help conserve lemurs, protect forest, and to live sustainably in areas around Ankarafantsika National Park.

ABOVE: MAMY RAZAFITSALAMA

FACING PAGE: RAZAFITSALAMA; NATIONAL PARK COMMUNITY WORK CREW, ANKARAFANTSIKA. PHOTOS: RAZAFITSALAMA ARCHIVES



FAWN SHARP

ADVOCATE

Nominated by **JOE ROHDE FN'10**



FAWN SHARP IS PRESIDENT OF THE NATIONAL CONGRESS OF AMERICAN INDIANS AND THE 5TH TERM HEAD OF STATE AND CEO OF THE QUINALT INDIAN NATION. A HUMAN RIGHTS ATTORNEY RECOGNIZED BY THE UNITED NATIONS AS A GLOBAL AUTHORITY ON INDIGENOUS RIGHTS, PRESIDENT SHARP RECEIVED HER JURIS DOCTORATE FROM THE UNIVERSITY OF WASHINGTON. PRIOR TO SERVING AS AN ELECTED OFFICIAL, SHE SERVED AS A JUDGE FOR BOTH THE QUINALT NATION AND WASHINGTON STATE AND HELD POSITIONS WITHIN THE CENTRAL INTELLIGENCE AGENCY.

When our ancestors signed the Treaty of Olympia in 1855 with the United States of America, the federal government recognized the Quinalt Nation as a sovereign state in perpetuity. We would always have a relationship with the United States that was between equals, sovereign to sovereign.

I understood that my people had lost nearly everything in order to secure that treaty and that our treaty has been repeatedly broken ever since. I became an attorney to remedy that injustice. I have a feeling of pride and God-given sense of purpose. I serve roughly 3000 Tribal citizens and their families, am the CEO of rapidly growing business enterprises, and am the sovereign head of state of over 200,000 acres of our rainforest homelands and 31 miles of Pacific coastline.

I have co-written the revolutionary Tribal consultation policy for the State of Washington Attorney General's Office and have led our Tribe to an undefeated record in federal court defending our Treaty

Rights, including at the U.S. Supreme Court. From the local to UN level, I have written countless pieces of environmental legislation, resolutions, initiatives, and policies.

We are all blessed to be the inheritors of generations of visionary leadership, activism, and spiritual teachings that have made Indian Country the conscience and inspiration of the world. On October 24, 2019, I became the second leader of the Quinalt Indian Nation to be elected as the President of the National Congress of American Indians (NCAI). My hope for the future is to ensure that Tribal Nations receive their just rights: to be recognized, treated, and respected as entirely sovereign and self-governing States.

ABOVE: FAWN SHARP

FACING PAGE: FAWN SHARP AT QUINALT POW WOW; WITH TRIBAL DRUMMER DANIEL BEFORE WASHINGTON SUPREME COURT.



VICKI LYNN FERRINI, PHD

OCEANOGRAPHER

Nominated by MAUREEN RAYMO FR'17



DR. VICKI FERRINI IS A SENIOR RESEARCH SCIENTIST AT COLUMBIA UNIVERSITY'S LAMONT-DOHERTY EARTH OBSERVATORY. HER RESEARCH INTERESTS LIE AT THE INTERSECTION OF OCEAN EXPLORATION, SEABED MAPPING AND CHARACTERIZATION. SHE HAS PARTICIPATED IN MORE THAN 30 EXPEDITIONS USING SHIPS AND SUBMERSIBLES IN REMOTE UNEXPLORED PARTS OF THE OCEAN. DR. FERRINI IS DEDICATED TO ENSURING THAT MARINE GEOSCIENCE DATA ARE ACCESSIBLE TO SCIENTISTS AND TO THE PUBLIC. SHE IS WORKING CLOSELY WITH STAKEHOLDERS TO BUILD A COMPLETE MAP OF THE GLOBAL OCEAN BY 2030.

One of the things that fascinates me most about the ocean is its magnitude. The sea gives you a unique sense of wonder and humility. Exploring the seafloor from a submarine literally adds another dimension. My work gives me the opportunity to bring the unseen underwater world to others through the combination of seabed mapping and the preservation and access of marine geoscience data. I explore the ocean daily through both research expeditions and by wading through a sea of data collected throughout the global ocean.

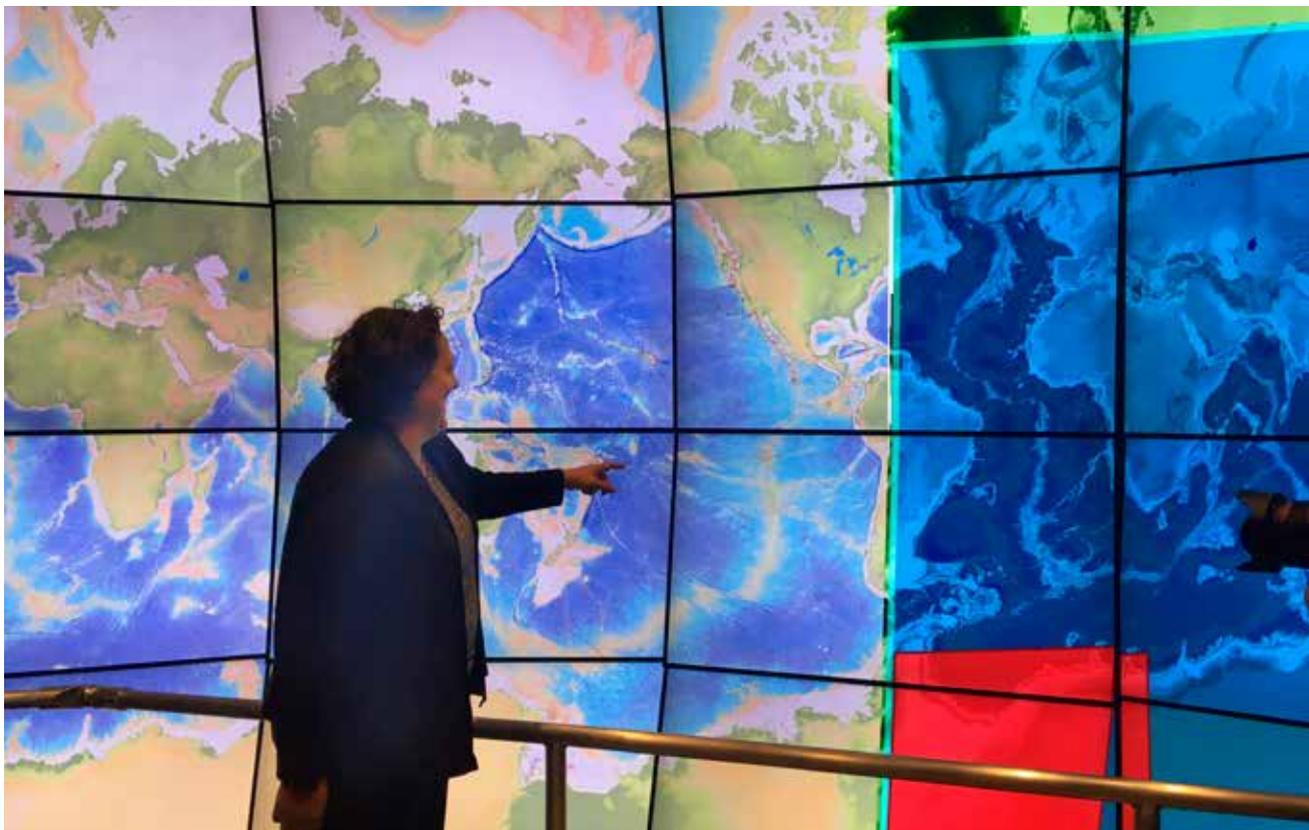
The ocean covers more than 70% of the planet, yet less than 20% has been mapped and a much smaller fraction has been explored. Our collective

understanding of the ocean is based on observations that are sparse in both time and space. Ocean mapping and exploration not only lead to discovery, but they improve knowledge relevant to a variety of processes ranging from basic earth science to ocean circulation, weather and climate, marine archaeology, resource management, and sustainable development.

Working to map and characterize the global ocean will yield unimaginable discoveries and will directly impact the lives of all people around the world who depend on ocean resources. It is a grand challenge that can only be achieved through well-coordinated technical and social solutions. I have the honor of helping to galvanize a global community to discover new ways of working together to achieve a common goal. Playing a role in creating, at long last, a complete map of not only the ocean floor, but of the whole planet, is perhaps the most gratifying outcome that I look forward to as a product of my work.

ABOVE: VICKI FERRINI PHOTO: ZLATKA ANDOROVA

FACING PAGE: FERRINI AT LAKEROTOMAHANA, NEW ZEALAND PHOTO: AMY KUKULYA; A SEA OF DATA PHOTO: ZLATKA ANDOROVA



ANDERS JEPSEN, PHD

GEOPHYSICIST

Nominated by **LEE LANGAN MED'99**



ANDERS JEPSEN IS AN EXPLORATION GEOPHYSICIST WITH A SIX-DECADE CAREER AS A FIELD GEOLOGIST, GEOPHYSICIST, AND BUSINESSMAN. HE IS AN EXPERT USING REMOTE SENSING TO MEASURE AIR POLLUTION, HE HAS PROVIDED GEOPHYSICAL MAPPING FOR RENEWABLE ENERGY AND THE ENVIRONMENT, HE EXPLORED NEW SOLAR POWER GENERATION TECHNOLOGY. RECENTLY JEPSEN IS HELPING TO DEVELOP AIRBORNE DRONE CAPABILITIES, COMBINED WITH MAGNETOMETERS, TO PROVIDE EFFICIENT LANDMINE REMOVAL AND LOCATE UNEXPLODED ORDNANCE AROUND THE WORLD. HIS TEAM IS PRESENTLY DEFINING SURVEY PROCEDURES AND DATA ALGORITHMS FOR LOW-COST DETECTION APPLICATIONS.

About 70 countries in the world exhibit the presence of war-related material, landmines and unexploded ordnances, that has an enormous impact on people's daily lives. These are commonly detected and removed by slow, inch-by-inch searching and careful digging using treasure-hunter equipment. Landmine removal progress for a team of ten people is only one or two hectares per month at a cost of around \$30,000. Hundreds of thousands of hectares of land remain unusable because of landmines.

My colleagues and I are working to extend drone-based geophysics to landmine and ordnance detection and mapping. These will permit inexpensive field measurements conducted close to the ground by local operators using equipment supplied by NGOs. Success of this mapping will enhance the recovery of usable land and will increase the local production of food.

Survey costs and the small size of targets are major obstacles to using commercial airborne geophysics

for landmine detection. These obstacles can be overcome by the use of geophysical sensors adapted for programmable drones. What is needed now is the design of survey and data analysis procedures to fit the nature of landmine contamination.

Drones can be programmed to fly a set of closely spaced exploration lines at low altitude. The result is a map that shows the magnitude and location of every piece of magnetically responsive material in the soil. Detailed analyses can identify which are landmines. Acceptance of this technology by the demining community requires testing, demonstration surveys, analysis, calibration, and reporting.

My hope for the future is a successful understanding of the use of drone geophysics to improve the quality of life for landmine-afflicted communities.

ABOVE: DR. JEPSEN AT HELIO-SOLAR INSTALLATION
FACING PAGE: FIVE-MAGNETOMETER DRONE FLIGHT PHOTO: JEPSEN



INTI KEITH, PHD

MARINE BIOLOGIST

Nominated by **BUFFY REDSECKER MR'19**



DR. INTI KEITH IS A SENIOR MARINE BIOLOGIST AT THE CHARLES DARWIN FOUNDATION. SHE LEADS THE MARINE INVASIVE SPECIES PROGRAM AND THE LONG-TERM SUBTIDAL ECOLOGICAL MONITORING PROGRAM IN THE GALAPAGOS MARINE RESERVE. INTI HAS WORKED AROUND THE WORLD TAGGING SHARKS, MONITORING SEA TURTLES, AND SURVEYING CORAL AND ROCKY REEFS. HER CURRENT INTERESTS LIE IN UNDERSTANDING THE HEALTH OF MARINE ECOSYSTEMS IN THE EASTERN TROPICAL PACIFIC AND IN EVALUATING THE IMPACTS OF ANTHROPOGENIC DRIVERS ON THIS INCREDIBLY BIODIVERSE REGION INCLUDING CLIMATE CHANGE, INVASIVE SPECIES, INCREASING TOURISM, ILLEGAL FISHING, AND PLASTIC POLLUTION.

Due to the confluence of warm and cold currents, the Eastern Tropical Pacific (ETP) has a unique biophysical environment with high levels of productivity and a diversity of ecosystems with distinctive biological communities. The region's Galapagos Islands, an archipelago that is home to one of the world's largest multi-use marine protected reserves, are utilized by the tourism industry and small-scale fisheries as the backbone of the local economy.

Several threats and challenges confront sustainable development and conservation of the Galapagos Marine Reserve and other protected areas of the region. Despite their conservation status, the Galapagos are not immune to invasions. A wide variety of species threaten to diminish their high conservation and social value. Exploring and collecting information on ecosystem health enables

us to identify the factors affecting the abundance per species of key resources.

Our research leads to better understanding of the region's taxonomic and functional diversity, and the socioeconomic benefits derived from reefs. It allows us to identify thresholds beyond which populations may collapse and where important ecosystem functions and services may become eroded, and to develop ecosystem-based models to predict the ongoing and potential negative impacts of climate change and anthropogenic pressures.

An early warning system for the marine protected areas in the Eastern Tropical Pacific will help prevent new cases of marine invasive species and plastic pollution during climatic events. New tools, including a manual of best practices for managing tourism to these iconic islands, will result in environmental authority working together with scientific experts from each country. I am working toward this capability.

ABOVE: INTI KEITH

FACING PAGE: SETTLEMENT PALTE INSTALATION PHOTO: GEINER GOLFIN



BINBIN LI

CONSERVATIONIST

Nominated by ALEXANDRA SUTTON LAWRENCE TM'14



BINBIN LI IS AN ASSISTANT PROFESSOR AT DUKE KUNSHAN UNIVERSITY, KUNSHAN, JIANGSU, CHINA. SHE FOCUSES ON PROTECTED AREAS AND ENDANGERED AND ENDEMIC SPECIES CONSERVATION. HER STUDIES INCLUDE GIANT PANDA HABITAT AND UNDERSTANDING THE IMPACTS OF OIL PALM AND RUBBER PLANTATIONS ON BIODIVERSITY IN SOUTHEAST ASIA. SHE ALSO EMPOWERS YOUNG WOMEN TO PARTICIPATE IN SCIENTIFIC RESEARCH AND CONSERVATION WORK, AND SHE IS ACTIVELY ENGAGED IN SCIENCE COMMUNICATION AND NATURE EDUCATION. SHE IS A POPULAR WRITER AND NATURE PHOTOGRAPHER WITH MORE THAN 400,000 FOLLOWERS IN SOCIAL MEDIA.

Biodiversity is the foundation for ecological balance and the sustainable development of human society. However, biodiversity conservation may be treated as the opponent of development and cause huge conflicts. My work helps to identify key areas to set aside that better protect threatened and endemic species while reducing conflicts with local communities.

I focus on certain flagship species including giant pandas, not because they are cute, but because they help similar conservation problems to get more attention and support from the public and the government. Other species within the same habitat can benefit from the expansion of protected areas and the reduction of human disturbances.

Nature, with its biodiversity, is the inspiration for our society and the key to solving our societal problems. I aim to find the underlying mechanisms of nature-based solutions to solve challenges that we

face today, such as poverty and health issues. The most meaningful aspect of my work is to show the existence of a way of living, and thus show possibilities. Many people understand that it is important to protect biodiversity but have no idea how to do it.

I feel like I am raising an army, the future generation to guard our Earth. By providing opportunities to recruit people for research and field studies, I engage young people, especially women, in conservation work. This offers them confidence. Creating a connection between nature and our hearts can connect the fate of biodiversity with our next generation. The most meaningful aspect of exploring wild places and the unknown is sharing this journey with many others.

ABOVE: BINBIN LI

FACING PAGE: BINBIN LI IN THE FIELD PHOTOS: WANG JINGNAN



JENERIA LEKILELEI

CONSERVATION ADVOCATE

Nominated by **JOE RHODE FN'10**



JENERIA LEKILELEI IS DIRECTOR OF COMMUNITY CONSERVATION FOR THE NGO, EWASO LIONS. AS A YOUTH, HE SAW LIONS ONLY AS KILLERS OF GOATS AND COWS, A THREAT TO HIS COMMUNITY'S LIVELIHOOD. SPENDING TIME WITH LIONS CAUSED A SHIFT IN HIS THINKING - HE BEGAN TO SEE THEM AS THREATENED RATHER THAN AS A THREAT. JENERIA CONCEIVED THE WARRIOR WATCH PROGRAM IN 2010, ENGAGING SAMBURU WARRIORS IN LION CONSERVATION. HE HAS WON DISNEY'S CONSERVATION HERO AWARD (2015), THE HOUSTON ZOO WILDLIFE WARRIOR AWARD, THE PARADISE FOUNDATION INAUGURAL AFRICA'S RANGER AWARD (2018), AND WAS A FINALIST FOR THE 2019 TUSK CONSERVATION AWARDS.

Lions are in my bloodstream now. Over the last 8 years, the lion population in our region has been stable. I attribute some of this to the Samburu warriors who are engaged in conservation in northern Kenya in the Warrior Watch. This herder alerting system stops conflict before it starts, and lion numbers have tripled. My future plans include training a new warrior demographic to continue with Warrior Watch as the older generation of warriors transition to eldership. I see this as part of a wider plan for Kenyans and Africans to reclaim ownership of our wildlife as part of our own story. Mentorship is key to my work. Through our programs at Ewaso Lions, we take school children and

herders to see lions up close, which helps to build and mentor future conservationists.

Ever since I came to learn about lions, including how they are threatened and how similar they are to us in how they think, I really now love lions. They are my driving force. If the lions need help, I can't say, "I will do it tomorrow." I will help them immediately. If I stop and conflict happens, this pushes me to continue mutual coexistence.

Exploration is often about people coming from far away to see and do exotic things. For me, exploration is about working tirelessly at home with my people. It's about solving a problem to help one of the world's most iconic animals to keep roaming our landscapes. It takes a lot of work and a lot of people. It also means keeping my culture alive in the face of many changes. Yet, it is not just about me and my team, it's about the whole community, the country, and the world. *We all* need to save lions for our children.

ABOVE: JENERIA LEKILELEI PHOTO: JACQUES VAN DER WESTHUIZEN
FACING PAGE: JENERIA WITH WARRIORS ON FOOT PATROL PHOTO: TYREL BERNARDINI; JENERIA (CENTRE) ENGAGES WITH OTHER WARRIORS ABOUT THE IMPORTANCE OF LION CONSERVATION PHOTO: DAVID CHANCELLOR



CASUARINA MCKINNEY-LAMBERT

ADVOCATE

Nominated by FAANYA ROSE ME'94



CASUARINA MCKINNEY-LAMBERT IS THE EXECUTIVE DIRECTOR OF THE BAHAMAS REEF ENVIRONMENT EDUCATIONAL FOUNDATION (BREEF), A NON-GOVERNMENTAL ORGANIZATION DEDICATED TO PROTECTING THE BAHAMIAN MARINE ENVIRONMENT THROUGH HANDS-ON EDUCATION, OUTREACH, RESEARCH, AND POLICY. SHE WAS A FOUNDING BOARD MEMBER OF ONE ELEUTHERA FOUNDATION AND BAHAMAS PROTECTED AREAS FUND. SHE SERVES ON THE FISHERIES ADVISORY COUNCIL, THE NATIONAL CLIMATE CHANGE, BIODIVERSITY, NATIONAL MARITIME POLICY COMMITTEES AND ON THE SUSTAINABLE DEVELOPMENT GOALS TECHNICAL COMMITTEE. SHE IS A MEMBER OF THE GLOBAL ENVIRONMENT FACILITY SMALL GRANTS PROGRAMME AND THE UNITED WORLD COLLEGE NATIONAL COMMITTEE IN THE BAHAMAS.

I was born in an archipelagic nation of over two thousand low-lying islands surrounded by ocean. We are particularly vulnerable to sea-level rise and the impact of increasingly strong hurricanes. The Bahamas has some of the last remaining stocks of important species, such as the critically endangered Nassau grouper and the iconic queen conch. My work is to better understand the ocean around us and to use this information to guide how we can live more sustainably, socially, economically and environmentally.

I have spent thousands of hours underwater while exploring coral reefs, mangrove creeks, and blue holes, and have descended into underwater canyons over 780 meters deep in a submarine. I have the privilege of sharing the wonders of the Bahamian ocean with many people from different walks of life, including students, teachers, fishermen, and enforcement

officers in communities throughout the islands. A public that is active and aware supports efforts to sustain the ocean that sustains us all.

Many Bahamians don't know how to swim. It's shocking to think members of my own community are missing the opportunity to experience the beautiful and diverse coral reefs first hand. One of my favourite things is to take someone, terrified of the ocean, into the water for the first time, to be part of the transformation that occurs. It's a huge expansion when people realize that a whole part of the planet unfamiliar to them is now accessible. Inspiring others to be environmental stewards is definitely one of the most rewarding aspects of my work.

ABOVE: CASUARINA MCKINNEY-LAMBERT

FACING PAGE: CASUARINA AND STUDENT DIVING IN THE BAHAMAS



JUAN D. MARTINEZ-PINEDA

ADVOCATE

Nominated by REBECCA MARTIN FN'02



JUAN D. MARTINEZ-PINEDA IS A SENIOR FELLOW AT THE ASPEN INSTITUTE FORUM FOR COMMUNITY SOLUTIONS AND A CO-FOUNDER OF FRESH TRACKS, A YOUTH-LED CROSS CULTURAL REVOLUTION ROOTED IN THE HEALING POWER OF THE OUTDOORS. JUAN IS A PROUD PRODUCT OF SOUTH CENTRAL LOS ANGELES. HE SERVES ON THE WILDERNESS SOCIETY'S GOVERNING COUNCIL, IS AN AUTHOR, AND A TED SPEAKER. HE IS DEDICATED TO BRINGING THE POWER OF EQUITY AND JUSTICE TO LIFE THROUGH YOUTH AND COMMUNITY-DRIVEN SOLUTIONS.

Youth of color in communities across the country are severely and disproportionately impacted by climate change. They also lack equitable access to public open spaces, foster care, and the justice system. They face serious disparities in school discipline and suffer from extreme rates of violent victimization. Elevating youth narratives, power, and vision is at the core of my work.

I work through *Fresh Tracks* to develop efforts that grow and strengthen leadership pathways for those who are adversely impacted. My goal is to improve these systems and build community cohesion with leaders who can reach across cultures to draw on the strength of their diversity. *Fresh Tracks* envisions a world where all people are advancing social and environmental justice

and overcome hate and racism. *Fresh Tracks* provides cross-cultural community building skills, leadership training, civic engagement opportunities, and resources for innovative youth and community-led action. Our movement is grounded in the healing power of nature and culture. It is a lifelong journey.

In 2000, I realized how nature could heal me from trauma. I was given an ultimatum to either stay in detention or join the Eco-Club. This opportunity, growing jalapeños in Mrs. Pepin's garden, opened books to study photosynthesis, irrigation systems, and the life cycles of peppers around the world. My path was changed.

Exploration is a consistent rhythm of imagination and wonder. It is about lifting the narratives, leaders, communities, and voices that are often left in the margins. It is not about discovery of the new but about finding ways to value each other and the natural world, by honoring what was always there.

ABOVE: JUAN D. MARTINEZ-PINEDA IN WASHINGTON D.C.

FACING PAGE: *FRESH TRACKS* IN WEST CREEK, CO & YOSEMITE NATIONAL PARK



SONAM PHUNTSHO

ELECTRONICS & ICT ENGINEER

Nominated by **MATTHEW DESANTIS MI'16**



SONAM PHUNTSHO IS CHIEF OF DIVISION OF TELECOM AND SPACE, DEPARTMENT OF INFORMATION TECHNOLOGY AND TELECOM, MINISTRY OF INFORMATION & COMMUNICATIONS FOR THE ROYAL GOVERNMENT OF BHUTAN. AMONG HIS MANY ACCOMPLISHMENTS, HE PARTICIPATED IN LAUNCHING THE FIRST SATELLITE FOR BHUTAN, BUILDING THE FIRST NATION-WIDE HIGH-SPEED FIBER OPTICS BACKBONE NETWORK, ESTABLISHING AN EMERGENCY COMMUNICATIONS NETWORK FOR DISASTER COMMUNICATIONS USING SATCOM NETWORK, AND ESTABLISHING A HIGH-SPEED NATIONAL RESEARCH AND EDUCATION NETWORK. HE IS THE RECIPIENT OF THE AUSTRALIAN LEADERSHIP AWARDS SCHOLARSHIP.

Bhutan embraced modernization starting in the early 1960s after a long period of self-imposed isolation. Road networks were built followed by an analog telecommunication network in the 1970s. Bhutan introduced the Internet and TV in 1999. Since, Bhutan's progress has accelerated.

I am inspired by the vision of His Majesty The King to harness space science and technologies for the benefit of Bhutanese people and to engage the Bhutanese youth in taking up STEM education. Space-exploration activity in Bhutan was initiated in 2016 by sending Bhutanese engineers to Japan. The country's first satellite, BHUTAN-1, was designed and developed entirely by Bhutanese engineers and was launched in 2018.

In 2019, I coordinated Bhutan's participation in the NameExoWorlds Project being carried out by the International Astronomical Union (IAU). We successfully named a star and exoplanet which caught

national attention and participation by students. Due to the work of my division, Bhutanese youth can now look beyond the horizon and into space for their future endeavors.

Bhutan's participation in the South Asia Satellite is another major milestone in taking forward His Majesty's Royal Vision that extends to the frontiers of space. This has fostered the adoption of technology for emergency communications for disaster management, digital broadcasting on Ku band to reach the most inaccessible parts of Bhutan, remote sensing, weather forecasting, and digital news gathering. These milestones benefit this small Himalayan developing nation.

ABOVE: SONAM PHUNTSHO

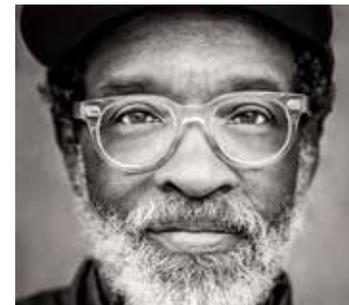
FACING PAGE: SATELLITE GROUND STATION FOR EMERGENCY COMMUNICATIONS SATCOM NETWORK, DIGITAL BROADCASTING, REMOTE CONNECTIVITY, DSNB AND BACKUP TELECOM BACKHAULING; BHUTAN UHF/VHF GROUND STATION.



CHIP THOMAS, MD

PHOTOGRAPHER AND PHYSICIAN

Nominated by REBECCA MARTIN FN'02



DR. CHIP THOMAS (AKA "JETSONORAMA") IS A PHOTOGRAPHER, PUBLIC ARTIST, ACTIVIST AND PHYSICIAN WHO HAS BEEN WORKING BETWEEN MONUMENT VALLEY AND THE GRAND CANYON ON THE NAVAJO NATION SINCE 1987. HE COORDINATES THE PAINTED DESERT PROJECT WHICH MANIFESTS AS A CONSTELLATION OF MURALS ACROSS THE NAVAJO NATION, PAINTED BY ARTISTS FROM ALL OVER THE REZ AND THE WORLD. DR. THOMAS WAS RAISED IN THE SOUTHERN USA AND HAS ALWAYS BEEN INTERESTED IN SOCIAL JUSTICE ISSUES. THOMAS WAS ONE OF A HANDFUL OF ARTISTS CHOSEN TO RECOGNIZE THE UNITED NATION'S 75TH ANNIVERSARY.

Dr. Chip Thomas cycled across Africa in the 1990s with National Geographic Fellow Dan Buettner, producing uniquely powerful black and white imagery along the way. He has spent the last 30 years providing medical care for the Navajo Nation and photographing the Diné (the Navajo people). He showcases their lives and plight through huge posters of his black and white images applied to structures visible to the public along roadways, at art stands, on water tanks, any available structure.

Spending his free time exploring the Four Corners area, and photo-documenting individuals along the way, Chip then creates murals. These not only help the public understand some of the issues the locals

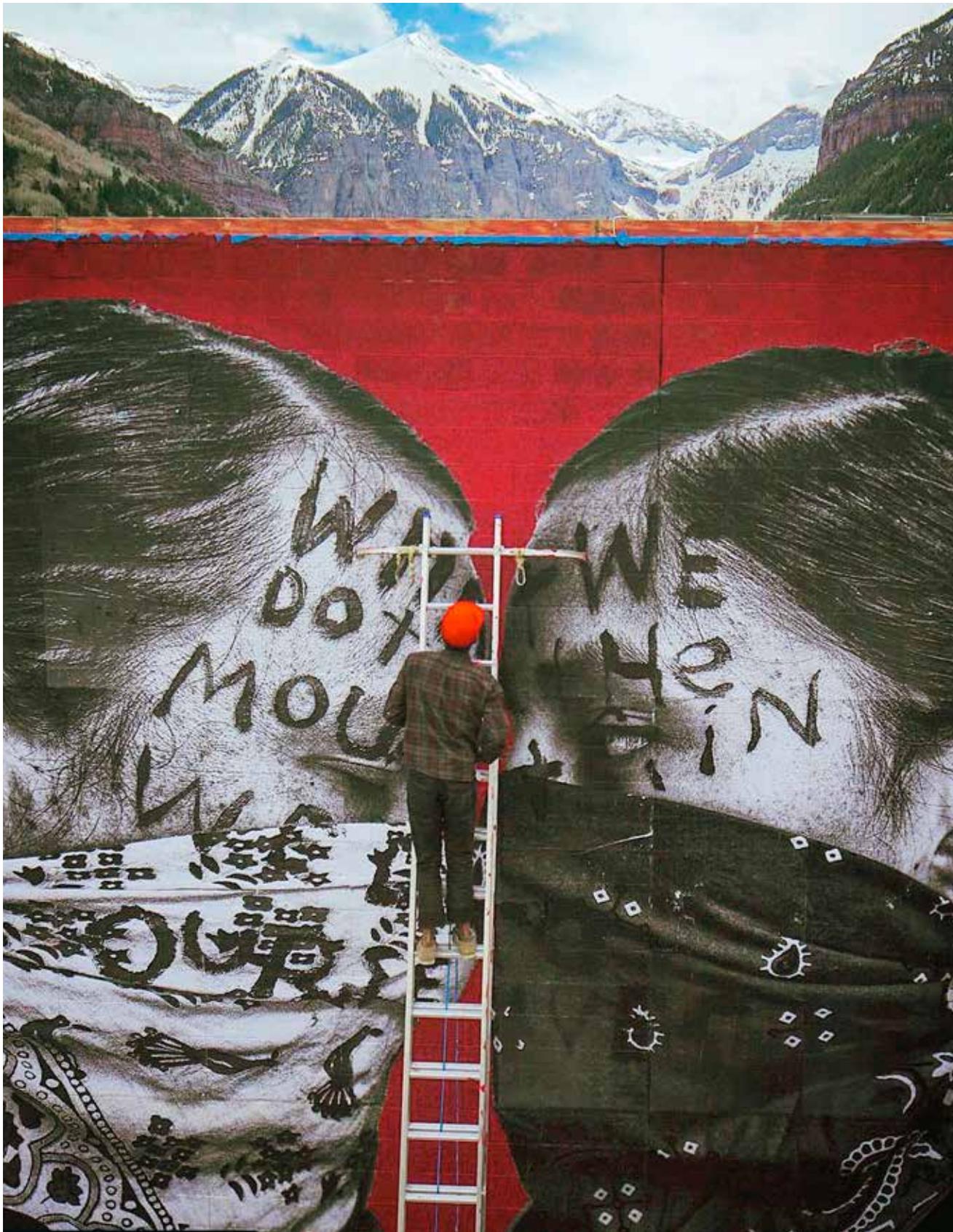
face, but they are a wonderful support to the people indigenous to this land.

Chip's incredible dedication to the health and issues confronting the Navajo Nation, as expressed through his art and collaboration with other artists through the Painted Desert Project, is exemplary of an individual changing the world and caring for a nation of people who bring rich cultural context to this country. As a member of the Justseeds Artists Cooperative he appreciates the opportunity to be part of a community of like-minded, socially engaged artists. Heretofore, too often individual lives of the Navajo have received little attention from the public. This art strives to change that.

An explorer of culture, a medical doctor, and an individual committed to helping a culture in need, Chip Thomas has been making a huge difference for the Navajo Nation over three decades, illuminating this tribe through his incredible vision and art.

ABOVE: DR. CHIP THOMAS, PHOTO: BEN MOON

FACING PAGE: CHIP THOMAS MOUNTING A PHOTOGRAPHIC MURAL, KLEE + PRINCESS PHOTO: JIM HURST



the explorers club fifty
making the book

LEE LANGAN MED'99
 EDITOR-IN-CHIEF

The process of editing materials submitted by the honorees was condensed over a busy few weeks. Each individual was asked to respond with several photos, biographic information and two 250-word essays. Some added a bit more. The editorial task was to condense this material to the constraints of the publication space and to select images that spoke of the individual. The biographic description was limited to around 90 words, the supporting text to less than 300 words. We reviewed the submitted material, attempting to use much of the text as-while creating a cohesive voice for the book. Once placed into the honorees' space in the book, the condensed text was again reviewed and proofed. A three-person team assembled the book: Log Editor, myself; Log Chapter Editor, Martha Shaw; Log and Journal Art Director, Jesse Alexander. We take responsibility for this work; the honorees and essayists for the original content.

It was a singular honor to be part of this first-of-a-kind effort by The Explorers Club to recognize so many so deserving. Absorbing the descriptions of what these explorers are doing was enlightening, inspiring. Exploration is in good hands in the twenty-first century. It is quite clear that these fifty, distilled from over 400 who were considered, represent the result of difficult judging. Many were deserving.

I was taken by the thread of interest of so many awardees who have devoted their work to the benefit of their fellow humans by addressing the common

good and encouraging cooperation and kindness, to their fellow creatures in need of protection from endangerment through ignorance, tradition, and greed, and to enlightenment directed to protecting the Earth in which we spend our lives and upon which our progeny depend.

The world of exploration has grown to include conservation, sustainability, and concern for future well being. Still there remains that curiosity to find what was and to look in new ways at prior discoveries using new technology.

It was fitting that this effort, conceived by President Wiese, was directed by our 2019 Lowell Thomas Award Winner Joe Rohde. In addition to being an accomplished artist who has captured unique places around the world, he spent much of his life as Disney's Director of Imagineering. If you have visited Orlando's Wild Kingdom, thank him for creating a place where so many are introduced to real places in that compact space. J. R. Harris and Kim Frank were some of the judges who have commented herein. Both are devoted to the Club and our goals of expansion and diversity.

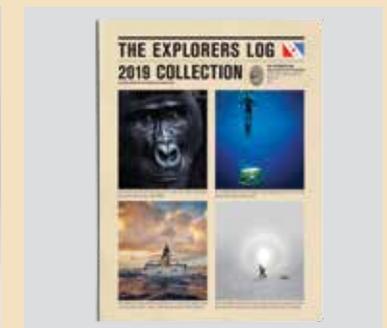
Each of the awardees will be offered three-years of supported membership in The Explorers Club for having been selected. They also receive several gratis printed copies of this book. TEC members are being sent digital copies; if desired, printed copies are available in the Outfitters Store.

I have a feeling this effort will be revisited.

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*another world is not only possible,
she is on her way. On a quiet day,
I can hear her breathing.*

— ARUNDHATI ROY

