

THE EXPLORERS LOG



THE EXPLORERS CLUB
WORLD CENTER FOR EXPLORATION
Official News Published Quarterly
Volume 53 Number 4
Fall 2021

JAMES BORTON FN'15
KIM-ANH NGUYEN PHD

Vietnam's forest guardians

SIAN PROCTOR PHD MN'21

A spacecraft with a view

NICK ORENSTEIN MN'21

View from mission control

BHAVITA BHATIA

Cowboys of the lost horizon

PATRICIA SIMS FI'20

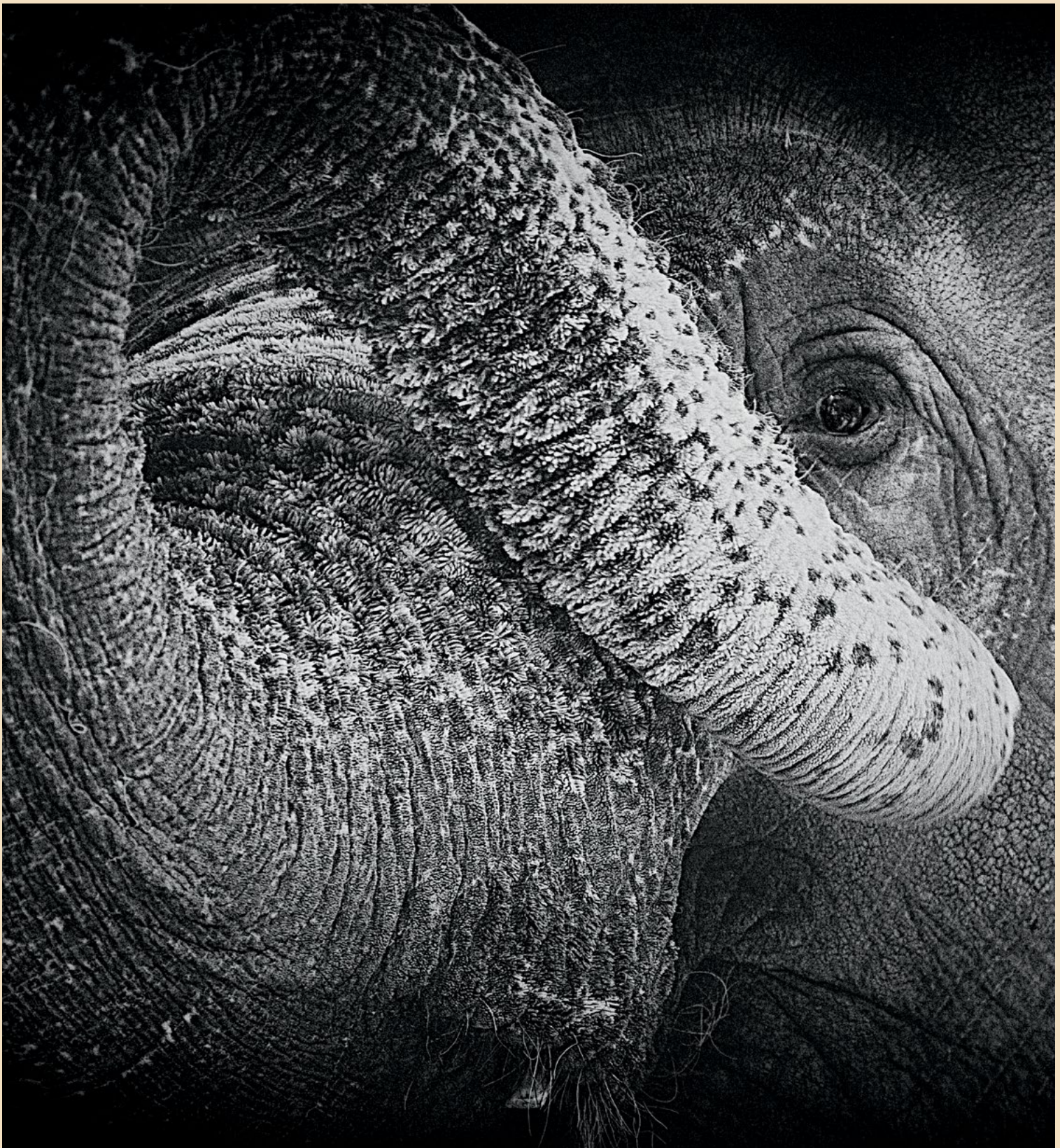
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PAMELA PEETERS FN'19

The Arctic through a graphic novel

SEAN C. AHEARN FR'96

Charting Ground Zero



Portrait of Thailand's 'Kamala'. Photo: Patricia Sims, founder of World Elephant Day.

THE EXPLORERS CLUB

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THE EXPLORERS LOG

The official news of The Explorers Club published quarterly

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MEMBER DESIGNATIONS

FR: Fellow Resident
FN: Fellow National
FI: Fellow International
FE: Fellow Emeritus
LF: Life Fellow
MR: Resident Member
MN: Member National
MI: Member International
ME: Member Emeritus
LM: Life Member
CO: Corresponding Member
TM: Term Member
SM: Student Member
AR: Associate Resident
AN: Associate National
AI: Associate International
Fc: Friends of the Club
MED: Medalist
HON: Honorary Member
PEX: Patron of Exploration

EXPLORERS LOG SUBMISSIONS

News items, photos, member and chapter activities, and subjects of general interest are welcome. Submissions from members, text in Word or Pages format and 300 dpi (or greater) digital photographs. Send all materials to: log@explorers.org. The authors are responsible for article content. Their views do not necessarily reflect the views of The Explorers Club, and the Club is not responsible for their accuracy.

THE EXPLORERS CLUB

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PRINTING

The paper used to manufacture this magazine comes from 100% post consumer recycled paper stock. This magazine is printed in Canada.



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The Explorers Club is committed to eliminating single-use plastics. The use of paper envelopes in place of plastic mailers is generously supported by donors to the World Oceans Week Program.

MEMBERSHIP

The Explorers Club congratulates and welcomes the following newly elected members

SINCE THE LAST EXPLORERS LOG

NEW MEMBERS RECENTLY APPROVED

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Cassandra M. Bongiovanni
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Dr. Tess E. Caswell
Dr. John J. Cherry
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Daniela V. Fernandez
Kendall L. Fitzgerald
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Lindsey F. Kaye
Margaret M. Knight
Dr. George M. Leader
David O. Litwak
Connor J. Maheady
Tessa M. Markham
Jeff K. Maynard
Bhavna R. Menon
Samantha M. Miller
Dr. Michael R. Monfett
Erica L. Moulton
Bridget Z.K. Nicholls
Daniel B. Ortega
Elizabeth M. Perez
Charis A. Peterson
Matthew Picarelli-Kombert
Michele du Plooy
Ana V. Ramos
Brynne E. Rardin
Christopher J. Reynolds
Gabrielle S.K. Rosenbacher

Adeline C. Shelby
Stephanie P. Siegel
Dr. Sarah M. Spivey-Faulkner
Tez Steinberg
Sheikh Mohammed bin Abdulla
Al Thani
Bailey C. Thomasson
Dr. Hillary Viders
Vanessa C. Walsh

THANKS TO THE FOLLOWING CLUB MEMBERS FOR SPONSORING THESE ACCOMPLISHED INDIVIDUALS

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Robert Atwater
Jenifer Austin
Jeffrey Blumenfeld
Andi Cross
Dimitri Deheyn
Gregory Deyermenjian
Sylvia Earle

Suzanne Finney
Anthony Fiorillo
Jamie Fitzgerald
Clifton Foster
Kyle Foster
Richard Garriott
Derek Hagen
Ernest Helms
Theodore Janulis
John Kendall
Sophia Michelen
Idee Montijo
Aj "Buddy" Obara
Milbry Polk
Joshua Powell
Nena Rice
David Rothenberg
Neville Schulman
Robert See
Kathryn Sullivan
Liz Taylor
Callie Veelenturf
Trevor Wallace

ON TO HIGHER EXPLORATION

Michael Collins, MED '76
Diana Russell, MR '86
Elise A.B. Brown, Ph.D., FE '93
Robert J. Barsdate, FE '79
Magalen O. Bryant, MN '89
Hugh M. Downs, FE '84
James P. Blair, FN '09
Flora E.S. Kaplan, FR '83
Eric D. Rosenfeld, FE '78
Paul M. Levine, ME '67
Gypsy C. Graves, FE '86
Julius Kaplan, MN '01
William C. Tyndall, LM '79
Gilles J. Gagnier, MI '15
Robert F. Marx, FE '59
Tom S. Cooperrider, FE '80
Louise M. Burke, MN '86
Robert E. Rigney, FN '66

Headquarters Renovation Progress

Capt. Lynn Danaher FN'05, VP Mission Coordination
HQ Preservation Committee, Chair

The renovation committee has made some terrific strides and upgrades to our building. Number one on our list was removal of the asbestos in the basement as well as two very large defunct boilers. Now that both of these essential

tasks have been completed we are able to address our electrical system. The plan is to consolidate all of the electrical panels in a corner of the basement that had not been accessible until now. This will be the first step and upgrading our

electrical system throughout the building. Currently we are working with an electrical engineering firm to design the upgraded system.

We are also catching up with some deferred maintenance on our building. We repaired a leak in the roof of the Clark Room, necessitating some repair in the ceiling. So it needed to be repainted. A close-up of the new and improved ceiling is attached. It had all been one light beige color before; this gave us the opportunity to highlight the relief in the ceiling. Really quite lovely and distinctive.



Relief now highlighted in Clark Room

back in business

RICHARD GARRIOTT DE CAYEUX LM'98, PRESIDENT
 president@explorers.org



Photo: Lee Langan

It is with great pleasure that I am able to share that your Explorers Club Headquarters is back open for business. Despite the long closure due to the pandemic, it has been amazing how many of you still made it out into the field. It's clear from the readings in this *Explorers Log* that explorers are well suited to face innumerable global challenges, and continue your important work.

Over the last 12 months, for the first time in club history we have given out more than a million dollars, and we expect to sustain that level for at least the next few years, thanks to both our long term sponsors such as Rolex, Fjällräven, and our own endowment grants, as well as new sponsors like Discovery and the Stephenson Explorers Advancement program.

The depth and breadth of work by our fellow explorers is on display in this *Explorers Log*, our fellow explorers are in the arctic seas with narwhal, reaching new heights in space, following cowboys in Tibet, saving mangrove forests in Vietnam, celebrating elephant day and mapping 9/11 twenty years after that tragic day. All great examples of the vital role explorers play in understanding and protecting the cradle of humanity.

benefits

LEE LANGAN MED'99, EDITOR
 llangan@explorers.org



Puppy Louis In San Francisco, 2011



Louie at 10, 2021. Photos: Lee Langan

I have always responded to new members, and any who might ask, "What are the benefits I receive from being a part of The Explorers Club?", with the same simple answer: the opportunity to meet and mingle with some of the most intriguing, involved, and engaged individuals there are. Members are carefully considered by the Membership Committee to be real explorers, vetted as curious 'doers' to bring new knowledge they seek to enhance general knowledge. They tell their stories, publish their findings, talk to others about what they do, lecture, go into the field, and share. As a member you become a colleague. That is what membership is all about. As a member get involved. The more you do, the more satisfaction you will receive. It is a wonderful benefit.

Stated another way, the more you give and get involved, the more you benefit.

In times more normal we have lectures and meetings and get-togethers large and small. As noted in last quarter's *Log*, we have done very well even when confined. The fresh air is just better. Our headquarters is a vibrant place. Chapters meet, engage, take field trips. Conferences are held, such as GLEX.

Something a bit more tangible are the formal publications received by members*, *The Explorers Journal* and *The Explorers Log*. They are available in digital format to all, upon their date of release. A few weeks later printed copies may be received by mail, an option you can decline if you choose. Some do so for environmental reasons and/or the cost of distribution. It is your choice; both are part of membership. The *Journal* is TEC's public report of expeditions. The *Log* reports on internal activities and items of interest to explorers.

The Explorers Club now has several separate grant opportunities. Some are restricted to students and post grads. Some to members only. Some are open. These include The Rising Explorer Grant, The Exploration Grant, The Rolex Exploration Club Grant, The Stephenson Explorers Advancement program, the Fjällräven Field Grant, and the Discovery Grants. This years applications were introduced on our website.

In 2021, we initiated a program to recognize fifty people changing the world who the world needs to know about. It was received with such a positive response that your Board has authorized that we make this an annual recognition.

Honorees need not be a member, but those selected become a Fellow or Member. As you roam the world keep an eye out for explorers doing important work that needs to be known.

Then, there are also the gatherings we have, notably ECAD and the Lowell Thomas Dinners with their attendant lectures, awards, and galas. A decade ago, the first LTD held outside of Manhattan was hosted by the St. Louis Chapter, a festive gala at Forest Park's elegant Missouri History Museum. The traditional auction featured an unusual offer, a puppy from the Missouri Animal Protection Association, arranged by the current Chapter Chair's husband, Sandy Peters. The Langan family was the successful bidder. Louis, aka Louie, is now 10; he is a remarkable family member. A sibling of four mutts left roadside on a county country road, he fetched a pedigree price for TEC and has provided a value beyond calculation for all who know him. He is doing just fine and becomes a generous friend to all who visit! A grateful unexpected member benefit!

* YOU GET BOTH THE *JOURNAL* AND *LOG*, BY DEFAULT. TO DECLINE THE MAIL VERSION OR CHANGE YOUR OPTION, SEND AN EMAIL TO MIGUEL VASQUEZ AT HEADQUARTERS <MVASQUEZ@EXPLORERS.ORG>

Reason for Joy

Conservationists around the world can celebrate the announcement on October 8, that President Biden has reinstated the Bears Ears National Monument (as well as the Grand Escalante and the Atlantic Ocean's first marine monument,

the Northeast Canyons and Seamounts) to their original scale as designated by President Obama in 2016. In 2017 they had been decimated by the 45th president. This is a monumental move to protect the lands of the Colorado Plateau, as discussed



Vistas of Bears Ears National Monument viewed beyond Comb Ridge from above Bluff, Utah.



Aerial of the eponymous high mesas: The Valley of The Gods, within the monument. Photos: Lee Langan.

in my article in the *Explorers Journal* of Summer 2017, and a significant recognition of the

goals to protect important lands supported by The Explorers Club since our founding.

seeker to space

SIAN PROCTOR PHD MN'21

*why go?
because i can
it's what humans do
we explore, we observe, we learn
seeker*

One of the things that was most important to me as I went through all of the things that I packed to space was making sure that I got a photo of me holding the Seeker artwork. This piece of art was one of the first pieces I created as a new afro-futurist artist. It came about ironically the same way that I won my seat to space—through Twitter.

One night I was tagged in a Twitter post to Richard Garriott saying he is going down to the Marianas Trench and taking poetry with him—do we know each other? I saw this text and chuckled internally, “I have met Richard, but he has no idea who I am!” The next day to my surprise Richard replied and said, “Yes, I can take your poetry, but I am going next week. If you can send me a ‘cinquain’ poem (2 syllables, 4 syllables, 6 syllables, 8 syllables, 2 syllables) I will take it with me to the Marianas Trench.” I immediately thought I have to look up this type of poem when Richard messaged me through Twitter and said, “I notice you do art too. If you can send me art in the next 24 hours I can take that too.”

Because I am a new artist, and I combine art and poetry, this was a pivotal moment for me. Here was an opportunity for someone that I have admired from afar, a person who has traveled to space and is now the president of The Explorers Club, to experience not only my art and words but to take them to the place where I was born, GUAM! So I messaged Richard back and said YES I will overnight you something tomorrow and shared with him the story of me being born in Guam, because my father worked on Guam during the Apollo missions, knowing that he would get the significance and irony of this moment.



Dr. Proctor's art and poem floating in space on Inspiration4 flight.

I jumped up out of my bed and ran into my art room. Of course, it was the middle of the night when I read Richard's Tweet, and I thought, “I have to make art and a poem tonight so I can overnight this to Richard later that day!” As I looked at my wall with all of my beginnings as an artist I thought, “Should I do a collage, a line drawing, or a watercolor?” I immediately was drawn to the line art and had this vision of the Marianas trench being illustrated in beautiful metallic colors with my AfroGaia character keeping watch. So with black paper, metallic markers, and a ruler in hand, Seeker was born.

Constructing a structured poem was something I hadn't done since living in the HI-SEAS

Habitat in 2013. During that four-month simulated Mars mission, I challenged myself to create various poetic forms not knowing that one day poetry would become a central part of my life. With this line drawing I wanted it to express the human experience of exploration, but how do you do that when you are limited by syllables? The poem I penned is above.

That was how Seeker was born. I FedEx'd the poem and original artwork along with multiple copies, including postcards, to Garriott with a note saying “Can you please take these postcards to the bottom of the ocean with you because I would one day like to send them to space on a Blue Origin postcard flight.” I really wanted my art to end up in space one day. It was something that I could only just imagine not yet knowing that Inspiration4 was about to change my life. I shipped my art to Garriott on February 19, 2021; I found out that I won the Inspiration4 prosperity seat on March 7, 2021!

Now on orbit, I proudly pulled out my adventure art—art that has traveled to amazing locations. Not only has it been to the bottom of the Marianas Trench with Richard Garriott, it next went down to the Titanic with NASA Astronaut Scott Paraynzinski and his wife Dr. Mini Wadhwa in July 2021. Seeing my art and my words floating in space next to me was a dream come true.

Upon returning to earth I donated The Seeker artwork to St Jude Children's Research Hospital as my contribution to our Inspiration4 mission's goal of raising at least \$200,000 to end childhood cancer. That artwork goes up for auction on November 6, 2021 (after this is written), and I hope whoever wins it loves this piece of art as much as I do.

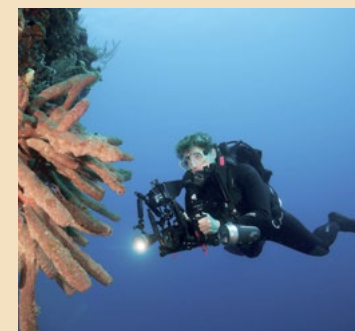
COMPASS POINTS

reports from chapters

Make Lemonade

NANCY MCGEE FN'13

Vice President Chapters



Nancy McGee in Greenland's waters

An early October weekend was food for the soul for me. I presented at my first face-to-face dive show in 18 months: Boston Sea Rovers 67th Annual Clinic, which was also the last dive show I attended just days before the

pandemic shut the world down. From behind masks, we lamented on the expeditions missed but quickly shifted to the opportunities found in our own backyards. It was no surprise that the speaker list was rife with Explorers Club members who had made hay instead of sourdough bread.

Treasured friends from the Canada Chapter, Julie Ouimet FI'16 and Michel Labrecque FI'16, (who have twice carried the Explorers Club flag on expeditions to Clipperton Atoll) found themselves in a rigid lockdown in Quebec. Lamenting the cancellations of foreign travel, Michel and Julie looked locally to find abun-

dant opportunities for exploration above the 49th parallel, especially in Anticosti Island. Social distancing is not a problem at 90' in 34°F water! Their tenacity in conducting countless exploratory dives paid great dividends with footage of remarkable biodiversity; it opened the door for further exploration in the months and years to come. Their unfortunate incarceration positively changed the course of their lives as they focus on a unique and relatively untouched region of their own province.

I had the great honor of introducing another friend, Marty Klein FE'79, who carried the Explorers Club Flag 65 to Loch Ness, Invernesshire, Scotland. Marty mentored MATE robotics teams virtually and was a featured speaker for numerous podcasts whilst working from home. His mentorship of many helped grow the expertise of young scientists and engineers in fields tied directly to exploration.

Jim Stayer FN'19 and Pat Stayer FN'19 from the Great Lakes Chapter took their found time to do a deep dive into their archived footage, creating a remarkable program showcasing the efforts of citizen science in the Sea of Cortez. Other friends searched for shipwrecks off the coast near their home on Long Island, and another filmmaking couple completed an award-winning animal behavior film from 12 years of archived film.

A world-wide pandemic cannot stop the explorer's innate curiosity and drive to discover. During the recent Chapter Connect with our Latin America Chapter, presenters summarized ongoing work in some of the world's most remote regions. Despite the obstacles, our drive to inquire is intact and strong. While we made have had to adjust focus, exploration continued in some surprising ways, many in our own backyards.

ANZEC Chapter

ANDI CROSS MI'20
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Amidst the pandemic, the ANZEC Chapter has found ways of remaining busy. To start, ABC Radio, which is broadcast across all of Australia, is continuing its interview series with the members of our chapter and keeping track of their amazing work. ABC Radio Journalist, Glynn Greensmith, presents his show, "It's Not Just Cricket," each Saturday during which he interviews different ANZEC explorers regularly.

His special guest on September 25th was author, explorer, adventurer cyclist, educator, speaker, tennis professional and philanthropist—Kate Leeming MI'13 has cycled a distance of more than twice around the world at the equator. In 2010, she became the first person to cycle an unbroken line from Africa's most westerly to its most easterly point, from Pointe des Almadies, Senegal to Cape Hafun, Puntland, Somalia. In her new film, *The Lights of Ladakh*, Kate details her 2018 Breaking the Cycle in Ladakh expedition. This was a 1200-km cycle over some of the world's

highest mountain passes. It was also a journey to bring light and education to the 1,100 year-old Ralakung village, the oldest and most remote village in the Zaskar region of the Indian Himalaya. *The Lights of Ladakh* is a great example of how exploration and adventure can be harnessed to support people and the planet. The story is dedicated to Kate's father, Ted, who passed away just before she embarked on this personal journey. *The Lights of Ladakh* premiered September 23, packaged with a pre-recorded interview and concluding with four short bonus videos about what's up next for Kate.

Members interviewed on ABC's "It's Not Just Cricket," series in the past six weeks included Rob McCallum MN'09 and Jessica Watson MI'17. Rob is an expert in deep-water submersible operations and has led multiple expeditions to the *RMS Titanic* and German battleship *Bismarck* performed in the twin 'Mir' submersibles. He is one of the few people to travel to the deepest point of



Cyclist Kate Leeming



Circumnavigation sailor Jessica Watson



Deep-water submersible expert Rob McCallum



Diver Jayne Jenkins.
Photo: © Don Silcock, Indopacific images

the ocean at the bottom of the Mariana Trench. Jessica Watson has navigated and sailed some of the world's most remote oceans. She survived seven knockdowns and 210 days alone at sea to become the youngest person to sail solo, nonstop around the world at age 16.

In other news, new membership cards have been printed and distributed within our chapter. The image on the card was taken by a member of our chapter, Jayne Jenkins FI'16, at Osprey Reef in the Coral Sea. Active in the diving industry for over 40 years, Jayne is an award-winning un-

derwater photographer. Among her many occupations, she is a regular editorial contributor to *Ocean Geographic Magazine* and is Chief Expedition Photographer with the Ocean Agency. In 2020, Jayne was chosen to be one of 10 Ocean Decade Champions for the United Nations.

As we start to inch our way closer to open borders nationally and globally, the ANZEC Chapter is gearing up for more exploration, adventures, storytelling and planetary action. We can't wait to share what we have in store next season.

Canada Chapter

GEORGE KOUROUNIS FI'09, CHAPTER CHAIR
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While indoor meetings have yet to resume, informal gatherings at a patio bar in Toronto have given some of the Canadian members the long-awaited chance to see each other face to face. The best part of the Explorers Club is sharing stories with other members, and it's refreshing to be able to see old friends again.

Earlier this year, Christian Stenner FI'17 completed the latest in a multi-year project to explore a new and expanding system of glaciovolcanic caves in the crater of Mount St. Helens volcano. Spending a week

camped on the side of the 1986 lava dome, Christian led the exploration teams as part of an international research team. Over 3 kilometers of cave passages formed in the Crater Glacier by advection of volcanic heat and gases have been explored so far. Rodan Cave, first discovered in 2019, was explored and surveyed to confirm it as the second longest and second deepest glaciovolcanic cave in the world. The expedition facilitated testing by NASA Jet Propulsion Lab of robotic technologies for examining ice for microbial communities,



Members enjoy a patio drink. Photo: George Kourounis



Gilles Gagnier, Chief Operating Officer
the Royal Canadian Geographical Society

for metagenomic studies of cave microbes, and for the discovery of antibiotic potential of those microbes. These help in further understanding volcano-ice interactions and the hydrothermal system of the volcano.

The Canadian Chapter lost an outstanding member and friend. Gilles Gagnier FI'09 who was best known as chief operating officer of the Royal Canadian Geographical Society and publisher of *Canadian Geographic Magazine* where he worked to showcase the

beauty and diversity of Canada. He was a patron of exploration, a champion of wildlife & ecosystem conservation, a staunch supporter of indigenous recognition & reconciliation, and a powerful educator. His publications reached millions of people. He influenced and encouraged young and old alike to care for the natural world, our country, and each other.



Glaciovolcanic volcanic cave on Mount St Helens

Chicago/Great Lakes Chapter

DEANA WEIBEL MN'20
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Summer 2021 saw many of the chapter members get back to exploration. Some of these expeditions were very ambitious; some were more modest including my own three-generation family voyage to Sequoia National Park.

Paul Bakken MN'19 spent two weeks in July as Mission Generalist of a six-person analog lunar expedition at the LunAres research facility in Piła, Poland. The LunAres habitat is located at a former Soviet airbase in the western part of Poland that was decommissioned and is now used mostly for recreational aviation. One of the remaining hangars is the outside EVA area with a dome and a number of modules created from shipping containers. Paul's time at LunAres was focused mainly on testing a new analog spacesuit of his own design known as the BORPSuit named after Paul's commercial space company, Bakken Offworld Research Products. The spacesuit is meant to improve upon other analog suits, which tend to fog up during use. It was assembled mostly from commercially available

parts off the shelf, and Paul fabricated the rest using a 3-D printer. Paul also worked on improving the standard-issue food rations for analog lunar missions which normally use dehydrated food from LyoFood, which Paul describes as similar to European style camping food. He creates augmented foods using different powders and solidified coconut oil. He reports that his proudest achievement was making an analog lunar mission crême brûlée. Podcaster Beth Mund covered the mission on her show.

In August, Jeff Seelbinder AN'18 conducted a mountaineering course climbing Koma Kulshan (formerly Mt. Baker) in Washington State following the Coleman Glacier Route. His course was held over nine days and focused on knot tying, traveling by rope, belaying, and using crampons and ice axes, etc. They climbed the mountain on the ninth day as their final exam. He notes that the weather was extremely hot and this made the glacier ice melt, increasing the size of the crevasses; this made the climb difficult. They started their climac-



Paul Tomko (left) in standard analog EVA suit; Paul Bakken in prototype BORPSuit. Photo: Beth Mund.



Jeff Seelbinder at the Koma Kulshan (Mt. Baker) summit. Photo: John Cadwalader.



Timothy Jacob scans bottom of a 300-acre spring. Photo: Timothy Jacob.

tic climb from base camp at 6300 feet at 2:30 am, reaching the summit of 10,781 feet at about 9 am. The victorious students returned to basecamp later that afternoon to rest and fuel up on hamburgers before heading home.

This summer, Timothy Jacob MN'20 did some reconnaissance work for a future project on freshwater lake mapping in southeastern Wisconsin. He conducted a trial of his citizen-science project, *Lake of Thunder*, at a 300-acre spring-fed lake. Using consumer-grade side-scan sonar equipment and software, Tim assembled a high-definition composite mosaic map of the spring's bed, using an innovative technique of his own invention. He hopes to provide an inexpensive means for local conservation groups in the

Midwest to help state governments keep track of invasive species. The resulting maps will also improve the identification of concentrations of freshwater springs in lake beds and the location of submerged cultural heritage artifacts. Tim's overarching goal is to empower local ecosystem champions in assisting state-level attempts to protect sensitive freshwater environments.

Great Britain Chapter

FELICITY ASTON FI'15, ON EXPLORATION

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Diversity and Inclusion in Exploration: modern diversity shown in explorers of Antarctica.

The role of explorer is the same today as it always has been – to travel with purpose and contribute new knowledge or understanding—but now have a greater awareness that how we go about exploring is as important as what we discover. Exploring needs to be representative, inclusive and ethical. Something it has often not been in the past, and the consequences of that failure are now clear. As humans strive towards becoming an interplanetary species, I hope this is a lesson we can take forward with us.

Reflecting upon what is an achievement, and is it the same as success? I think both these terms are often labels that are attributed by others. I've seen diamond dust a lot in Antarctica—frozen humidity in the air that catches the light and appears to sparkle. You only see it in the periphery of your vision because if you try to stare at it directly, it vanishes. I think success and achievement are both a little like this. If you think about it too hard you will end up dismantling everything you have ever done and feeling like ev-

everything is ultimately meaningless! A few years ago I returned from an expedition and although it achieved, and in some cases exceeded all its aims and objectives, it was the first time I ever struggled with a feeling of failure. I was critical of my own performance, acutely aware of circumstances I should have managed better and generally disappointed in myself. It took many months of quiet processing before I was able to extract the lessons I needed from the experience and to move on with positivity. It is only now that I consider it a success.

The future of exploration, given climate change, has exploration even more vital than now. As Sylvia Earle points out so eloquently, we are living at the exact moment humankind realizes it can impact global processes. As we have seen so dramatically in the last half-dozen decades climatic impact can be devastating, but our impact can be positive. Now we know that we have that power. Change can only ever be driven by greater knowledge, so in order to drive the change we and the planet needs, explorers have a clear role in contributing the knowledge to do that.

Reflecting on how do you deal with disappointment pre, during and post expedition, I've watched peers within the world of exploration struggle with what can feel like a conflict between the drive to explore and 'normal life'. It's all too easy to be at home dreaming of the next expedition only to spend the expedition desperately longing for home. I've worked hard to try and make the two extremes of my life work together rather than against each other: creating a home life that has challenge to match any expedition for a start and striving to find the joy in any experience regardless.

I don't think I ever made a deliberate decision to become an explorer. I feel like I had very little choice in the matter. In the same way it is hopeless to try and convince a determined flat-Earther that the planet is round, it is impossible to truly explain to someone who does not feel the urge to explore why exactly I do it. Expedition ideas are born from curiosity. I've learnt that the good ideas are the ones that simply won't go away, that inhabit my daydreams (and often anxious nightmares too!) until I have no choice but to give them my attention.

Northern California Chapter

WILLIAM M. PHILLIPS III JD MN'20

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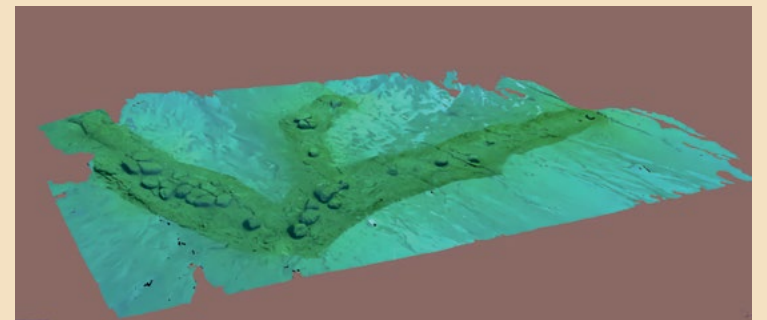
The Northern California Chapter continues to move forward even though we are still following proper protocols in view of the ongoing COVID-19 pandemic. We have been able to have our regular presentation schedule, and the topics have been most enjoyable and educational. Our June presentation was entitled "In Harmony with Life in the Natural Ocean: A Study of Old Animal Behavior". The speaker, Amos Nachoum NM'04, has evolved a personal style of wild animal photography that is both beautiful and awe inspiring. This style is as close to natural as is possible, really close, as Nachoum joins the residents of the oceans in the water with nothing more than his cameras and a non-threatening demeanor. As a result, his photos and videos are so natural that one almost feels that one is there in the water with him. In his talk, Nachoum highlighted experiences with three big-animal targets: a leopard seal; a Great White shark; and a polar bear with two cubs. The first was a leopard seal feasting on a penguin in Antarctica. How does a seal manage to eat a bird it has freshly killed without choking on its feathers? Another, the Great White shark. The presenter amazingly explained how the Great White is actually quite a sociable creature when it is not hunting. Something shark movie fans might not believe! Sometimes the Great White actually goes up to three weeks between meals. Plenty of time to make friends! The presenter also talked about and showed pictures of a mother polar bear taking gentle care of its young cubs. He showed pictures of the Mama bear watching a breathing hole waiting for a seal pup to peek through the ice. Hmmm. Protein! Amos Noachoum operates through his company, Big Animals LLC and is planning his next expedition to the Galapagos in 2022.

In our September meeting Dr. Ashley Lemke presented a fantastic talk about Underwater Archaeology. Specifically she discussed and showed pictures of one of her underwater expeditions along the bottom of Lake Huron. Dr. Lemke explained that similar to today, the ancient Great Lakes were dynamic, unique, and significantly impacted regional climates and cultures. At the end of the last Ice Age, water levels were much lower, and the Lake Stanley phase in Lake Huron provided a dry land corridor for people and animals to cross the basin. She identified this landform as the Alpena-Amberley Ridge (AAR). Using a combination of high-resolution mapping, remote operated vehicle survey, and direct excavation and sampling via scuba, Dr. Lemke's interdisciplinary team documented underwater archaeological sites and paleo-environmental data on the AAR. Data collected to date includes 9,000-year-old stone constructed features for caribou hunting, preserved trees, and organics, animal bones, and most recently, obsidian stone tool flakes. Dr. Ashley Lemke is an Assistant Professor at the University of Texas in Arlington and Chair of the Advisory Council on Underwater Archaeology. She is a leading researcher on the archaeology of hunter-gathers. She has worked extensively on both terrestrial and underwater archaeological project from the Lower Paleolithic in Europe to the 19th century Nunamiut archaeological sites in the Arctic.

We are planning two field trips to include: Survival Field Medicine with our chapter member Dr. Paul Freitas MN'10 and a 2-day expedition to Pinnacles National Park; schedules are dependent upon the pandemic impact. A holiday get together is hopeful. All in all, the Northern California Chapter has been quite busy!



Amos Nachoum images of leopard seal, Great White shark and polar bears.



Lake Huron underwater archeology boulders corralled caribou.

New England Chapter

BJ HILL MN'20

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Matthew Picarelli-Kombert TM'21, studying for his Master's of Historical Archeology at the University of Massachusetts Boston, reports on the analysis of six separate colonial-era middens (waste piles), discovered in Mystic, Connecticut. The dig site, Calluna Hill, is a Pequot village that was burned during the Battle of the English Retreat on May 26, 1637. The goal of the analysis is to see how individual households differed in the formation of their middens. Each has a noticeable variation, though only about 10 meters away from each other. One household, for example, contains soft-shell clams exclusively, while another nearby is split between oysters and soft-shell clams. Two middens were entirely excavated and four were sampled. Identified in this data-

set were soft-shell clams, oysters, quahogs, channeled whelks, blue mussels and scallops. An arc of postholes was detected near one of the shell middens and likely represents a domestic structure. Also found were bones of white-tailed deer, dogs, foxes, seals, birds, rodents and domesticated pigs—the earliest domesticated pig identified at a New England indigenous site. Various household items of indigenous, and people of Dutch or English origin, were found within and outside of the middens. The European artifacts include pewter buttons, glass beads and iron knife blades, while the native articles include pottery and wampum beads. Evidence of European goods repurposed by the Pequot tribe include a hide scraper made from a brass kettle



Mark Allio and BJ Hill, paddleboarding the Narrow River, Narragansett.



(l-r) Greg Deyermenjian, President Richard Garriott and Mark Allio



Mark Fowler (left), Greg Deyermenjian (center), Capt. Breezy Grenier (right of Greg)

and a brass signet ring with traces of what appears to be a thunderbird carved into the face.

As the pandemic resurgence continues to affect travel, many New England members have pursued interests closer to home, venturing out locally. BJ Hill MN'20 and Mark Allio MN'98 spent time on the Narrow River in Rhode Island, and Chapter Chair Greg Deyermenjian FN'88 and Officer-at-Large Mark Allio ventured down to New York headquarters for the August 9 BBQ and enjoyed quality time with President Richard Garriott LM'98 and other members, including Capt. Breezy Grenier MN'17, Rodney Brown MN'02, and Mark J. Fowler MN'02. We look forward to safe travels and ECAD next year.

The New England Chapter returns to the site of our usual rousing meetings and presentations, the Doubletree Guest Suites Hotel overlooking the River Charles in Boston, on October 25. Further news of explorations, research and plans will be shared through discussion and presentations at our biannual New England Chapter Explorers Roundtable.

New York Headquarters

ZYGMUTH MALINOWSKI FR'07
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It was a pleasant occasion and re-union for attending members at Friday September 24's evening Frolic for the first time since the pandemic shut down about one and a half years ago. Caution still prevailed with a 30-person limit and vaccine proof required during check in. Executive Director Will Roseman MR'07 greeted guests and President Richard Garriott LM'98 chatted with members and answered questions. Cave explorer Chris Nicola FR'04 had suggestions for a possible future member event. Among those attending WERE Journal Editor Angela Schuster FR'91 AND Carl Schuster FE'74, who spent

most of last year researching vintage Hudson River area maps for his ongoing project. Jack Reilly MED'81, contributor to the popular 'Backwards Glance' series for the Log, chatted with President Garriott. Board members JR Harris MR'93, Mark Bryan-Brown MN'95, and Martin Kraus MR'15 mingled with guests as did former treasurer Robert Maroney MR'14. Geologist Martha Shaw FN'06 stopped by and updated us on her excursion to the Azores and her dive during GLEX 2021. She noted that the Azores are located above an active triple junction between three of the world's major tectonic plates. The evening was



Evening frolic on Lefraq Terrace: Angela Schuster, center table, with Carl Schuster, standing



(l-r) Roberta Kravette, Richard Garriott, JR Harris, Jack Reilly

enlivened by President Garriott's two young children who came to the club dressed in fluffy animal costumes and accompanied by their family pet miniature husky named Delta.

Following the Frolic, the first live Monday lecture titled *The Archeology of Indiana Jones* by David West Reynolds PhD opened for public attendance on October 4. Introduced by Ann Passer we enjoyed the first hybrid event where Sarah Parcak PhD joined us remotely as host. Luis Muga MR'05 and Alex Serrano provid-



"The Archeology of Indiana Jones" first public lecture in Clark Room since shut-down. Photos: Zygmuth Malinowski

ed technical support. For safety reasons this event was also limited, to under 40 persons, and after announcement sold out within a few days.



John and Doug at one of the mine entrances. Photo: Dave Lester.

Philadelphia Chapter

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This summer Doug Soroka FN'06 and John Scheltens FN'91 spent time exploring for lost uranium mine entrances in the west. During the 1950's there was a great rush

for uranium ore. Mining claims were not always recorded and smaller workings were hit and miss operations on public lands, therefore many mines were worked and



A mine interior, from the entrance with natural light. Photo: Doug Soroka.

just left and forgotten. The team searched a high plateau series where access is only accessible on horseback. Very steep canyons along with surrounding private ranches made public access difficult. Access roads have been long overgrown and have weathered back into the landscape.

Entering abandoned mines is dangerous and should not be done. Their visitation was to the entrance, and they did not go in.

They used camera lenses to see as far back as their lights would allow. Many of these mines were only bulldozer scrapes or wall dynamite blasts to check for ore. Old food tin cans gave a clue that these were moving camps of the miners. Recorded mining records are scarce and unreliable due to the haphazard, free-for-all history. The only reliable records are of tonnage removed and what was paid for them.

Rocky Mountain Chapter

JEFF BLUMENFELD FN'89, CHAPTER CHAIR
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Chapter members spent the better part of a September Saturday "exploring" a large historic lead and silver mine dating to the late 19th century in the hills above Boulder. The White Raven Mine, owned by new Club member Markus Raschke FN'21, a physics professor at the University of Colorado-Boulder, has been part of the Captain Jack mine/mill superfund cleanup and remediation project. Raschke purchased the property to protect it from development. Temperature outside was in the 80F's, inside was a cool mid-

50s. The group trekked over 400 feet inside a hillside. Nonetheless, we saw signs of pack-rat nests built in the dark. The mine tour followed an outstanding picnic at the mountain home of member Andrew McKenna MN'07 and his wife Jacquie. Frustrated as we all are about Covid restrictions, the Rocky Mountain chapter requested that Club archivist and curator Lacey Flint conduct a live, virtual tour of the Research Collections. As the mid-September event came together, the chapter naturally thought to



Chapter members display new banner before exploring 400 feet into lead and silver mine, Ward, Colorado.

open it to all 3,600 of us worldwide. The 60-minute event offered insight into some of the Club's holdings which include an archive of documents, photographs, lantern slides and maps from late 19th century exploration to present day; artifacts ranging from polar sledges to historic flags that have flown to the moon; a library housing approximately 14,000 volumes; from Matthew Henson's mittens to a pocket-sized Club flag that flew to the moon. Our



Club archivist Lacey Flint shares unique artifacts in a live stream

thanks to chapter advisory board member Jeffrey Donenfeld MN'14 for handling the camerawork, and the staff team of Kevin Murphy and Lacey for sharing an intimate look at our 117-year heritage "Live From New York." If you missed the original broadcast, watch it here:

<https://explorers.org/events/detail/behind-the-scenes-tour-of-the-explorers-club-research-collections>

San Diego Chapter

CHARLENE GLACY MN'09, CHAPTER CHAIR
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Congratulations to Amber Sparks MN '14 and Emily Hazelwood MN '14, Co-Founders of the Blue Latitudes LLC. They are the proud recipients of the prestigious National Science Foundation Convergence Accelerator Grant for their proposal titled "Advancing Innovative Convergence Between Fisheries and Offshore Energy to Drive Adaptive Stewardship of Fisheries Habitat in a Dynamic Blue Economy." They will serve as principal investigators along with Louisiana State University, LGL Ecological Research Associates, and Global Fishing Watch to accomplish the goals set forth by this two-year, \$5 million dollar project. The objective is to quantify how fisheries use the productive artificial reef ecosystems found on oil and gas platforms in the Gulf of Mexico, by defining the value of these offshore structures as a fisheries resource, and extrapolating this valuation process as a model for current and future offshore development, including wind installations.

David Smith, Ph.D. FE'53 has been continuing work on his memoirs and family history project. Now retired, he is a geologist and environmental scientist with a fifty-year

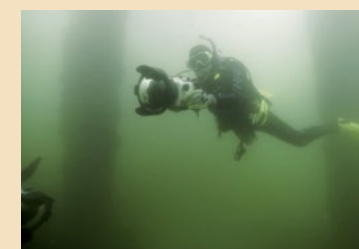
fascination with volcanoes, earthquakes and other natural phenomena that cause vast devastation and human suffering. He expects to celebrate his 70th year of membership in 2023, serves on the Legacy Society committee and is a founding member of the San Diego Chapter. Martha Shaw LF'06 joined the GLEX 2021 team in Portugal, followed by shark diving in the Azores with Amos Nachoum MN'04 and EC 50 recipient Mario Rigby MN'20.

In September, Prof. Tom Levy FN'09 and UC San Diego graduate students Loren Clark and Tony Tamberino have been developing and testing a new underwater photogrammetry system just off the Scripps research pier in La Jolla. This is in preparation for marine archaeology research in Greece in October with the University of Patras, and in November with the University of Haifa in Israel. The latter is part of the Scripps Center for Marine Archaeology Koret Israel Project.

The San Diego Chapter has continued hosting monthly webinars in conjunction with the Southern & Northern California Chapters. Vice



Nancy Nenow presents David Smith with a certificate of appreciation for his years of TEC membership and service to the San Diego Chapter.



(l-r) Loren Clark, Tom Levy, and Tony Tamberino, Scripps Research Pier, La Jolla. Subsurface camera testing.

Chair of Programs David Dolan MED'03 arranged several engaging presenters including John Maclean FN'02 discussing his new book *Home Waters*. Biologist and research associate at the Smithsonian, Mark Moffett, Ph.D., aka "Dr. Bugs," spoke about his book *The Human Swarm*. Amber Sparks and Emily Hazelwood shared their recent documentary *Faka'apa'apa*



Shark, Faial, Azores, diving with EC50 recipient Mario Rigby and big animal photographer Amos Nachoum after GLEX 2021. Photo: Martha Shaw



Picture of His Life was premiered in Faial, Azores on July 16, hosted by Amos Nachoum, Noiberto's Divers, Martha Shaw, Hotel Canal & Whaling Factory. Participants at GLEX. Photo: Martha Shaw

about humpback whales and eco-tourism in Tonga.

Southern California Chapter

LISA SONNE MN'98

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"Not only are you adapting to living in isolation and figuring out how to best reach your scientific objectives, you are quickly learning how to put the team first and to do everything for the group," said Dylan Dickstein TM '19, referring to his time on Mars at the Mars Desert Research Station (MDRS), a high-fidelity simulation station in remote Utah. A PhD candidate at UCLA in Aeronautical Engineering, he has also worked with SpaceX, Virgin Galactic, United Launch Alliance, and The Aerospace Corporation. "Together the team gathered soil to perform genomic sequencing. They quantified the merits of natural emergency shelters in the region, built and ran a hydroponic garden, conducted a dexterity and psychological study, and compared the growth rates for plants in Earth soil versus Martian regolith." Dickstein also said, "NASA astronaut Jessica Watkins, who is preparing to fly to the Moon as part of the Artemis Program, and Sian Proctor, who recently returned from space after a three-day stint in low-earth orbit as part of the SpaceX Inspiration4 mission, have both been crew members at MDRS.

Alan Feldstein MN'09 returned from Kenya, Tanzania and South Africa after he visited his Maasai "son" Patrick Papatiti, who runs anti-poaching teams of rangers in the conservancy next to Amboseli National Park. They lead a group of 11 veterinarians on a conservation safari. "We did some amazing things," Feldstein said, "including herding and capturing impala, darting and collaring rhino, and learning about the local conservation issues." A lively Zoom call of the SoCal Chapter on September 10t dove into the woes and wonders of traveling during the global pandemic. Co-host Dr. Maria Baltazzi FN'14, wrote, "Alan and I both talked about how traveling through Africa was a good experience. If you are willing to jump through the Covid-19 hoops to get to a destination, you could

be rewarded by empty camps."

Participating in the call were four new 2020 TEC members and producer Gale Anne Hurd MN'03, who shared that she wants to reactivate her Club involvement. She tried to outrun the pandemic in a bucket list of around-the-world trips starting last February. After many adventures she finally stopped the trip in Jordan after being evacuated from Petra by camel due to flooding threats from high rains. Chapter Vice Chair of Programs, volcanologist Jess Phoenix FN'15, spoke about traveling abroad for the Discovery show *Searching for Atlantis*. Broadcast journalist & presenter Christiana Pascussi MN'20 spoke about location shooting on several continents, and Chris Kostman FN'98 spoke about how his high endurance races have been impacted by Covid-19. The new Chapter Chair Steve Elkins FN '16, commented, "I have started a research project to be culminated in a book about pre-Columbian maritime explorations of the Americas. I am doing this in collaboration with a Chinese writer, which has allowed for some interesting access and perspectives." If any members have information relating to this subject please contact him.

Explorer artist Danielle Eubank MN '19 is often inspired by her participation in marine expeditions that recreate the routes of historic sea voyages. She will have a major show of her Southern Oceans paintings at the Pamela Walsh Gallery in Palo Alto, California, November 18 to December 23, 2021, and a one-woman show at Santa Ana College gallery, February to April 2022.

On August 21, Eubank, Baltazzi, Kostman and Phoenix met with fellow executive members Chapter Treasurer David Press LM'18, Owen P. Doonan FP'16 and Lisa Sonne MN'98 for an invigorating lunch meeting in the beautiful home garden of Steve Elkins in Pasadena with Pierre Odier MN'96 and former Chap-



At Mars Desert Research Station: collecting samples, Alex Coultrup (left) and Dylan Dickstein analyzing data, EVA simulation. Photos: Dylan Dickstein collection



Alan Feldstein with a collared Rhino in Africa.



Danielle Eubanks with two of her paintings.



Chapter Chair Elkins.



Solar eclipse "diamond ring"

Southwest Chapter

ROBERT LOUIS DEMAYO MN'01

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Paul D. Maley FN'21 will be looking to the heavens to capture an eclipse. We wish him good weather for his third trip to Antarctica in December. This will be his second trip to witness a solar eclipse; the first of which was from an aircraft flying over Antarctica. Maley is from Carefree, Arizona, and holds the record for the most solar eclipses (77) observed by anyone living or dead. He has been leading expeditions since 1976 to remote parts of the world as public outreach for the NASA Johnson Space Center Astronomical Society. He researched changes in the solar radius by setting up observing posts at the edges of certain eclipse paths and has organized upcoming total eclipse cruises in 2023 (Australia), 2024 (Mexico) and soon to the Red Sea in 2027. His world travels have taken him to 296 countries

and pseudo-countries. In 2019, a binary asteroid was named for him. His pioneering observation in 1977 led to the possibility that asteroids have natural satellites. Since 1994, 433 asteroids have been found to have companions.

Scott Trageser MN'18 continued to publish reptile and amphibian discoveries from Ecuador and Bangladesh and developed non-profit programs to facilitate conservation efforts worldwide through The Biodiversity Group. He has been leading the group in their charge to assist conservation organizations around the globe. Through an altruistic fiscal sponsorship model and a deep understanding of their struggles, they are able to democratize critical resources, thereby allowing conservationists to focus less on administrative tasks and more on fieldwork.



Solar eclipse prominence



Paul Maley in Antarctica, 2012

Furthering their mission to facilitate conservation worldwide, they have also been developing an innovative online resource at www.ConnectandConserve.org. This aims to aggregate and convey the work of all conservationists worldwide to better visualize and coordinate efforts and provide a donation portal for the public that makes it much easier to discover organizations saving their favorite species. Staying connected to their roots, Scott's staff has also been busy in the field on another expedition to the Rio Manduriacu Reserve in Ecuador, with potentially three novel species of snake.

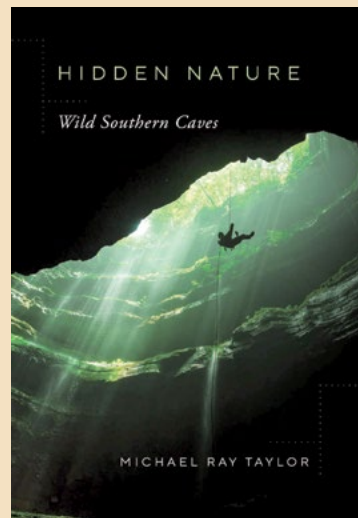
This fall, Tara Lumpkin FN'18 focused on building awareness for the plight of biodiversity through mentoring and publication. As the founder

of nonprofit Voices for Biodiversity based in Taos, New Mexico, she works with individuals worldwide to share important stories about nature and to build a community around biodiversity conservation. The mission is to empower and create a grassroots story-sharing community dedicated to saving biodiversity, from New Mexico to Manhattan to the Maasai Mara. The organization believes that building awareness about the biodiversity crisis through media channels alone is not enough. Voices for Biodiversity takes an anthropological approach to biodiversity loss and provides mentoring and a website to publish content creators' stories, photo essays, podcasts and videos. "When one is heard, one will act," she says.

St. Louis Chapter

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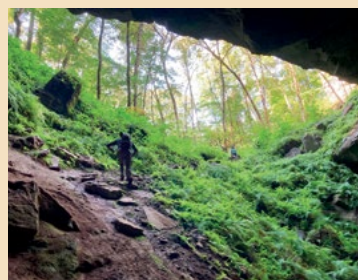
Michael Ray Taylor FN'21 co-led a research team that has discovered hundreds of unusual microbes within a relatively unexplored Tennessee cave. This microbial life appears to support a larger ecosystem of invertebrates and salamanders located far from sunlight or surface nutrients. Dr. James Engman and students at his Henderson State University DNA lab analyzed samples that Taylor collected in the cave, identifying organisms previously found in deep-sea hydrothermal vents (*Methanopyrales*, *Epsilonproteobacteria*), beneath three kilometers of polar ice in Antarctica's Lake Vostok (*Hydrogenophilus Thermoluteolus*), and in volcanic hot springs (*Spirochaeta*, *Tepidamorphus*). Some have never been identified elsewhere. How did such life wind up in Middle Tennessee? The answer, Taylor believes, may be a deep global biosphere, a model for life that could exist today beneath the surface of Mars or other bodies in our solar system. A nature writer by profession, Taylor's enthusiasm for caves has led him to collaborate with scientists from NASA and other research centers in a variety of published studies. Among other books, he is author of *Hidden Nature*, *Dark Life* and *Cave Passages*, and has written about science and nature for The New York Times



A chapter describes the discovery of the Petroleum Passage.

and many other publications.

Their study area is a shallow underground pool known by cavers as Petroleum Passage because of its strong smell and floating tar balls, oily globules rising from black patches on the sandy floor. The pool lies within a cave whose name and exact location are kept secret per request of the private landowner. Water samples from the site reveal that the ancient petroleum emerges from deep beneath the Earth. Using gas chromatography and mass spectrometry, Chemist Erik Pollack of the University of Arkansas analyzed degraded petroleum molecules that may have been broken



Undergraduate biology students at Tennessee cave entrance.



Michael Ray Taylor's son Chris (left) and student Quincy Gragg collect microbial samples from the Petroleum Passage



Water sample collected from a "tarball" eruption; likely food for extreme microbes.

is commonly used for bioremediation of oil spills. The team hopes that they may find other novel species that might one day help clean polluted environments. Taylor plans more collections at nearby sites over the coming year.

Fiona Woods MN'98 and Captain Randy Woods MN'98 recently completed a 3000-mile naviga-



m/v Jupiter rarely shared anchorage, Cleveland Peninsula, SE Alaska



Sáádúúts, a Haida Elder, interprets his Eagle Clan totem at Hydaburg.



Yes Bay "Totem waters" occur during low tides in nearly calm conditions

coastal settlements, and communities. Anchoring their vessel *Jupiter* in rarely visited inlets and coves they photographed remarkably unspoiled shorelines, thriving wildlife and interesting, instructive Alaskans. Complete documentation of the mariners' recent voyage can be viewed at www.jupitersway.com.



Silfra, Iceland. Photo: Bill McGee.

canic activity of the island.

Mary K. Wicksten FN'91 continues her work as scientist onshore for the research vessel *Nautilus*, and its deployed ROV *Hercules* to

study the deep areas off southern California along the west coast of Baja California and the San Juan Seamount, 100 miles off the coast. *Hercules* followed video transect

lines and transmitted live videos to Mary and others. The seamount is studded with glass sponges and soft corals, offering habitat to crabs, shrimp, and lobsters which are Mary's specialty. The fauna was very different from that at lesser depths, similar in many ways those seen on the slope of central Pacific Islands. So far, interesting creatures include surprisingly active sponge-dwelling lobster, the first thread-leg shrimp seen in life in the northeastern Pacific, and a species of squat lobster perched on the stalk of a soft coral. The latter is very interesting because species of this group of squat lobsters seem to be very specific about their coral hosts. Is this just great perch for the lobster, a protection for the coral from predatory starfishes, or does the lobster steal food from the tentacles of the coral? It looks like they will need another expedition to have a look.

Speleologist Bill Steele FE'79 travelled to central Tennessee three times in recent months to explore and map a new cave in an undisclosed location with extraordinary archaeological evidence



Life on a steep side of the San Juan Seamount. Photo: Ocean Exploration Trust.

of 3,000 year-old indigenous explorers who used handheld cane torches to go miles into it. Their footprints remain with what are thought to be direction markers. In Texas, he is giving leadership to the exploration of Texas' longest cave, 21-mile-long Honey Creek Cave. In late September he is coordinating nine teams to continue exploring and mapping where previous explorers have turned around. Steele is also organizing another flag expedition in April 2022 to the deepest cave in the Americas, Sistema Huautla, in the southern Mexico state of Oaxaca. In May he presented this with two colleagues from Mexico at the Explorers Club, which can be viewed on The Explorers Club's



Gass Hall, the largest room in Honey Creek Cave, Texas. Photo: Bennett Lee

YouTube channel.

A new friend of our Chapter, Isabelle Berryhill says, "I am currently pursuing a wildlife sciences major at Oregon State University as wildlife conservation and photography are my two biggest passions. When I was a kid, I looked up many explorers and knew I wanted to be involved in the Explorers Club which is helping to advance exploration and modern science. It's so incredible to be involved in this amazing organization." In late June, she found herself in the desert of south Texas for a photography workshop. Horned lizards are one of her favorite animals, a marvel of evolution. Her goal was to see one, but she never imagined she would see



Horny Toad (Horned Lizard). Photo: Isabelle Berryhill.

some hatchlings, a juvenile, and an adult. While adults are difficult to spot, hatchlings are in an entirely different league. Spotting an animal that is smaller than your pinky is quite difficult. Thankfully however, the workshop instructor, Karine Aigner, was able to spot them. In recent years, horned lizards (aka horny toads) have been declining in numbers. Once a frequent sight in the state of Texas, they are now becoming increasingly more difficult to see. Everything from pesticides and habitat encroachment is accelerating the rate of their decline. On this trip, we were able to see a wide variety of wildlife ranging from a roadrunner, rattlesnakes, grebes, a caracara family, and more.

Washington Group

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In September, The Explorers Club Washington Group (ECWG) began its first live dinner meeting with safety protocols, which was well attended. Dr. Meredith L. Gore's talk centered on dimensions of conservation criminology by giving examples of how interdisciplinary intelligence mapping can enhance scientific understanding of illicit global environmental change. She illustrated these concepts based on her fieldwork in illegal rosewood logging in Madagascar's northeastern rainforest, urban wild meat trafficking into Kinshasa, Democratic Republic of the Congo, and illegal fishing and trafficking of sea cucumber in Yucatan, Mexico.

In May, Amanda Uowolo, an ecologist with the Institute of Pacific Islands Forestry of the USDA Forest Service in Hilo, Hawaii,

gave the month's virtual talk entitled, *Melai Mai: Promoting Food Security, Local Food, and Sustainability For Island Communities Across Micronesia*. Amanda discussed the promotion of agroforestry on the remote islands of Micronesia where she is working to promote breadfruit (*Artocarpus altilis*) for the indigenous communities.

In April, the month's virtual talk was on America's involvement in Afghanistan and El Salvador by Robert Nickelsberg MN'15. Robert showed photographs from his experiences as a photographer covering the civil war in El Salvador from 1981-1984 for Time magazine and his nearly thirty years covering Afghanistan.

It is with great sadness to announce the loss of one of our most active members, Julius "Jay" Ka-



Julius "Jay" Kaplan, Esq.

plan MN'01, who died unexpectedly on September 1. Jay's career began in 1962 in the office of legal counsel for the Agency for International Development, Department of State during the Kennedy Administration. He met his wife, Fulbright Scholar Ann Lanyon, in London in 1963. Beginning in 1965, Jay entered private practice as an international lawyer. In 1969, he became a founding partner of Kirkwood, Kaplan, Russin, and Vecchi, which grew to 125 lawyers with many national and overseas offices. In his retirement he became a Chapter member, Chapter Chair and Chapter Board member. He embarked on trips and expeditions all over the world, including climbing live volcanoes in Kamchatka, Siberia, climbing sand dunes in the

Gobi Desert, Mongolia, watching the orangutans in Borneo, viewing four of the world's highest peaks from Sandakphu mountain on the border between India and Nepal, and navigating the Peruvian Amazon. He was active in fundraising events for the Explorers Club for field research grants for graduate students, and he chaired the Lowell Thomas Awards Gala in 2015. In recent years Jay was an author of two books, *Secrets and Suspense* which captured the highlights of his legal career, and a memoir *In Search of Beauty*, which illustrated his experiences as an art collector over the course of five decades. At the time of his death, he was writing a fictional novel that drew upon his lifelong interests of art and law. Jay will be remembered as generous, cultivated and passionate in all his pursuits. He relished a challenge and did not hesitate to try new things. Above all, Jay's family and friends cherished his energy, optimism and enthusiasm for life. The poem *Ulysses* by Tennyson best captures his spirit. "I cannot rest from travel: I will drink Life to the lees."

IN THE FIELD

articles from far and near

Flag and Honors News

MARTIN NWEeia DMD, DDS, FN'99

Vice President, Flag and Honors



Flag Award to Axiom Space, flying history's first private mission to the International Space Station. (l-r) Martin Nweeia; Michael López-Alegría, flight commander; Richard Garriot

"Until the lion has a historian, the hunter will always be the hero." So goes the African proverb that questions how history is told, and who gets to be the storyteller. Examples abound. How will we end up calling one of our national holidays, Columbus or Indigenous Day? Was he a conqueror or an explorer? Why was self-taught fossil hunter Mary Anning's 1823 discovery of a *plesiosaurus* first refuted by then expert Georges Cuvier? And why did this extraordinary scientist die in financial strain despite her years of successful discoveries? Why did it

take Nobel laureate in medicine Barbara McClintock almost 50 years after her groundbreaking discovery about genes being mobile to be recognized for its significance? Why was 18th century British clockmaker John Harrison denied receiving the full monetary award for determining longitude at sea, the greatest scientific question of his time? Not everyone who deserves an award is recognized, or even acknowledged, even in an untimely fashion. Some endure critique, others shunned. As The Explorers Club tells their stories, we will continue our best efforts to highlight significant contributions to exploration and scientific discovery pushing the limits of endurance, and the risk of life. We may get it wrong, but we have a wide spectrum of voices from our Committee to make sure those who deserve recognition are seen, heard and discovered.

Our awards ceremony at ECAD 2022 will combine awards from 2020 and 2021 for an in-person award ceremony. Though other

societies and groups have elected to present awards virtually during the past two years, our leadership has elected to give awards at our annual dinner celebration to be witnessed by fellow explorers, face-to-face, and spirit-to-spirit in a COVID free 2022 celebration. Please send nominations for all award categories, described on our website to mvasquez@explorers.org, and designate the award and the year clearly at the top of the nomination form. Because the COVID pandemic has hindered the full spectrum of exploration, we will limit awards over the two years, and omit certain categories if nominations do not reach the level and merit of the award category. The Explorers Medal, The Citation of Merit and the Sweeney Medal will be awarded for each year. Please have your nominations delivered by midnight EST on January 15, 2022.

We are also opening nominations to the next Lowell Thomas Awards for 2022 in October and welcome submissions for the category: Exploring Conservation Genetics: The Lowell Thomas Award for Conservation Genetics. With the advent of the sixth mass extinction, the planet's biodiversity is threatened by environmental, anthropogenic, and ecologic pressures. Since all of the prior mass extinctions have

been caused by natural disasters, this is the first that has a large component of potential human-influenced factors.

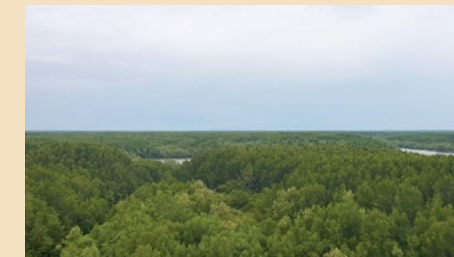
Addressing this new challenge, are a group of explorers, working in the field and laboratory, probing DNA and other biomolecular components of life to better understand how it all works, and how migrations, populations and adaptive genetic mechanisms affect some of these changes so we can help maintain the adaptive genetic potential of the world's organisms. How do we make the connections from individual species fitness to population growth rates? Can we better understand the dynamics of genes and how they influence populations? Why is it robust to have genetic change? Can we preserve unique species, and what are the bioethics in these considerations? How do conservation geneticists work with traditional conservationists? We invite nominations from diverse fields of population genetics, evolutionary biology, molecular ecology, systematics and biology integrated with field science to be considered for the Lowell Thomas Award in Conservation Genetics. Please submit your nomination and supporting letter by June 30, 2022, to Dr. Martin Nweeia, Chairman of the Flags and Honors Committee in care of mvasquez@explorers.org

Vietnam's forest guardians

and sat images protect mangroves

JAMES BORTON FN'15 AND KIM-ANH NGUYEN PHD

asiareview@yahoo.com



Can Gio mangrove Biosphere Reserve.



Can Gio mangroves. Photos: Kim-Anh Nguyen.

Scientists confirm that the lush green mangrove forests in Vietnam are now threatened by the devastating impacts of climate change in combination with human disturbances, accelerating the degradation of these fragile ecosystems. Monitoring the changes in spatial distribution and quality of the small trees that grow in coastal or brackish water remains an urgent protection and restoration task since the livelihoods of so many depend on these mangroves. Vietnam is embracing high-tech and forest guardians to address climate change impacts on the rain forests. The exigency is prompted by the loss of nearly half of Southeast Asia's mangroves over the past three decades.

Population growth, pressure of economic conditions and the dioxin contamination attributed to the military use of napalm during the Vietnam War, have measurably destroyed Vietnam's mangroves. The transformation of the mangrove areas for agricultural land use, intensive shrimp farming and mud crab ponds, coastal erosion, typhoons, tidal regimes change, are all responsible for deforestation and degradation. This is especially evident in the Vietnamese Mekong Delta, where storm storks, white-winged wood ducks and spotted-billed pelicans one peacefully assembled.

Vietnam, with a long coastline snaking along 3,200 kilometers offers vast potential for mangrove ecosystems. Before the Vietnam War, studies showed that about 400,000 hectares were covered by mangroves. Professor Phan Nguyen Hong, a recognized authority on mangroves, has systematically chronicled Vietnam's forested areas, from the Red River Delta in the north, to the Central coast, and to the Mekong

Delta, with a focus on the ecological stability of Can Gio and its verdant diverse vegetation. It is in this protected area, situated on an estuary, where the Saigon and Dong Nai rivers empty into the sea, that forest rangers and local guardians, like Ms. Nguyen Kim Hoang, rehabilitate mangroves. Families have received as much as \$150US to build guard stations, purchase boats, water containers, and other necessary tools to protect the forest area.

Our mix of in-the-field monitoring and remote sensing technology, seen in Geographic Information System Mapping (GIS), has been instrumental in insuring the future of mangrove forests. These techniques demonstrate a high potential to detect, identify, map, and monitor mangrove conditions and changes. The acceleration of the rampant erosion of the shorelines rimming the Mekong River has led to the increased importance of using high-resolution satellite images for evaluating the advances or retreats of mangrove belt fringing. Yuei-An Liou, a distinguished professor at the Center for Space and Remote Sensing Research says that the satellite generations of the Landsat Program of the United States Geological Survey (USGS) provide the longest time spans for the forest land cover monitoring. This satellite archive now gives rise to new opportunities in the field of forest study by reconstructing the historical baselines over several past decades in a continuous fluid manner. The temporal depth of the Landsat archive with current classification methods aided by artificial intelligent approaches has proven beneficial for gaining insights into the processes of forest tree species and high accuracy baselines at different scales.

In addition, the satellite images reveal the footprint of the Can Gio mangrove Biosphere Reserve, located approximately 60 kilometers south of Ho Chi Minh City, and one of the first UNESCO-managed reserves in Vietnam. However, this 187,000-acre area, home to one of the largest rehabilitated mangrove forests and an essential defense against storm surges, is now pitted against a planned \$9.3 billion development. The plan, marketed as 'Can Gio Tourist City', may require more than 4.9 billion cubic feet of sand to reclaim the land for this mega project. This will be dredged from the Mekong Delta, already under pressure subsidence from losses resulting from the upstream China-built dams. "This type of large-scale extraction impacts on the river ecosystem," claims Dr. Vu Ngoc Long, president of the Southern Institute of Ecology.

The Mekong Delta offers winding postcard images of the network of channels and nearby shrimp farms, complete with snapshots of industrious farmers toiling in the rice paddies in one of Vietnam's most fertile regions. With threats to the mangroves increasing, the Mekong Delta may no longer be Vietnam's rice basket since the region's entire natural wetlands are in peril. Consequently, the local farmers may be in a race against time as more extreme flood events, rapid groundwater depletion, and salt-water intrusion continue. Brian Eyler, a leading expert on the Mekong River, and author of *Last Day on the Mighty Mekong*, warns that "without sufficient sediment to replenish the land, the delta will sink beneath the East Sea—a problem compounded by unsustainable groundwater pumping and a rising sea level.

a spacecraft with a view

SIAN PROCTOR PHD MN'21
EC50 Honoree, 2021

The one question everyone keeps asking me since coming home from my 3-day Inspiration4 mission to orbit is, "What surprised you the most about being in space?" The immediate answer has always been the view of our beautiful planet from the cupola. We knew we were going to have an amazing view, but none of us understood just how significant that view would be. The fact that our window was domed enabled us to slide up into the cupola just past our shoulders giving us this feeling of having nothing between us and the Earth but the vastness of space. Before we opened the forward hatch to access the cupola, our Dragon capsule was oriented with the nose down toward Earth. This means that from our perspective, the Earth was suspended above us every time we floated up into the cupola. The first time I floated in to soak up the view, I was immediately overwhelmed by how bright our planet is. As a geoscientist, I know the Earth has a high reflectivity but to see it from the blackness of space left me speechless.

The next thing my brain tried to do was process the fact that when you spun around in the cupola you could see the entire sphere of the Earth - not just a section or corner. There it was, a complete sphere too big to take in when looking straight up at Earth but clearly defined by this thin blue veil against the vast darkness as you twirled around. The Earth is stunningly beautiful—a portrait in motion. As we orbited every 90 minutes we got to see the shadow of darkness creep across the planet slowly gobbling up the sunlight and unveiling humanity's impact on our planet as orange-tinged globs of artificial light connected by strings. The night revealed so much about where we can and can't dominate as a species. Areas where the light suddenly stopped were marked by the dark edges of oceans and lakes. One time I slid up into the cupola at night and, to my surprise, my eyes caught the green glow of the aurora borealis shimmering on the horizon. I yelled to my crew mates, "It's the aurora" as we speed away at 17,500 miles per hour. Would they come up in time to catch it?

Another unique mind-tripping result of us being inverted with the Earth suspended above us is that the Moon would rise out from around the Earth and appear to just hang there off to the side. We were creeping toward a full moon and from our vantage, it looked similar in size as from the ground but crisper, more defined without the weight of the atmosphere distorting its glow. It made you want to reach out and grab it. All the photos we tried to take just didn't do it justice against the much brighter backdrop of our dominating planet. As I stared out at the Moon I kept thinking of how I'm a direct result of Neil Armstrong's first footsteps upon that non-terrestrial soil. I am a Moon baby born 8.5 months after one giant leap for all mankind. Now here I was up in the cupola, mesmerized by our beautiful fragile world, floating Neil Armstrong's autograph to my father, and daydreaming about the first female steps on the lunar surface. I wonder who she will be!



The human impact on the Earth is reflected in nighttime electric lighting.



Floating Sian Proctor with Neil Armstrong's note to her father, Ed Proctor, who worked with Apollo 11 at the Guam tracking station.



Jared Isaacman, Sian Proctor and Hayley Arceneaux with TEC Flag in space. Photos: Inspiration4 archive.

view from mission control

NICK ORENSTEIN MN'21

The radio calls of splashdown and “welcome home to planet Earth” from the CORE operator marked a jubilant end on September 18, 2021 to SpaceX’s Inspiration4 mission. For the previous 72 hours, the all-civilian crew of Explorers Club members had orbited around our planet in Crew Dragon.

Mission Control operators in Hawthorne, California were there with the crew every minute of the mission. From pre-launch suit preparations to launch to on-orbit activities, from fault responses to floating pizza, from deorbit burn to splashdown to recovery, operators provided non-stop support over multiple rotating shifts. The mission directors, COREs (our equivalent of NASA’s CapCom), systems and navigation operators, communications coordinators, and a host of technical specialists sat at console screens filled with telemetry data and talked to each other on multiple voice loops. Occasionally the quindar tones would chime, and the CORE and the crew would share some words over the radio.

The Inspiration4 flight was the culmination

of roughly 6 months of engineering and operations development, along with crew and operator training. Simulations had trained everyone to respond to contingencies and emergencies, and this mission flew with a sense of preparedness. The crew was always ahead of the spaceship during the fast-paced operational cadence which spanned four days and three nights on-orbit.

There will be many more first-flights of new spaceships, but this was the first ever all-civilian trip to orbit. The trip lasted multiple days at an altitude high enough for this first-of-its-kind crew to see the whole circular disc of the Earth through the cupola window. SpaceX and the crew determined how to best succeed. Much of this success centered around the crew’s focus on performing scientific research experiments related to biology and human health. The flight’s orbit also meant different burn profiles in order to explore new regions of Low Earth Orbit. The higher orbit provided amazing views for days, not just to the crew but also to controllers. From Mission Control we watched

alternating videos from inside the cabin and the cupola “selfie cam” as the crew lived and worked in space.

The cargo team helped pack Explorers Club Flag #218 into the crew’s cargo bags before flight, and I caught a glimpse of the flag before we shipped it off to space. It’s been an honor and an exciting challenge to contribute to human space exploration at SpaceX as we expand access. As a recent new TEC member with my membership pin posted to my SpaceX cubicle wall, I am thrilled to have had such early opportunity to participate on a flag mission — even if from the production floor and from Mission Control, not inside the capsule. We are all proud of the crew and their top-notch performance.

NOTE: JARED ISAACMAN, THE INSPIRATION4 LEADER, PROVIDED THE FUNDS AND DEDICATED THE FLIGHT TO SUPPORT ST. JUDE’S CHILDREN’S RESEARCH HOSPITAL IN MEMPHIS, SHORTLY AFTER THE MISSION. OVER \$200 MILLION HAD BEEN RAISED. (YOU CAN DONATE AT [HTTPS://INSPIRATION4.COM/DONATE](https://inspiration4.com/donate).) FAMILIES NEVER RECEIVE A BILL FROM ST. JUDE FOR TREATMENT, TRAVEL, HOUSING OR FOOD—BECAUSE ALL A FAMILY SHOULD WORRY ABOUT IS HELPING THEIR CHILD LIVE.



Inspiration4 launch, September 15, 2021



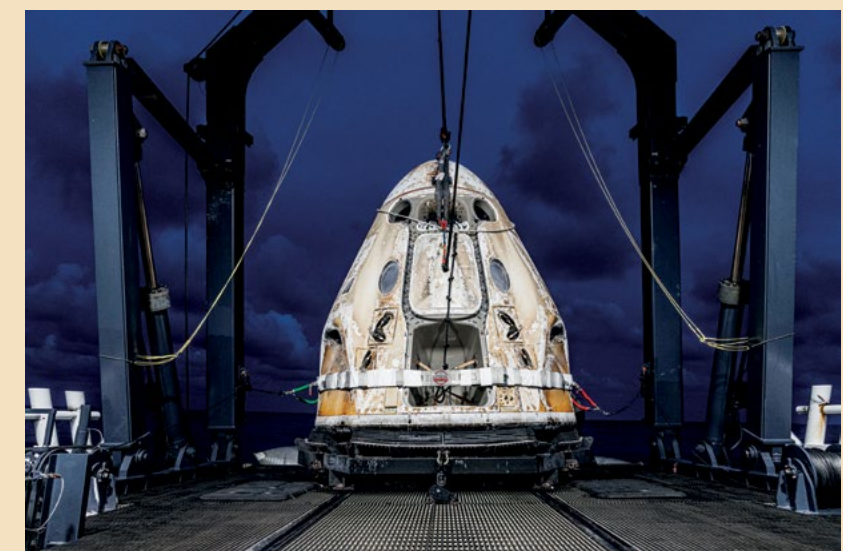
Dragon splashdown, September 18, 2021



Crew post-splashdown: (l-r) Chris Sembroski, Sian Proctor, Jared Isaacman, Hayley Arceneaux



Jared Isaacman, the Inspiration4 leader



Dragon retrieved on board recovery ship. Photos: Official SpaceX releases.

cowboys of the lost horizon

BHAVITA BHATIA

Explorer & storyteller Bhavita Bhatia joins a caravan, among the last generation of horse traders... a journey of camaraderie, loss, survival and hope, in the remote Himalayan sacred ranges around Mount Kailash

Many moons ago, the lure of a legendary trail sucked me deep into the remotest corner of the Himalaya. Barely ten days into the trail, I fell out with a trekking group and got hopelessly lost amid dangerously high mountains. Yet, I wasn't quite fazed. I was following a well-worn trail, marked out by yak and horse hooves, the very same trail walked upon by hunters, nomads, and warriors of a region off of Tibet's Mount Kailash. Clearly, I didn't possess the swagger; nor the wits of my predecessors, to march on this trail alone. As fate would have it, off the ridges on the end of the looming horizon, a passing horseman came to my rescue.

Years passed. Traveling solo, has now become a thing of the past for me. The horses, and the men riding them are family to me now. It's been several years that I've ended up befriending, and following horsemen of the highlands to the most isolated, extreme passes on earth.

Years of joining them on the 'laam'. The 'laam', or the herd's man trail across treacherous trade routes of the Himalaya are torturous as they are inspirational. Tales of the horse nomads have barely ever made it beyond these impenetrable mountains. The steep valleys still vividly echo back the horsemen's stories, their histories, their adventures, their hardships. Every passing minute, I sense their very breath along this trail. Elders tell me the sturdy ponies running wild across the open grasslands of Dolpo and Mustang could be as old as the kingdom of Mustang is; dating back to over 700 years ago.

Thukten Lama, an artist and a horse breeder, lives in the capital of Upper Dolpo – Dho Tarap, Takyu. On a warm sunny morning, we walk past the wide open barley pastures of Dho village as he tells me: "Some horses are born to be great, not all. Dho Tarap has been a centre for breeding, and rearing of good horses across history, hence the name."

'Dho'- the last corner; 'ta' – horse, and lastly, 'Rap'- the best.

Days pass on; I take more detours and go off the trails along the high and arid mountains of Dolpo, over and beyond at least four or five brutal high passes well over 5,000 metres. Only to see the fearless duo of man and horse come to life before my very eyes.

'Khampa Babu' is a horse trader in his mid-thirties from the lower town of Dhorpatan. Till date, he has bred over eight generations of horses. "When I was younger, I saw other children going to school. I wasn't among them. I was busy studying the hard knocks of life with my horses," he tells me, chewing on a strand of grass while resting upon the pastures. His rugged, swashbuckling swagger is not uncommon to men around this region. This is a sacred place for men, and for men alone. The women's stories I hear often resonate with a lot more pain and oppression. The Himalayan highlands; the horses, the sheep, the yak, the women and children are ruled over by the men of the land; no questions asked. "My best season was a decade ago, when I traded almost a hundred horses from Dhorpatan up to Dolpo-Chaangthang. But good things don't last forever! Times have changed now."

A younger kid furiously zips past us on a Chinese sports bike at breakneck speed. These days, it's cheaper to buy and to maintain a dirt bike rather than a horse. The mountains of Dolpo aren't impervious to the changes fast hitting the landscape. Horse rearing, breeding and trading are evidently, soon to be a thing of the past. I can't help but wonder; *will the horses phase out from the horizon as well?*

Far out in the pastures at a nomadic yak tent, Mingmar Gurung arrives with his disheveled white horse... and I struggle to tell the difference between horse and man. "All my life, I never learnt how to ride a cycle, a scooter or a car, but I learnt how to ride horses," he says. The luxury of romanticizing the men, the mountains, and the horses is reserved for outsiders like me alone.

Yet, the forlorn regret in his eyes is distinct. It haunts me even outside of the remote mountains. "Few years ago, I travelled to Mustang when I sensed an opportunity – I borrowed a loan and purchased over thirty-seven horses. I attempted to sell them back across Dolpo-Chaangthang. I almost scored a profit, had it not been for three of my horses...sadly, they died along the way. Besides the shock of losing them, I suffered an enormous business loss. I'm still paying off my debt."

Days go on, and I lag closely behind. I have yak and horse's hair intertwined with my own hair; thorns from the earth forever tangled up in my skin. In the heart of the grasslands, we pause at a stone-housed horse stable, and I solemnly go inside to rest upon a sack full of yak dung.

A woman spins a ball of yarn; letting it sway across a game of cards the horsemen are enthused with. Right then, an argument breaks out over horses and money. The irritable man slowly rises up and hits his head against the horse collar bell hung right above him. It sends a faint ring across the shed as more chatter and laughter over the horses ensues. I try not to laugh.

There's no evading the dark side of these mountains. The pandemic's effects haven't spared the highest mountains on earth either. With trading and travels completely banned across the borderlands; alcoholism, poverty and domestic violence is slowly said to become rampant now. I have painstakingly attempted to build a project to support my friends in the highlands during these troubled times. To know more and to support us, please visit www.cowboysofthelosthorizon.com

NOTES: THIS PROJECT IS SUPPORTED BY A GRANT FROM WASHINGTON-BASED INTERNEWS' EARTH JOURNALISM NETWORK. IMMENSELY GRATEFUL TO PULITZER-PRIZE WINNING JOURNALIST PAUL SALOPEK, DOLPO TULKU CHARITABLE FOUNDATION & TO THE PEOPLE OF DOLPO/KATHMANDU FOR ASSISTANCE WITH RESEARCH & TRAVELS. *NEPALIS REFER TO DOLPO DISTRICT HEREIN AS 'DOLPA'; THE UPPER REGION IS USUALLY TERMED 'DOLPO'.



Storyteller Bhavita Bhatia joins a nomadic family across a journey along the trade routes of Dolpo, Nepal.



Mingmar Gurung sights the setting sun, estimating when and where, to break the journey for the night. Photo: Sudin KC.



Bhavita Bhatia photographs a fellow horseman from atop her horse, as they ride into the passing storm of Nyomala pass, enroute the capital of Upper Dolpo, Dho Tarap.



Khampa Babu with his mother Ringzin Choden, resting on the pastures of Dho Tarap with their horses.



Bhavita Bhatia pictured after their caravan descended from a high pass. Mingmar Gurung's beautiful white horse died later, in the bitter winter of 2020, by falling into the frozen river.



Horsemen as they descend the high passes of Dolpo. Photo: Bhavita Bhatia.



Lobsang Tsultrim precariously trudges along with his horse off the high passes near Charkha, Dolpo. Photo: Bhavita Bhatia.



Long-time horse trader Mingmar Gurung sets out, after trading deal, from the lower town of Dhorpatan. Photo: Sudin KC.

why I started World Elephant Day

PATRICIA SIMS FI'20

World Elephant Day is an annual global awareness day that I launched over ten years ago, at a time when the future was not looking very bright for elephants. What led me to do this was my belief that our role as human beings is to take care of the other living creatures with whom we share the planet. I knew I had to try to help the elephants.

Throughout my career as a documentary filmmaker I have been fascinated with large-brained megafauna: dolphins, whales, and more recently, elephants. In 2006, I read a scientific paper about mirror self-recognition tests conducted on Happy, an Asian elephant at the Bronx Zoo¹. I was familiar with this test, which determines if animals have the awareness to recognize themselves in a mirror. Orangutans, chimpanzees, and dolphins had passed it. Given that elephants have the largest brain of all terrestrial animals, it made sense that they too proved to have this same self-awareness. Elephants have strong emotional and social bonds and a structured matriarchal society that exhibits empathy. Their species is marked by complex communication, long memories, and they play a key role in taking care of their habitat—all qualities that we humans would do well to emulate. Learning that elephants are self-aware was an “ah-ha” moment for me. The elephants have been my calling ever since.

About this time CITES (the Convention on International Trade of Endangered Species) approved a legal, one-off sale of 108 tons of government-owned ivory from Botswana, Namibia, South Africa, and Zimbabwe². The purpose of this sale was twofold: to appease the lust for ivory in China and Japan's domestic consumer markets, and to supposedly garner funds to support elephant conservation in Africa. This announcement left me dumbfounded. The international commercial ivory trade had been banned by CITES in 1989. How could it be that this ivory that had been seized and stockpiled in a global effort to protect elephants was now being sold to the very countries that were driving the senseless slaughter of elephants that led to the ban? Would this not once again put these magnificent animals at risk?

Poaching is not the only issue the elephants face. Other threats include climate change, loss of habitat, human-elephant conflict, and unethical tourism and captivity practices. As I learned the extent and complexity of these issues I wondered, is there any hope at all for the elephants? As a filmmaker, I believed the best way I could be of service would be to tell the story of their relationship with us. This eventually led me to Thailand in 2010, where my filmmaking colleague Michael Clark and I made two documentary films about Asian elephants: *Return to the Forest* and *When Elephants Were Young*. We were filming with the Elephant Reintroduction Foundation (ERF), an initiative of Queen Sirikit of Thailand, highlighting the ERF's work in returning captive elephants to the wild.

My fears came true when that 2008 sale of stockpiled ivory catalyzed a booming, illegal consumer ivory market in China. This drove the increased slaughter of elephants such that between 2010 and 2012 more than 100,000 African elephants were poached. Investigations revealed that the sale caused a significant increase in the illegal ivory trade, and there was no evidence that those funds paid to the four African countries were put towards elephant conservation³. Awareness of the ivory crisis began to escalate worldwide.

In my films, I highlighted some of the threats that elephants face today. They are exceedingly complex because elephants live in so many different countries, with so many diverse problems, politics, and cultures. Where do we begin to solve these complicated concerns? It was clear to me that we needed one day to bring the world together on these issues. That's why World Elephant Day was born. We launched it on August 12, 2012, in Bangkok, with the Elephant Reintroduction Foundation, on the Queen of Thailand's birthday—a national holiday in Thailand.

I had no idea then that World Elephant Day would grow to what is today. Through our annual social media outreach it's become a global movement for the preservation of elephants, reaching millions of people worldwide. It's an

earmarked day that gives elephant conservation organizations around the world a chance to bring focused awareness to their valuable conservation work, and it's an important day for their fundraising.

World Elephant Day remains a grassroots organization. I founded it as a charity and we operate on a shoestring budget without funding from any major organization or government. It means many things to a wide array of scientists, governments, advocates, brands, and celebrities. Most significantly, it educates the global public and serves as a reminder of just how important elephants are to the health of our planet. They are a keystone species, they take care of one another, they take care of their habitat, and they mitigate climate change in maintaining forest biodiversity.

Over this past decade have we made a difference? Is the elephants' future any brighter? I believe we are seeing glimmers of hope. We've seen changes in legislation with the banning of the domestic ivory market in China, and other countries following suit. We've also seen concerted efforts across the globe to address the myriad of threats to the pachyderms.

Of course, in my heart I believe that every day should be World Elephant Day. But it's also important to have one special day designated to them. It is my hope that World Elephant Day continues to celebrate these magnificent creatures and not be a grim reminder of the threats they face. World Elephant Day inspires a bright future for the elephants, where we learn that the planet needs the elephants, the elephants need the planet, and we need them both.

1. https://www.researchgate.net/publication/6721540_SELF-RECOGNITION_IN_AN_ASIAN_ELEPHANT
2. https://cites.org/eng/news/pr/2008/080716_IVORY.shtml
3. <https://www.nationalgeographic.com/animals/article/140818-ELEPHANTS-AFRICA-POACHING-CITES-CENSUS>
<https://therevelator.org/southern-africas-ivory-delusion/>

CITES (THE CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA) IS THE INTERNATIONAL BODY THAT OVERSEES TRADE IN WILDLIFE SPECIES SO AS TO ENSURE THEIR HEALTH AND SURVIVAL. IT CAME INTO FORCE IN JULY 1975.



Trunks and Tails Photo: Patricia Sims



Asian elephant calf with her family. Photo: Patricia Sims



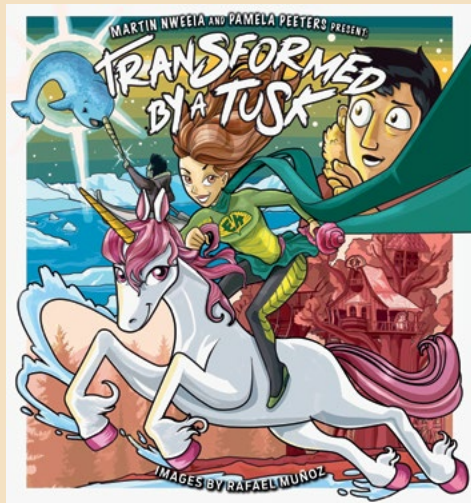
Patricia Sims with elephant friend. Photo: ©canazwest pictures



Asian elephants returning to the forest in Thailand. Photo: Patricia Sims

the Arctic through a graphic novel

PAMELA PEETERS FN'19



Characters from the graphic novel *Transformed by a Tusk*

As an environmental economist and sustainability strategist I celebrate the majesty of Greenland with a new publication and introduce the “50 Shades of Blue” photo exhibit. There are more and more books that touch upon the theme of Planet Earth and how to take care of her., but there are none - except one - that bring you the “Eco Hero” personality, Dr. Narwhal, and Mother Earth in a transformative Arctic adventure that blends science and traditional knowledge. *Transformed by a Tusk* is a graphic novel I have co-authored as a conscious media producer and Certified National Geographic Educator with Dr. Martin Nweeia, the world’s most renowned expert on the Narwhal tooth who has unraveled its mystery during the course of some 18 expeditions to the Canadian and Greenlandic Arctic. While under Explorers Club Flag 179, the one that also joined the American Mount Everest Expedition in 1963, we decided to merge our research results for educational purposes through the development of a graphic novel. We both had already published research results, more tooth and Narwhal related for Dr. Nweeia and earth sciences and environmentally educational for me, but he

blend of backgrounds and purpose resulted in a new form of environmental education.

The graphic novel is a vehicle for transforming a person’s relationship with our planet. The messenger is none other than *Eco Hero*, a Warrior for Truth and Light who protects the vast natural resources of Mother Earth. She is gifted with special powers and uses them to assist those who call for help. Her mission? To preserve and restore the balance of life! In this first adventure, Eco Hero is called by the Narwhal’s to come to their help and meet Dr. Narwhal in Pond Inlet. Together, they will learn about the legend of the Narwhal, solve an imbalance, and will inspire the young Inuit girl Suka to become a guardian for our planet. Eco Hero has an important message for the readers: “when you listen to the language of Mother Earth and come to her help, good things happen.” Together with her loyal hedgehog assistant, Erisson, she hopes to inspire a new generation of planet protectors to take care of the environment, our communities, and...themselves.

The graphic novel is the companion book of the Smithsonian Museum for Natural History’s

“Narwhal: Revealing an Arctic Legend” exhibit that has recently started traveling again throughout the United States. It was first introduced to the Young Cubs of the Explorers Club and was extremely well received by kids & parents alike. At present, the graphic novel is available in English; it has been launched in Belgium in its second language—Dutch—thanks to the support from the Delegation of Flanders to the USA.

While in Ilulissat, Greenland, in June and July on a recent “Ice Safari,” I enjoyed an eight-hour boat trip with two Inuit locals and was transformed by the beauty of hundreds of floating icebergs that surrounded us. I took some 800 photographs and, with difficulty, narrowed these to 50 for a solo art exhibit entitled “50 Shades of Blue” currently on display at the Town Hall in Sharon, Connecticut, until January 6, 2022. The variety of lightscapes that showed up for this already grandiose spectacle added an unexpected veil for balancing out the blue/white theme the clouds had embraced. With this exhibit I want to showcase both the strength and vulnerability of our planet’s ecosystems.



An example berg in “50 Shades of Blue”



Author/photographer Peeters on iceberg excursion



Authors Nweeia (in red) & Peeters (in blue) with TEC flag on Narwhal Expedition

charting Ground Zero

the role of geospatial technology

a retrospect of two decades past

SEAN C. AHEARN FR'96

Professor and Director of the Center for Advanced Research of Spatial Information (CARSI), Hunter College, CUNY



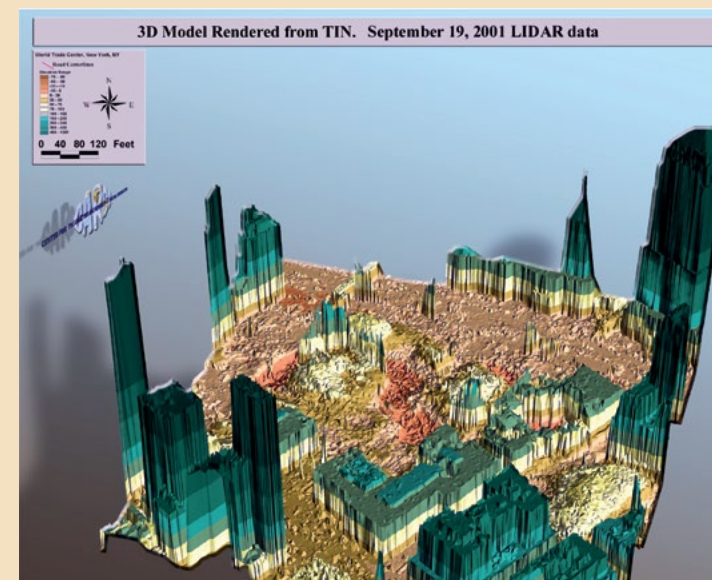
Professor Ahearn's Ground Zero badge

Rarely does a single event help both to transform the value and use of a technology. The World Trade Center (WTC) Disaster was one of those events. What started out as an exclusive technology known to a few and used primarily by experts in the mapping sciences discipline, ended up playing a critical role in almost every aspect of the WTC disaster recovery. Firemen who had never worked a computer were using some of the most advanced mapping technologies ever deployed to log the location of victims and equipment found on the "pile". They would rely on images produced from an airborne laser-measuring device for command and control at Ground Zero. Building inspectors who had previously depended on paper and pencil to do their inspections were wirelessly tapping into one of the world's largest urban geographic databases (NYCMap) to retrieve and send the geographic and inspection information of damaged buildings. The immediacy of the moment would drive the innovation necessary to make these developments possible. As the City of New York struggled to respond to this event,

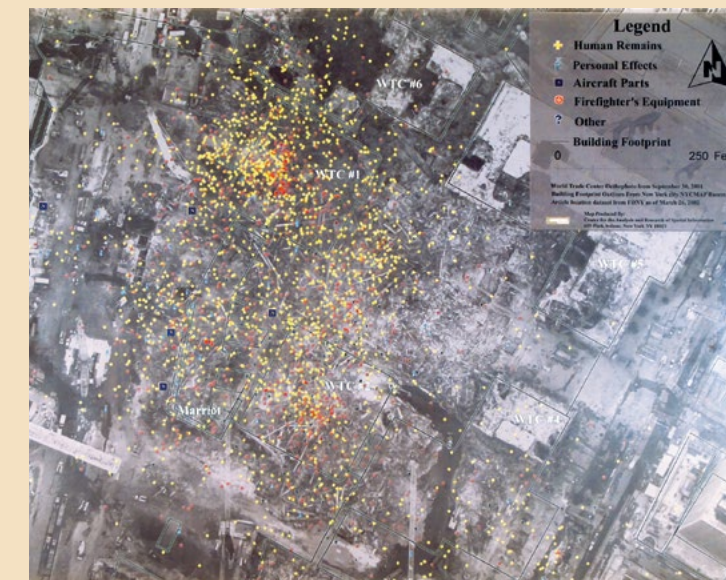
NYCMap, the geographic base-map of New York City, that was created in the late 90s in a collaboration between, the City of New York's Department of Environmental Protection, led by Alan Leidner and Wendy Dorf, the Center for Advanced Research of Spatial Information (CARSI) at Hunter College and the mapping company Sanborn, would prove to be an organizing force that would aid the emergency staff in directing their workers, helping the firemen assess the damage and monitor the changes at "ground zero" and assist the City Managers in determining the extent and location of damage to the City's infrastructure. An array of geo-spatial technologies: Geographic Information Systems (GIS), Remote Sensing Instruments, and Global Positioning Systems (GPS) would be deployed in the response to this unprecedented crisis in American History.

"When all your landmarks and points of reference have been destroyed, you're lost." Said David Litvin of the FDNY's Phoenix Mapping Unit in describing the situation on the ground shortly after September 11th. A lack of orientation combined with the smoldering fires that shrouded the

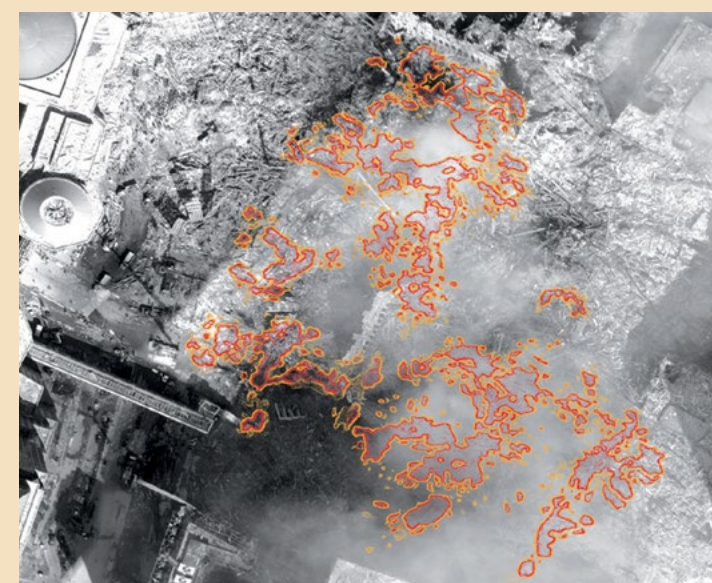
site in smoke made assessment of the damage incurred in the sixteen-acre World Trade Center site impossible. Firemen and rescue workers could see parts of the site, but it was like feeling parts of an elephant without seeing the whole. The heat was so intense on the "pile" (i.e. the smoldering 16 acre site of "ground zero") that the firemen's boots began to melt when they stood in one location too long. Knowing where it was hot and where it was not became a necessity for the workers on the pile. Having a detailed map of the hot spots would greatly expedite the extinguishing of the fires by providing guidance as to where to place their water hoses. Thermal scanners that detect "heat" were deployed as part of the airborne suite of sensors that I ordered on the morning of September 12 while on a call with EarthData and the State of New York Emergency Management Director, Bruce Oswald. The resulting images gave the rescue workers the first look at the spatial distribution of the hot spots on the pile and which sites to avoid and which needed water. These maps were updated daily to provide the firemen with information on changes in the location of these "hot spots".



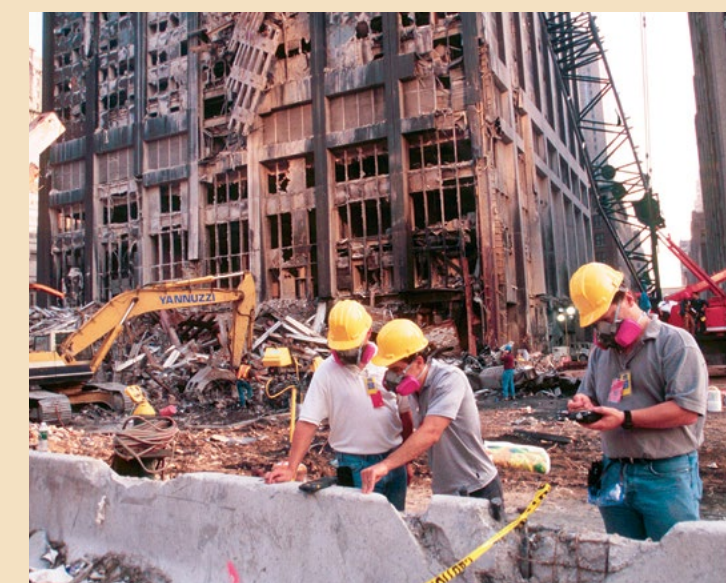
LIDAR image of "Ground zero" Sept. 19, 2001, shocked even those who had been there.



Map of human remains and equipment found at Ground Zero.



Thermal imagery hot spots were updated daily.



Linkpoint's GPS team at Ground Zero. All images from CARSI archive.

There was total silence as firemen watched the map being unfurled onto the Pier 92 floor; it was huge, measuring four feet by five feet. They moved in tighter until they were shoulder to shoulder. Its vibrant colors seemed to reflect off their faces. One squatted down to get a little bit closer. They had all been down there, but they'd never seen anything like this map before. Suddenly their demeanor changed, and the connection between map and reality surged in their minds. "I was on that mound yesterday", said one. "My guys are working over there", said another. "I wondered what was on the other side of that structure", interjected a third. "Look at the Customs Building, there is a huge pit in the center", exclaimed another. It was the first clear image of the site, and the nature and extent of the damage shocked even the men who were working there every day. They had all seen the smoke-obscured early Orthophotographs. But because the laser used penetrated the smoke it was their first comprehensive understanding of what had happened. The image would later come to

epitomize the extraordinary destruction at WTC site and would appear in publications around the world. More importantly the image would be the focal point of the Command Center at the Duane Street Fire House and a key reference for discussions of logistics at Ground Zero.

Firemen were using a hand-draw grid to fix the location of human remains and equipment found the "pile" and a paper and pen to log information. The process was inefficient, error-prone and inaccurate. A new solution was the GPS application that changed the way the firemen collected forensic information on the site enhancing the location accuracy and the time to record the information. A team at Linkpoint Inc. designed the system to include a hand-held computer with a bar-code scanner and GPS plug-in (which didn't exist 20 years ago) to perform the whole process: placing the remains in a medical bag, scanning a bar code on the bag, and gathering the location and time, in less than a minute. The results, mapped in space and time, were used for forensic analysis.

There were several additional impressive applications developed. What really stood out during this whole period was the power of the collaboration between government, academia and industry to solve these complex problems and organize the response and recovery effort. Companies like Environmental Systems Research Institute (ESRI) played a key role in implementing GIS technology and staffing the 24x7 Mapping and Data operation at Pier-92, managed by NYC's GIS director Alan Leidner, The City Agencies of New York demonstrated the breadth and depth of their expertise and adaptability in response to this unprecedented crisis and Hunter College led by the CARSI lab in collaboration with Linkpoint and IBM, injected key geo-spatial technological solutions to solve some of the most pressing problems confronted during the recovery effort. The NYC administration's understanding of the potential for Geo-spatial technologies of GIS, remote sensing, and GPS fundamentally changed with this event, not just for its value in responding to emergencies, but for managing the complexities of a city like New York on an everyday basis.

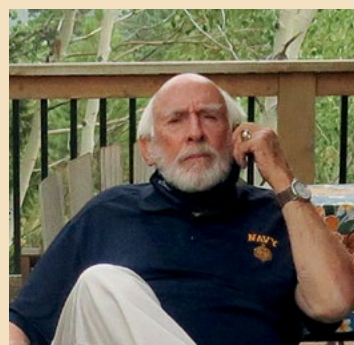
FROM BASECAMP

activities at headquarters

RCGS College of Fellows

The Fellows Committee of The Royal Canadian Geographical Society has approved Captain Alfred McClaren MED'71 to the Society's *College of Fellows*. Fellowship in the College has, since its inception in 1929, included

distinguished individuals from many different fields, united in their commitment to the Society's mission—to celebrate the country, its geography and peoples. To learn more about their efforts link to www.canadiangeographic.ca



Capt. McClaren at home in Colorado



The Story Behind The Explorers Club Outfitters

Andrew McInerney, TEC Staff
amcinerney@explorers.org

At this point, you have likely seen advertisements, emails, and social media posts for our new store, The Explorers Club Outfitters. Many of you have visited us online and shopped there. We thank you for your order!

The Outfitters launched in May 2020 as a way to expand the reach of The Explorers Club brand, boost sales, and offer quality merchandise outside of our NYC Headquarters, reaching Members and Club enthusiasts on a national and international level. As with any new venture—during a pandemic, no less—we faced a number of start-up challenges. This included moving inventory to an offsite facility during clubhouse closure (aka my apartment!), revised fulfillment logistics, and countless trips to the post office in a 1993 Mitsubishi van; it may have broken down once or twice, but it did the trick! With Headquarters now reopened, our team has worked diligently to streamline the process, from start to finish.

We have developed a website that offers an organized, contemporary, and easy-to-use online shopping experience, with great help from David Isserman LM'02. The store features professional product photography and detailed descriptions, and fulfillment is taken care of at headquarters in our revamped storage area.

The project has been a great success. With over \$350,000 in sales and 4,200 shipped orders as of October 2021, we've greatly increased revenue from previous years when merchandise was mainly sold during in-person events, most prominently at ECAD. Needless to say, during an unprecedented pandemic when Club events were postponed, this expansion has been a welcome development.

Today, we offer over 100 items—quality apparel, accessories, publications, and more—that appropriately reflect the Club's storied history and important mission. Popular products include our iconic red Watch Cap. A true symbol of nautical exploration that has been worn on expeditions all over the globe, from Thor Heyerdahl's oceanic crossings to Club President Richard Garratt's recent dive to the Challenger Deep. Our Classic Baseball Cap was recently taken aboard *The New Shepard* by members Jeff and Mark Bezos into suborbital spaceflight. How many products have been to the top—and bottom—of the world?!

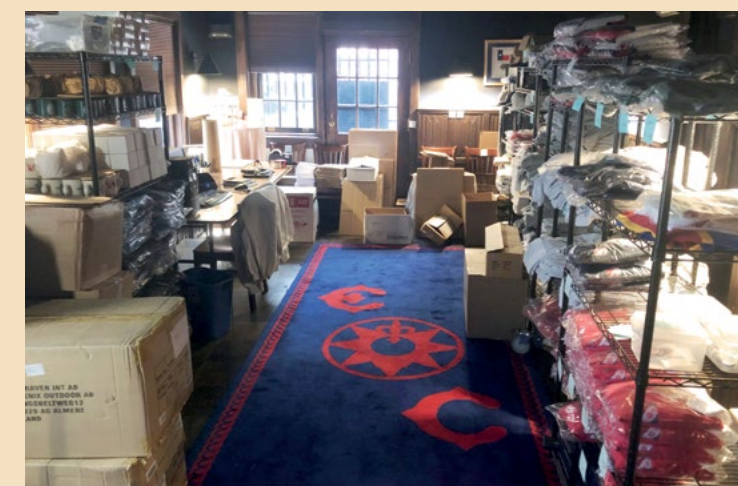
The Outfitters also offers an assortment of beautiful Club publications, including *As Told At The Explorers Club*, *The Explorers Journal*, and *The EC50: Fifty People Changing the World that the World Needs to Know About*, all available now. We also continue to offer a variety of exclusive, members-only items, including expedition patches, membership rings, rowing blazers, and more.

As we approach the end of 2021, make sure to be on the lookout as we add to our extensive selection of gear, including a number of new items for the holidays. This includes our exciting *Explorers Club x Fjällräven Collection*, featuring a limited edition assortment of hand-picked and specially-customized fleeces, hoodies, parkas, and trousers. An updated, redesigned store website is also on the horizon.

Visit The Explorers Club Outfitters at store.explorers.org for more information or to browse the collection. You can also shop our selection on Instagram @ [the_explorers_club](https://www.instagram.com/the_explorers_club). If you have any questions, please contact me at that address or the one above.



A backwards glance! The US Post Office at Little America, an Antarctic exploration base established by Explorers Club Member Richard Byrd. Photo: Smithsonian Institution Libraries, Washington, DC.



Outfitters inventory now back at Headquarters. Photo: Andrew McInerney.



A packed van during the pandemic, ready for the USPS loading dock! Photo: Andrew McInerney.

Veteran's Day Recognition

Lindley K. Young FE'89

On this day we honor a veteran of the war in Afghanistan at a time in our country's history when we can learn much from one man's experience while deployed. Jeffrey Downen MN'18, a member of the Pacific Northwest Chapter, served two combat deployments to Helmand Province, Afghanistan, during 2010- 2012. Jeff enlisted as a 0311 Infantry Rifleman and deployed under Task Force Highlander with the Marine's 1st Light Armored Reconnaissance Battalion, Charlie Company. His unit was to establish routes, skirmish with the enemy, set up forward operating positions, and gain raw intelligence before battlefield action. Taught to shoot a rifle by his Marine grandfather, Jeff was skilled enough to score the highest in his platoon at Boot Camp; he made the Range High shooter in his Battalion, highest over 1200 Marines. Jeff became Corporal (E-4) during his 2nd combat tour as an Infantry Scout and earned the Purple Heart for wounds in combat.

Asked for some personal recollections from Afghanistan and he graciously responded: "The Afghanistan culture and the people were drastically different than what media outlets portrayed and the American populace assumed. The people were generally kind and incredibly hospitable, only the insurgents were obviously hostile and were not the majority of the population. I would consider the conflict in Afghanistan similar to how the cartels operate in a power state over Mexico, and I would compare the Taliban over there to cartel operations. I never personally encountered the religious extremists that are commonly portrayed, only people fighting for their lifestyle, families, and income.

I was primarily in southern Helmand Province. The Helmand River flows through this region

and they use the water source for irrigation on their poppy and marijuana fields. They then sell these annual harvests to insurgents that come from Pakistan and traffic arms, narcotics, and insurgents. The region is vastly different in terms of demographics, languages spoken, and terrain. The Helmand River was the "green" zone and highly tropical. Going 40km south there were vast sand dunes that looked like something out of Aladdin. And finally when you hit the boarder of Pakistan there were sharp, vertical, jagged, black mountains. All within 80km or so. We ran into Asian, Caucasian, and Middle Eastern races or mixes with an abundance of spoken languages and dialects. This made for a very strange mixing pot from all of the conquerors that had tried to seize the region during the past 1000 years.

Overall it was an amazing experience, and I really enjoyed my time over there. I wouldn't change a thing and am proud to have served my Country and the United States Marine Corps." No one spends four years in Afghanistan without memorable encounters with the local people. Once while an exchange of gunfire from fellow Marines and hostile insurgents was taking place, the residents of the housing compound Jeff and his buddy were searching offered them chai tea. They took a break from the action, lit up a cigar, and had tea. Seek out Jeff, for he has other warm and enlightening stories to tell.

If you are a veteran, we ask you to add your information about your service to our growing Veterans Archive covering Explorers Club veterans from before WWI. Send your material to the club in care of Lacey Flint, Curator of Collections.

Thank you, Jeff, for helping us celebrate Veterans Day, when we honor the contributions from our Explorers Club membership.



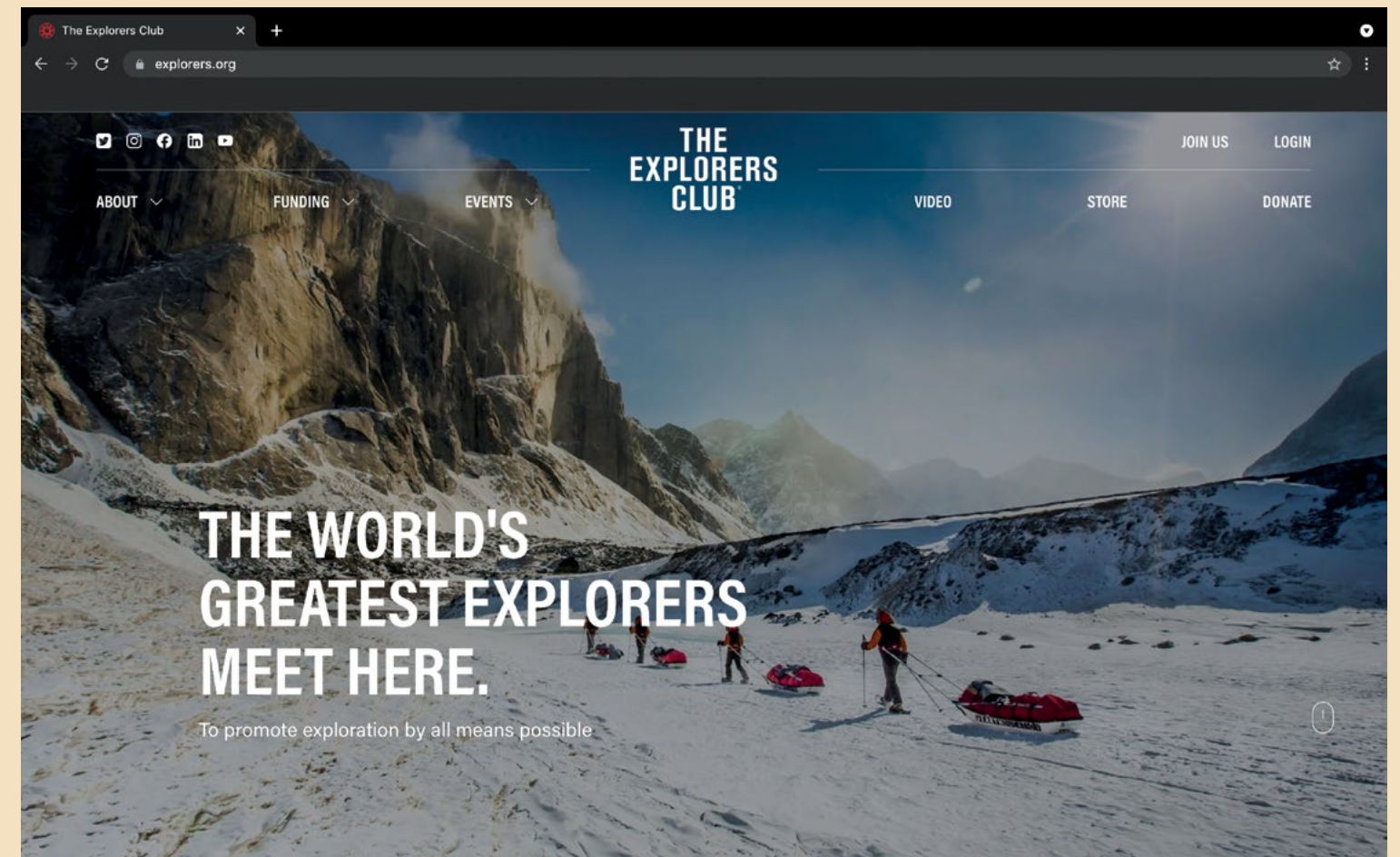
Jeff on combat patrol during poppy season. Locals sell black-tar opium harvested from the bulbs to the Taliban.



Designated Marksman Jeff Downen on the day he was wounded while seeking a new outpost.



Marine search team, during a sandstorm, sought firearms, explosives, and narcotics. Photos: Jeff Downen archive.



The Explorers Club New Website

Jeremy Hirschhorn MN'14 & David Isserman LM'02
Website Redesign Co-Chairs

The Explorers Club is excited to announce the launch of our new website, creating a modern and feature-rich window for the home of the world's greatest explorers. A few features of the new site include:

- Brand new design that will work natively on desktop and mobile browsers
- Updated content
- Expanded member dashboard
- New member features and functionality built to allow for growth over time
- There are also several exciting feature rollouts planned through the fourth quarter and beyond

We would like to extend a special thanks to Michael Tennenbaum MN'13. This project would not have been possible without his generous support. Feel free to reach out to us directly or email support@explorers.org

To help guide you through cre-

ating your new website member account and answer a few other important questions:

Who can register for an account?
You must be an Explorers Club Member in good standing (have dues paid up-to-date within the last dues cycle). This includes Fellows, Members, Term, Students, and Friends (formerly Associates).

Can I access the website without an account?

Yes, anyone can access the public-facing portion of the website without an account, but those without an account will not be able to access the Members Only section.

How do I sign-up?

1. Click LOGIN on the top right.
2. At the bottom of the log-in pop-up window, you will see a prompt: "Don't have an account? SIGN

UP". Click SIGN UP.

3. Where prompted, enter your email-of-record on file with the Club and click SUBMIT.

4. You will receive an automated email with additional instructions on how to finish setting up your account.

Note: The only email address that will work to register is your primary email on record with the Club's Membership Department (this is likely not an @explorers.org email address if you have one for Club business). Your email of record is the main email on file with the Club (e.g. the email address that receives official Club communications like event announcement, dues notices, etc). If you believe the Club has the wrong email identified as your primary email or would like to update it, please email membership@explorers.org. If you are up-to-date on your dues, believe you are registering with the correct email, and are still unable to create an account, please email support@explorers.org for additional help.

Will my old log-in work with the new site?

Unfortunately no, all Members must

create a new account on the new site. That said, as the site is now directly connected to the Club's database, once you create your account, your personal information will auto-populate from the database into your new website account, and you will be able to change your information on file with the Club directly via the new website. You no longer have to email or call us to update your information in our records.

How do I update my profile?

1. In the Members Area, select MY PROFILE from the navigation menu on the left side of the screen
2. To view your full profile, click SHOW ACCOUNT DETAILS at the bottom of the My Profile box
3. Review all relevant fields and update as required.
4. Once complete, click the SEND DATA CHANGE REQUEST button, at the bottom of the My Profile Page.

Note: This change request will be sent to the Club's Membership staff for review and then to be updated in the Club's database. Please allow 48 hours for changes to take effect.)

Don Walsh Awardees

Three winners of the *Captain Don Walsh Award for Ocean Exploration*, a prestigious award established by the Marine Technology Society (MTS) and the Society for Underwater Technology (SUT), will be honored in London in March 2022. In 2020, the year the award was established, Dr. Edith Widder FN'99 was selected. In 2021 the award is shared by Commander Victor Vescovo MED'18 and Patrick Lahey MN'18 for the Five Deeps Expedition.

Commander Victor Vescovo proposed a goal of finding and diving into the five deepest spots in the world's ocean with dives taking place in the Atlantic, Southern, Indian, Pacific and Arctic oceans. This feat required not only a unique diving submersible but also fielding a specially equipped survey and support ship.

Patrick Lahey and the team at

Triton Submarines responded to Commander Vescovo's project by creating a revolution in deep submergence capabilities.

Dr. Edie Widder FN'99 was the inaugural recipient of the Captain Don Walsh Award for Ocean Exploration. Dr. Widder, a MacArthur Fellow, is a deep-sea explorer, and conservationist who combines expertise in oceanographic research and technological innovation with a commitment to reversing the worldwide trend of marine ecosystem degradation.

Awarded jointly by MTS and SUT, this is named after Captain Don Walsh MED'61, who with co-pilot Jacques Piccard MED'61 were aboard the bathyscaph *Trieste* during its record descent on January 23, 1960, into the Challenger Deep in the Mariana Trench. The award recognizes outstanding, sustained, interna-



Patrick Lahey (seated), sub builder, with Tim Macdonald (top), sub pilot & engineer

tional contribution to the development, application, and propagation of marine technology toward the advancement of ocean exploration.

The MTS promotes awareness, understanding, and the advancement and application of marine technology and was incorporated in 1963. The SUT is a multidisciplinary learned society that brings together organizations and individuals with a common interest in underwater technology, ocean science and offshore engineering and was founded in 1966.



Dr. Edie Widder, researcher on sea bioluminescence. Photo: Tom Smoyer.



Commander Vescovo above Tonga Trench

On Track with Joe Kittinger

Jim Clash FR'99

Honorary Member Joe Kittinger MED'01 is not a household name. But if you mention him to Explorers Club members, they know who he is. In 1960, as research for NASA's then-fledgling space program, he rode a helium balloon to the edge of space 102,800 feet above the Earth, then jumped out, eclipsing 600 mph during free-fall. His chute opened at 14,000 feet, and he gently glided to the surface of the New Mexico desert, setting the then-world record for a parachute jump. Joe's daring experiment also proved that man could eject from extreme altitudes, and survive. Moonwalker Neil Armstrong even wrote the forward to Joe's book, "Come Up And Get Me."

So imagine my trepidation as I was about to take Joe for a 170-mph thrill ride around the Daytona International Speedway, courtesy of the NASCAR Racing Experience. I had given similar rides

to hundreds of NRE customers and friends, including Club members Constance Difede MED'01, Gaelin Rosenwaks FN'06, Steve Pigott MN'13, Don Morley MN'90, Andrea Davide MR'19, and Alex MN'01 and Julie MN'09 Wallace. But Joe? He is a national treasure. There is even a park near Orlando named after him, which features an F-4 fighter jet he had flown combat missions in during the Vietnam War.

In full disclosure, I know Joe from a decade back. When we had originally met, he encouraged me to try my own parachute jump. Proudly wearing his sneakers (I had "big shoes to fill," pun intended), I did a tandem from 13,500 feet at Skydive Deland, not far from Joe's home in Altamonte Springs, Florida. We became friends and kept in touch over the years, especially when he was in New York at Club events. I even did a few Exploring Legends in-



Jim Clash at the wheel with Joe Kittinger holding on.

terviews with him on-stage in the Clark Room.

As the NRE crew strapped Joe into the passenger side of a 600-plus-horsepower stock car with five belts, a helmet and Hans device, I wondered what was going through his mind. Certainly, this ride would be small potatoes compared to the other things he had done in his 93 years. We would pull about 3 G's on the 31-degree-banked, 2.5-mile-long Daytona oval. But Joe once told me he had pulled 15 G's (15 times one's body weight!) in a centrifuge for NASA experiments. 15 G's? I couldn't even imagine that kind of force. I once pulled 6 G's as a passenger in an F-15, and that was



Chevy stock racing car with Kittinger & Clash on the track. Photos: Mike Killian.

enough for me.

As I gunned the engine in pit lane, Joe gave me a fist-bump, then we roared onto the track entering Turn 1. Because of the engine noise and focus I had on the asphalt ahead, I couldn't hear or see Joe, other than the occasional "thumbs-up" in my right peripheral vision, and the time he reached over for a quick handshake on the back-straight. The guy is fearless.

After six laps, we returned to pit lane, and I shut down the engine, waiting with apprehension as to whether the ride met Joe's expectations. "Holy cow, that was a blast," he exclaimed. "I had SO much fun. You're a great driver!" Wow! How often does one get to give something back to a man who has given so much to America?

BACKWARDS GLANCE

Annapurna, a woman's place vera komarkova, mountaineer/scientist

JACK REILLY MED'81

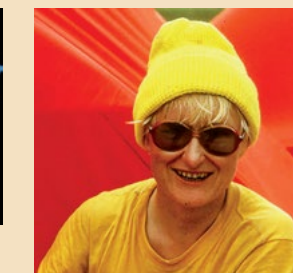
john.reilly@msmc.edu



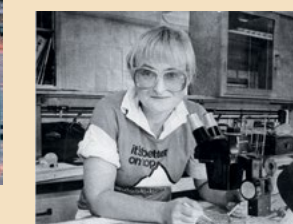
Annapurna



sold to fund Annapurna climb



Vera and Irene Miller Beardsley with sherpas, summiters of Annapurna



THE EXPLORERS CLUB

outfitters

SHOP THE COLLECTION OF THE EXPLORERS CLUB OUTFITTERS

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