

ELEPHANT ECHOES

Updates from the International Elephant Foundation (IEF)

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May 2023

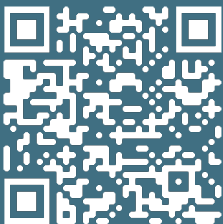
The International Elephant Foundation is the catalyst for creating a sustainable future where elephants thrive by linking people and elephants for their mutual long-term benefit.

Founded in 1998, IEF is a non-profit 501(c)(3) corporation of individuals and institutions dedicated to the conservation of African and Asian elephants worldwide. IEF creates a sustainable future for elephants by generating and effectively investing resources to support elephant conservation, education, research, and management programs worldwide. Through our passion, expertise, knowledge, and partnerships, we inspire and engage people to ensure a vibrant future with elephants everywhere.



International Elephant Foundation Staff:
Deborah Olson
Executive Director
Sarah Conley
Conservation Coordinator
Julie Bates
Donor Relations Manager

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Let's Go to Thailand!

19th International Elephant Conservation & Research Symposium

It has been almost four years since our last in-person symposium in South Africa, and we are ready to get out there and connect with elephant experts face-to-face! The International Elephant Foundation has partnered with the Faculty of Veterinary Medicine Chiang Mai University, the National Elephant Institute, and the Faculty of Veterinary Medicine Kasetsart University to host the 19th International Elephant Conservation & Research Symposium in Chiang Mai, Thailand on November 14 to 17, 2023 at the Empress Hotel Chiang Mai.

While we have been thankful technology has allowed us to connect virtually, there is no replacement for the connections we can make in person. The ability to bounce ideas around at lunch and coffee breaks, see cutting edge research developments, and network with folks who can serve as resources down the line is invaluable, and one of the things we love most about IEF symposia.

We invite global elephant conservationists and researchers to present conservation projects and research outcomes, new technologies in field conservation and conflict mitigation, studies in disease, reproduction and behavior, and other issues that impact the long-term survival of African savannah, African forest, and Asian elephants. We will have 4 days of expertly-curated talks, ending just in time to visit the legendary Surin Elephant Festival (an event not included in the conference program) or to explore the countless other elephant-centric experiences in Thailand.

Anyone and everyone can attend. If you want to learn more about elephants, regardless of your background and profession you are welcome to attend. If you love elephants we'd love to see you there! [Get more information on presenting and attending here.](#)

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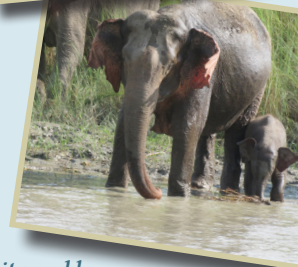


2022 By The Numbers

At the end of every year we ask our projects to quantify the work they do. Oftentimes conservation work seems abstract and less defined, but there are some basic metrics that we can use to show the jumbo impact that your support for IEF has made throughout the globe. Here's what you made possible:

- ▶ **31,897+** elephants protected
- ▶ **1,016** rangers supported
- ▶ **257,598+** community members served
- ▶ **203,757** km² of habitat protected or positively impacted
- ▶ **20,601+** patrol man days supported
- ▶ **11,085** snares & traps found and removed
- ▶ **470** poachers and wildlife criminals caught
- ▶ **831** educational opportunities

Some projects focused on education and community outreach, while others focused on security and law enforcement, but the message is clear: IEF's projects are doing a lot of good!



CONSERVATION CHATS

Bridging the Gap and Connecting You with Fieldwork

At IEF, we believe in building a bridge between the work happening in the field and those of us outside of range countries. Connecting with elephant experts from around the world is one of the most effective ways of learning and making a lasting impression. In this spirit, we started our Conservation Chats. These free, monthly events feature a guest speaker from one of our project leaders or conservation colleagues talking about their work and then taking questions from the attendees. Conservation Chats are dynamic, interactive, and last about an hour. They are a great way to enhance your knowledge about elephants and get things straight from the “horse’s mouth” so to speak. [You can sign up to join us here.](#)

If you can't attend a Conservation Chat live, you should still sign up because you will be given a link to replay and rewatch, as each session is recorded. We hope to see you there!

Upcoming Speakers:

Thursday, June 15, 8am PST/10am Central

Ian Craig and Samuel Lekimaroro

Northern Rangelands Trust's Chief of Conservation & Development Ian Craig and Wildlife Protection Manager Samuel Lekimaroro will join us to discuss the gold standard of the conservancy approach to conservation and the important work of the 9-1 and 9-2 anti-poaching patrol units in Kenya.

Monday, July 31 (World Ranger Day), 9am PST/11am Central

Amos Gwema

Join IEF and Amos Gwema on World Ranger Day. Amos is the Principal Intelligence Officer for Zimbabwe Parks and Wildlife Management Authority and is responsible for all Wildlife Intelligence in Zimbabwe. He has 25 years' experience in law enforcement, first as a police officer then as a wildlife ranger. Amos has secured over 290 convictions, which is a record for any ranger in the country. He takes a community approach to conservation, seeing communities as the first line of defense against wildlife crime. In 2020, he won Tusk Wildlife Ranger of the Year, and was recently featured on the nature series program 'A Year On Planet Earth'.

Human-Elephant Conflict Mitigation in the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA), Zambia

The Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA) is the wildlife protected landscape of the Okavango and Zambezi River Basin regions extending through the countries of Angola, Botswana, Namibia, Zambia and Zimbabwe. Corridors linking protected areas in the KAZA region now enable southern Africa's 300,000-strong elephant population to re-connect safely across the various habitats that make up the KAZA landscape. However, old elephant migration routes have since been settled by farmers, and most are near existing water resources. This results in conflict between humans and elephants over food and water as elephants re-establish their home ranges. Seeking ways to encourage coexistence between people and elephants is vital so that communities support efforts to re-establish traditional elephant movement pathways across borders of the five countries, especially now that after a decade or more elephants are returning to many areas in Zambia along the Zambezi River.

In 2015, a simple low cost, low maintenance, single-strand solar-powered Poliwire electric fencing system was designed by Dr. Kerry Carter and her husband specifically for use by subsistence farmers to reduce the impact of elephant crop-raiding. This system encircles fields and vegetable gardens and has been very effective in preventing elephants from entering these areas. Poliwire fences have improved food security and the livelihoods of subsistence farmers while reducing negative encounters between farmers and elephants. This program also promotes a community approach by encouraging cluster farming so that a number of farms can be protected with one fencing system thereby helping to secure food sources and safeguard incomes of multiple subsistence farmers easily at one location.

To date, over 2000 people have benefited from the food and income generated by the farm plots that are secured by Poliwire fences. To ensure the ongoing success of this project, all recipient farmers in the area encompassing 250 kilometers along the Zambezi River spread across 4 geographical areas also receive refresher training and technological assistance to ensure they are maintaining the fencing system effectively.





We Will Never Forget You

It is important to be good stewards of the Earth, protecting and preserving wildlife and habitat for generations to come. IEF has built our entire foundation on this idea, and we are honored with many incredible donors who feel the same way. Recently we lost a few of these ele-friends and found out how deep their commitments to elephants were, as they even thought about IEF in their wills. Leaving a legacy for elephants and their protection beyond their lifetimes is a true commitment to stewardship and conservation.

*In Memory of:
Judith Groban-Shorb
Betty Slauson*

We will make sure your support for elephants makes an impact for years to come.

There are many ways to support elephants, including gifts of stock, directing your Donor Advised Funds, and leaving a legacy in your will. Giving in these ways may help with next year's taxes while making a bigger impact protecting the elephants we love. We're always here to help guide you through the process.

Board Member Spotlight Liz Larsen

The IEF Board of Directors includes representatives from a variety of facilities, expertise, and experience from around the world but what ties them together is their unwavering love for elephants and commitment to conservation. We are fortunate to have such incredible people working alongside us on behalf of elephants. This quarter we are highlighting Liz Larsen, Vice President of Programs at Utah's Hogle Zoo and IEF Board Member. Liz started her career at the Zoo over 30 years ago, as a zookeeper working with a variety of animals. Liz's vision to use the power of zoos to effect change began with creating the Zoo's first conservation strategy – building a suite of international and local conservation partnerships and programs and embedding those programs in core aspects of the Zoo's operations. She strongly believes conservation is a marathon not a sprint. Let's hear more about Liz in her own words:



What inspired your love for animals?

I was fortunate to grow up in the foothills of northern California where nature was right out my backdoor – my family encouraged me to spend time outside climbing oak trees and wandering in the woods alongside our family dog. My grandmother fueled my curiosity when she would visit; we would take long walks together, she taught me how to use binoculars and encouraged me observe and learn more.

How did you start working with animals professionally?

While I was attending school at the University of Utah, studying biology a friend of a friend put me in touch with the zoo. My first job was working in the summers in the great apes house, where I had the opportunity to help the zoo keepers take care of the animals in the morning and share my love of animals with zoo guests during the day. I loved working with the animals and talking with the zoo guests – I was hooked! After I finished school I was elated to join the zoo full time as a zoo keeper and care for a wide diversity of species.

As my experience grew I became more aware of the plight of wildlife and eager to make a difference. I was especially drawn to the unique capacity that the amazing animals at zoos have for reaching people and the importance that we use their visit to do the greatest good possible. So I felt very privileged to have the opportunity to develop the zoo's first conservation program. While I missed working directly with the animals it was very fulfilling to know that I was creating a foundation for the work of the zoo to have a greater impact.

Tell us about the first time you met an elephant in person.

The first time I met an elephant was while I was waiting to be interviewed for my first zoo job! Toka, an Asian elephant in our care was always very curious about zoo guests and she had a crowd outside of her exhibit lined up to see what she was up to.

Can you tell our readers about your current job and what it involves?

In my current role, as Vice President of Programs, I oversee the strategic direction of our animal care, conservation, education, animal health and risk management programs. I am thrilled to lead us through significant change including a new strategic plan with five priority areas: provide excellence in animal care and wellbeing, be the conservation leader in Utah, be a destination with purpose, be a zoo for all and be sustainable for long term growth. With this plan we aim to mobilize the guest experience where all zoo guests will have the ability to take part in conservation action! Our institution's Strategic Plan recognized how valuable as breeders our two female African elephants are to the overall African elephant population in the United States. This drove our recent announcement to move them to another zoo to be a part of a large breeding herd. While we are really sad to see them go, we are excited for them and their future impact on elephant conservation.

Why do you support IEF? What do you think makes our organization important/special/impactful?

For wildlife conservation to be effective, we need local engagement, to keep innovating, and when programs are successful, we need to commit to them. IEF does just that – through the small grants program, communities are given the funding to trial an approach that resonates with their unique circumstances and the legacy program provides long term commitments to high impact field projects and critical research.

We have found that animal people often have other species they nerd out about. Besides elephants, what other species do you love?

I could spend all day answering this question – animals are amazing and I love that I work in a field where I continue to learn new things as we discover new adaptations.

As you can see, Liz is committed to elephants, animals, and building a sustainable future where animals thrive. She received her bachelor's in biology and master's in public administration from the University of Utah. When she is not at the Zoo, she can be found exploring the Utah deserts with her family and dogs.

Donor Spotlight: Jill Donaldson

Obviously, IEF's supporters are animal lovers. Today we hear from another wonderful IEF donor, Jill Donaldson. This is a woman who is unafraid to follow her passion to the far corners of the Earth.

“ I grew up with dogs, then cats ... far from any elephant or zoo in the Texas Panhandle. My first close encounter with an elephant, was in India where my brother/family lives. I experienced first-hand, how smart, funny, playful, loyal, and amazing elephants are.

Kenya was my first experience in Africa. It was 1979 and I was hooked on Africa—the animals, people and beauty. Later in 1994, I was lucky to visit Botswana and Zimbabwe to see elephants. My last trip in 2010 was to Rwanda (gorilla trekking) and back to Kenya.

After mentioning to the Kenya safari guide that I liked elephants, the guide mentioned we would be visiting an elephant orphanage, but she also suggested, booking a “private” session with the two groups of baby/young orphaned elephants. I jumped at the chance and said, ‘BOOK IT!’ This was the impetus of the ‘new road’ I started taking.

After that experience, I spoke with anyone and everyone about elephants. After seeing an article about a hands-on elephant experience in the USA, I booked a weekend. While there, I fell in love with two amazing Asian pachyderms: Booper and Peggy. As they were swinging their trunks I started quietly singing to them, and they stopped swinging trunks and stared and listened. Magic.

These combined experiences led me to the Dallas Zoo, and becoming a Volunteer at the Giants of the Savanna area, where you guessed it, the zoo's elephants live. I am also on the Dallas Zoo Volunteer Council and served as the Council Chair in 2022. It was through the Dallas Zoo that I learned about (and joined) the Elephant Managers Association (EMA), attended numerous elephant conferences, joined the Dallas chapter of the American Association of Zoo Keepers (AAZK), and first learned about the International Elephant Foundation. Seeing the connection between elephants in human care and the important conservation work they support for their cousins around the world inspires me to keep supporting IEF.

As I like to say, ‘Tembo forever!’



Advisor Spotlight

DR. PAUL LING

Advancements in science are always a team effort, building on the work done by others in the field, inspired by publications or meetings, but sometimes when progress is made you can point to one key individual who made that possible. When it comes to the development of a vaccine to protect elephants from Elephant Endotheliotropic Herpesvirus (EEHV), that individual is Dr. Paul Ling. Dr. Ling has a PhD in Microbiology and has devoted his lab at Baylor College of Medicine to studying EEHV and developing a vaccine. IEF is lucky to count him as one of our Advisors and we are eager for you to learn more about Dr. Ling and his work, in his own words:



Did you always know you wanted to help elephants or was there something specific that inspired you to investigate EEHV?

For a large portion of my career, my research focused on human herpesviruses that cause chickenpox and shingles and then Epstein-Barr virus, which causes mononucleosis, some types of cancers, and now is strongly associated with multiple sclerosis. When I moved to Baylor College of Medicine to establish my own research program, my group continued to investigate Epstein-Barr virus.

However, I always had an interest in the natural world and conservation. And having done my postdoctoral training in Dr. Gary Haywards lab, I knew of his seminal work with EEHV. Shortly after the death in 2008 of a young elephant “Mac” at the Houston zoo from EEHV, I was contacted by the zoo about what more might be done to address this horrible disease. I guess you could say it was timing plus connection with the right group of people, but after meeting another young elephant “Tucker” at the zoo, I decided *who wouldn’t want to help save baby elephants?* and that I would try and find a way to do it. I felt quite deeply that with my decades of experience researching this virus family that I had something useful to offer. And come on—I get to continue working on herpesviruses but now in elephants—the coolest project ever!

Despite the recent global experience with COVID-19, creating a vaccine is a long process. How long have you been working on this?

The COVID-19 pandemic certainly accelerated the implementation of mRNA vaccines. But it’s important to remember that many years of prior work made this possible. This included developing the mRNA technologies and understanding the biochemistry of virus glycoproteins, like the Spike protein used in SARS-CoV2 vaccines. Likewise, we have spent the good part of the last 10 years obtaining basic information that will allow us to generate a vaccine against EEHV. This has included sequencing the genomes of all the EEHVs known to circulate in Asian and African elephants, describing viral dynamics in elephants that develop EEHV disease, generating diagnostic tests to detect the various EEHV species, and generating assays to detect antibody responses to these viruses. In addition, within the last few years, emerging new data has shown what general herpesvirus virus proteins contribute to effective vaccines against several human herpesviruses.

To generate a successful vaccine against EEHV, we need to be able to address some basic questions such as: 1) what type of immunity should an EEHV vaccine generate? 2) to what parts of the virus? and 3) when should it be given? Foundational information gathered over many years, new advances in vaccine technologies, and successful vaccines in other systems, has provided us with a template for how we might generate, test and implement a vaccine against EEHV. Our research efforts over the last couple years have been focused on these latter activities.

How has working with elephants in human care impacted your work?

In my opinion, almost all of the progress we have made learning about the biology of EEHV and using it to generate diagnostic tests and treatment protocols has been derived from being able to have access to elephants in human care. One thing that has impressed me immensely has been the professionalism and dedication of elephant keepers, zoo veterinarians, and clinical staff towards the well-being of elephants in their care. Working with such a passionate group has been a rewarding experience by itself. But the hard work and passion of these individuals to help me “help them” has been extraordinary.

I should note that efforts of many individuals to obtain samples from wild free-ranging elephants has helped us confirm that much of the biology learned from elephants in human care is also observed in these populations and underscores the fact that research on both populations in tandem is important.

Tell us about the “bench to barn” approach you have to research.

The term *bench to bedside* is described as, “the process by which the results of research done in the laboratory are directly used to develop new ways to treat patients.” I modified the term for obvious reasons, but the philosophy was the same—can I do stuff in the lab that could be used directly to help deal with EEHV. So I always viewed this project as one where basic research was required, but it also needed to be in service of bringing tangible knowledge or tools to help mitigate disease from EEHV. The bench to barn vision had three general categories: 1) diagnostics,



2) treatments, and 3) vaccine(s). I viewed the first two as areas where I could make rapid short term impacts, while we worked in the background to build the foundations for generating a vaccine. Generation of most of the qPCR assays used today for detection of EEHVs in both African and Asian elephants had perhaps the most immediate impact on diagnosing and understanding disease caused by EEHV. More recently, new tests developed by our lab for detecting anti-EEHV antibodies (or lack thereof) has provided new insights into factors that may lead to disease vulnerability caused by EEHV infection. The lab is now largely focused on reaching our third major objective of generating an effective EEHV vaccine.

Has your research produced any other interesting, useful, notable findings along the way?

I think we have made multiple contributions specific for understanding EEHV infection and biology. One finding that I think was surprising for some people was the observation that elephants, unlike cows or horses, acquire significant maternal antibodies via transplacental transfer (like humans) rather than from colostrum. In other words, most elephants are born with lots of antibodies against EEHV and that probably helps protect

them from disease for a period of time. Loss of maternal antibodies to EEHV, which can occur if the elephant doesn't get infected during the first couple years, appears to be a factor leading to susceptibility of severe illness caused by EEHV. Our serology assay will also help inform us about when an EEHV vaccine might be most appropriate to administer and how might we evaluate whether it is working or not.

What impact do you hope your work will have for elephants in range countries?

It's clear that many elephants in Asia are under some form of human care and some of these animals have succumbed to lethal infection by EEHV. In the short term, if we develop an effective EEHV vaccine, I can imagine distribution of this vaccine to help protect these elephants.

Are there any interesting stories or experiences from working with and for elephants that you can share with our readers?

I have been lucky to partner with the Houston Zoo over the last 12 or so years and be a part of their Asian elephant program. When I started, there were 5 elephants and through a very successful breeding program, they have grown to 13!! During this time, I've been fortunate to witness several births, watch the young ones grow up and even give birth themselves to another generation of elephants. Just observing how herd and family dynamics have evolved over time has been wonderful to experience. The herd also experienced multiple clinical cases from all known varieties of EEHV, including a significant case with EEHV1A, the most dangerous version of the virus. I believe that our research had an impact on managing and preventing the lethal effects that this virus is capable of inflicting. Moreover, our collaboration with the Houston Zoo has produced important protocols for surveillance and treatments for EEHV that has had broader impact for the elephant community. I'm also extremely grateful for the outreach and support from other zoos that have participated in our research efforts. I'm continually amazed by the elephant community, which rather than looking at the glass half full and finding reasons not to do something, more often has the "can do" attitude of "what can we do to make progress against EEHV".

Talk about your experience with IEF as an Advisor, supporter, and researcher.

Without question, IEF financial support has played a significant role in virtually all of our research activities. I certainly hope the elephant field recognizes the essential and important role IEF has played in this respect. IEF supported conferences have made another crucial contribution. The dissemination of research knowledge and collaborative links established at these conferences has helped foster national and international collaborations that would have never occurred or would be more difficult to establish. I also consider [IEF Executive Director] Debbie Olson an important mentor, as while my knowledge about herpesviruses is abundant, I'm less versed when it comes to other aspects of elephant conservation. Debbie has been one of my "go-to's" for education and advice about elephants, elephant conservation, and the zoo and wildlife fields. I feel privileged to know that IEF values my opinion and advice about EEHV when needed and I hope to continue doing so as long as I am able!

Besides working to save elephants, do you have any other interests, hobbies, etc?

I've always felt it was important to do something outside of work to prevent burn out. I played ice hockey for many years, but as I got older contact sports were taking too heavy a toll, so I switched to running and some triathlons. I qualified and ran the Boston marathon in 2015, which was quite an experience. While I don't do marathons anymore, my daughter and I enjoy doing destination half marathons together every so often. I like gardening and bird watching and I recently started to dabble in agility training with my Cavapoo, Pepper, which is something completely new for me.

We hope you feel as inspired by Dr. Ling's attitude and approach as we are! The elephant community is lucky to have such an ally on our team.