ANNUAL
REPORT **2016**

صندوق محمد بن زايد
للمحافظة على الكائنات الحية
The Mohamed bin Zayed SPECIES CONSERVATION FUND

ANNUAL REPORT 2016

The Mohamed bin Zayed Species Conservation Fund provides financial support to species conservation projects worldwide.

In 2016 the Fund supported 172 projects in 69 different countries with $1,523,118.

We must also remember that each of us can make a contribution to conservation in our own way.

We are all potential conservationists; you do not need to risk life and limb in a far corner of the world to play your part.

We are all conservation.

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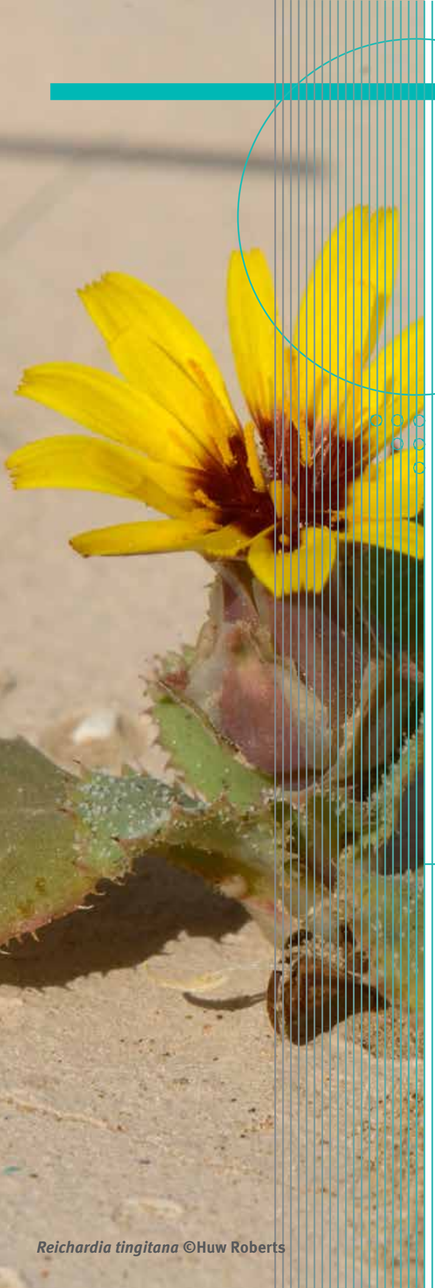


Reichardia tingitana ©Huw Roberts

FOREWORD

Efforts to understand and preserve the environment around us come in a multitude of forms. Whether it is conducting a multi-million dollar conservation programme, providing funds to support species conservation projects, or the simple act of learning something new about nature, we are all contributing to building awareness of the natural world and the multiple threats it faces; we are all part of the process of conservation.

Nurturing this interest, passion and knowledge is vital in ongoing efforts to conserve threatened species around the world, and is a key of the Fund's approach. By issuing targeted grants to projects of all sizes, we aim to draw attention to the wealth of endeavours to protect threatened species in every corner of the globe.

ULTIMATELY WE ARE THE GUARDIANS OF OUR NATURAL WORLD AND THE ONLY HOPE FOR COUNTLESS SPECIES WITHIN IT; WE ARE CONSERVATION.

This report presents a selection of the projects the Fund has recently supported, featuring species as diverse in their biology and scale as the mighty Asian elephant and the humble Red-finned blue-eye. It also aims to celebrate the people behind these unique endeavours to defend and preserve global biodiversity — the grant recipients who dedicate their lives to the study and preservation of our flora and fauna.

UAE President His Highness Sheikh Khalifa bin Zayed Al Nahyan declared 2017 as the Year of Giving, and the Fund is honoured to be in a position to finance those who are committing their time and effort to projects which give back to nature in their own unique ways.

During 2016, some 172 projects received grants totalling $1,523,118, bringing the number of projects supported by the Fund since 2008 to 1,558 across more than 150 countries. Our total disbursement through December 2016 has now reached $14,985,491 to projects both big and small, and has impacted 1,062 species and/or subspecies, as well as the urban and rural communities in and around their respective habitats. They have helped develop global-minded citizens who now better understand the importance of restoring and protecting our planet's biodiversity and are willing to address this pressing challenge.

The Fund provides grants directly to conservationists in the field, and in doing so hopes to provide these individuals and their projects with the necessary exposure to win further financial and material support from other donors. We are glad to report that many of our grant recipients have attributed their progress in attracting further financial support directly to their successful application to the Fund.

We are also delighted to reveal that two of the projects featured herein report the re-discovery of species not seen alive in the wild for decades: Cropan's boa in the Atlantic Forest of Brazil (missing for 64 years) and the tiny, coin-sized Cave squeaker of Zimbabwe's Chimanimani mountains (not seen for 50 years).

Yet again, we have been amazed to learn what an intrepid group our grant recipients are, be they dashing through Vietnamese forests on motorcycles to save the *Pinus cernua* pine; studying grasshoppers deep within the top secret confines of a sports car testing ground in France; or tracking the elusive Okapi in the dense forests of the conflict-ridden Congo.

These are the individuals living at the sharp end of species conservation; but we must also remember that each of us can make a contribution to conservation in our own way. We are all potential conservationists; you do not need to risk life and limb in a far corner of the world to play your part.

Our grant recipients' dedication to studying and saving these unique creatures is humbling and should serve as an inspiration to us all. We hope that their stories, and those of the species they strive to protect, will inspire many more people from all walks of life to take up the mantle of conservation and contribute in some small way to this most vital of causes. Ultimately we are the guardians of our natural world and the only hope for countless species within it; we are conservation.

Razan Khalifa Al Mubarak
Managing Director

© Huw Roberts

Edgbaston Reserve, Queensland © Annette Ruzicka

DEAR GRANT RECIPIENTS

During 2016 the Fund built on the financial support given to dedicated species conservation projects worldwide, increasing the total amount disbursed in small grants to almost $15m.

The allocations for the year have again been issued against a backdrop of increasing grant applications, and it remains the case that more requests are received than can be supported. During 2016, we received requests amounting to roughly $29.1m, yet were only able to distribute $1,523,118.

The Fund continues to adapt to this supply and demand equation by applying more stringent review criteria, with only 9.7% of applications gaining approval, the majority of which have received only partial funding. Nevertheless, we believe part-funding is preferable to rejection and hope that the Fund's support adds sufficient credibility to projects to attract additional financing from other sources. This has certainly been the case with a number of initiatives.

In 2016 the Fund maintained its focus on supporting less high profile projects while still targeting threatened species, particularly those listed on the IUCN Red List as Critically Endangered or Endangered. The Fund also continued its strong financial support for species listed as Data Deficient or Not Evaluated, with over $245,445 dispersed to 32 projects. Importantly, the Fund continues to support the conservationists who dedicate their lives to saving the world's most threatened and least well-known species and making this planet a better place for all.

Looking to the future, the Fund will continue to adapt to the challenges facing species conservation, whilst seeking additional capital, striving to maximise its investments and refining qualifying criteria for grant applications. Our efforts will continue to be global, and grant eligibility will extend to all plant, animal and fungus species conservation efforts, without bias of geography or selected species.

The Fund intends to provide small, targeted grants to local and grassroots projects. In order to cover the widest possible spectrum of species conservation efforts, two grant types are available; up to $5,000 or those between $5,000 and $25,000.

The Fund also continues to make the grant application process more user-friendly and efficient, especially for smaller projects where onerous administration can undermine the benefits of financial contributions. All grants are subject to independent review and are awarded three times a year following Advisory Board meetings.

We also offer an online system which makes it more convenient for conservationists worldwide to submit applications and brings greater efficiency to the Advisory Board's review and award process. Grant submissions can be made via the Fund's website **www.speciesconservation.org** and Board members can log-in to evaluate projects; and grant recipients can upload their project reports twice a year for board review and submit author case studies at any time to highlight their work.

We want to thank all applicants; the recipients who help implement the Fund's ideals of assisting individual species conservation initiatives, recognising leaders in the field and elevating the importance of species in the broader conservation debate; and all who support the Fund through generously giving their valuable time and experience.

The Board of Advisors
The Mohamed bin Zayed Species Conservation Fund

Lake Nougalafa, African wild dog habitat © Ezequiel Fabiano

WHY SPECIES CONSERVATION?

The sense of loss resulting from extinction is a relatively modern phenomenon. In many ways it is the result of a new understanding of the impact of human activities, and a greater awareness of our collective accountability for that impact. This sense of responsibility for endangered species has complex origins; it has developed from academic studies, concern for lost resources, even the love of a species engendered through hunting, and importantly, from the sense of loss all of us have experienced as landscapes have been emptied of majestic trees, bison or passenger pigeons.

There is an urgent need now to re-stimulate broad discussion on the subject of species conservation and biodiversity, and to better integrate individual environmental initiatives addressing issues such as species conservation, climate change, habitat destruction and unsustainable development. Ultimately, the conservation community must end the era of promoting one environmental cause at the expense of another, because if one of these causes fails, all of them are less likely to succeed. Just like the species of a complex ecosystem, our individual conservation efforts are more interdependent than we tend to recognise, and we will all only be as strong as our weakest links.

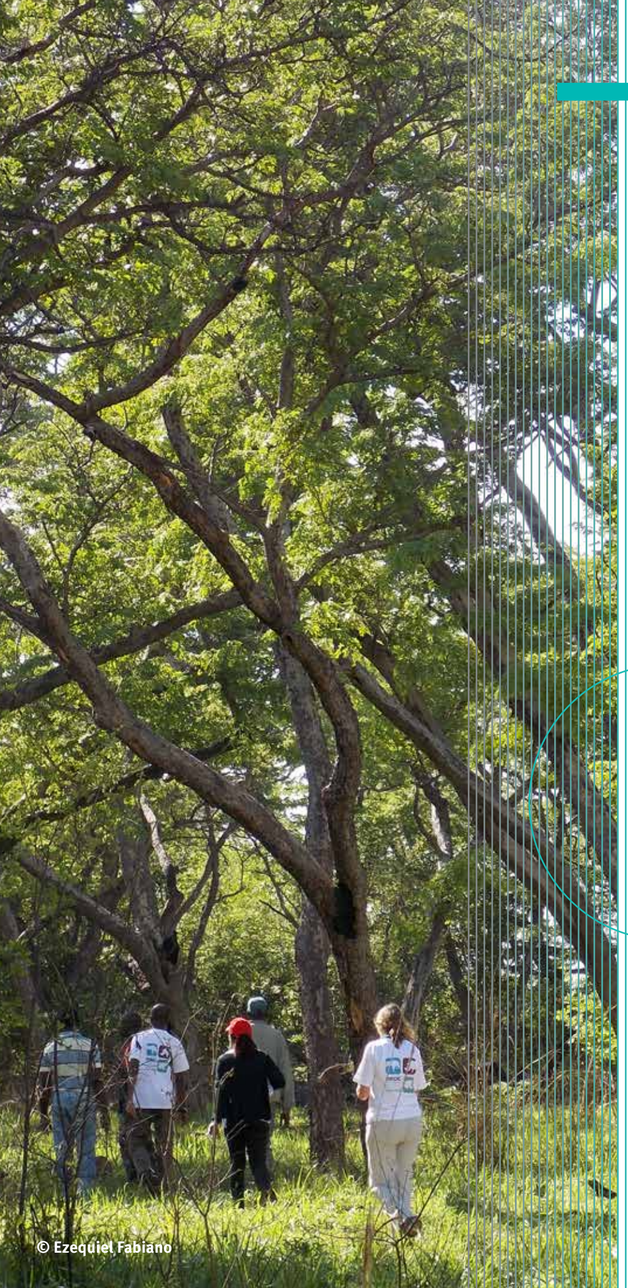
Recognising the crisis facing species conservation, His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, established this dedicated fund for the provision of support to individual and coordinated species conservation initiatives worldwide. To retain the species and habitats we treasure – and indeed require – the Mohamed bin Zayed Species Conservation Fund seeks to support on-the-ground champions of species conservation: the individuals in villages, field stations, laboratories and homes who are dedicated to conserving their local (and the world's global) threatened species.

The Fund assists their work through focused financial support and is nurturing the next generation of species conservationists by making the best conservation practices available to them using innovative communication methods. Through additional events and activities, the Fund also seeks to recognise individual leaders in the field of species conservation whose passion and commitment often go unnoticed, and in doing so, to inspire others with an interest in the field of conservation.

This contribution is consistent with a long-standing tradition of philanthropy and conservation in the Emirate of Abu Dhabi. Locally, significant conservation programmes have been introduced to protect species as diverse as the Arabian oryx, gazelle, Houbara bustard, dugong and marine turtles amongst others.

The people of Abu Dhabi have witnessed first-hand the tangible benefits of targeted and well-resourced species conservation initiatives. For example, the population of the Arabian oryx, hunted to near extinction in the early 1970s, is currently on the rise and the Emirate of Abu Dhabi is leading efforts to reintroduce the species to its traditional desert habitat.

Through the Mohamed bin Zayed Species Conservation Fund this tradition continues, in the form of an innovative and genuinely international approach to philanthropy and species conservation.



© Ezequiel Fabiano

DISBURSEMENT OF FUNDS 2016

The Fund is committed to providing grants to high quality projects involving all types of species in need of urgent conservation and does so without geographic bias.

In 2016 the Fund supported 172 projects selected from 1,780 grant applications. The selected projects, located in 69 countries across six continents, shared $1,523,118 in funding.

These 172 projects covered 162 different species, 100 of which had not previously been supported by the Fund.

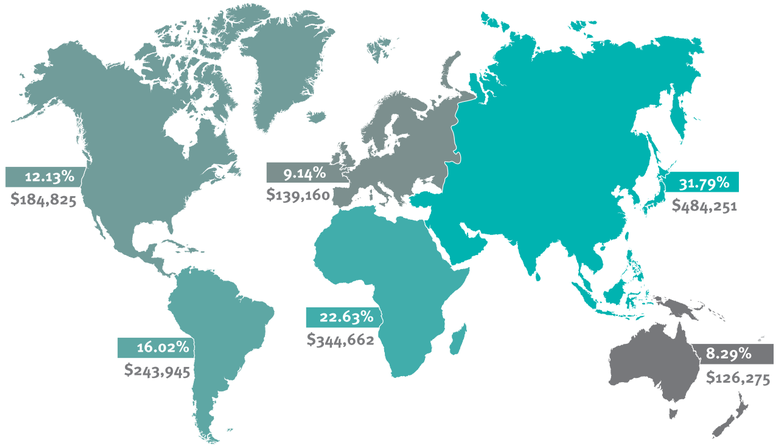
For 82 of the grant recipients in 2016 this was the first time they had received support from the Fund.

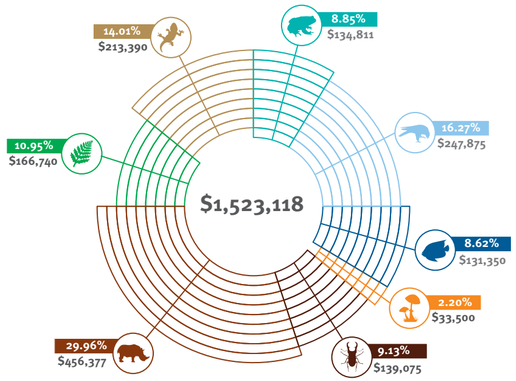
A majority of the support from the Fund was awarded to projects working to protect species classified as Endangered or Critically Endangered by the IUCN Red List of Threatened Species. However, the Fund also remains committed to supporting work with species listed as Data Deficient or Not Evaluated.

The Fund has been particularly interested in supporting projects in regions of high biodiversity such as East Africa, Southeast Asia and the tropical Americas, as well as in countries where limited funding can go a long way. In many cases these areas are one and the same —representing high conversation value.

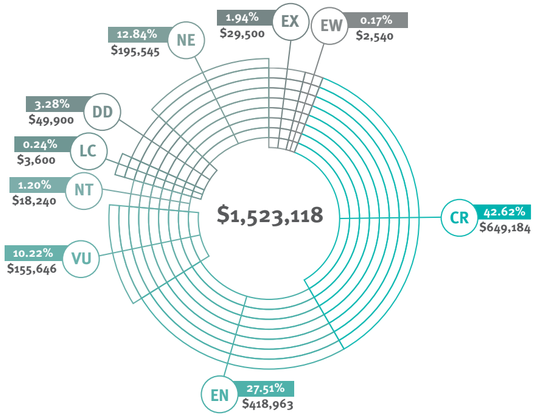
Since its inception in 2008, the Fund has contributed a total of $14,985,491 to 1,558 projects worldwide, helping to conserve over 1,050 species and sub-species.

We aim to continue providing such support well into the future.





Distribution by species type



Distribution by IUCN Red List

EX=Extinct | EW=Extinct in the Wild | CR=Critically Endangered | EN=Endangered | VU=Vulnerable
NT=Near Threatened | LC=Least Concern | DD=Data Deficient | NE=Not Evaluated

Vietnam © Leonid Averyanov

THE FUND'S MISSION, OBJECTIVES AND STRUCTURE

The Mohamed bin Zayed Species Conservation Fund is a philanthropic entity established in October 2008 at the World Conservation Congress in Barcelona with an initial endowment of €25m. Its aim is to both provide targeted grants to individual species conservation initiatives, and recognise species conservation leaders and the importance of species in the broader conservation debate.

The Fund's reach is truly global and its species interest is non-discriminatory. Conservationists worldwide can apply for funding for projects focused on any and all kinds of species — amphibians, birds, fish, fungi, invertebrates, mammals, plants or reptiles. Applications are subject to review by an independent advisory board.

By recognising leaders in species conservation and scientific research, the Fund hopes to ensure their important work and the role of species in global conservation discourse both receive the attention they deserve.

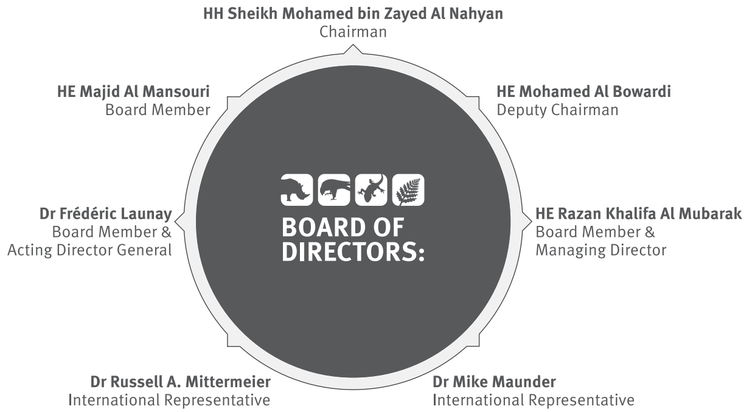
The Fund hopes to contribute to the growth of a thriving global community of well-resourced species conservationists and to stimulate additional, third party donations to ensure increasing annual contributions to direct species conservation projects.

The Fund's mission is to elevate the importance of species in the conservation debate by: providing timely support for grass-roots initiatives which make a real difference to species survival; supporting those whose passion, dedication and knowledge is key to saving species; assisting the conservation of species in their natural habitat; heightening awareness of species conservation; stimulating renewed interest among young people in the natural sciences; and attracting further contributions to species conservation from across the globe.

The Fund is a private philanthropic interest whose donor is His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, who holds a wide range of policy, legislative and economic responsibilities in Abu Dhabi and the UAE and is a committed conservationist.

HH Sheikh Mohamed also chairs the Abu Dhabi Executive Council which oversees the emirate's development and implementation of all government policy and legislation under the guidance of His Highness Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE and Ruler of Abu Dhabi.

The environment is one of Sheikh Mohamed's highest priorities, both from a policy and a personal perspective. He was instrumental in establishing the Environment Agency – Abu Dhabi, and has led significant conservation efforts to protect falcons, Houbara bustard and Arabian oryx within the UAE and internationally.



The Fund's mission is to elevate the importance of species in the global conservation debate by:

- Providing timely support for grass-roots initiatives that have a genuine impact on species survival.
- Supporting those whose passion, dedication and knowledge is key to saving species.
- Assisting species' conservation in their respective habitats.
- Heightening awareness of species conservation.
- Stimulating renewed interest among young people in the natural sciences and attracting further financial contributions to species conservation from across the globe.

STORIES OF PEOPLE

OF PEOPLE AND SPECIES

1

Our grant recipients are a fascinating, inspiring breed of individuals. Their limitless dedication and passion for the most humble of species provide genuine hope for the future of our planet and its multitude of creatures. Let no one underestimate the importance of the people behind the projects; those who simultaneously work to save grasshoppers and crickets in separate hemispheres; who catalogue desert mountain ecosystems, powered by passion alone; or who track Honduran ‘swampers’ through dense island mangroves. Here are the personalities behind the projects; the people at the sharp end of global conservation.

Axel Hochkirch

AN INESCAPABLE CALLING

"I always loved animals when I was a child", recalls Dr Axel Hochkirch as he tries to trace the roots of his journey from young amateur conservationist to the Chair of the IUCN Species Survival Committee's (SSC) Invertebrate Conservation Subcommittee.

He was inspired by the films and TV programmes of zoo director and conservationist Bernhard Grzimek, and dreamt of one day following in his footsteps. By the age of 12 he was already an active member of a number of NGOs, and at 16 he became a regional secretary for Bund für Umwelt und Naturschutz Deutschland (BUND, also known as Friends of the Earth, Germany).

He remained with BUND when undertaking his civilian service, working on a project in northern Germany to preserve peat bogs. "The main focus was on birds but this was also the time that I first came into contact with grasshoppers. Of course, I had caught them as a child, but for this project we had to make a plan for a new nature reserve and to make inventories for several taxa including grasshoppers; they had no expert who could work on grasshoppers, so I said, 'OK I can do this'."

Mahé boulder cricket
Phalangacris alluaudi
Critically Endangered
Seychelles
$10,000

Little did he know that from that moment on he would be forever typecast as the 'grasshopper expert'; whilst studying at the University of Bremen he undertook two projects in conservation biology, "I wanted to learn about some different taxa, but again I was asked to work on grasshoppers because they were not so species rich and therefore easy to supervise".

"I always wanted to do something else but they always asked me to do grasshoppers: 'You know something about grasshoppers? – we need you!'," and the demand only grew.

When visiting an IUCN project in the eastern Usambara mountains of Tanzania at the age of 23, Axel saw an opportunity to branch out, asking his supervisor if he could write his diploma thesis on birds; "he said there was already so much research on birds — 'wouldn't you like to do something on invertebrates?' I said 'OK, grasshoppers again' and started to work on the ecology

Mahé boulder cricket © Axel Hochkirch

Axel Hochkirch

and habitat of grasshoppers in the eastern Usumbaras. At this time there was nearly no research on these species at all. For most we had only names. So I became an expert on east African grasshoppers very quickly".

His work in Tanzania resulted in him describing his first species in 1996, *Physocrobylus tessa*, and led to a PhD studying the evolution of grasshoppers in East Africa.

Shortly after his studies he became an Assistant Professor at the University of Osnabrück's Department of Biology/ Chemistry (Ecology Group), and began to focus on molecular ecology and phylogenetics.

In 2009 he was asked to give a presentation on orthoptera conservation at a conference in Antalya, and mentioned that a mere 74 species had been assessed for the IUCN Red List. This caused uproar among the orthoptera specialists in attendance, considering there were around 24,000 species known at the time [now closer to 27,000], and eventually led to the establishment of the IUCN Grasshopper Specialist Group. Axel became the first Chair of the group, he explains humbly, because "I was the only one who didn't say 'NO!' fast enough!".

Axel has received a number of grants from the Fund over the years, and is currently in receipt of two for ongoing projects in France and the Seychelles; "The Mohamed bin Zayed Fund [provides] in many cases the only available grants for invertebrate conservation — something we really appreciate!" But how to choose which to pursue with so many deserving grasshopper species requiring study and conservation?

The Mahé boulder cricket had not been seen in a staggering 105 years since its initial description from specimens found in the lush, otherworldly cloud forests of Mahé in the Seychelles. "It was assessed as Critically Endangered and possibly extinct; and two of my students who were working on other species found it two years ago, and I said well, OK this should be our next species to focus on".

A global biodiversity hotspot, the forest is under threat from invasive non-native plants, so Axel and his colleagues are now working with support from the Fund to study the threats to this species on Mahé. The team have now found numerous populations of the species; "it seems to be very common, in fact, and the main reason why it was not found is that it hides under boulders in small cavities and caves so it's very difficult to find and was probably simply overlooked, which is good news for the species... the second reason is that it might be confused with another species which also lives under boulders".

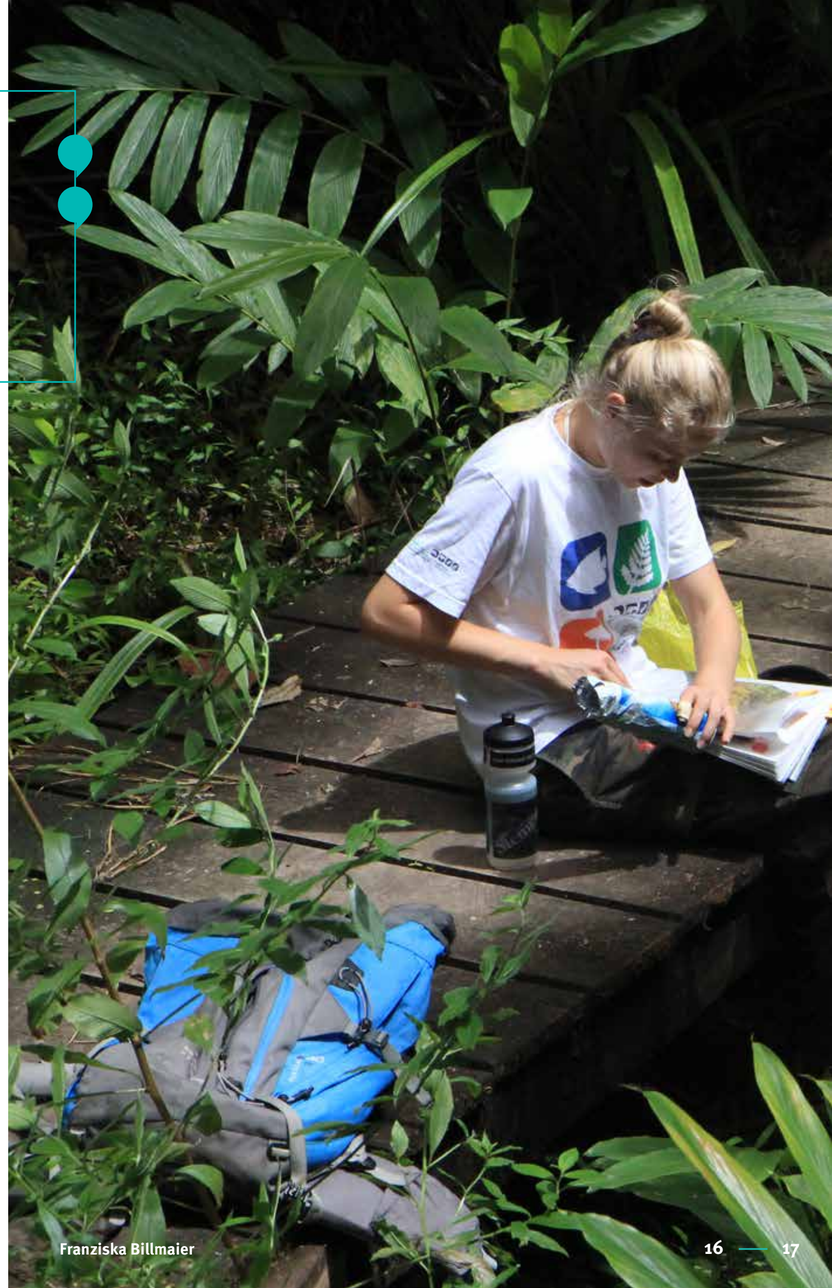
The latest assessment undertaken by the team will likely see a change in the IUCN status to Least Concern. "But we have also studied other species which still seem to be threatened", Axel explains. "The same project also sought to investigate the status of a small groundhopper species the Seychelles Forest groundhopper, *Amphinotus nymphula*, which is quite rare. My students worked on this species

HERE WE HAVE A SEVERE THREAT BECAUSE THERE IS THIS INVASIVE PLANT SPECIES ... AND THIS COMPLETELY CHANGES THE VEGETATION STRUCTURE AT GROUND LEVEL

in the higher elevations [it only occurs from around 500 meters] and it has a very small population size and needs very open ground vegetation."

It is likely that the alien soap bush (*Clidemia hirta*) is having quite dramatic effects on these native species, owing to its dense growth which alters the habitat structure. "Here we have a severe threat because there is this invasive plant species... and this completely changes the vegetation structure at ground level".

Axel aims to gather sufficient data to create and implement a comprehensive adaptive management plan to control the invasive soap bush; "This is the point where action is needed", he says. "We will probably start with a workshop this, or next year, together with the authorities in the Seychelles to discuss what we can actually do about controlling the species". The second project for which Axel has received a grant concerns the Crau Plain grasshopper. Endemic to the Crau Steppe in southern France, it is estimated that only around 2,000 or so of these grasshoppers are left in the wild.



Franziska Billmaier

Axel Hochkirch © Laurent Tatin

One challenge, however, is to locate them. The team has tried camera traps, but these can be triggered by moving grass – resulting in too many photographs. So, they are now investigating the viability of using tracking dogs who could identify the species by scent!

"It is such a large and charismatic species for an invertebrate … It moves like a toad and is not really a good jumper. It looks like a large stone which jumps and falls on its back; you wonder how it could have survived so long! They simply don't move when you come across them, which is why we are considering the use of sniffer dogs. We need to see if they can be trained to find them. If it's possible, it will enhance monitoring".

This sub-species has been in dramatic decline over the past decade, despite the availability of apparently suitable habitat. Only four highly fragmented sub-populations remain, of which little is known, and the threat of extinction looms. "The bad news is that we still have not really found the clue to why this species has become so rare", Axel explains.

Of these four sites, the largest population occurs inside a restricted area controlled by the French Armed Forces, while another is conveniently located in the centre of an equally impenetrable BMW facility used to test the German marque's top secret prototypes. It has been determined that the grasshopper populations are negatively affected in areas with vegetation thinned by sheep grazing. However, the researchers have yet to figure out whether this is a direct result of overgrazing, or a consequence of an invasion of hungry Cattle egrets who follow the sheep herds, or even caused by the negative effects of sheep medication on the local environment.

A captive breeding programme has been launched and has successfully produced eggs; however, the mortality rate among the hatchlings is very high. In an effort to rule out environmental factors, eggs were transplanted back to the Crau, and it was found that these hatchlings were much healthier.

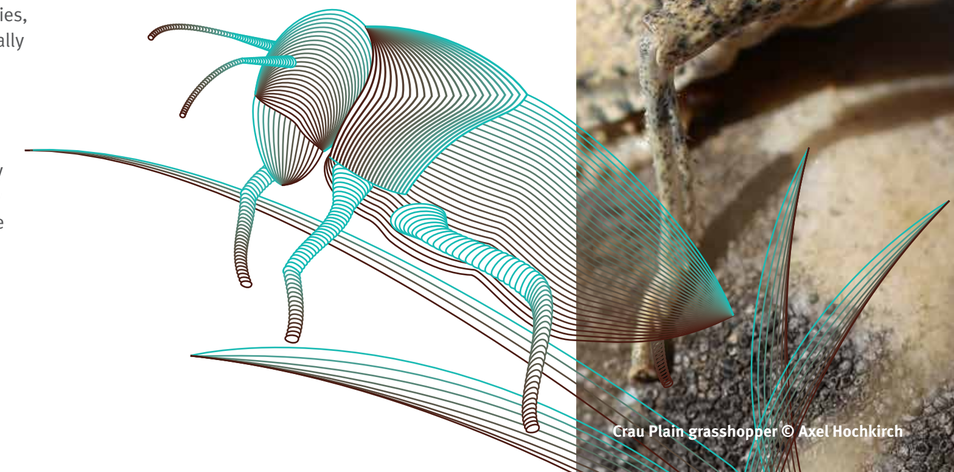
"It could be a problem with a lack of moisture, we don't have a clue why so many specimens died, but we at least have had success with breeding them so we will now optimise the conditions to achieve better success".

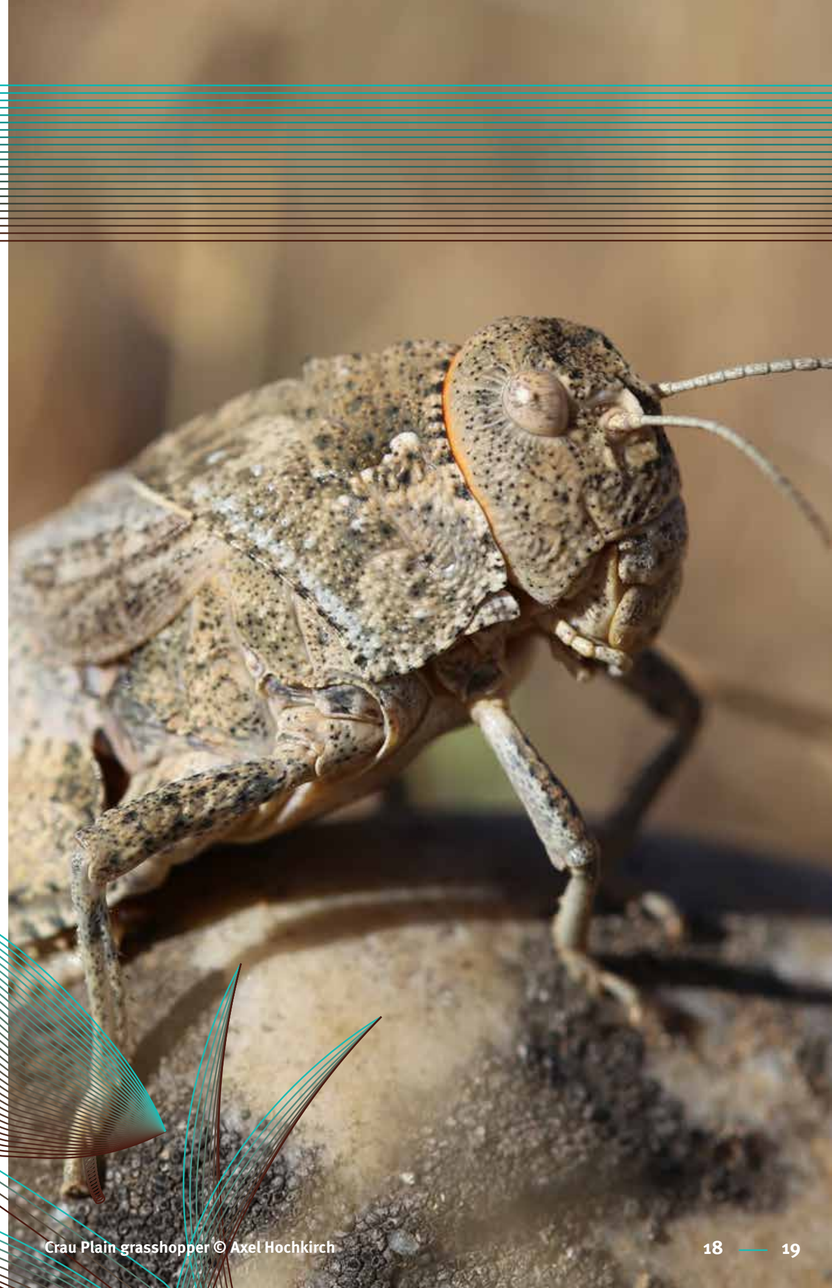
Axel is clearly driven by a genuine passion for the study and conservation of this populous order, so how does he view the seemingly impossible task of preserving the numerous orthoptera species in need of conservation? "I'm always optimistic otherwise I couldn't do this job! … What keeps me going are the positive moments – when you, for example, rediscover a species, and when you realise that people are really motivated to do something for it".

"People want to do something for the conservation of invertebrates but they simply don't have a clue what to do; they don't know the species, they don't know their requirements, they don't know the threats, they don't know anything. For example, the rangers on the Seychelles are very interested to learn something about these crickets and grasshoppers because they see them every day but they don't know what it is, and there are no good field guides … people really move when you provide them with information".

This speaks to his wider opinion on the potential success of species conservation efforts in general; "We will not be able to completely halt biodiversity loss, but we should try to minimize it; this is possible". However, he adds, "You can only preserve what you know".

Crau Plain grasshopper
Prionotropis hystrix rhodanica
Critically Endangered
France
$10,000





Crau Plain grasshopper © Axel Hochkirch

Sorting through insect specimens © Huw Roberts

THE MAN THE MISSION AND THE MOUNTAIN

Huw Roberts is not your average conservationist. His interest in the natural world came late; whilst working as a teacher at the British Council in Bahrain in the mid-1990s he discovered a love of birds. "I wasn't birding as a kid", he says, but after introducing his brother, a keen birder, to some like-minded people during a visit he caught the bug: "I started going out every weekend after that, and it grew from there … along with photography and collecting and trying to put names to species – it's a passion".

THE WHOLE THING IS ABOUT HABITAT; THE ONLY WAY YOU CAN KNOW IF A HABITAT IS ANY GOOD IS IF YOU CAN SHOW THERE'S A HELL OF A LOT THERE AND YOU CAN NAME THEM.

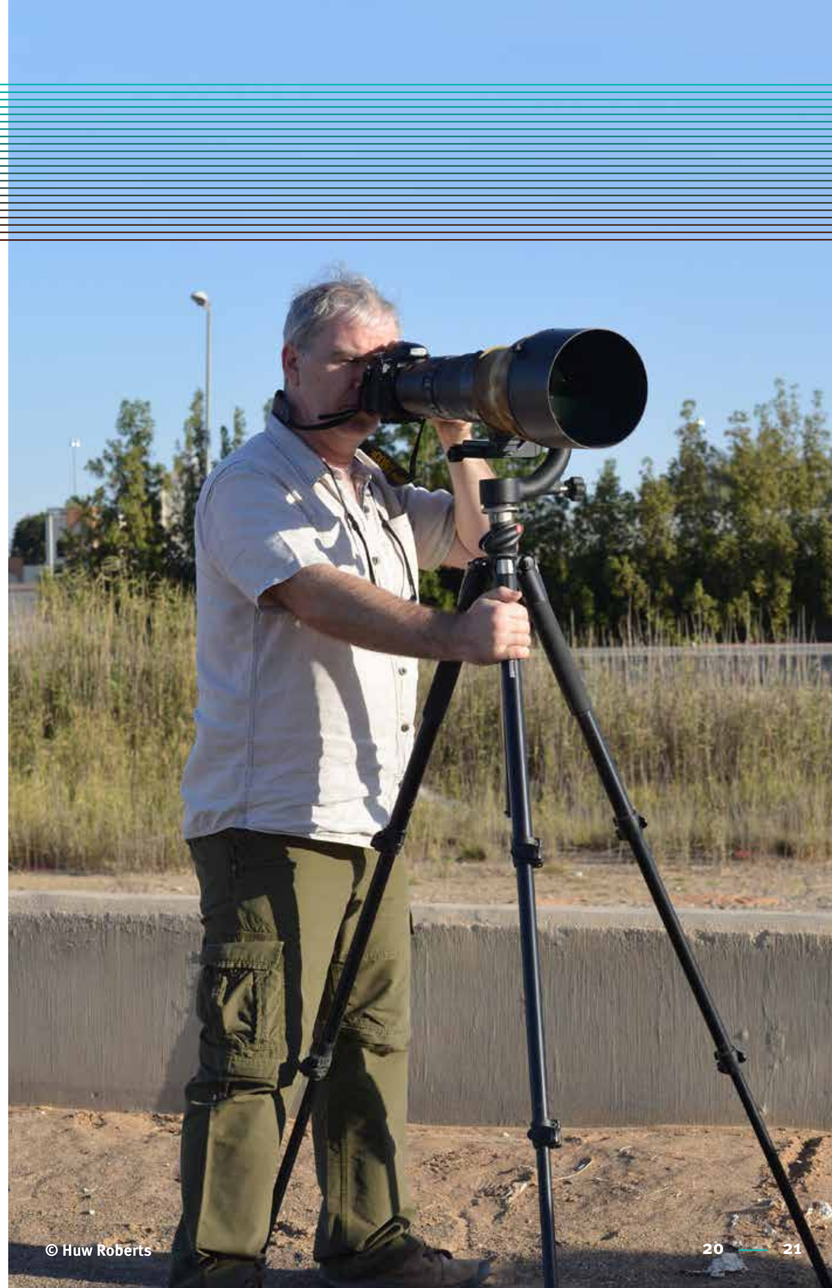
Invertebrates of Jebel Hafeet
Various species
United Arab Emirates
$3,000

His interest in both birds and photography led to the creation of an online database in 2008, which today features images of nearly 1,000 species from the Gulf region: "I started a website; an e-based gallery of birds and other wildlife and I started looking at other wildlife and seeing things up close was very interesting".

Having moved to the UAE via Oman, he settled in Al Ain, where he is now a university lecturer in English, and quickly found himself exploring the nearby Jebel Hafeet mountain in search of interesting species. He ended up in Ain Al Waal on the west side of the jebel, photographing a Trumpeter finch; "but I got chased away at that time; the border [with Oman] was very near and I was warned off. I came back a few years later and there was nobody really patrolling the area so I was able to have a closer look".

What he found was a small, incredibly species-rich patch of the mountain that instantly piqued his interest; "I just felt, I knew there was a lot there and I wanted to chronicle it and hopefully try to persuade somebody, by doing that, that this is worth keeping or trying to protect in some way".

He set out to catalogue the species found in the area by single-handedly undertaking



© Huw Roberts

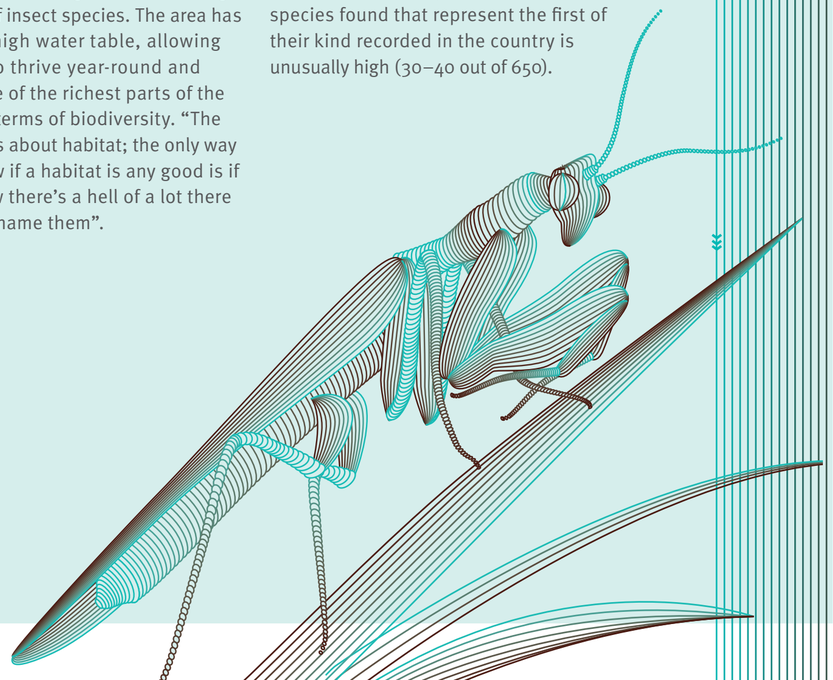
his own ecological study. The Fund has provided a grant for him to continue this study and reveal the extraordinary range of species present in this breakaway peak of the Hajar Mountains. The funds provided have been used to buy specialist monitoring, photography and data storage equipment, including camera traps, black lights and a bat detector.

“At first I was going to do a collecting effort of 12 months, then it became 18 months and then it turned into two years”.

The project focuses on a T-shaped area roughly 800 by 500 metres in size, and has already identified the presence of an impressive array of inhabitants, including Arabian tahr, foxes, bats, a host of reptiles including snakes and geckos, and a large community of insect species. The area has a relatively high water table, allowing vegetation to thrive year-round and making it one of the richest parts of the mountain in terms of biodiversity. “The whole thing is about habitat; the only way you can know if a habitat is any good is if you can show there’s a hell of a lot there and you can name them”.

Huw has discovered around 650 separate species that occur in this area, which is made up of vegetated plains, pools and dry wadis, but he expects to double this number following his dedicated collecting effort supported by the Fund and the ongoing exhaustive analysis of specimens, many of which are in the hands of 50 or so leading specialists from around the world.

As his collection data expands, the area is rapidly emerging as quite distinct from the main body of the Hajars some 25 kilometres to the east, with species being identified that are absent from the rest of the range; “Because Jebel Hafeet is isolated, away from the rest of the Hajar Mountains, it does evolve differently and possibly there are more species there that are not recorded in the UAE”. Indeed, so far the number of species found that represent the first of their kind recorded in the country is unusually high (30–40 out of 650).



Fan-footed gecko © Huw Roberts

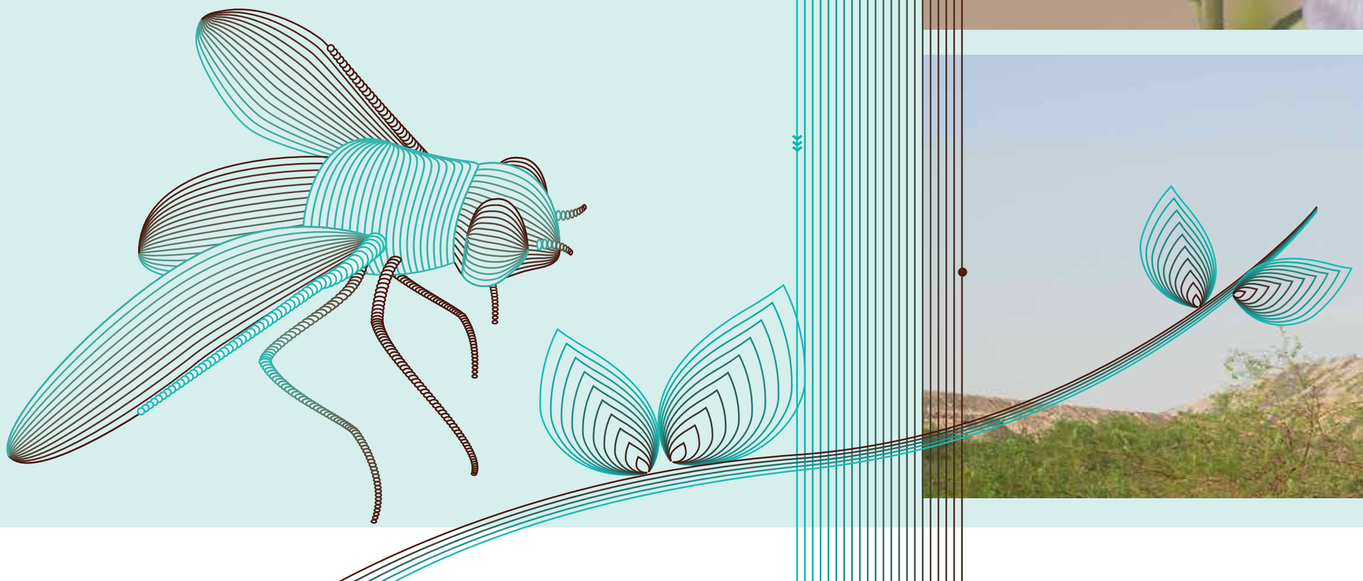
Halter nutans © Huw Roberts

Huw, in one area of Ain Al Waal, was able to collect 17 different species of *Tachysphex*, a genus of ground-nesting digger wasps, and he has already been able to provide the paratypes for the description of a new ant species, the holotype of which was collected in neighbouring Oman. There are also several other species that appear to be new to science and for which official descriptions are pending, including a cuckoo wasp and several bees.

However, he warns, “The threat to the mountain is developing all the time”. Its position a mere 25 metres from the construction site of a large housing development poses an immediate threat to this vast community of species, as does further construction and the threat of non-native livestock releases in nearby Wadi Tarabat.

Huw hopes that creating a comprehensive flora and fauna list will ultimately provide the basis for efforts to achieve some form of official protection for Ain Al Waal, with its unique combination of habitats and species, particularly in light of the looming threat posed by these developments. “I’m certain about the whole of the mountain; I think there is more than a normal number of species that are only found in one place,” Huw concludes, “it’s unique”.

He now aims to expand his focus to Wadi Tarabat, which is still poorly-known in terms of its arthropod fauna; “I feel compelled to continue my work there now to gain more knowledge about the natural species that inhabit another part of the mountain at a time when people seem to be intent on clearing them out. This way, data is available, and it can inform decision-making, and people can have a clear understanding of what is at stake”.



Hummingbird hawk moth © Huw Roberts

Ain Al Waal, UAE © Huw Roberts

Daisy Maryon with a Utila spiny-tailed iguana

SAVING
THE SWAMPER

"I always wanted to work with animals; I never really wanted to do anything else; nothing ever felt right apart from doing this", says Daisy Maryon as she recollects her early love for the natural world, fed by weekly visits to nearby Bristol Zoo with her family; "I just wanted to be a zoo keeper or a vet or something like that", she recalls.

THE IGUANAS DON'T REALLY DO THEMSELVES ANY FAVOURS, BECAUSE THEIR DEFENCE MECHANISM IS TO STAND PRETTY STILL ON THE TREE AND NOT RUN AWAY ... THE HUNTERS WILL ALSO CUT THEM OUT OF TREES WITH MACHETES

However, at school she found herself restless, impatient to fulfil her urge to be out in the field working directly with wildlife. "I didn't really see Biology as being linked with doing work in the field ... for a while I didn't understand how to get there ... I ended up doing some volunteering and a college course in animal management; that set me on the right track to go into conservation".

Utila spiny-tailed iguana
Ctenosaura bakeri
Critically Endangered
Honduras
$10,000

She would eventually go on to complete her BSc in International Wildlife Biology at the University of South Wales and now divides her time between the lecture halls of USW and the field as she undertakes her Masters of Research (MRes).

It was whilst managing Operation Wallacea's schools programme in the Cusuco National Park in Honduras that she first learned about Utila's endangered iguanas; "I was looking for a project to do for my MRes", she recalls, "so my boss said: 'my friends on Utila have a research station' ... so I got in contact to see what they needed help with and everything fell into place really well".

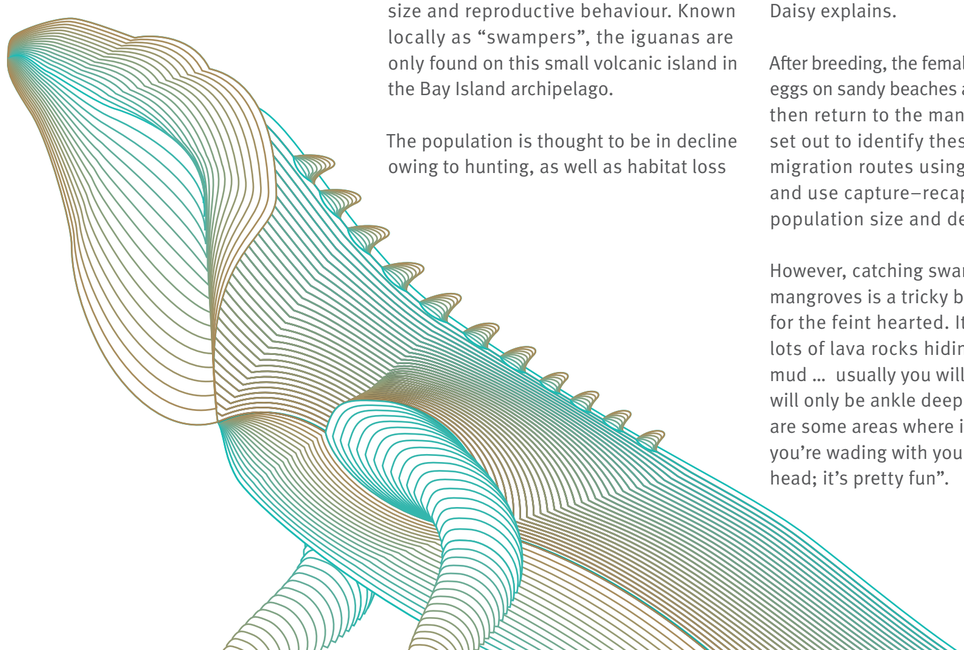
Little did she know how prescient her childhood visits to the local zoo would prove to be; "I used to go to the zoo every weekend with my dad and my mum and they actually had Utila spiny-tailed iguanas there; so without knowing it I have been looking at these iguanas my entire life!"

With the support of the Fund she went on to spend nine months with these miniature dragons, studying their habitat, population size and reproductive behaviour. Known locally as "swampers", the iguanas are only found on this small volcanic island in the Bay Island archipelago.

The population is thought to be in decline owing to hunting, as well as habitat loss and fragmentation. While hunting of the iguana has been illegal since 1994, the ban is rarely enforced; iguana meat is sold to locals and tourists, while their eggs are considered a local delicacy. It is thought that the specific targeting of egg-laden females by hunters is to blame for the dangerous imbalance in the number of males per female (currently around 1.7:1). "The iguanas don't really do themselves any favours, because their defence mechanism is to stand pretty still on the tree and not run away ... the hunters will also cut them out of trees with machetes", Daisy explains.

After breeding, the female iguanas lay their eggs on sandy beaches and the hatchlings then return to the mangroves, so Daisy set out to identify these reproductive migration routes using radio telemetry and use capture–recapture to assess population size and demography.

However, catching swampers in Utila's mangroves is a tricky business; "It's not for the feint hearted. It's hot, there are lots of lava rocks hiding underneath the mud ... usually you will be lucky and you will only be ankle deep in water but there are some areas where it's chest deep and you're wading with your backpack on your head; it's pretty fun".



The other native species that inhabit the island are not always sympathetic to the cause; after rescuing one gravid (egg-carrying) female from an attack by a pair of dogs, Daisy found it later that day being patiently devoured by a boa constrictor; “I’m not messing with fate anymore!” she reflects.

The tracking also proved difficult at times because the radio signals bounced off the gnarled volcanic landscape, giving bizarre readings, and some of the iguanas managed to rid themselves of their tags on the jagged terrain; “the longest we had a tag on a female was seven weeks”, Daisy admits.

The team determined that the iguanas often move through and nest in urban areas and gardens, including the shore of beachfront properties; not only that, hatchlings were discovered ambling around the centre of Utila town. Hence, the project also supported an education programme in five local schools and involved students in some of the population surveys.

“There is real scope to save these iguanas”, Daisy says, “to educate the community more … to make the children on the island like these animals so when their parents come home with an iguana for them they will say: ‘I don’t want to eat that!’.”

Land development is also an ever-present threat in the areas inhabited by these prickly individuals, with mangroves being cut and used for waste dumping and native vegetation being cleared from beaches.

Areas of mangrove and prime nesting beach are up for sale, and the project has concluded that raising funds to purchase these plots may be the only way to ensure the safety of the iguanas and their habitat. Employing local people as guides and rangers would ideally follow and would illustrate the potential profit of conservation for the community; “It’s about showing people it’s possible to make quite a lot of money this way and that you don’t have to go out and hunt for your family”.

Despite the many challenges faced in preserving these spiky reptiles, Daisy is upbeat concerning the swampers’ prospects; “Because of the MBZ grant we were able to acquire funds from the International Iguana Foundation as match funding … the IIF liked what we were doing and funded us again this year … but [the MBZ grant] got the ball rolling; without the Fund we wouldn’t have been able to do what we wanted to in the first place”.

It is clear that in Daisy Maryon the Utila spiny-tailed iguanas have found their champion, and for Daisy this is certainly now a labour of love; “It’s a subject really close to my heart”, she says, “I really don’t want to see these iguanas go extinct… [the project] is at a crossroads and with some hard work and more funds I think we can save them”.

Utila spiny-tailed iguana © Daisy Maryon

GRANT RECIPIENTS 2016


Agustinus Wijayanto


Alan Chamorro Cuestas


Alcides Ricieri Rinaldi


Alecsandra Tassoni


Alex Kutt


Alfayo Koskei


Alfonso Gonzalez


Allie Hofner


Alvaro Garcia Olaechea


Amanda Santiago Biologa


Amelia Nugrahaningrum


Amila Sumanapala


Anibal H. Diaz


Andre Alonso


Androa Otomops


Angie Appel


Anslem de Silva


Ariel S. Espinosa-Blanco


Ashan Thudugala


Axel Hochkirch


Brad Lock


Caesar Rahman


Chandra Mouli


Chung Liu


Cristian Sitar


Daisy Maryon


Darren Weeks


David Bilton


Eduardo Fernandez


Eli Christian


Elisabeth Condon


Enrico Lunghi


Erwin Willianto


Ezequiel Fabiano


Fatimah Zahratul Jannah


Ganga Ram Regmi


Geoffrey C. Smith


George Kehayias


Gianluca Serra


Gisella Caccone


Glyn Maude


Gopal Khanal


Greg Mueller


Gust Van Jlava


Hazel Oxenford


Hermine Mkrtchyan


Hibraim Perez Mendoza


Hyeon Jeong Kim


Ian Singleton


Iraj Hashemzadeh Segherloo


Irina Stepanchikova


Itai Roffman


Jack Saunders


Jacky Judas


Jacobo Marrero Perez


Jason Corbett


Javier Ortega


Jen Nightingale


Jennifer Shaw


Jihäne Ben Hassine


Joanna Barker


Sanchez Rendon


Juliett Gonzalez


Justus Deikumah


Karen Aghababyan


Kate Detwiler


Kathleen Reinhardt


Kevin Omland


Khalid Mahmood


Konrad Mebert


Lauren Gardiner


Leida Maria Dos Santos


Leonid V. Averyanov


Lisa Davenport


Louise Fletcher


Malla Giridhar


Manuel Merchan


Margaretha Hofmeyr


Micaela Camino


Michael Gichia


Mikhail Rusin


Milton Norman Medina


Muhammad Kabir


Muller Tamas


Murthy Kantimahanti


Natalia Tangalin


Nathanael Stanek


Nayana Wijayathilaka


Nazrul Islam


Ng Yong Foo


Nicholas James


Njumbe Peter


Noumbissi Tenku


Nyree J.C. Zerega


Palma Rola


Pedro G. Mendez-Carvajal


Pete Rand


Tabita Randrianarivony


Raoul Manenti


Ricardo Torres


Rishi Kumar Sharma


Robert Hopkins


Robert Thomson


Ruzanna Petrosyan


Sam Shanee


Samya Basu


Schutz Emmanuel


Seana Walsh


Siddhartha Pati


Sriyanie Miththapala


Fiona Bracken


Steve Cranwell


Susan Cheyne


Huw Roberts


Tomas Diagne


Tomas Michel Rodriguez


Ugur Kaya


Vanessa Herranz Munoz


Vania Carolina


Victor Wasonga


Vincent Droissart


Stefano Bovero


Nick Holmes


Yvonne Sadovy


Wieland Heim


Kristen Petrov


Chris Wiese


Christophe Boesch


Lisa Mogensen


Daniel Ferguson


Daniela Torres


Marrino Rakotoarisoa

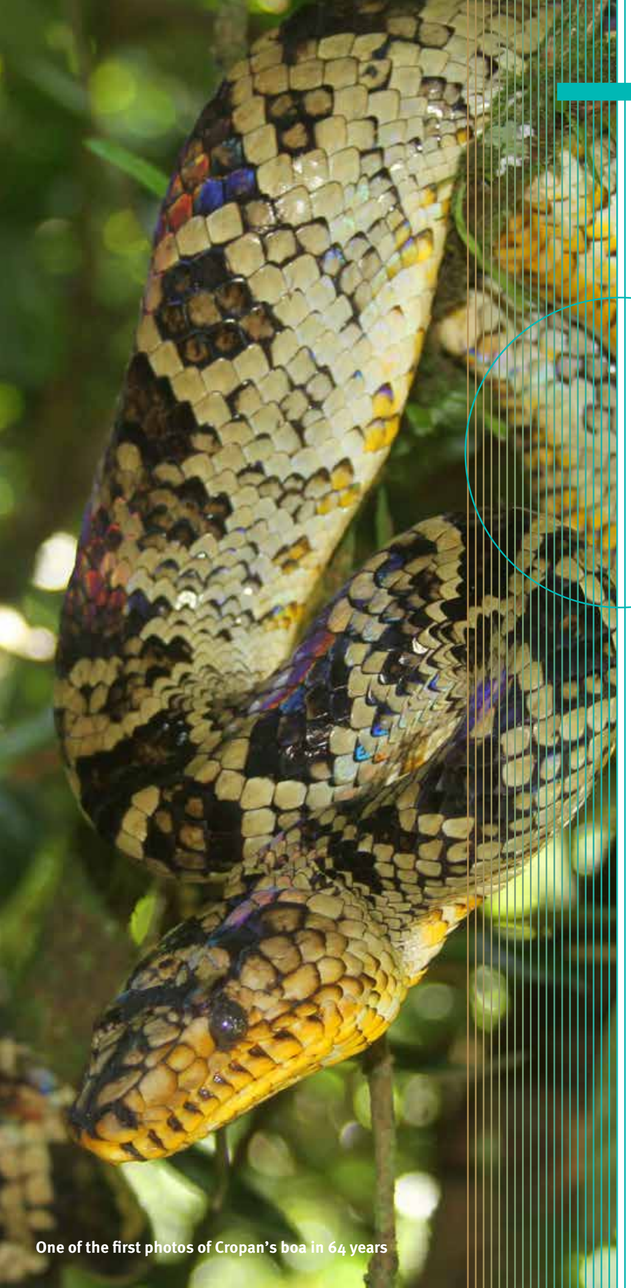

Wacho Tapia

STORIES OF DISCOVERY

REMARKABLE REVELATIONS

2

Time and again we have the privilege of witnessing the ability of species to disappear in the most pessimistic of circumstances only to surface decades later to astound naturalists. For scores of years we have lost sight of Brazilian boas and Zimbabwean squeakers, or have been mystified by the epic wanderings of Great knots. Their capacity to endure and evade is both remarkable and reassuring; but for those that have been re-discovered a true challenge emerges: to ensure that they achieve the greater goal of long-term survival.



One of the first photos of Cropan's boa in 64 years

WANTED ALIVE

THE BOA IS NOT A POPULAR NEIGHBOUR AMONG THE EXTREMELY POOR HUMAN INHABITANTS OF THIS RURAL AREA, WHO HAVE A TENDENCY TO KILL SNAKES ON SIGHT, JUST FOR GOOD MEASURE.

Cropan's boa
Corallus cropanii
Endangered
Brazil
$9,450

It has taken a staggering 64 years, but as of January 2017 one of the longest ever herpetological 'man-hunts' is finally at an end. The elusive Cropan's boa, last seen alive in 1953, has remained hidden in the Atlantic Forest of Brazil with only a handful of dead specimens surfacing; but finally a live snake has been found.

This extended vanishing act is all the more surprising given that Cropan's boa exists in an area of approximately 300 km^2 which also happens to be one of the best-studied areas of the Forest. As a consequence, very little is known about what is probably the world's rarest boa. Its habits in particular remain a mystery, so the surest solution to fill this gap in knowledge is to track a live Cropan's boa in the wild using an implant and radio-telemetry. This of course is easier said than done, considering the rarity of the snake, but field biologist Bruno Rocha and fund-raiser Everton Miranda hope that it will eventually allow the team of researchers involved in the project to learn a great deal more about the snake.

The boa is not a popular neighbour among the extremely poor human inhabitants of this rural area, who have a tendency to kill snakes on sight, just for good measure.

Aside from conflict with man, habitat loss is a major threat to the species. One of the most biodiverse ecosystems on the planet, the Atlantic Forest has suffered one of the highest rates of deforestation in Brazil, having been reduced to a mere 7–12 percent of its original cover.

Cropan's boa © Bruno Rocha

Cropan's boa is in good hands © Bruno Rocha

In an attempt to circumvent the mistrust that exists between human and boa, a financial reward has been offered for anyone who can produce a live specimen for scientific study; Wild West-like reward posters and pamphlets have been hung in farming and fishing stores in a small village in the boa's suspected vicinity.

Mercifully the hunt to locate the first live specimen ended without a deadly show-down. A group of five local men found the boa, two of whom had attended a lecture by the researchers and knew of the reward.

Despite their concerns that the campaign was really a scheme to catch people in the illegal animal trade, they contacted members of the project team at the University of São Paulo's Museum of Zoology and the Butantan Institute, and Bruno Rocha rushed to the scene, narrowly avoiding a car accident in his excitement.

The find was so astounding to the herpetology community that at first no-one believed it to be true; that is, until the team's photographs led to an avalanche of congratulatory emails from around the world.

With the help of the Fund, the researchers aim to conduct radio telemetry studies on this snake and further individuals by encouraging more local people to become involved in the hunt for specimens. Lectures on the species will continue to be delivered to inhabitants of its range and special kits distributed to allow safe capture of snakes found. The team also hopes to be able to find a way to contribute to the local economy and improve the lives of local people who rely on illegal extraction of forest products to survive.

No specific plan exists to protect Cropan's boa, therefore the ultimate aim of the project is to build a conservation strategy to preserve what remains of the wild population; that is, if these herpetological Houdinis finally agree to give up the secrets of their astonishing disappearance.

Great knot © Dmitry Dorofeev

THE INCREDIBLE JOURNEY

THE KEY TO DECIDING IF THE ESTUARY SHOULD BECOME A PROTECTED AREA WAS TO DETERMINE WHETHER THE GREAT KNOT AND OTHER ENDANGERED WADING SPECIES WERE USING THE AREA TO FORAGE AFTER BREEDING BEFORE THEIR LONG SOUTHWARD MIGRATION

Great knot
Calidris tenuirostris
Endangered
Russia
$4,000

Whilst on a bird watching trip to Umm Al Quwain in the north of the United Arab Emirates, a teacher at the British School Al Kubairat in Abu Dhabi spotted an Endangered wading bird with a leg band. Following the trip this experienced amateur ornithologist investigated further and discovered that the bird, a Great knot, had been ringed an astonishing 8,300 kilometres away by a scientist in Russia.

As it turned out, that scientist was none other than Dmitry Dorofeev, one of the Fund's grant recipients who was conducting field work in the Kamchatka Peninsula. Specifically, Dmitry was investigating Khairusovo–Belogolovaya estuary on the Western coast of Kamchatka as a key location for protected wader species on the East Asian–Australasian migratory flyway.

Following previous informal ornithological investigations in 2010 and 2012 conducted whilst serving as observers for a Beluga whale project, Dmitry and his colleagues surmised that the area – with its 47 square kilometres of mudflats – was the largest wader stop-over on the western coast of the Peninsula, and that it could consequently be in need of formal protection.

The key to deciding if the estuary should become a protected area was to determine whether the Great knot and other endangered wading species were using the area to forage after breeding before their long southward migration. If so, there would be grounds to prepare the necessary documents and evidence to establish the area as a sanctuary for these important visitors.

To view a video on this project, scan this QR code

Great knot © Dmitry Dorofeev

Great knot © Dmitry Dorofeev

To this end, with the help of Tomas Noah and Anna Ganiukova, Dmitry set out to count the numbers of the species in the area, observe and monitor birds marked with leg bands to learn how long individuals foraged there, and sample the invertebrates in the birds' most popular feeding spots to identify important prey species.

The grant from the Fund accounted for around one quarter of the total project funding, and was allocated to the purchase of a stills camera with an appropriate telephoto lens and a spotting scope to aid the observation and identification of the target species, as well as covering some of the researchers' travel costs to an area poorly served by transport infrastructure.

The project ultimately confirmed Dmitry's suspicion that the Khairusovo–Belogolovaya estuary is one of the largest and most important stopovers on the Kamchatka Peninsula for this species. The Great knot remains in the area for a significant period and in large numbers before departing to the next (so-far unknown) stop in its southward migration.

The mudflats were also identified as an important location for the Spoon-billed sandpiper, and a key breeding and migration area for the Far-Eastern curlew. The next step for the researchers is to pursue the formation of a special protected area in the estuary to ensure these elegant waders may continue to comb the mud flats in search of much-needed fuel for their epic annual journeys.

Thanks to Dmitry, many more Great knots may also undergo the incredible voyage to the UAE to scour its tidal zones in years to come.

Francois Becker © Robert Hopkins

IT PAYS TO SPEAK SQUEAK

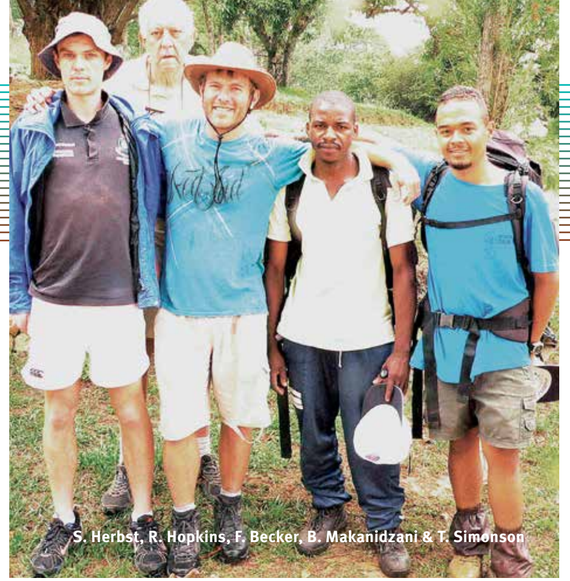
ROBERT HOPKINS HAS SPENT A LIFETIME STUDYING THE FROGS OF ZIMBABWE, BUT THE CAVE SQUEAKER HAS CONSISTENTLY ELUDED HIM SINCE HE SET OUT TO FIND IT IN 1998.

Cave squeaker
Arthroleptis troglodytes
Critically Endangered
Zimbabwe
$4,800

How does one go about finding a rare, coin-sized frog that has not been seen for over 50 years in a 20 km² patch of the Chimanimani mountain range of eastern Zimbabwe? The answer: bring someone along who speaks Cave squeaker.

In an area that is being steadily degraded by people panning for gold and searching for diamonds, this tiny, elusive frog has not been sighted in over half a century and not a single photograph was available to help the team of intrepid herpetologists that sought to track it down.

The Cave squeaker (*Arthroleptis troglodytes*), the Chimanimani stream frog (*Strongylopus rhodesianus*) and the River frog (*Amietia quecketi*) were all discovered and described between 1962 and 1965, when the Rhodesian Bush War put an end to field work in the area. Not one of these species has been seen since, leading to the inevitable conclusion that one or all may have become extinct.



S. Herbst, R. Hopkins, F. Becker, B. Makanidzani & T. Simonson

Robert Hopkins

Cave squeaker © Robert Hopkins

Robert Hopkins has spent a lifetime studying the frogs of Zimbabwe, but the Cave squeaker has consistently eluded him since he set out to find it in 1998. This is the second grant he has received from the Fund to locate this missing amphibian, his first search having been undermined by a severe drought in the area caused by El Niño.

Working under the auspices of the Natural History Museum in Bulawayo, he and two fellow scientists resolved to finally locate the species and, if successful, collect specimens for *ex-situ* breeding and release in suitable areas where they may be monitored and protected.

Whilst searching for the frog on 3 December 2016, Francois Becker – one of Hopkins' team members who has a remarkable ear for the language of Zimbabwean frogs – heard a call that he recognised as being from the genus *Arthroleptis* but was unfamiliar. Closer investigation revealed their tiny target species in a location they did not expect.

It had been assumed that the frogs would be found in caves near the Bundi River, like the original specimens, but it turns out that *A. troglodytes* breeds away from these areas, throwing the search team off the scent.

The wild population of Cave squeakers appears to be healthy, but they live in a small, rather hostile neighbourhood harassed by gold panners and therefore require protection, as does the Chimanimani stream frog which has also since been discovered and appears to be abundant in the area.

Four frogs were collected and are awaiting re-location to their new home — a purpose-built breeding tank housed at the Natural History Museum.

Following the drama of their re-discovery – and the explosive media coverage it attracted – the captive frogs have settled down and regained a healthy appetite.

As yet there are no little squeakers, but Robert reports that the males are 'in attendance', and he is hopeful that there will soon be some tiny candidates for re-introduction to their native habitat high in the Chimanimani mountains.

STORIES OF FIELDWORK

THE FRONT LINE

3

Knowledge is the basis of successful conservation. Without dedicated people working in the field, surveying treacherous landscapes, locating and describing populations, and identifying and mitigating threats to all manner of species, it would be impossible to effectively protect the world's threatened flora and fauna. There is no substitute for primary data, whether it is collected by scouring the unforgiving Sechura desert of Peru for a cat; braving the wilds of the Vietnam–Laos border to study the *Pinus cernua* pine; or searching the bark of spruce trees in the volcanic landscape of the Kamchatka Peninsula for boreal felt lichen.

CRYPTIC CATS

Pampas cat
Leopardus colocolo
Near Threatened
Peru
$10,740

Conducting fieldwork in the sparse expanse of the Sechura desert of north-western Peru can be an uncomfortable experience. Hardly any vegetation survives here outside a few areas of mangrove, and temperatures are known to reach as high as 48°C. But the experience is made all the more frustrating when your elusive quarry simply refuses to be captured for science.

This is the situation faced by Alvaro García-Olaechea and his team, who are attempting to attach GPS collars to the wily Pampas cat in order to better understand its habits and range, and subsequently develop plans for its protection.

THE PROJECT SEEKS TO DETERMINE THE SIZE AND NATURE OF THE HOME RANGES OF THE CATS BY TRACKING FOUR INDIVIDUALS BY GPS IN THE SAN PEDRO DE VICE MANGROVES AND THE ILLESCAS RESERVE ZONE.

"After 15 days, we were unable to capture any cats and planned a second capture attempt with twice as many traps [10] and callers to attract Pampas cat[s] to the traps", Alvaro explained. "Also, we used old transmitters as trap alarms to avoid disturbing the area so often and had help from a veterinarian specialised in mammal and felid capture. We were able to capture one cat after almost one month on the second attempt".

Pampas cat © Alvaro García-Olaechea

A captured 5-month old Pampas cat © Alvaro García-Olaechea

The project seeks to determine the size and nature of the home ranges of the cats by tracking four individuals by GPS in the San Pedro de Vice Mangroves and the Illescas Reserve Zone.

Evidence from camera traps and the presence of significant quantities of scat suggest that there are more cats in the mangroves than previously thought. This has led the team to surmise that the difficulty they face in catching them is down to an abundance of prey in the mangrove and a lack of competition from other carnivores. However, this remains a matter of guess-work, as there is no ecological information about these populations, nor on how they are able to survive in a desert environment as much as 35 kilometres away from the nearest known sources of water.

During the course of the project so far, Alvaro and his team have documented previously unknown threats to the Pampas cat and its habitat, including the presence of feral animals and livestock, animal capture for the pet trade, and destructive practices such as pasture burning to flush out wild boar during hunting season.

This is the second grant provided by the Fund; its purpose is to ensure the continuation of the project, including a new component that will involve the delivery of environmental workshops for local villages and schools in order to increase awareness of the importance of the Pampas cat to the broader ecosystem. However, one problem remains: how to capture three more of these elusive felines, who appear more interested in striking tantalising poses for Alvaro's cameras than being enticed into his traps.

Conservation success at work © Alvaro García-Olaechea

© Irina Stepanchikova

MIGHTIER THAN THE MOUNTAIN

Boreal felt lichen
Erioderma pedicellatum
Critically Endangered
Russia
$10,000

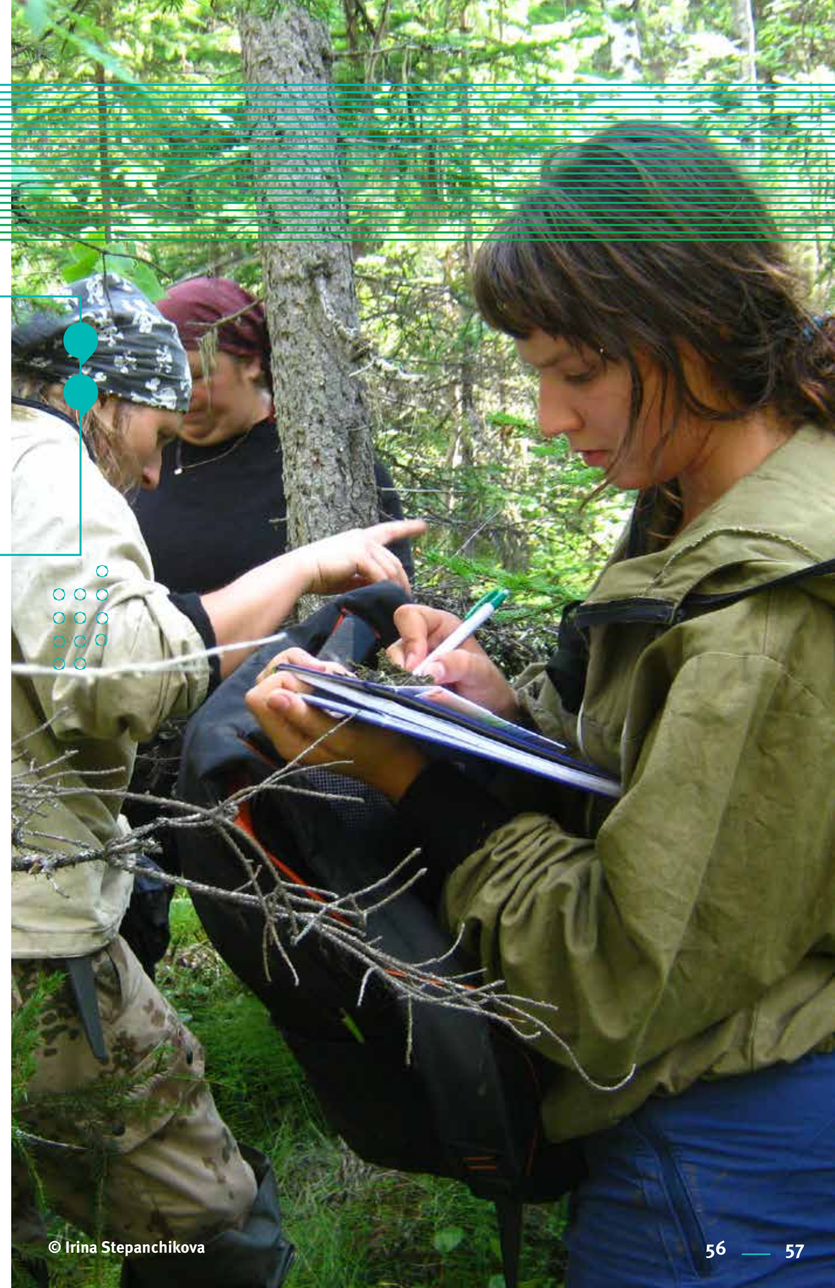
AMONG THE MOTLEY CREW OF FUNGI CLINGING TO THEIR TRUNKS ARE FUZZY SPLASHES OF BOREAL FELT LICHEN (*ERIODERMA PEDICELLATUM*).

In the frigid wilderness of Russia's Kamchatka Peninsula, littered with active volcanoes and the giant carcasses of their extinct cousins, a primitive life-form can be found on the bark of the spruce trees that blanket the landscape.

Among the motley crew of fungi clinging to their trunks are fuzzy splashes of Boreal felt lichen (*Erioderma pedicellatum*). This Critically Endangered species belongs to a genus that is thought to have been present on Earth for over 400 million years, quietly bearing witness to the remarkable evolution of our planet.

Part of the lichen's range is situated within the Kronotsky Nature Reserve, but in 2013 a substantial part of the population was discovered outside the borders of the protected area close to Lazo on the lower slopes of the Nikolka volcano.

These primeval spruce forest communities are thought to be unique in the whole of Eurasia, but the trees of this ancient woodland – most of which are more than 200 years old – may soon be levelled by a logging



© Irina Stepanchikova

operation along the perimeter of the reserve, destroying a significant proportion of the Boreal felt lichen along with it.

With the support of the Fund, Irina Stepanchikova of the Komarov Botanical Institute is conducting a field study of this recently discovered Asian population of *Erioderma pedicellatum*, with a particular focus on its distribution outside the limits of the Kronotsky Reserve. It will be used to re-evaluate the IUCN Red List status of the species worldwide and provide further impetus for it to be included in the Red Data Book of Russia, for which an application was made in 2015.

Irina aims to formally request a 580 km² extension to the reserve to protect the main part of the lichen population on the slopes of Mount Nikolka. Her hope is that one day a much larger extension to the protected area may be established that would encompass the peak of the volcano, thereby also protecting the mountain-top sources of the rivers which are so important to all the fungi, plant and animal communities at its base.

Much to the dismay of Irina and her team, as they prepared to begin their expedition in the particularly dry summer heat of 2016, a substantial area of spruce forest in the Nikolka river valley was razed to the ground by wildfires, annihilating part of the lichen population. Furthermore, they discovered that the north-eastern part of the study area is habitually cut for heating each year by local residents of Lazo and Atlasovo.

There is also some good news to report, however; since receiving support from the Fund, one of the project's participants has already identified another part of the Asian population of *Erioderma pedicellatum* on the eastern slopes of the Sredinny Range in the western part of the Kamchatka River Valley.

Not every humble fungus can claim to be the gallant protector of a volcano and its surrounding ecosystem, but if Irina and her team are successful, these colonies of Boreal felt lichen could prove themselves to be more than a match for the looming deforestation that threatens their habitat.

© Irina Stepanchikova

The Pha Luong Mountains © Leonid Averyanov

LIFE ON THE EDGE

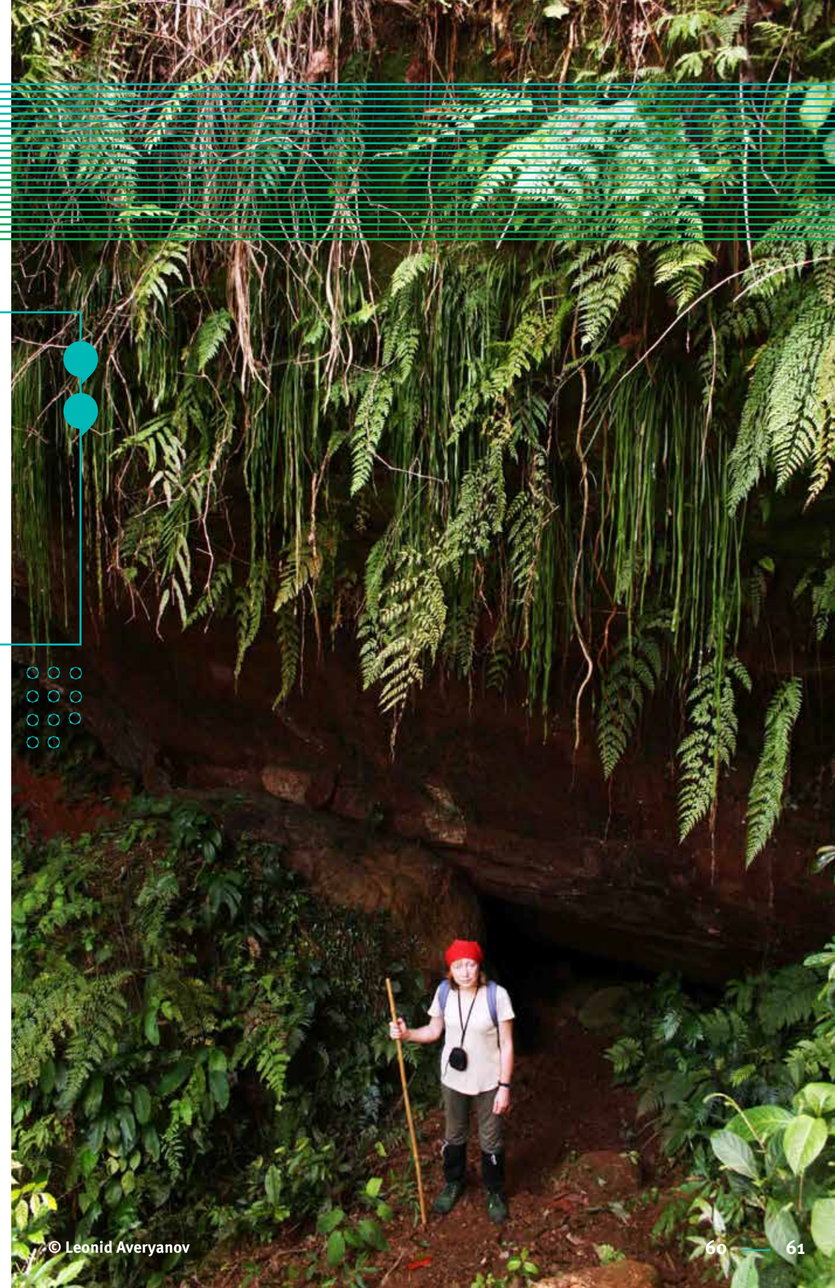
Pinus cernua
Not Evaluated
Vietnam
$12,000

ASIDE FROM LOCATING AND STUDYING THIS RARE PINE – AN ADMIRABLE FEAT IN ITSELF – WHILST IN THE FIELD PROF. AVERYANOV ALSO IDENTIFIED 99 FAMILIES, 180 GENERA AND 550 SPECIES.

Few botanists would expect to find themselves called upon to dash along remote mountain tracks on motorcycles within restricted military zones along the Vietnam–Laos border. But Professor Leonid Averyanov may have had some idea of what was in store for him when investigating the status of *Pinus cernua*, an endangered pine tree found only in the unforgiving landscape of the Pha Luong Mountains.

Specifically, *P. cernua* almost exclusively inhabits the steep rocky slopes and sandstone cliffs of the region, making the assessment of its status in the wild an even more challenging prospect.

Nevertheless, Prof. Averyanov was able to verify the presence of the species in 16 previously identified locations across the Pha Luong Mountains and discovered six new subpopulations. However, he also



© Leonid Averyanov

identified one location where the tree has now become extinct as a result of a forest fire, and concluded that the total distribution area for the species has been reduced by 25–30 percent in the past 3–5 years, its area of occupancy shrinking to just three square kilometres.

Uncontrolled forest burning and clearing related to agriculture is largely to blame for this rapid decline, especially given its small range, but other factors such as logging activities and targeted felling for its fragrant wood have also served to reduce the population of *P. cernua*.

Owing to the inherent restrictions associated with working in a sensitive border area, Prof. Averyanov and his colleague were denied permission to establish camps from which to conduct their fieldwork. As a result, they were forced to spend nights in the dense forest, and to travel by motorcycle to reduce the time required to reach different study areas. They also had to undertake much longer journeys on foot, for which local guides and porters were required.

Furthermore, the researchers found themselves joined by staff from the Xuan Nha Nature Reserve, as well as representatives of the local state administration, police and military on their expedition, which stretched their budget for food and supplies.

The fieldwork resulted in detailed descriptions of *P. cernua* ecology, habitat, biology, population structure and taxonomy, as well as new data on the geography, geomorphology and climate of the Pha Luong Mountains.

Aside from locating and studying this rare pine – an admirable feat in itself – whilst in the field Prof. Averyanov also identified 99 families, 180 genera and 550 species.

Remarkably, among the plant specimens he collected were 30 endemic species requiring protection, six species that were previously unknown from the flora of Vietnam, and twelve species that are completely new to science.

P. cernua has yet to be included in the IUCN Red List of Threatened Species, but the data collected by Prof. Averyanov places the species firmly within the Critically Endangered category according to IUCN criteria. It seems clear that only through careful protection and monitoring of all known subpopulations of this highly-threatened tree will it stand a chance of long-term survival in the wild.

© Leonid Averyanov

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STORIES OF SUCCESS

CAUSE FOR HOPE

4

Conservation is an enduring struggle, a litany of seemingly insurmountable challenges; yet our grant recipients rise to the task with enviable determination and stoicism, meeting obstacles head-on with innovative solutions and boundless optimism. Their stories serve as an ongoing source of hope, exemplified by the success of the Tahina ‘suicide palm’ on its Madagascan ‘tsingy’; the Red-finned blue-eye, under siege and surrounded by the parched landscape of central Queensland; and the Carbonera pupfish ensconced in its single natural spring in the unforgiving Samalayuca basin of Chihuahua, Mexico.

© Annette Ruzicka

GOOD FENCES GOOD NEIGHBOURS

THE STRIKING RED-FINNED BLUE-EYE REPRESENTS AN EASY TARGET FOR THE INVASIVE MOSQUITO FISH—A PLUMP PREDATOR INTRODUCED OVERLAND DURING LOCAL FLOODING.

Red-finned blue-eye
Scaturiginichthys vermeilipinnis
Critically Endangered
Australia
$16,550

To the casual observer, the tranquil shallow springs of the Edgbaston Reserve in central Queensland, Australia are a picture of calm. However, inches below the surface a war is raging between the poorly defended residents and a formidable invading army.

In the Great Artesian Basin springs of the reserve, where it was first discovered in 1990 and to which it is endemic, the striking Red-finned blue-eye represents an easy target for the invasive Mosquito fish (*Gambusia holbrooki*)—a plump predator introduced overland during local flooding.

Very few Red-finned blue-eye populations exist in the wild, comprising less than 3,000 individuals spread between a handful of springs on the Reserve, so the introduction of a voracious predator such as *Gambusia* can easily eradicate the fragile colonies that remain, leading to their extinction.

Robert Wager in the field © Annette Ruzicka

Robert Wager © Annette Ruzicka

Thankfully these brightly-coloured little fishes have found their champions in the form of Rob Wager and Dr Alex Kutt of Bush Heritage Australia, a conservation organisation that bought the 8,200-hectare former sheep and cattle station primarily to protect the host of endemic fishes, plants and invertebrates occurring in the springs.

Their battle plan is surprisingly straightforward; with the support of the Fund they will erect fences around a number of high-priority springs using a custom-made barrier material that will prevent marauding Mosquito fishes from occupying the springs during flooding events. The fencing has been specifically designed to be both more permeable and durable than existing barrier materials, and is highly resistant to wind and animal damage.

Both the springs containing the Red-finned blue-eye and those that are home to the troublesome *Gambusia* will be fenced in order to prevent them flooding into their neighbours' patch; specifically, the grant will be used to fence five of the springs inhabited by the Red-finned blue-eye, seven containing the Mosquito fish and one currently co-habited by both species. Once the fences are in place, the Mosquito fish will be removed by hand to allow the springs to be rehabilitated, creating a threat-free habitat fit for the broader reintroduction of the Red-finned blue-eye. This is not the first grant the Fund has provided to the project, which successfully applied in 2014, and the survival of this endemic fish is still far from guaranteed, but Bush Heritage Australia aims to establish ten self-sustaining populations in individual springs on the Edgbaston Reserve by 2020.

Rob Wager, Dr Kutt and Bush Heritage Australia view the project as an important stepping stone in reaching the long-term goal of achieving a situation in which the *Gambusia* are properly controlled, the fences are removed and the natural processes unique to artesian spring communities are restored.

For the sake of the survival of the rarest little fish in Australia the grant recipients hope that, in this case at least, good fences will make good neighbours.

The Red-finned blue-eye © Annette Ruzicka


© Lauren Gardiner

A BLAZE OF GLORY

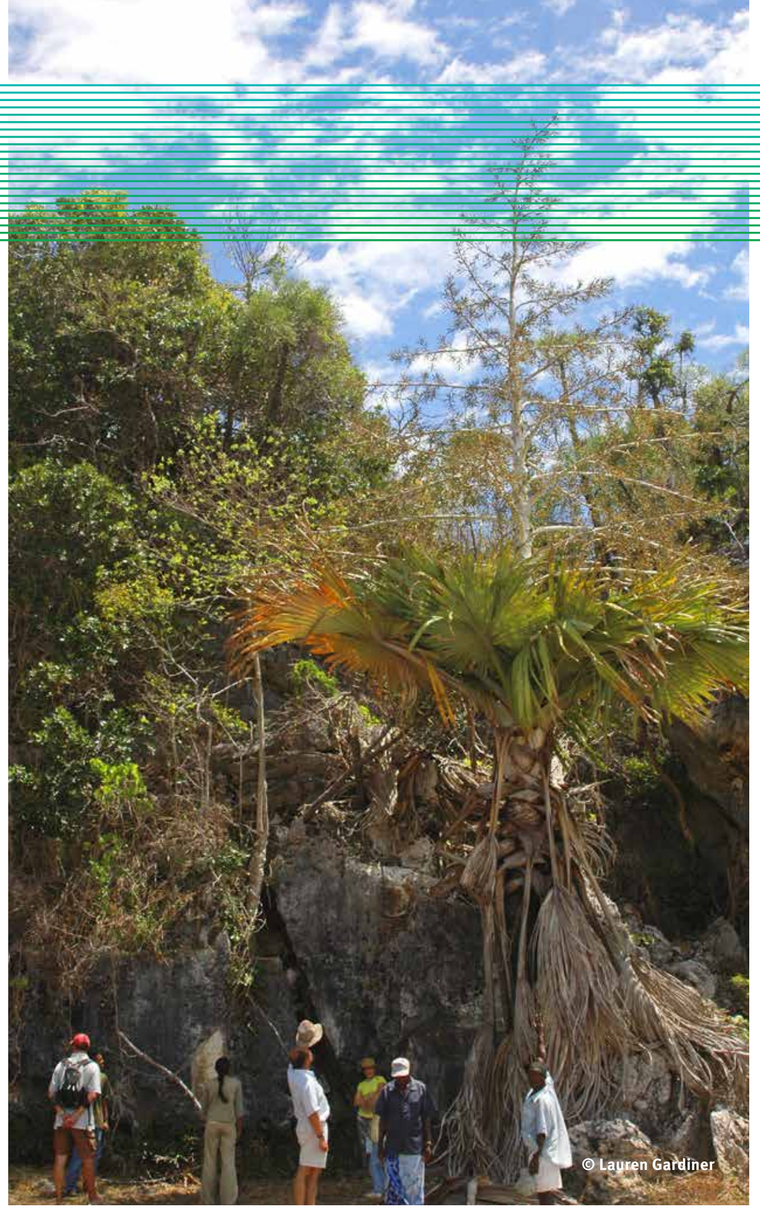
THE TAHINA PALM IS FAR FROM SAFE, AND REMAINS A CRITICALLY ENDANGERED SPECIES, YET THE FAMED CONSERVATIONISTS' OPTIMISM IS CLEARLY IN EVIDENCE AND HOPES ARE HIGH THAT THIS MAGNIFICENT PLANT IS NOT YET READY TO FLOWER ITSELF OUT OF EXISTENCE.

Tahina palm
Tahina spectabilis
Critically Endangered
Madagascar
$5,000

There is perhaps no greater challenge than the conservation of a species with a tiny population, known from only one or two remote locations, that dies after its only attempt at reproduction.

As if that were not enough, *Tahina spectabilis* – known ominously as the 'suicide palm' – is found in northwest Madagascar on an island-like patch of eroded limestone, embedded in a landscape which is both regularly flooded and prone to grassland fires. Having only been discovered in 2006 by the manager of a neighboring cashew plantation, a 2008 census of this population of Critically Endangered palms recorded just 26 adult plants.

In a bid to bring the Tahina palm back from the brink, funds were raised by selling *T. spectabilis* seeds to the global horticultural community, both raising money for conservation efforts and ensuring a broad *ex-situ* population.


© Lauren Gardiner

The proceeds of the seeds sold were channeled back into the local community and used to create a firebreak around the limestone ‘tsingy’ upon which the Tahina palm was originally found.

Most people would no doubt write off the prospects of the Tahina palm coming back from the brink, but conservationists are an understandably optimistic breed, and with the help of the Fund Dr Lauren Gardiner of the Royal Botanic Gardens at Kew is now re-surveying the population alongside colleagues from Madagascar and Australia, and preparing a conservation plan to ensure its survival.

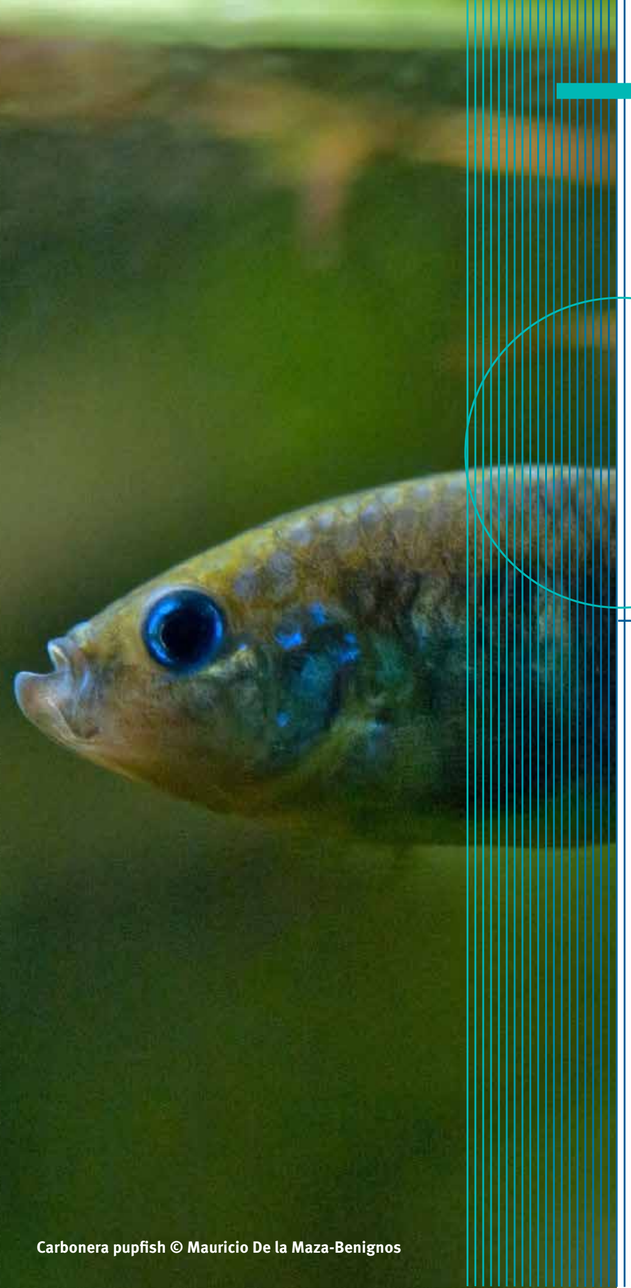
The new census has revealed roughly the same number of adult plants (27) as the 2008 count, but approximately 100 more plants overall on the tsingy (568) and a total of 740 individual plants on the peninsula as a whole. Also, the community-based conservation methods that have been implemented at the site over the past eight years appear to have been successful. Dr Gardiner has also reported that a new site has been discovered nearby with a healthy seeding population and that efforts are being made to include this area in local conservation measures.

However, there are reports of rot affecting the trunk and the gigantic flowering heads of the palms, as well as evidence of a destructive beetle larvae that may be affecting the reproductive potential of the Tahina.

The present focus of the project is the creation of a species conservation management plan that includes the distribution of education materials to the local community and school to secure their support for, and involvement in conservation measures. A further objective is to train local field workers to undertake censuses and monitor the species year-round.

The Tahina palm is far from safe, and remains a Critically Endangered species, yet the famed conservationists’ optimism is clearly in evidence and hopes are high that this magnificent plant is not yet ready to flower itself out of existence.

A 2-day journey to reach the project site © Lauren Gardiner



Carbonera pupfish © Mauricio De la Maza-Benignos

AN UNLIKELY HERO

THE TRANSPLANTED POPULATIONS HAVE THRIVED, EXPANDING SIGNIFICANTLY WITHIN THEIR NEW REFUGE AND THROUGHOUT THE BROADER NATURAL SPRING SYSTEM.

Carbonera pupfish
Cyprinodon fontinalis
Endangered
Mexico
$12,000

In the arid expanse of the Samalayuca basin in Chihuahua, Mexico, water is the most precious of resources; so it is hard enough to survive in this dune-ridden environment without needing to be permanently submerged in water to breathe.

That is the incredible challenge facing the tiny, unassuming Carbonera pupfish, which today is found in a single natural spring in the heart of this unforgiving neighbourhood.

This endemic fish was originally known to occur in nine different springs, but years of groundwater extraction for agriculture, combined with the introduction of non-native species, have eliminated all but one of these modest sources of refuge—the now-failing Ojo Solo desert spring in Ejido Rancho Nuevo, Chihuahua.

© Mauricio De la Maza-Benignos

Teetering on the edge of survival, the only way to ensure the safety of the species was to arrange more suitable accommodation as soon as possible.

Thankfully, under the careful direction of Dr Mauricio De la Maza-Benignos, a new home was found in the Ojos Calientes thermal spring, which is fed by a deep aquifer and is unaffected by groundwater extraction.

Together with two other endemic tenants – the Largemouth shiner (*Cyprinella bocagrande*) and the Chihuahuan dwarf crayfish (*Cambarellus chihuahuae*) – a number of Carbonera pupfish have been successfully relocated to their new home, and the important business of rescuing and renovating their original abode has begun.

With the Fund's support, Mauricio and his fellow researchers are now monitoring the populations of these three species in both the Ojo Solo and Ojos Calientes springs (which, in the case of the crayfish has proved somewhat challenging given their unrivalled aptitude for remaining hidden in the smallest of pools). They have also sought to expand the habitat for the pupfish to allow for population growth, and have conducted three educational workshops explaining the value of conservation to the local community. This latter activity has produced very positive results, with local community leaders and students proving highly receptive to the concepts, importance and advantages of species and habitat conservation.

The transplanted populations have thrived, expanding significantly within their new refuge and throughout the broader natural spring system. As well as simply increasing their numbers, this has also provided an opportunity to expand the genetic diversity within their populations, greatly reducing the likelihood of their extinction.

In the battle to save the dry wilderness of the Samalayuca basin there is perhaps no hero more unlikely than a tiny fish; but the quest to rescue what remains of the original home of the endemic Carbonera pupfish could well serve to save an entire ecosystem and the livelihoods of the people who live and work within it.

© Mauricio De la Maza-Benignos

STORIES OF COMMUNITY

PARTNERSHIPS FOR PRESERVATION

5

To successfully conserve the world's threatened and endangered species often requires various compacts with our own species. Such understandings and arrangements are sometimes crucial to achieving the harmony and balance required to allow us to co-exist and thrive with the natural world. For the White-backed vulture in Botswana, the Asian Elephants of southern West Bengal and the enchanting Okapi of the Congo, cooperation with local people, as well as regional and national authorities, is the only way to prevent the negative influence of mankind in these often remote locations around the globe.

Okapi © William Konstant

COMMUNICATION REVOLUTION

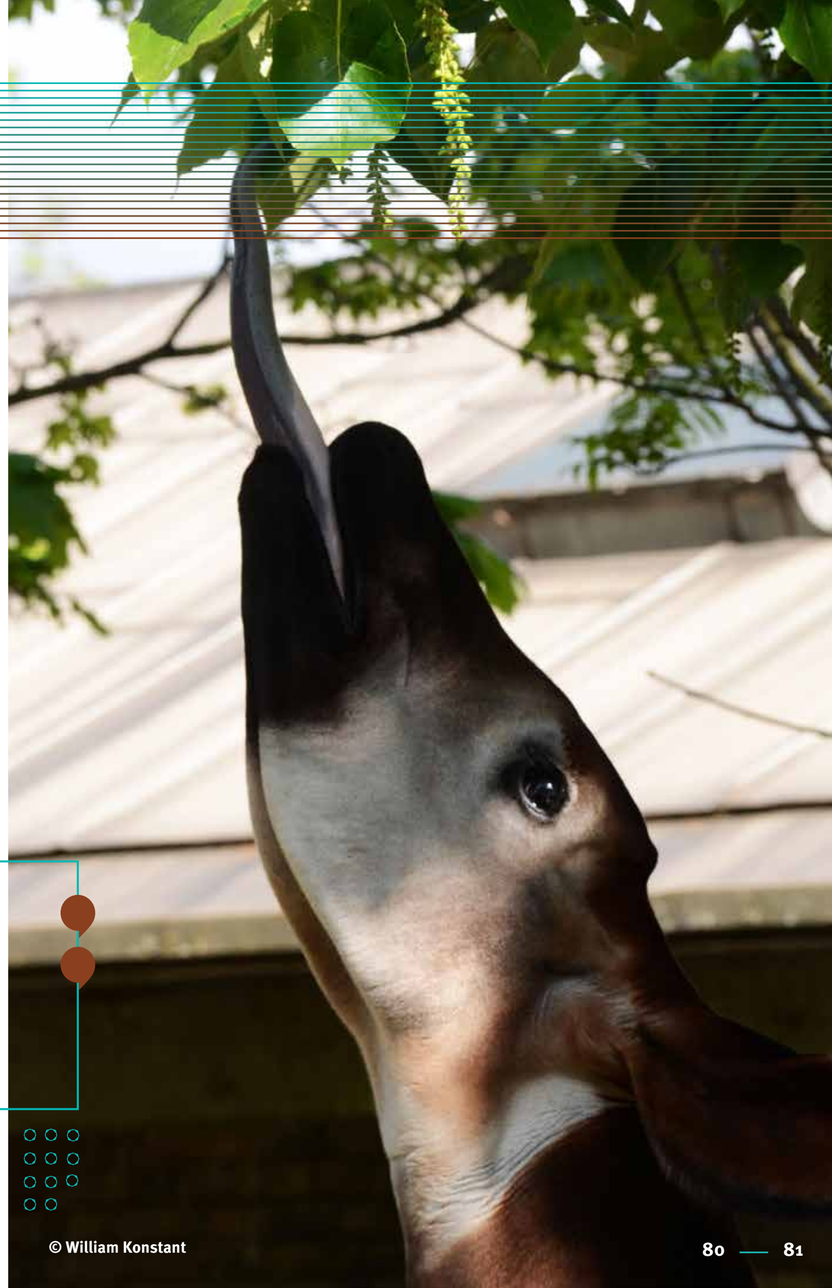
To say that the Okapi looks slightly odd would be to undersell the unique characteristics of this curious mammal. While at first sight they seem alien in appearance, closer inspection reveals a mish mash of familiar features. With a sepia complexion reminiscent of old family photographs, their stance, stubby velvet-covered horns and extraordinarily capable tongues betray their membership of the *Giraffidae* family. The zebra stripes on the hind quarters and lower forelegs, however, are thought to have developed independently to that of the more familiar herding beasts of the continent.

Okapi
Okapi johnstoni
Endangered
Democratic Republic of the Congo
$10,000

Okapi are only found in central and north-eastern Democratic Republic of the Congo (DRC), with the largest population (around 3,000 individuals) occurring in the Ituri Forest, one-fifth of which is covered by the Okapi Wildlife Reserve, established in 1992.

They are certainly not fussy eaters, and happily consume over 100 different species of plants occurring throughout their range, from the dense lush undergrowth of the high-altitude forests in the east to the swamp forests of the west, the northern savannah and the open woodlands of the south.

THE CONFLICT GAVE RISE TO ROGUE MILITIAS INVOLVED IN ILLEGAL POACHING AND MINING, PILING FURTHER PRESSURE ON THE SPECIES AND ITS HABITAT.



© William Konstant

However, the Okapi face a double threat that is all too familiar – the ever-present menace of poachers and the steady destruction of their habitat caused by illegal mining and logging operations.

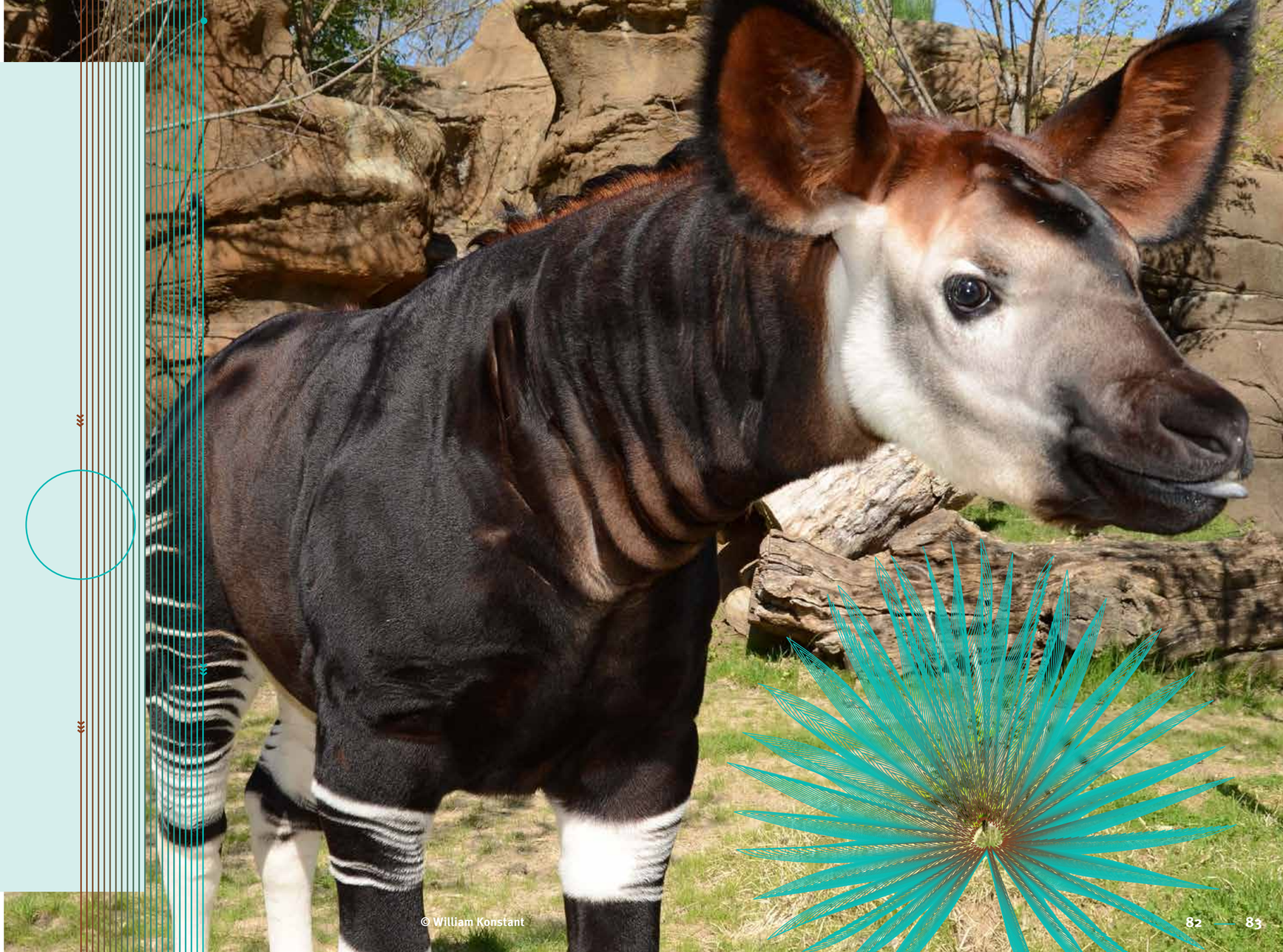
The Okapi have been protected since 1933, but their numbers have declined by over 50 percent since the outbreak of the 1995 civil war in the former Republic of Zaire. The conflict gave rise to rogue militias involved in illegal poaching and mining, piling further pressure on the species and its habitat.

Recently, however, the security situation has improved, allowing the Okapi Conservation Project (OCP) and the Institute in Congo for the Conservation of Nature (ICCN) to expand their efforts to curtail these activities throughout the reserve. One major problem remains, however; while the Okapi are partial to remote, inaccessible corners of the region, the rangers tasked with their protection find it rather more difficult to operate in these areas.

Communication across vast swathes of dense forest is particularly problematic, which is why John Lucas, President of the White Oak Conservation Center which directs the operations of the OCP, sought the help of the Fund. A grant was subsequently provided to purchase handheld radios, a VHF repeater, two satellite phones and five GPS devices to improve coordination between rangers and staff, as well as between the ICCN leadership and the Congolese military.

Unfortunately, the VHF repeater was blocked from entering the DRC from neighbouring Uganda owing to the high demand for communications equipment among paramilitary groups operating in the region. Instead, five satellite phones and two GPS units were purchased and are now in the hands of the ICCN. This means patrols are able to stay in the field for longer periods, cover up to 25% more territory, and can immediately report illegal activities or request reinforcements when needed.

Ongoing conflict in the DRC will continue to frustrate the efforts of conservationists; but, armed with a more effective means of communication, those on the front line of efforts to preserve the lush Ituri Forest and its inhabitants will now have a significant advantage. The simple provision of a means of communication could well ensure that the wild population of these charming creatures, with their extraordinary identi-kit features, is not lost to history like so many faded family portraits.



© William Konstant

Glyn Maude with a White-backed vulture

BIRDS WITHOUT BORDERS

White-backed vulture
Gyps africanus
Critically Endangered
Botswana
$20,000

They may appear invincible as they circle high above the arid savannah of the Kalahari, but Botswana's vultures are falling prey to a wholly terrestrial threat across these lands and throughout southern Africa.

The White-backed vulture is the victim of an ongoing war between farmers and the predators who stalk their livestock. In this conflict, the carcasses of dead animals are laced with poison to kill the unwitting jackals, hyenas and feral dogs that pick off the farmers' cattle, sheep and goats.

Not only that, vultures are sometimes specifically targeted by poachers, who poison the carcasses of their kills to rid the area of these enigmatic scavengers—the presence of which alerts wardens to the grizzly evidence of the poachers' illegal activities.

THE WHITE-BACKED VULTURE IS THE VICTIM OF AN ONGOING WAR BETWEEN FARMERS AND THE PREDATORS WHO STALK THEIR LIVESTOCK.

Lappets Moving in © Glyn Maude

National Parks and game reserves account for over eighteen percent of Botswana's surface area, but vultures are not the types to be tied down by boundaries, no matter how benign the motive. Those fitted with satellite tags in the past have shown regular trans-boundary movements, stressing the need for corresponding conservation measures.

That's why the Fund is supporting a team from Denver Zoo, led by Dr Glyn Maude, to monitor endangered and vulnerable vultures in Botswana using GPS technology. The project encompasses the Makgadikgadi, Kalahari, Linyanti, Ghanzi and Okavango regions, tracking vultures with satellite tags to learn more about their range and ecology, and working with farmers in the target areas to protect these magnificent raptors.

Carcass poisoning has had a severe effect on populations of White-backed, Hooded, Cape, White-headed and Lappet-faced vultures in the Kalahari, and by tracking birds live via satellite, the researchers hope to be able to work with local law enforcement agencies to offer real-time responses to poisoning events. This includes undertaking helicopter-based rapid response missions with anti-poaching authorities and the Botswana Defence Force to intercept and arrest poachers.

Specifically, the grant provided by the Fund has been used to purchase and fit two GPS telemetry units in order to study and monitor vulture movements and determine how widespread the poisoning is. The grant was also allocated to fund a road survey of raptors, replicating a previous count made in the early 1990s, and a detailed study of Lappet-faced vulture nesting behaviour, as well as to produce community education materials and assist the studies of a Botswanan Master's student.

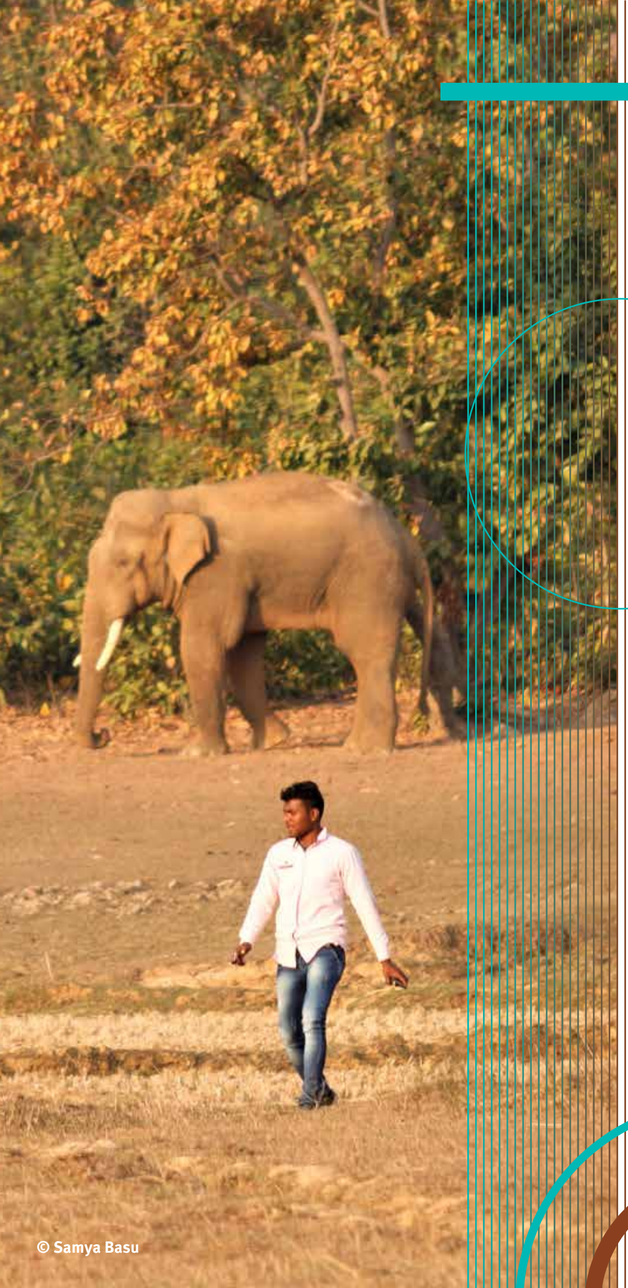
The tracking data collected showed that, as suspected, the White-backed vulture and its relatives roamed well beyond the protected areas of Botswana and even into Namibia and South Africa with reckless abandon, showing scant regard for internal or international boundaries.

Furthermore, during the course of their work supported by the Fund, the team from Denver Zoo discovered that significant numbers of vultures and other large raptors are being electrocuted by power lines, and they are now working with the Endangered Wildlife Trust in South Africa to assess the problem in Botswana and explore solutions to reduce the number of such incidents.

While there is little chance of educating these formidable and unruly birds as to the potential dangers of overhead power lines or the benefits of remaining within the confines of Botswana's protected areas, Glyn and his fellow researchers hope that efforts to map their movements and engage with local communities to reduce poisoning events will play a significant role in ensuring the viability of vulture populations across the region.

© Glyn Maude

VICTIMS OF SUCCESS



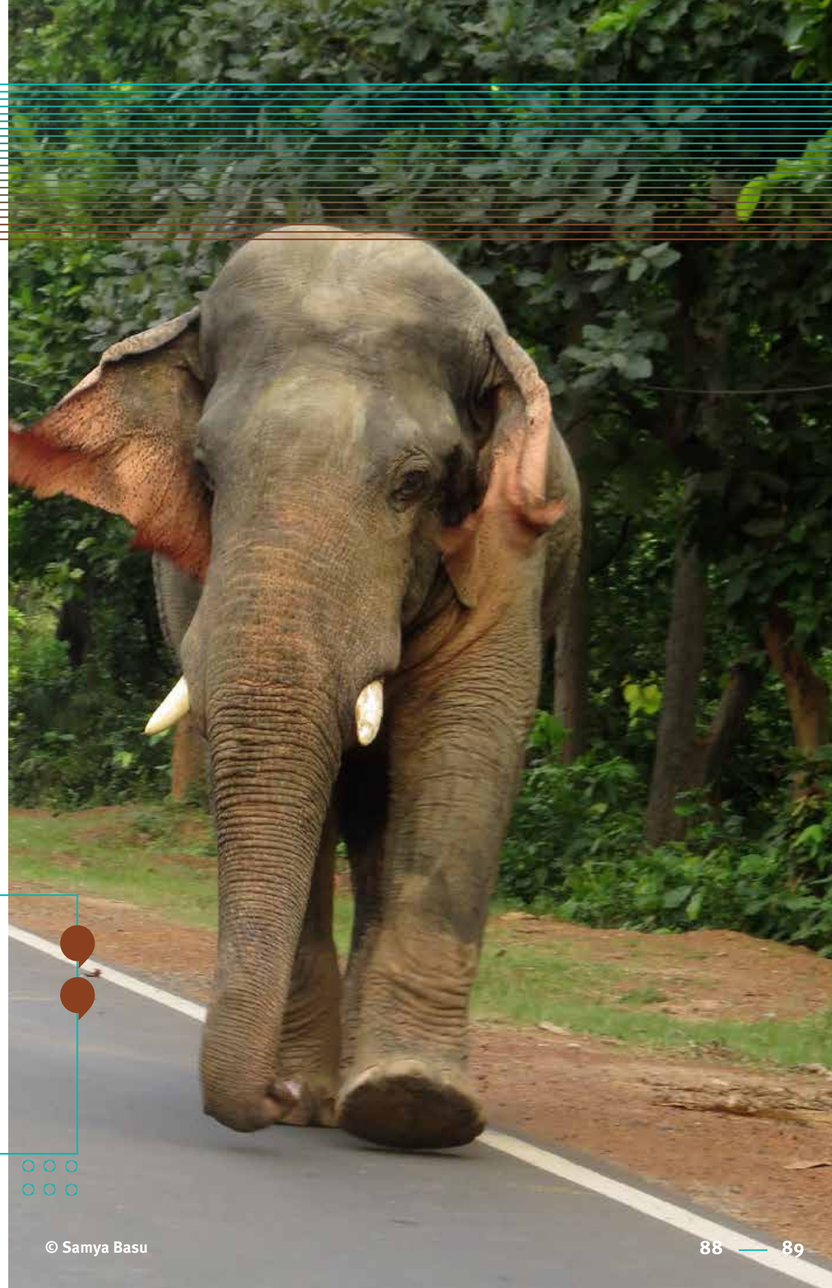
© Samya Basu

Asian elephant
Elephas maximus
Endangered
India
$4,930

A decade ago less than 100 Asian elephants roamed the 415 km² expanse of the Mayurjharna Elephant Reserve in southern West Bengal, but today the number of these magnificent giants is firmly on the increase, having risen by 90 percent between 2005 and 2015 thanks to work funded by the UK-based Rufford Foundation.

Their success has also seen the population expand its 'zone of influence', which now covers 1,850 km². However, a growing number of elephants means a growing number of human–elephant interactions, the outcomes of which are often negative for both species. In southern West Bengal in 2013–14 alone, such encounters resulted in 3 elephant deaths, 37 human deaths, 57 human injuries, as well as damage to 3,935 hectares of crops and 929 buildings.

THIS FOREST CORRIDOR IS FAR BEYOND THE BORDERS OF THE RESERVE IN AN AREA DOMINATED BY HUMAN SETTLEMENTS.



© Samya Basu

Existing data and information regarding the elephants' range is more than 12 years old. Therefore, conservationist Samya Basu applied for a grant from the Fund to help gather updated population data for elephants in the reserve and the expanded zone of influence. He sought to determine both their home and migratory ranges to generate distribution and interface zone maps, before devising a plan to mitigate the negative effects of human–elephant interaction.

Samya found that herds have been forced in from adjacent areas owing to stresses in their local ranges, and that their migration routes are also changing, bringing them into more frequent contact with humans. He also faced the unexpected and formidable challenge of preventing accidental elephant deaths in the area.

Seven elephants died as a result of electrocution during the project period, thought to be the result of accidental contact with power lines; but to Samya's dismay, some of these incidents were discovered to have been the result of the intentional trapping and killing of elephants by electrocution. He therefore established an awareness programme, engaging local schools and colleges to dissuade the practice, and also liaised with the West Bengal State Electricity Board to monitor more closely the condition of the wires and poles in the main elephant forest corridor.

This forest corridor is far beyond the borders of the reserve in an area dominated by human settlements. It is crossed by two railway lines and a number of accidental elephant deaths have been caused by train collisions. The project has identified around eight kilometres of track which pose a particularly high risk and raised the problem with local authorities, suggesting a reduced speed limit of 20 km/h in the accident zone. However, a long-term solution has not yet been devised.

Since the conclusion of the project there have been no retaliatory killings of elephants in the area; five trained elephants and their handlers now tour the region to reduce human–elephant conflict; and two specially-equipped conflict mitigation vehicles have been deployed.

It will take more work to mend fences between these two proud and powerful residents of West Bengal. While they may not be the easiest of bedfellows, however, thanks to the work of Samya and others the Asian elephant and the villagers of southern West Bengal are now at least learning to be better neighbours.

© Samya Basu

SUPPORTED PROJECTS 2016

Projects listed alphabetically by vernacular species name

AMPHIBIAN

EX=Extinct | EW=Extinct in the Wild | CR=Critically Endangered | EN=Endangered | VU=Vulnerable
NT=Near Threatened | LC=Least Concern | DD=Data Deficient | NE=Not Evaluated

Vernacular Species Name	Scientific Species Name	Name	Name of Organisation	Country, Continent	Funding
Aparasphenodon arapapa (NE)	*Aparasphenodon arapapa*	Amanda Lantyer-Silva	UNESP	Brazil, South America	$2,500
Bleeding toad (CR)	*Leptophryne cruentata*	Ernestin Sianipar	N/A	Indonesia, Asia	$4,450
Boulenger's backpack frog (CR)	*Cryptobatrachus boulengeri*	Fabio Leonardo Meza Joya	Universidad Industrial de Santander	Colombia, South America	$8,000
Caecilian (DD)	*Boulengerula denhardti*	Domnick Victor Wasonga	National Museums of Kenya	Kenya, Africa	$4,500
Cauca poison frog (EN)	*Andinobates bombetes*	Andrés Quintero Angel	Corporación Ambiental y Forestal del Pacífico CORFOPAL	Colombia, South America	$5,000
Cave squeaker (CR)	*Arthroleptis troglodytes*	Robert Hopkins	Natural History Museum	Zimbabwe, Africa	$4,800
Forest spiny reed frog (EN)	*Afrixalus sylvaticus*	Alfayo Koskei	Egerton University	Kenya, Africa	$4,911
Guajira stubfoot toad (CR)	*Atelopus carrikeri*	Nicolette Roach	N/A	Colombia, South America	$12,500
Kloof frog (EN)	*Natalobatrachus bonebergi*	Jeanne Tarrant	Endangered Wildlife Trust	South Africa, Africa	$12,500
Koni man frog (CR)	*Alexteroon jynx*	Noumbissi Tenku	Eco Relief	Cameroon, Africa	$1,000
Leprous false brook salamander (VU)	*Pseudoeurycea leprosa*	Anibal Díaz de la Vega	Universidad Autónoma de Tlaxcala	Mexico, North America	$12,400
Luristan newt (CR)	*Neurergus kaiseri*	Iraj Hashemzadeh	N/A	Iran, Asia	$5,800
Lycian salamanders (CR)	*Lyciasalamandra genus*	Uğur Kaya	Ege University	Turkey, Asia	$10,000
Mahe caecilian (EN)	*Hypogeophis brevis*	Simon Maddock	Reaseheath College	Seychelles, Africa	$9,200
Malagasy rainbow frog (EN)	*Scaphiophryne gottlebei*	Marrino Falitiana RAKOTOARISOA	N/A	Madagascar, Africa	$2,500
Megophrys parallela (DD)	*Megophrys parallela*	Ahmad Mursyid	Andalas University	Indonesia, Asia	$3,550
Painted tree frog (NE)	*Aparasphenodon pomba*	Clodoaldo Assis	N/A	Brazil, South America	$4,000
Pseudophilautus semiruber (DD)	*Pseudophilautus semiruber*	Gayani Senevirathne	University of Peradeniya	Sri Lanka, Asia	$4,450
Sardinian brook salamander (EN)	*Euproctus platycephalus*	Stefano Bovero	"Zirichiltaggi" Sardinia Wildlife Conservation	Italy, Europe	$12,500
Sinharaja shrub frog (CR)	*Pseudophilautus simba*	Nayana Wijayathilaka	Open University of Sri Lanka	Sri Lanka, Asia	$2,250
Stream sirenodon (CR)	*Ambystoma leorae*	Felipe Osuna	Institute of Ecology A.C.	Mexico, North America	$5,500
Valcheta frog (CR)	*Pleurodema somuncurense*	Federico Kacoliris	Museo de La Plata - Meseta Salvaje	Argentina, South America	$2,500

PLANT

EX=Extinct | EW=Extinct in the Wild | CR=Critically Endangered | EN=Endangered | VU=Vulnerable
NT=Near Threatened | LC=Least Concern | DD=Data Deficient | NE=Not Evaluated

Vernacular Species Name	Scientific Species Name	Name	Name of Organisation	Country, Continent	Funding
Beentje orchid (CR)	*Ossiculum aurantiacum*	Vincent Droissart	Institut de Recherche pour le Développement	Cameroon, Africa	$11,000
Brandegee oak (EN)	*Quercus brandegeei*	Audrey Denvir	Morton Arboretum	Mexico, North America	$15,000
Caribea litoralis (NE)	*Caribea litoralis*	Ramona Oviedo Prieto	Empresa Nacional para la Protreccion de la Flora y la Fauna de Cuba	Cuba, North America	$17,000
Diospyros katendei (CR)	*Diospyros katendei*	Bulafu Collins	Makerere University Kampala	Uganda, Africa	$3,500
Hazomafana (NE)	*Diospyros laevis*	Paul Smith	Botanic Gardens Conservation International	Madagascar, Africa	$8,500
Hibiscus (NE)	*Hibiscus storckii*	Paul Smith	Botanic Gardens Conservation International	Fiji, Oceania	$14,000
Keruing (EX)	*Dipterocarpus cinereus*	Henti Hendalastuti Rachmat	Center for Forestry Research and Development	Indonesia, Asia	$4,500
Koki'o ke'oke'o (NE)	*Hibiscus waimeae hannerae*	Seana Walsh	National Tropical Botanical Garden	United States, North America	$17,700
Lake Lutamba coral tree (CR)	*Erythrina schliebenii*	Kirsty Shaw	Botanic Gardens Conservation International	Tanzania, Africa	$10,000
Mosses and liverworts (NE)	*Bryophytes*	Neil Brummitt	Natural History Museum, London	Brazil, South America	$24,000
Ohe mauka (CR)	*Polyscias bisattenuata*	Natalia Tangalin	National Tropical Botanical Garden	United States, North America	$8,000
Sclavo's cycad (CR)	*Encephalartos sclavoi*	Samora Andrew	Sokoine University of Agriculture	Tanzania, Africa	$7,000
Sinai primrose (CR)	*Primula boveana*	Karim Eissa	Ministry of Environment	Egypt, Africa	$3,500
Tahina palm (CR)	*Tahina spectabilis*	Lauren Gardiner	Royal Botanic Gardens, Kew	Madagascar, Africa	$5,000
Terminalia acuminata (EW)	*Terminalia acuminata*	Eduardo Fernandez	University of Reading/ CNCFlora - JBRJ	Brazil, South America	$2,540
Tetramicra malpighiarum (NE)	*Tetramicra malpighiarum*	Frander Brian Riverón Giró	El Colegio de la Frontera Sur	Cuba, North America	$2,500
Tillandsia moscosoi (NE)	*Tillandsia moscosoi*	Natalia Ruiz Vargas	National University Pedro Henríquez Ureña	Dominican Republic, North America	$3,000
Vonatabola (EN)	*Euphorbia mandravioky leandri*	Tabita Noromalalaharivelo Randrianarivony	Missouri Botanical Garden	Madagascar, Africa	$10,000

Red-finned blue-eye © Annette Ruzicka

MAMMAL

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Vernacular Species Name	Scientific Species Name	Name	Name of Organisation	Country, Continent	Funding
African primates (CR)	*Primates*	Andrea Dempsey	African Primatological Society	Cote d'Ivoire, Africa	$25,000
African wild dog (EN)	*Lycaon pictus*	Ezequiel Fabiano	Angola Carnivore Project	Angola, Africa	$12,500
African wolf (NE)	*Canis anthus lupaster*	Tariku Mekonnen Gutema	Jimma University	Ethiopia, Africa	$6,000
Arabian pipistrelle (DD)	*Hypsugo arabicus*	Jacky Judas	Emirates Wildlife Society in association with World Wide Fund for Nature (EWS-WWF)	United Arab Emirates, Asia	$12,500
Azuero spider monkey (CR)	*Ateles geoffroyii azuerensis*	Ruth Metzel	Proyecto Ecológico Azuero	Panama, North America	$12,500
Barbour's vlei rat (EN)	*Otomys barbouri*	Rogers Makau	National Museums of Kenya	Kenya, Africa	$5,000
Bay cat (EN)	*Catopuma badia*	Susan Cheyne	Borneo Nature Foundation	Indonesia, Asia	$4,800
Bay cat (EN)	*Catopuma badia*	Gabriella Fredriksson	Pro Natura Foundation	Indonesia, Asia	$15,438
Blond titi monkey (CR)	*Callicebus barbarabrownae*	André Chein Alonso	N/A	Brazil, South America	$12,500
Bonobo (EN)	*Pan paniscus*	Michael Hurley	Bonobo Conservation Initiative	Congo, Democratic Republic of (Congo-Kinshasa), Africa	$12,500
Brown-headed spider monkey (EN)	*Ateles fusciceps*	Juliett Gonzalez	Fundacion Proyecto Primates	Colombia, South America	$6,000
Buffy-tufted-ear-marmoset (VU)	*Callithrix aurita*	Wagner Lacerda	Muriqui Biodiversity Institute	Brazil, South America	$4,000
Chacoan peccary (EN)	*Catagonus wagneri*	Ricardo Torres	Museo de Zoología, Universidad Nacional de Córdoba	Argentina, South America	$5,000
Delacour's langur (CR)	*Trachypithecus delacouri*	Amy Winterbourne	Fauna & Flora International	Vietnam, Asia	$10,000
Dinagat bushy tailed cloud rat (CR)	*Crateromys australis*	Milada Rehakova	Usti Zoo and Tarsius NGO	Philippines, Asia	$5,000
Dryas monkey (CR)	*Cercopithecus dryas*	Kate Detwiler	Florida Atlantic University	Congo, Democratic Republic of (Congo-Kinshasa), Africa	$12,500
Ecuadorian sac-winged bat (CR)	*Balantiopteryx infusca*	Santiago Burneo	Ecuadorian Bat Conservation Program	Ecuador, South America	$7,000
Fishing cat (VU)	*Prionailurus viverrinus*	Vanessa Herranz Muñoz	Centre for Biodiversity Conservation	Cambodia, Asia	$9,600
Fishing cat (VU)	*Prionailurus viverrinus*	Angie Appel	Fishing Cat Working Group	Pakistan, Asia	$4,550
Fishing cat (VU)	*Prionailurus viverrinus*	Sayam Chowdhury	N/A	Bangladesh, Asia	$4,965
Fishing cat (VU)	*Prionailurus viverrinus*	Murthy Kantimahanti	N/A	India, Asia	$10,000
Fishing cat (VU)	*Prionailurus viverrinus*	Tiasa Adhya	N/A	India, Asia	$10,000
Fishing cat (VU)	*Prionailurus viverrinus*	Ashan Thudugala	University of Peradeniya	Sri Lanka, Asia	$25,000
Fishing cat (VU)	*Prionailurus viverrinus*	Giridhar Malla	Wildlife Institute of India	India, Asia	$10,000
Flat-headed cat (EN)	*Prionailurus planiceps*	Muhammad Yunus	PKHS	Indonesia, Asia	$10,644
Giant otter (EN)	*Pteronura brasiliensis*	Vania Fonseca da Silva	N/A	Brazil, South America	$5,000
Giant pangolin (VU)	*Smutsia gigantea*	Kambale Nyumu	Tayna Center for Conservation Biology	Congo, Democratic Republic of (Congo-Kinshasa), Africa	$4,986
Golden langur (EN)	*Trachypithecus geei*	Dilip Chetry	Aaranyak	India, Asia	$7,000
Himalayan musk deer (EN)	*Moschus chrysogaster*	Wangdi	Sakteng Wildlife Sanctuary	Bhutan, Asia	$11,000
Jungle cat (LC)	*Felis chaus*	Sriyanie Miththapala	IUCN, Sri Lanka Country Office	Sri Lanka, Asia	$3,600
Kashmir grey langur (EN)	*Semnopithecus ajax*	Junid Shah	Environment Agency - Abu Dhabi	India, Asia	$5,000
Kordofan giraffe (VU)	*Giraffa camelopardalis antiquorum*	Osiris Doumbe	Bristol Zoological Society	Cameroon, Africa	$10,000
Leadbeater's possum (CR)	*Gymnobelideus leadbeateri*	Pia Lentini	University of Melbourne	Australia, Oceania	$12,000
Mentawai langur (EN)	*Presbytis potenziani*	Fatimah Fatimah	N/A	Indonesia, Asia	$5,300
Northern muriqui (CR)	*Brachyteles hypoxanthus*	Mariane Kaizer	N/A	Brazil, South America	$12,000

Projects listed alphabetically by vernacular species name

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Orangutan (CR)	*Pongo pygmaeus*	Emma Lokuciejewski	University of Exeter	Indonesia, Asia	$4,400
Pallas's cat (NT)	*Otocolobus manul*	Ganga Ram Regmi	Global Primate Network-Nepal	Nepal, Asia	$7,500
Pampas cat (NT)	*Leopardus colocolo*	Alvaro García-Olaechea	Centro Neotropical de Entrenamiento en Humedales	Peru, South America	$10,740
Panamanian owl monkey (CR)	*Aotus zonalis*	Pedro Guillermo Mendez-Carvajal	Fundacion Pro-Conservacion de los Primates Panamenos	Panama, North America	$7,500
Preuss's red colobus (CR)	*Procolobus pennantii preussi*	Alexandra Hofner	Oxford Brookes University	Cameroon, Africa	$4,500
Red panda (EN)	*Ailurus fulgens*	Nazrul Islam	Wild Trail	India, Asia	$7,500
Red-shanked douc (EN)	*Pygathrix nemaeus*	Andie Ang	GreenViet	Vietnam, Asia	$4,750
Sandy mole rat (EN)	*Spalax arenarius*	Mikhail Rusin	Schmalhausen Institute of Zoology	Ukraine, Europe	$1,990
Small rufous horseshoe bat (DD)	*Rhinolophus subrufus*	Alyssa Fontanilla	University of Chinese Academy of Sciences	Philippines, Asia	$6,000
Sumatran orangutan (CR)	*Pongo abelii*	Ian Singleton	Sumatran Orangutan Conservation Programme	Indonesia, Asia	$12,400
Sunda pangolin (CR)	*Manis javanica*	Louise Fletcher	N/A	Singapore, Asia	$12,000
Tamaraw (CR)	*Bubalus mindorensis*	Emmanuel Schutz	D'Aboville Foundation	Philippines, Asia	$9,000
Tonkin snub-nosed monkey (CR)	*Rhinopithecus avunculus*	Nicholas James	Oxford Brookes University	Vietnam, Asia	$4,724
West African manatee (VU)	*Trichechus senegalensis*	Ikponke Nkanta	Tropical Research and Conservation Centre	Nigeria, Africa	$11,990
Western chimpanzee (EN)	*Pan troglodytes verus*	Itai Roffman	Haifa University	Mali, Africa	$10,000
Western chimpanzee (EN)	*Pan troglodytes verus*	Christophe Boesch	Wild Chimpanzee Foundation	Guinea, Africa	$12,500

Projects listed alphabetically by vernacular species name

FISH

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Vernacular Species Name	Scientific Species Name	Name	Name of Organisation	Country, Continent	Funding
Arunachalam's hill stream loach (CR)	*Horalabiosa arunachalami*	Rajeev Raghavan	Kerala University of Fisheries and Ocean Studies	India, Asia	$12,000
Azerbaijani spring roach (CR)	*Pseudophoxinus atropatenus*	Oleg Artaev	Mordovian State Nature Reserve	Azerbaijan, Asia	$7,000
Beluga sturgeon (CR)	*Huso huso*	Tudor Ionescu	Research and Development Centre for Sturgeon, Aquatic Habitats and Biodiversity	Romania, Europe	$13,500
Escamudo de San Cristobal (EN)	*Tlaloc hildebrandi*	Alfonso A. González-Díaz	El Colegio de la Frontera Sur	Mexico, North America	$10,000
European eel (CR)	*Anguilla anguilla*	Tamás Müller	Tavirózsa Association of Environmental Protection and Nature Conservation	Hungary, Europe	$4,800
Greenback parrotfish (EN)	*Scarus trispinosus*	Pedro Pereira	Reef Conservation Project	Brazil, South America	$9,750
Groupers (EN)	*Epinephelidae*	Yvonne Sadovy de Mitcheson	Groupers & Wrasses Specialist Group (IUCN/SSC)	Hong Kong, Asia	$14,500
Jipe tilapia (CR)	*Oreochromis jipe*	Johnson Grayson	Sokoine University of Agriculture	Tanzania, Africa	$12,100
Murray hardyhead (EN)	*Craterocephalus fluviatilis*	Jennifer Shaw	CSIRO	Australia, Oceania	$11,000
Red-finned blue-eye (CR)	*Scaturiginichthys vermeilipinnis*	Sophie Clarke	Bush Heritage Australia	Australia, Oceania	$16,550
Sakhalin taimen (CR)	*Parahucho perryi*	Peter Rand	Limnos, LLC	Japan, Asia	$4,000
Sevan trout (NE)	*Salmo ischchan*	Vahe Gulanyan	"Sevan" National Park	Armenia, Asia	$4,950
Trichonis dwarf goby (EN)	*Economidichthys trichonis*	George Kehayias	University of Patras	Greece, Europe	$11,200

REPTILE

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Vernacular Species Name	Scientific Species Name	Name	Name of Organisation	Country, Continent	Funding
Aeolian wall lizard (CR)	*Podarcis raffonei*	Gentile Francesco Ficetola	Univeristà degli Studi di Milano	Italy, Europe	$11,440
African rock python (NE)	*Python sebae*	Timm Juul Jensen	N/A	Cameroon, Africa	$5,200
Arakan forest turtle (CR)	*Heosemys depressa*	Shahriar Rahman	Turtle Survival Alliance	Bangladesh, Asia	$11,800
Bellinger River snapping turtle (CR)	*Myuchelys georgesi*	Myuchelys georgesi	Western Sydney University	Australia, Oceania	$16,000
Bolson tortoise (CR)	*Gopherus flavomarginatus*	Christiane Wiese	Turner Endangered Species Fund	United States, North America	$4,975
Campbell's alligator lizard (CR)	*Abronia campbelli*	Brad Lock	Zoo Atlanta	Guatemala, North America	$6,000
Cropan's boa (EN)	*Corallus cropanii*	Everton Miranda	Boa and Python Specialist Group (IUCN/SSC)	Brazil, South America	$9,450
Forsten's tortoise (EN)	*Indotestudo forstenii*	Christine Light	N/A	Indonesia, Asia	$10,000
Four-toe snakeskink (NE)	*Chalcidoceps thwaitesii*	Anslem de Silva	Amphibia & Reptile Research Organization of Sri Lanka	Sri Lanka, Asia	$6,100
Gympie broad-tailed gecko (NE)	*Phyllurus kabikabi*	Daniel Ferguson	Queensland Herbarium	Australia, Oceania	$10,750
Home's hinge-back tortoise (VU)	*Kinixys homeana*	Victor Agyei	N/A	Ghana, Africa	$4,325
Home's hinge-back tortoise (VU)	*Kinixys homeana*	Andrews Agyekumhene	Wildlife Division (Forestry Commission)	Ghana, Africa	$11,000
Javanese narrow-headed soft shell turtle (CR)	*Chitra chitra javanensis*	Ayudha Bahana Ilham Perdamaian	Indonesian Herpetological Society	Indonesia, Asia	$5,000
Nicobar worm lizard (NE)	*Dibamus nicobaricus*	Chandramouli SR	N/A	India, Asia	$5,000
Nubian flapshell turtle (CR)	*Cyclanorbis elegans*	Tomas Diagne	African Chelonian Institute	Benin, Africa	$13,000
Orinoco crocodile (CR)	*Crocodylus intermedius*	Ariel S. Espinosa-Blanco	Instituto Venezolano de Investigaciones Científicas	Venezuela, South America	$4,970
Painted terrapin (CR)	*Batagur borneoensis*	Joko Guntoro	Satucita Foundation	Indonesia, Asia	$11,000
Pinta giant Galápagos tortoise (EX)	*Chelonoidis abingdoni*	Adalgisa Caccone	Yale University	Ecuador, South America	$25,000
Rhinoceros iguana (VU)	*Cyclura cornuta*	Christopher Pellecchia	University of Southern Mississippi	Dominican Republic, North America	$5,000
Rostombekov's lizard (EN)	*Darevskia rostombekovi*	Ruzanna Petrosyan	Yerevan State University	Armenia, Asia	$4,780
Sardinian grass snake (CR)	*Natrix natrix cetti*	Enrico Lunghi	University of Trier - Natural History Museum of University of Florence	Italy, Europe	$5,000
Wagner's mountain viper (CR)	*Montivipera wagneri*	Konrad Mebert	N/A	Turkey, Asia	$4,450
West African slender-snouted crocodile (CR)	*Mecistops cataphractus*	Fiona Bracken	University College Dublin	Cote d'Ivoire, Africa	$23,150

Projects listed alphabetically by vernacular species name

FUNGUS

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Vernacular Species Name	Scientific Species Name	Name	Name of Organisation	Country, Continent	Funding
Boreal felt lichen (CR)	*Erioderma pedicellatum*	Irina Stepanchikova	St. Petersburg State University	Russia, Asia	$10,000
Derrumbe (NE)	*Psilocybe caerulescens*	Marko Aurelio Gomez Hernandez	N/A	Mexico, North America	$10,000
Graceful tooth (VU)	*Hydnellum gracilipes*	Reda Iršėnaitė	Nature Research Centre	Lithuania, Europe	$5,000
Loyo (NE)	*Boletus loyo*	Daniela Torres	The Fungi Foundation	Brazil, South America	$3,500
Mauritanian lichinella (NE)	*Lichinella mauritanica*	Joana Marques	CIBIO-InBIO	Mauritania, Africa	$5,000

Projects listed alphabetically by vernacular species name

INVERTEBRATE

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Vernacular Species Name	Scientific Species Name	Name	Name of Organisation	Country, Continent	Funding
Acilius duvergeri (VU)	*Acilius duvergeri*	David Bilton	Plymouth University	Spain, Europe	$6,000
Adriatic marmored bush-cricket (EN)	*Zeuneriana marmorata*	Axel Hochkirch	Grasshopper Specialist Group (IUCN/SSC)	Slovenia, Europe	$7,500
Alindanaw (EN)	*Risiocnemis antoniae*	Milton Norman Medina	University of Mindanao	Philippines, Asia	$5,750
Burrowing scorpion (NE)	*Didymocentrus sanfelipensis*	Tomas Michel Rodríguez Cabrera	N/A	Cuba, North America	$4,500
Drapanosticta spatulifera (NE)	*Drapanosticta spatulifera*	Amelia Nugrahaningrum	Indonesia Dragonfly Society	Indonesia, Asia	$3,300
Elkhorn coral (CR)	*Acropora palmata*	Hazel Oxenford	University of the West Indies	Barbados, North America	$5,750
Fungus gnats (NE)	*Mycetophilidae*	Andrea Carolina Henao Sepulveda	Universidad de Antioquia	Colombia, South America	$5,545
Golden sand fish (EN)	*Holothuria scabra*	Priyanka Iyer	Zoo Outreach Organization	India, Asia	$25,000
Gran Canaria crested grasshopper (CR)	*Dericorys minutus*	Axel Hochkirch	Grasshopper Specialist Group (IUCN/SSC)	Spain, Europe	$12,500
Grasshopper (NE)	*Paraconophyma kashmiricum*	Khalid Mahmood	University of Poonch Rawalakot	Pakistan, Asia	$2,500
Horseshoe crab (DD)	*Tachypleus gigas*	Siddhartha Pati	Fakir Mohan University	India, Asia	$3,900
Italian cave-dwelling flatworm (NE)	*Dendrocoelum italicum*	Raoul Manenti	Università degli Studi di Milano	Italy, Europe	$20,000
Odonata (NE)	*Acanthagrion franciscoi*	Rhainer Ferreira	Federal University of São Carlos	Brazil, South America	$10,000
Syrandri clubtail (DD)	*Davidioides martini*	Kumaran Sathasivam	N/A	India, Asia	$2,500
Talaud black birdwing (VU)	*Troides dohertyi*	Agustinus Wijayanto	N/A	Indonesia, Asia	$4,100
White-clawed crayfish (EN)	*Austropotamobius pallipes*	Jen Nightingale	Bristol Zoological Society	United Kingdom, Europe	$10,000
White-clawed crayfish (EN)	*Austropotamobius pallipes*	Raoul Manenti	Università degli Studi di Milano	Italy, Europe	$7,500
Wide diving beetle (VU)	*Dytiscus latissimus*	Oleksandr Martynov	National Museum of Natural History at the National Academy of Sciences of Ukraine	Ukraine, Europe	$2,730

Arabian tahr in Al Ain, UAE © Huw Roberts

BIRD

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African penguin (EN)	*Spheniscus demersus*	Stephen Van der Spuy	Southern African Foundation for the Conservation of Coastal Birds	South Africa, Africa	$11,300
African white-backed vulture (CR)	*Gyps africanus*	Gareth Tate	Endangered Wildlife Trust	South Africa, Africa	$13,000
Akekee (CR)	*Loxops caeruleirostris*	Ryan Trachtenberg	American Bird Conservancy	United States, North America	$25,000
Alagoas antwren (CR)	*Myrmotherula snowi*	Holly Robertson	American Bird Conservancy	Brazil, South America	$7,200
Becks' petrel (CR)	*Psuedobulweria becki*	Steve Cranwell	Birdlife International	Papua New Guinea, Oceania	$12,275
Blue throated macaw (CR)	*Ara glaucogularis*	Lisa Davenport	Florida Museum of Natural History	Bolivia, South America	$7,300
Buff-breasted button-quail (EN)	*Turnix olivii*	Geoffrey Smith	Queensland Herbarium	Australia, Oceania	$4,000
Cape vulture (CR)	*Gyps coprotheres*	Tim Snow	Wildlife Poison Prevention and Conflict Resolution	South Africa, Africa	$11,200
El Oro parakeet (EN)	*Pyrrhura orcesi*	Holly Robertson	American Bird Conservancy	Ecuador, South America	$8,000
Helmeted hornbill (CR)	*Rhinoplax vigil*	Chin Aik Yeap	Malaysian Nature Society	Malaysia, Asia	$13,000
Junin grebe (CR)	*Podiceps taczanowskii*	Constantino Aucca	Asociacion Ecosistemas Andinos	Peru, South America	$12,450
Night parrot (EN)	*Pezoporus occidentalis*	Sophie Clarke	Bush Heritage Australia	Australia, Oceania	$20,700
Omani owl (DD)	*Strix butleri*	Jacky Judas	Emirates Wildlife Society in association with World Wide Fund for Nature (EWS-WWF)	United Arab Emirates, Asia	$12,500
Peruvian diving-petrel (EN)	*Pelecanoides garnotii*	Nick Holmes	Island Conservation	Chile, South America	$12,500
Red siskin (EN)	*Carduelis cucullata*	Chung Liu	South Rupununi Conservation Society	Guyana, South America	$5,000
Saker falcon (EN)	*Falco cherrug*	Andrew Dixon	N/A	Bulgaria, Europe	$7,500
Sociable lapwing (CR)	*Vanellus gregarius*	Rob Sheldon	RDS Conservation	Pakistan, Asia	$4,950
Spoon-billed sandpiper (CR)	*Calidris pygmaea*	Baz Hughes	Wildfowl & Wetlands Trust	Russia, Asia	$19,500
Taita thrush (CR)	*Turdus helleri*	Fredrick Onyancha	Egerton University	Kenya, Africa	$10,000
Tooth-billed pigeon (CR)	*Didunculus strigirostris*	Gianluca Serra	N/A	Samoa, Oceania	$9,000
Townsend's shearwater (CR)	*Puffinus auricularis*	Alfonso Aguirre-Muñoz	Grupo de Ecología y Conservación de Islas	Mexico, North America	$12,500
White-rumped vulture (CR)	*Gyps bengalensis*	Bharathidasan Subbaiah	Arulagam	India, Asia	$9,000

***Prosopigastra creon* in Al Ain, UAE © Huw Roberts**

2016 ENDOWMENT OVERVIEW

Endowment:

The Fund's endowment started on 30 March 2009 with a value of $29,202,745
Analysis Period: 1 January 2016 to 31 December 2016
Reporting Currency: US dollars

Statement of Assets:

Begin value	31,172,705
Withdrawals for distributions	-1,000,000*
End value	30,185,367
Net Portfolio Internal Rate of Return (IRR)	0.0%

Note: *Distributions for 2016 were actually $1.5m but the last $0.5m were taken from the endowment bank account in January 2017, after the reporting period.

The year 2016 was a transition year for the endowment. As a consequence of the Request for Proposals (RfP) for Investment Management having taken place at the end of 2015, a part of the portfolio at Credit Suisse was liquidated during Q1-2016, and reinvested with Banque Pictet during Q4-2016. At the end of 2016, the endowment was managed both by Credit Suisse and Banque Pictet.

The performance generated by Credit Suisse on the part they managed through the whole of 2016 was -1.84%. The performance generated by Banque Pictet over the course of Q4-2016 was +0.65%.

1 USD = 3.6722 AED

www.**speciesconservation**.org

The Mohamed bin Zayed Species Conservation Fund
PO Box 131112
Abu Dhabi, United Arab Emirates