

April 2020 AMPHIBIAN SURVIVAL ALLIANCE







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A big leap for a small frog: Conserving the Golden Mantella

The Golden Mantella Frog Mantella aurantiaca is – for now – one of the many Critically Endangered island endemics barely holding on in Madagascar's fragmented forests. Ecosystems here are subject to some of the most intense anthropogenic pressures on Earth. Over the last decade, Chester Zoo and Madagasikara Voakajy have worked to ensure the chirrup of these tiny amphibians can still be heard

amongst the Malagasy trees for the foreseeable future.

From 2008, Madagasikara Voakajy, a Malagasy NGO, sought to assess the situation for the species. They found across the frog's remaining range, the forest ponds essential for the mantella life cycle were disappearing rapidly as trees were cleared for rice fields by slash and burn "tavy", or water made uninhabitable by il-

legal gold mining activity. In urgency, the organization encouraged the national government to bestow protection over a key area of high pond density and remaining forest. The Mangabe-Ranomena-Sahasarotra New Protected Area decreed in 2015 gave much needed hope to the project.

Chester Zoo joined Madagasikara Voakajy in its surveying efforts from 2012 onwards. Together, we now know that the protected area contains at least 276 ponds suitable for Golden Mantella habitation, though we estimate only ~40% of these ponds contain the species as of 2019.

With the protected area in place and the scale of the situation realized, the approach shifted to a long-term community-conservation based plan. Madagasikara Voakajy led capacity building sessions in forestry law and patrolling systems, building a team of forest protectors to ensure the breeding ponds were kept safe. Alongside this, villages surrounding the protected area



EDITORIAL

Our global partnership is linked by many common struggles, and the recent developments surrounding the COVID-19 pandemic have added a new and urgent threat. You remain firmly in our thoughts as you collectively and individually cope with the challenges thrown your way on a daily basis. As the impact of this virus is revealed over the coming weeks and months, we will do our utmost to continue to highlight and support your work. You are all involved in wonderful and important initiatives that help build a positive future for amphibians, and we could not be more grateful for your contributions to conservation worldwide. However, it all starts with your health and wellbeing. We hope you can get the time and space you need to sustain yourselves through this immensely difficult and uncertain time. We wish you, your families, friends and colleagues great strength, health, and hope.

received agricultural training in crop rotation, composting techniques, and the plantation of alternative crop, with the intention of benefitting people and slowing forest loss.

To reliably monitor the population in the protected area, Chester Zoo researchers developed a Golden Mantella specific capture-mark-recapture method involving the implanting of a fluorescent elastomer under the skin (VIE tagging). This method is now employed in research to understand the detailed habitat requirements and ecological needs of the species, and assess the impact of the conservation actions led by Madagasikara Voakajy. Through

In the midst of this crisis, we share recent news from the partnership to a brighter future. This includes: where we ran the Amphibian Consigned the WCH Climate Change ship's latest annual report; Chester Mantella (Mantella aurantiaca); Baw Frog (Philoria frosti) Recovery nels; Synchronicity Earth's descripof Jackson's Climbing Salamander (Bolitoglossa jacksoni) in Guatethe Atewa Forest from bauxite afiabirago) and Togo Slippery Frog wetland management and protecaddressing fundamental questions around the species' dispersion, migration and pond colonization, we can better manage the protected area and drive sustainable use of the forest in the years to come.

With the combined approach of *exsitu* research, and *in-situ* community led conservation, we are preventing the extinction of one of the smallest and rarest frog species on Earth.





Society to our partnership and are sharing an interview with Teresa Camacho Badani (a Future Leader of Amphibian Conservation from Bolivia)

Although nothing can distract from the current context of the COVID-19 crisis, we sincerely hope these stories provide you with interest and inspiration. Once again, we send our very best wishes for your health and happiness over this time, and may you recover swiftly from any illness. Please do continue to get in touch with your developments, difficulties, opportunities, and thoughts. We are rooting for each and every one of

Helen Meredith, PhD
Executive Director
Amphibian Survival Alliance



2019 in review with the Asian Species Action Partnership

If you'd like to know what the IUCN SSC Asian Species Action Partnership (ASAP) did during 2019, you can now read our recently released Annual Report. Writing an Annual Report is often a good opportunity to pause and reflect on hurdles overcome and achievements made for the previous year. As usual, the year flew by, so this is a chance to share some of the things we've been working on.

Reviewing endemism – a full house for amphibians

ASAP focuses on Southeast Asia. It is a region that is incredibly rich in biodiversity but facing extreme pressure from habitat loss and overexploitation. Our remit is Southeast Asian land and freshwater vertebrates that are listed as Critically Endangered, known as ASAP species. Currently, there are 15 amphibians that sit in this camp. We always knew that the region is home to many species found nowhere else in the world, but a piece of work we conducted highlighted just how true this is. It showed us that every single ASAP amphibian is a country-endemic. This increases their vulnerability and makes the efforts of ASAP Partners even more vital.

Planning to build regional conservation capacity

One of the strategic priorities for ASAP is to strengthen the capacity in Southeast Asia to deliver robust, successful conservation work. A key piece of work towards this was doing a gap analysis of the support already available, and to get feedback from our Partners on their needs. The work highlighted areas that conservation organisations felt more support could be given for, including accessible and long-term training in project management and leadership. We're excited to have secured funding to begin addressing some of these priorities in the coming years.

Growing the Partnership

Much like the Amphibian Survival Alliance, ASAP is an alliance of Partners, all with a shared interest in averting the extinction of ASAP species. In a year when the number of ASAP species unfortunately increased, we were pleased to see the number of Partners grow to almost 100. There is a huge opportunity for knowledge sharing and networking across ASAP, something we will focus on facilitating in 2020.

If you are working on one of the following ASAP amphibians we'd love to hear from you at asap@iucn.org:

- Ansonia guibei
- Megophrys damrei
- Ansonia vidua
- Occidozyga tompotika
- Kalophrynus yongi
- Oreolalax sterlingae
- Leptobrachella palmata
- Pelophryne linanitensis
- Leptobrachium kantonishikawai
- Pelophryne murudensis
- Leptolalax botsfordi
 Philautus jacobsoni
- Leptolalax kecil
- Platymantis insulatus
- Leptophryne cruentata

To find out more visit www.speciesonthebrink.org, or follow us on Twitter @IUCN ASAP.









SAVE THE FROGS! Ghana joins lawsuit against government to protect Atewa Forest

SAVE THE FROGS! Ghana has joined 20 Civil Society Organisations to file a notice with the Attorney General and Minister of Justice against the Government of Ghana. This action has become necessary to immediately halt ongoing bauxite 'exploration' activities at Atewa Forest Reserve and seek legal orders to permanently secure Ghana's 'crown jewel' of biodiversity.

Intended reliefs of the notice include:

- Declaration that the right to life and dignity as enshrined in the Constitution of Ghana, 1992 which includes (a) the right to a clean and healthy environment and (b) the right to have the environment protected for the benefit of present and future generations;
- A declaration that mining bauxite in the Atewa Forest violates the right to life and dignity enshrined under articles 13 and 15 of the Constitution;
- An order, compelling the government of Ghana and its agents to take the necessary steps to protect Atewa Forest Range in accordance with constitutional obligations as contained under article 36(9) of the constitution; and
- An order, restraining the Government of Ghana, its assigns and agents, servants, workmen, allottees and guarantees whatsoever and howsoever described, from undertaking mining and its related activities in the Atewa Forest Range.

For several years, SAVE THE FROGS! Ghana has been campaigning to prevent bauxite mining in Atewa Forest. Our proposed upgrade of the forest into a national park to offer it higher protection looked promising



Old logging Trails in Atewa Forest 5 days ago 29TH May, 2019

Access roads created by bulldozing activity in Atewa Forest 3rd June, 2019

until 2017, when Ghana's Government entered into an infrastructural 'loan' agreement of US\$19 billion with China. From the terms of the agreement, the loan will be repaid with proceeds from bauxite including that from Atewa Forest (www. savethefrogs.com/ghana-accraprotest-save-atewa-forest/). By June 2019, the government had approved the clearing of part of the forest for what was later communicated as 'prospecting' activities without wider consultation with independent environmental stakeholders like SAVE THE FROGS! Ghana, or with local communities. Our immediate petitions to the Presidency and Parliament unfortunately, did not yield any positive responses thus, the decision to undertake this new action to prevent the further advancement of government's plans to mine Atewa Forest.

Atewa Forest is the only home to the Critically Endangered Afia Birago Puddle frog (*Phrynobatra-chus afiabirago*) and the last viable population of the Togo Slippery Frog (*Conraua derooi*). Atewa is the

single location in West Africa with the highest diversity of butterflies. It also harbors at least 1,100 plant species including 56 that are threatened with extinction and many more endemic to the Upper Guinea Forest of West Africa. In addition, it is the headwaters of three rivers, Rivers Ayensu, Birim and Densu that supplies water to over five million Ghanaians. Thus, mining this area to contribute 17% of the total loan repayment will be a big failure in our quest to protecting Ghana's crown jewel of biodiversity.

To help with our campaigns as a volunteer writer (not paid), please contact SAVE THE FROGS! Ghana's Advocacy Co-ordinator at sandra@ savethefrogs.com. You can also donate to sustain our efforts at www. savethefrogs.com/donate-ghana/





Froglife's tunnels campaign 2020

Over the past six years Froglife have been monitoring the success of road mitigation tunnels for amphibians. We have used unique infrared time lapse cameras to monitor amphibian movements through 34 tunnels across seven sites in four countries across Europe (England, Scotland, France and Portugal). During this time period we have recorded 4,760 individual amphibians from 11 species including Common Frog (Rana temporaria), Agile Frog (R. dalmatina), Fire Salamander (Salamandra salamandra), Great Crested Newt (*Triturus cristatus*), Western Spadefoot Toad (Pelobates cultripes) and Iberian Ribbed Newt (Pleurodeles waltl). In 2019 Froglife published findings from one of our sites in Northern England (1), demonstrating a significant population increase in the Great Crested Newt, a European protected species, over a four year period.

Our research has shown that mitigation tunnels can provide benefits to amphibian populations, providing valuable corridors between terrestrial and aquatic habitats. We are currently working on analysing data from all of our sites to fully evaluate the success of the tunnels and to provide guidance for developers, local councils and ecological consultants. This will be helpful for implementing the most effective mitigation solutions for amphibian species.

Now that we have good data to demonstrate the efficacy of road mitigation tunnels for amphibians, the next step is to promote their use. Too often research is disseminated in the academic world and does not reach the decision makers and, in this case, infrastructure developers. Froglife has initiated a campaign to promote more good quality road mitigation tunnels: https://www.froglife.org/what-wedo/education/london-t-o-a-d/t-oa-d-campaign/. This is proving to be popular and support levels are increasing rapidly. The campaign is being run in tandem with a series of public engagement events to raise awareness of the issue of amphibian road deaths and the role of road mitigation tunnels.

To attract new audiences Froglife has created a virtual reality experience of a toad passing through a tunnel under a road. This gives an immersive toad's-eye view of the world and the challenges toads face. To date 5,363 people have tried the virtual reality and evaluation shows that 75% of people asked had more understanding of why toad tunnels are needed after the VR experience.

These events are being run in highfootfall areas such as London stations and major events such as New Scientist Live! This event attracted 40,000 attendees, with 1,582 undergoing the Toads VR, which is 13% of the total visitor base.

The campaign is gaining high levels of support and once we have reached a substantial number of signatories, we will use that to provide greater impetus to our guidance to decision makers. We will contact the relevant Government departments, all UK Local Authority transport departments, ecological consultants and developers, and by combining guidance on road mitigation tunnels based on our research plus the substantial support from the public from our campaign and petition, we aim to effect real change.

1. Jarvis, L.E., Hartup, M. & Petrovan, S. O. (2019) Road mitigation using tunnels and fences promotes site connectivity and population expansion for a protected amphibian. European Journal of Wildlife Research, 65:27-38. https://doi.org/10.1007/s10344-019-1263-9.







Sleeping Children of the Mountains: Guatemala's rare and secretive amphibians



In October 2017, Tomás Ramos León was patrolling the edge of the Yal Unin Yul Witz Protected Nature Reserve when he saw something that had not been witnessed by human eyes for over 40 years.

A shift as a reserve guard in Western Guatemala is no walk in the park. With steep climbs, muddy slopes and frequent heavy rain, it is a heavy-duty hike. But Tomás was motivated by a decades long mystery which had haunted these mountains for years: the disappearance of the 'golden wonder'.

The golden wonder is one of the many names of the Jackson's Climbing Salamander (*Bolitoglossa jacksoni*), about which Tomás had learned during a workshop held by one of Guatemala's leading am-

phibian experts: Carlos Roberto Vásquez Almazán. Carlos had visited the guards of Yal Unin Yul Witz and taught them about the rare and elusive amphibians of their unique reserve, including how to identify one which hadn't been seen for four decades. The golden wonder was discovered in the Western Highlands of Guatemala in 1975 and promptly disappeared. There had been no recorded sightings since.

Like the other guards, Tomás comes from the local community adjacent to the reserve, Santo Domingo Chiblac, and he belongs to the Mayan ethnic group Q'anjob'al. He had always been keen to discover the secrets of the reserve, using his patrols to look in the damp and dark hidey holes where Guatemala's unseen treasures lurk: under logs, rocks,

and roots. So when he heard about the golden wonder, he wanted to be the one to rediscover it.

"I had always dreamed about finding this salamander," Tomás said. "I have found rare salamanders, frogs, toads and snakes before, but this was very different because it was believed to be extinct – it is of interest to the world."

And then one day, there it was. Underneath some leaf litter, the striking black and yellow colours of the unmistakable Jackson's Climbing Salamander.

"I had no doubts that it was the *Bolitoglossa jacksoni*, recognising its striking colours instantly." He photographed it and sent the photos via WhatsApp to Carlos, who excitedly





confirmed that he had rediscovered a lost species.

Yal Unin Yul Witz is the name of the reserve in the Mayan language Q'anjob'al. It translates to 'Sleeping Child Between Mountains', which refers to the salamanders themselves, who are described by several indigenous communities as the sleeping children in the forests.

The golden wonder is only one of the many rare and beautiful amphibian species in these mountains. At the same time the Jackson's Climbing Salamander was discovered, so was the Finca Chiblac Salamander and Nimble Long-limbed Salamander, both of which are rare and endangered. There are also healthy populations of rare frogs, including Critically Endangered Perkins' Treefrog and Ixil Spikethumb Frog.

This is one of the reasons why Foundation for Ecodevelopment and Conservation (FUNDAECO), an accomplished conservation charity in Guatemala, purchased the land (then known as Finca San Isidro) to create a protected reserve for amphibians in 2015 with the help of several international partners (International Conservation Fund of Canada, World Land Trust, Global Wildlife Conservation/Amphibian Survival Alliance and Rainforest Trust). These reserves are managed together with the local indigenous communities, who take the lead in protecting them.

Creating reserves to protect important amphibian habitats like Yal Unin Yul Witz in the Western Highlands and La Firmeza Amphibian Reserve (in the Sierra Caral, on the eastern border with Honduras) is just one branch of FUNDAECO's amphibian conservation work.

One of the key hurdles to effective amphibian conservation is lack of knowledge. Without research identifying the species and habitats which should be our priority to conserve, it is much harder to know which areas need urgent action.

This is why the people around FUNDAECO's reserves, like Tomás Ramos León, are receiving training in amphibian identification – they are the ones on the ground who, as well as protecting the reserve itself, can gather invaluable insights into the wildlife they are protecting. Their findings will also be used to help create environment education programmes to engage local communities, teaching them about their local wildlife and involving them in its protection.

Amphibian conservation is one of the overlooked and underfunded conservation challenges that our research has identified, which is why Synchronicity Earth founded our Amphibian Programme. So far the programme has concentrated on assessing amphibians for the IUCN Red List of Threatened Species, which is used globally to highlight priority

species, and identifying key areas for amphibians which need to be protected through the Amphibian Survival Alliance.

But now, in addition to this important work, we are expanding to support amphibian conservation in the field. Simon Stuart, Synchronicity Earth's Director of Conservation, says "FUNDAECO's work in their amphibian reserves addresses two of the key priorities for amphibian conservation: protecting habitats on the ground and improving the knowledge base which will inform further conservation efforts. This is why we are proud to announce our new partnership with them as our Amphibian Programme develops."

New amphibian species are still being discovered at a very rapid rate – around 150 species per year. This demonstrates just how much more we have to learn about this incredible group of metamorphosising animals, because with such large knowledge gaps we cannot comprehend the consequences of losing these species and their habitats.

Fortunately, there is fascinating work being done around the world for amphibian conservation which inspires far more hope than despair.







8th Amphibian Conservation Research Symposium

The Amphibian Survival Alliance (ASA) has recently organized the 8th edition of the Amphibian Conservation Research Symposium (ACRS), the only international symposium dedicated specifically to the sharing of research and strategies to empower the future of amphibian conservation. This edition was held during the last day of the 9th World Congress of Herpetology (WCH) at the Otago University in Dunedin, New Zealand (5-10 January, 2020). WCH was co-organized by Prof. Phil Bishop (ASA's Chief Scientist) and attended by 870 herpetologists from 57 countries.

This edition of ACRS was chaired by ASA's Communications and Partnerships Officer Luis Fernando Marin da Fonte. During the symposium, fifteen talks were held about relevant topics for amphibian conservation such as infectious diseases, climate change, and stories of success. Since



ACRS has a strong focus on early career conservation, in order to help build a future for global amphibian conservation, at this edition ASA has awarded four conservationists from around the world with the 2020 Future Leaders of Amphibian

Conservation prize: Michelle Abadie (Brazil), Teresa Camacho Badani (Bolivia), James Watuwa (Uganda) and Muhammad Rais (Pakistan). You can learn more about them and the amazing work they conduct here.

An Amphibian Red List Authority update

In February the IUCN SSC Amphibian Red List Authority held a very successful workshop in Colombo, Sri Lanka. The workshop was hosted by Dilmah Conservation and welcomed over 25 amphibian experts from across the country. Under the leadership of Rohan Pethiyagoda, the group worked tirelessly over four days to produce comprehensive and detailed assessed of over 120 species. Preliminary results from the workshop indicate that over threequarters of the amphibians in Sri Lanka are now considered threatened. Participants at the workshop, with the support of Dilmah conservation, are committed to following through on conservation action to protect the unique amphibians of this beautiful country.



Securing wetlands will go a long way in conserving aquatic biodiversity



Securing wildlife habitats outside traditional protected area network is one of the mandates of the Wildlife Trust of India (WTI). Wetlands are one such critical habitats which are facing multiple threats due to expanding agriculture and human settlements as a result of surge in human population. Diminishing wetlands adversely affect the populations of a range of invertebrate and vertebrate taxa including birds, reptiles and amphibians. The trust works to protect wetlands in 10 districts, in a north Indian state of Uttar Pradesh, situated in the basins of the Rapti and Ghaghara Rivers in the Gangetic Plains in India. Wetlands and rice paddies together cover around 40% of the geographical area of the districts and provide habitat to a variety of aquatic biota. These wetlands are embedded in agricultural landscape where synthetic agrochemicals are used in large quantities for better production and reduce loss due to pests. A study by WTI found presence of residues of 15 pesticides belonging to organochlorines, organophosphate and pyrethroid groups of insecticides, weedicides and herbicides. The toxic chemicals are direct threat to the

wetland ecosystem and needless to mention that amphibians are one of the worst sufferers of the toxic pollution.

The project, started in 2013 to conserve the Sarus Crane (Antigone antigone) – the tallest flying bird and iconic to wetland ecosystem, has identified over 50 wetlands which are important for biodiversity conservation and require concerted efforts for their conservation because of no legal protection accorded to them. The organization is working with the government authorities to bring these wetlands under legal protection regime, and at the same time engage communities in conservation of wetlands and its biodiversity. Community based organizations - Sarus Protection Committees and Wetland Management Committees, have been constituted in villages to institutionalize the process of protection and conservation of wetland ecosystem. Local farmers voluntarily protect the Sarus Crane nests in wetlands and rice paddies. WTI organizes events to felicitate these farmers in recognition to their contribution towards conservation. With this approach the project has

protected over 800 Sarus nests till successful hatching, directly contributing to increase in the crane's population.

Assessment of biodiversity, hydrological characteristics, threats, rights and privileges of local communities and land ownership status of the identified wetlands is being done by the WTI. It is a mandatory process for notifying them under the 'Wetland (Conservation & Management) Rules, 2017 of the Government of India. The rules would enforce measures to prohibit change in land-use and improve ecological conditions of wetlands. Effecting an Integrated Wetland Management Plan is mandatory for each of the notified wetlands. It will go a long way in conserving biodiversity and promoting wise-use of wetlands.







New ASA Partner: An introduction to the Bristol Zoological Society

The mission of the Bristol Zoological Society is to save wildlife through conservation action and engaging people with the natural world. The Society was established in 1835 and its specific objectives are to advance the public understanding of the conservation of wildlife and the natural environment and encourage our guests to help protect wildlife through pro-conservation behaviours. The Society currently leads 14 conservation projects in ten countries across the world. We focus on 18 high conservation priority flagship species to galvanise the conservation of extremely biodiverse

habitats such as tropical forests. We are evaluating our conservation outcomes through specific Key Performance Indicators to ensure the implementation of sustainable solutions to species and ecosystem conservation challenges.

Bristol Zoological Society has a number of ongoing amphibian conservation contributions, including the *in-situ* work we are doing with the Lemur Leaf Frogs. We coordinate the European Association of Zoos and Aquaria (EAZA) studbook for the Lemur Leaf Frogs with our own breeding population and breed oth-

er threatened amphibians; Chapa Bug-eyed Frogs, Mountain Chicken Frogs, and Golden Dart Frogs. Members of our reptile department are also involved with the current release programme for the Mountain Chicken Frog in Monserrat.



Zoos Victoria Baw Baw Frog Recovery Program

The Baw Baw Frog (Philoria frosti) is a unique beast indeed, isolated to montane habitat of a small mountain plateau, it is small and brown, lives in the undergrowth with all its reproductive behavior and early life history occurring underground, add to this its Critically Endangered status. Getting a handle on the captive biology for this species has been challenging to say the least, not to mention eliciting reproductive behavior and successful breeding.

However, ten years on and the Recovery Program is starting to experiment with reintroduction of captive laid eggs and larvae.

Aside from producing viable eggs perhaps one of most challenging aspects of reintroduction for this species is how to translocate captive laid eggs and larvae back to wild sites. Baw Baw Frog oviposition sites



have an intimate relationship with underground seepage lines where the eggs and larvae rely on hydrology to complete development. Experimentally we have been able to manipulate underground soaks to flow through artificially created

oviposition sites that not only protect the larvae but also allow them to develop through to metamorphosis without intervention. Given the complexity of these underground systems it has been a huge milestone for the Recovery Program and one that provides us with a great deal of optimism moving forward.

During the 2019/20 season we have released over 200 eggs and larvae across two release sites, so far over half of those have metamorphosed and dispersed.

And now we play the waiting game, if any of these tiny frogs survive to maturity it will be another 4-5 years before we expect them to return to the breeding site



as adults.



Meet Teresa Camacho Badani



Teresa Camacho Badani is one of ASA Future Leaders of Amphibian Conservation. As part of the programme, ASA awarded her a grant to attend the 9th World Congress of Herpetology in Dunedin, New Zealand, where she gave a talk about her work at the Amphibian Conservation Research Symposium, organised by the ASA. To learn more about Teresa and other Future Leaders, visit our webpage.

Please tell us a bit about yourself.

I am a Bolivian herpetologist, and I have been working with amphibians since I was a student at the university. This is something that really fascinates me. One of my favorite places is the cloud forest, where we can see unique species in the world. Currently, I'm working at the Alcide d'Orbigny Natural History Museum in Cochabamba, Bolivia, where I lead a wonderful team dedicated to the conservation and the care of threatened amphibians in the country.

What projects have you been involved in to promote amphibian conservation?

We are currently working on the Action Plan for the Sehuencas Water Frog (*Telmatobius yuracare*) and the Titicaca Water Frog (*Telmatobius culeus*). In our captive breeding program called K'ayra (word which in the native Quechua and Aymara languages means "frog") we have a population of about 700 frogs, comprising 5 endangered species of the Telmatobius genus, the Chape Toad (*Rhinella justinianoi*), and the Bolivian Cochran Frog (*Nymphargus bejaranoi*), a glass frog that has only recently been rediscoverd in Bolivia after 18 years.

What is your favourite amphibian species and why?

This is a tough question! Choosing just one is almost impossible, since they all have something special. Most people would expect me to say that my favourite is Romeo, the Sehuencas Water Frog... this species is undoubtedly on the top of my list. But if I had to chose a species that I would like to see in the field, it would be another Water Frog (Telmatobius edaphonastes). It is an endemic species of the Bolivian cloud forests that has not been seen for more than 20 years now. I would love to find it and would be extremely happy to report the rediscovery of this species!

Has being recognized as a Future Leader of Amphibian Conservation by ASA made a difference in your career so far?

It has not been too long since I had the honor to be recognised as Future Leader by the Amphibian Survival Alliance. But since then and after attending the Amphibian Conservation Research Symposium at the World Congress of Herpetology in New Zealand, I have already seen positive changes. At the Congress I had the opportunity to network with several scientists, and many of them are interested in the work that we are doing in Bolivia. We have even planned some activities and agreed to write scientific papers together. Here in Bolivia, there was a great coverage by the press about my award. It was very important to widely publicize amphibian conservation in the media. Now people know more about my work and are interested in the wonderful species of amphibians that we have in Bolivia!







Aotearoa Climate Change Declaration of the 9th World Congress of Herpetology

Whereas the World Congress of Herpetology is an organization dedicated to scientific study and conservation of amphibians and reptiles, and

Whereas 870 herpetologists from 57 countries have gathered in Dunedin to share research in appreciation of amphibians and reptiles; and

Whereas many presentations at the 9th World Congress in Dunedin, New Zealand described the impacts of climate change and other anthropogenic environmental changes on the health of amphibian and reptile populations, adding to a growing body of scientific knowledge documenting the global impacts of human activities, and

Whereas we are committed to transforming our society to achieve climate stability and biodiversity conservation for future generations, and

Whereas we wish to create a more sustainable Congress as part of building the capacity of scientists and society to become more harmonious with the ecological workings of the planet, and

Whereas we maintain that this endeavor is largely dependent on economic and social equity, respect for human rights, and the reduction of marginalization of all peoples currently under-privileged,

Therefore, be it resolved that the participants in the 9th World Congress of Herpetology call for

- the partnership of science and society to build science-based solutions to the problems caused by carbon emissions;
- all air travel to the Congress to be carbon-mitigated via reputable and certified avenues, with eventual

goal of being a 100% carbon-neutral Congress;

- renewable energy and materials alternatives, local food (including limited meat and dairy), and transparency by vendors providing services for all Congresses (including transport, housing, food, and other sectors), and recognizing and enabling resilient indigenous and local economies; and
- increased protection for biodiversity and wild places.

We also call upon the international community, including all national governments, to acknowledge the accumulated evidence for global climate change and to take immediate action to mitigate the future impacts of such change.

We prefer to remain hopeful and we declare that we will work together immediately at every level of society to honor our common humanity, to acknowledge and take responsibility for our climate-changed world. We resolve to engage human ingenuity in solving the challenges we face, respecting the needs of all people, and valuing all biodiversity.

