

# RAINFOREST REVIEW

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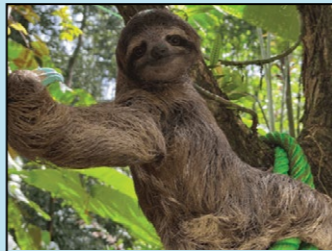
2024/25 Edition



**Costa Rica**  
Bosque de las Madres forest corridor



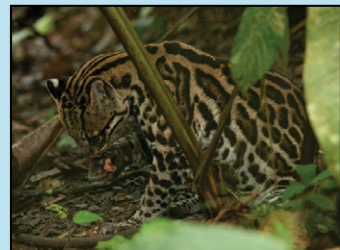
**Costa Rica**  
Turtle conservation on the Caribbean coast



**Costa Rica**  
Supporting wildlife at the Jaguar Rescue Center



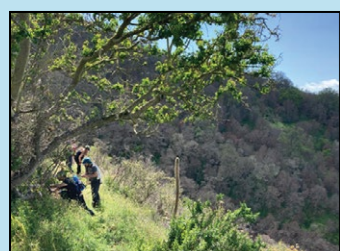
**Colombia**  
Environmental education in remote rural schools



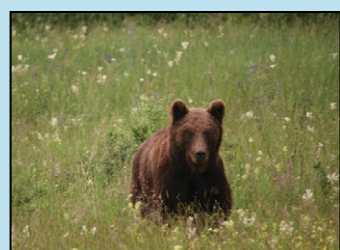
**Ecuador**  
Preserving threatened cloud forests of the Tropical Andes



**Ecuador**  
Preserving threatened forests of the Chocó-Andes



**Chile**  
Conserving fragmented coastal forests



**Romania**  
Protecting ancient meadows and woodlands of Transylvania



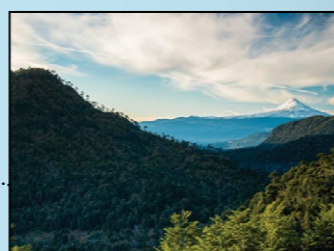
**Latin America**



**Brazil**  
Supporting indigenous communities in the Xingu



**Peru**  
Preserving the dry forests of the Lambayeque



**Chile**  
Protecting the Araucaria forests of southern Chile



**India**



**India**  
Conserving the threatened plant species of the Western Ghats

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Front cover photo of a jaguar by Pete Oxford.  
Back cover photo of the Neblina Reserve in Ecuador by Murray Cooper.  
Design: Walker/Jansseune  
Brand Communications

## Environmental conservation in an increasingly troubled world



Firstly, thank you all supporters for being so loyal over recent years. This year we celebrate our 31st anniversary and we have achieved much since 1993 thanks to our many wonderful supporters, colleagues and trustees.

Although we have been sending emailed updates of our activities, it is quite a while since we published the last paper copy of Rainforest Review. Since then, we are facing terrible instability in the world on a level that has not been witnessed for a century. With cruel and devastating wars raging in the Palestine and Ukraine and most recently in Lebanon and Iran, we live at a time when such disregard for human life and freedoms make taking care of this precious planet seem less important. Sadly, the environment has slipped down the list of priorities for many countries including our own.

As a result the world is being distracted from the growing pressure on the environment which of course threatens humanity as well as all other life forms. With constantly changing political administrations, private conservation initiatives remain ever more important. You choose to support us as you know we make a difference on the ground by directly protecting threatened habitats and the amazing diversity of life they contain.

Some highlights in the last couple of years include:

- Two successful legal victories against mining concessions, at Los Cedros Protected Forest Reserve and the Junin forests showed that hard work and perseverance can pay off. The Constitutional Court ruling against mining at Los Cedros cannot be appealed and sets a new precedent.
- After three years of hard work, preparing information, submitting data and working with the Ecuadorian Ministry of the Environment, we were pleased to be granted the highest level of legal protection possible for a private reserve in Ecuador – the National System of Protected Areas (or SNAP) for the larger part of the Neblina Reserve.
- In 2023 we began a partnership with communications company, Beyond ONE and with their support, we succeeded in extending the Neblina Reserve in Ecuador by 480 hectares, protecting rare and threatened cloud forest habitat.
- We started a new project with long term partners, Fundación Cuencas de Limón, to help consolidate the Corridor de las Madres in Costa Rica. This will be an important link for hectares of forests and wetland that aims to connect the highest peak in the country with the Caribbean coast.

Sadly, with the re-election of Donald Trump as US President, we enter a dark and challenging period for the natural world, having repeatedly stated his priority for extractive industries over environmental conservation. However, like you there are still many of us who are wish to leave the planet in a better state than when we arrived, so please support us or even consider leaving a legacy for Rainforest Concern.

With your help we can continue our work to protect some of the most precious areas of wilderness on our planet.

Peter Bennett, Director



Royal Botanic Garden Edinburgh



Running for the forests

London Marathon

The London Marathon returned in 2021 but the ongoing pandemic meant some runners were unable to take part. Luckily, Ed Croft and Ellen Sandrey saved the day, signing up less than eight weeks before the run! Together with Steven Williams they raised £4,500.

In 2022, 10 runners raised over £15,000. Huge thank you to: McCoy Barker-Mills, Ed Croft, Alvaro Junior, Damian Luscombe, Flavio Moraes, Chris Page, Alex Paul, Andre Salazar, Raphael Silva, and Louis Thrumble.

2023 saw the London Marathon return to its usual April date. Eight runners raised over £9,000. Thank you to: Matthew Belmoh, Sally Binding, André Carmo, Lucy Graham, Claire Grant, Frederico Mansur, Lucy Palfreeman and Ryan Smith.

In 2024 London Marathon. We wish to thank Renato Alvarango, Rebecca Close, José Luis de Dios Crispi, Susan Englert, and Ingeborg Jones, who between them raised £5,331.

Bath Half Marathon

Thanks also go to our runners at the 2022 Bath Half: Caroline Scott, Jonathan Hipkiss, Agnes Jascberenyi, Marcus Jolly and Lucy Palfreeman! For the 2023 Bath Half runners: thank you to: Tom Macklen, Hannah Southfield, Viviana Vargas Sotelo, and Chloe Willis. And thanks to 2024's runners: Jess Blacklock, and Georgina Reed Peter

Great Bristol Run

A big thank you to the team at Marrons Planning and Shakespeare Martineau who ran the Great Bristol Run 10k in 2023. Cecily Donoghue, Izzy Firkins, Paul Hardman, Tom Macklen and Chloe Willis raised £300.

Finally, thank you to Laura Hiscock who ran the Great Bristol Run Half Marathon, raising over £600!



Clockwise from top left, Ellen Sandrey, Inge Jones, José Luis de Dios and Ed Croft keep smiling

**If you feel inspired to run, climb, swim, cycle, hold a cake sale, or any other way to fundraise for Rainforest Concern, please do get in touch: [info@rainforestconcern.org](mailto:info@rainforestconcern.org)**

Dexter's mountain challenge!

Congratulations to intrepid explorer, Dexter, aged 10, who climbed Mount Yr Wyddfa, raising over £160 for Rainforest Concern!

His father says Dexter's passion for saving our planet drove him on, despite the awful weather.

The year before, he and his friends Padraig and Stanley, walked Pen Y Fan and raised almost £200. Thank you Dexter for your hard work and determination!



COVID and its effects on indigenous people

With the pandemic affecting all our projects, 2020 and 2021 were difficult years. However, not only did every one of our projects continue in some form, we also were able to help our long-term partners, Gaia Amazonas and Tribes Alive, support vulnerable indigenous communities in the Colombian and Brazilian Amazon in protecting themselves from the risk of the unmanageable spread of COVID.

In regions in both countries, it was apparent that immediate action was needed to save the lives of many

indigenous groups in the region and to help protect their extraordinary generational knowledge.

As a result we launched an emergency fundraising campaign. Thanks to the generous response of our supporters, and timely funding from The Waterloo Foundation, we raised over £20,000 for this urgent work.

In Brazil we helped Tribes Alive provide essential supplies to help communities in the Xingu region to increase their capacity to grow food and

catch fish without needing to leave their villages. They also provided medical equipment, including oxygen machines.

Working with tribal leaders in Colombia, Gaia Amazonas identified that isolation is the most effective measure to prevent rapid spread, along with training, supplies and equipment.

The money you gave provided 1,517 families with 'isolation support kits' to help them continue hunting, harvesting and fishing without needing to travel to towns. Undoubtedly this saved lives.

Taking risks for Rainforest Concern!

Former Royal Marines attacked by river pirates on Amazon expedition

John Bathgate, Ian Roberts and the team at Summit to Sea undertook a momentous challenge – to climb Chimborazo, the highest peak in Ecuador, and then to follow the Amazon River from its highest source on the summit to the Atlantic Ocean, travelling through 5,000km of wilderness. This expedition would be a world first.

This adventure was inspired by David Bathgate, father of expedition leader John. In 1968, David decided he wanted to follow this route along the Amazon but was never able to do so. His son was inspired to complete this challenge for his father, while raising awareness and funds for our natural world and mental health, supporting charities Rainforest Concern, RV1UK and Royal Marines Charity.

After weeks of challenges, including climbing Chimborazo, treacherous white water rafting and even escaping kidnappers, John and Ian were in a remote

part of the river close to the Colombian border. Unfortunately, the pair were ambushed by river pirates. Armed with nothing but their paddles, John and Ian managed to fight the pirates, disarm them, and get to safety. However, during the struggle, John was shot twice. Thankfully, Ian, with the help of local people, managed to stabilise him before help arrived.

They are now safely back in the UK. Of course this experience has not discouraged the team, and they are

determined to return to Peru to complete their challenge within the next 12 months.

All of us at Rainforest Concern send our gratitude and best wishes to these brave men. Summit to Sea have already raised a fantastic amount for our charity, and we are amazed by their courage and determination!

John and Ian intend to give a talk at the Royal Geographic Society on completion of their expedition.



Summit to Sea

# Protecting the Bosques de las Madres in Costa Rica

by Sofia Stein, Director, Fundación Cuencas de Limón (FCL)

**Fundación Cuencas de Limón has been working with Rainforest Concern for almost 20 years. In 2021, we were delighted to partner on a new, ambitious project to consolidate the ‘Bosque de las Madres’, a newly recognised 17,100 hectare biological corridor linking primary and secondary forests, farmland, and wetlands.**

FCL



The biological corridor connects forests from the highest peak in Costa Rica to the sea

The corridor provides a vital connection between Cerro Chirripó – the highest mountain in Costa Rica – and the Caribbean coast. The altitudinal range means that the corridor links 11 of

Costa Rica’s 12 ecozones. As well as sheltering at least five species of wild cat, it is one of the most important regions for bird migration in the world and provides vital habitat to species

under severe threat of extinction, such as the critically endangered great green macaw, lemur leaf frog and the endangered Baird’s tapir.

Restoring and protecting the forests in the corridor also reduces sedimentation being washed from the soil into the rivers and the sea – sedimentation that is threatening the health of Costa Rica’s unique coral reefs. The corridor also plays a critical role in public health as the watersheds protect the source of drinking water for around 100,000 people in and around Puerto Limón.

For the past few years, helped by Rainforest Concern, we researched the best route for the biological corridor. More recently, we partnered with Rainforest Concern to consolidate the corridor, working on activities to maintain and restore biodiversity, involve communities and encourage land management strategies that support conservation along the corridor.

In order to address problems of illegal logging, poaching and squatting in forested areas, we started environmental education with local communities. This involves taking people into the forest to enhance personal connections with the forest and examine the ecosystem services the forest provides to increase awareness of the importance of the forests and encourage behaviour change.

We are helping to protect key areas using forest rangers and air surveillance with periodic fly overs. This is a very effective way to quickly spot irregularities in large areas of forest. In the future, we hope to be able to extend the use of technology such as camera traps to monitor indicator species in the forest. This will allow us to assess the ongoing ecological health of the corridor.

We need to protect remaining areas of forest that are most threatened with degradation and deforestation – and have therefore instigated a purchase policy for key areas.

Helped by the Planet Foundation, via Rainforest Concern, a first small acquisition of around 22 hectares of forest is currently underway.

This is a very exciting time – and the opportunity to help protect this incredible area of biodiversity in Costa Rica is a huge privilege.

We hope you will support Rainforest Concern and the project on this journey and we are looking forward to reporting on the progress of the corridor as it continues.



Map showing the location of the Bosque de las Madres ecological corridor



The use of air surveillance helps quickly identify areas targeted by illegal loggers

# Protecting turtles at Urpiano in Costa Rica

by Bárbara Barrera, Biologist, Refugio de Vida Silvestre Laguna Urpiano

The special family here has always been led by my husband Johnny, who dreamt of this project for many years. Just like our turtles, he was born and grew up on the beach here.

After studying biology at the University of Salamanca, Spain, I travelled to the biodiversity paradise that is Costa Rica. The turtles and the charm of the Caribbean captivated me and held me here. The project and our family has grown over the years. Our love for nature and conservation has too.

Urpiano beach is located on the northern Caribbean coast of Costa Rica. From March to June each year, leatherback, green and critically endangered hawksbill turtles come to nest. Unlike other nearby beaches, historically, Urpiano had never been protected and was notorious for the illegal poaching of turtle eggs.

We have now been protecting the beach for nine years and have released thousands of hatchlings during this time. We believe that this is a great

achievement, as without our presence, far fewer would ever have reached the sea.

One of the special parts of this project is the people involved. Since we started in 2016, around 40 local individuals have joined us as guards and field assistants, providing vital field work and expertise. We have great examples of dedication and hard work such as Pedro, who is very knowledgeable about the beach and turtles. He loves to share this knowledge with others, which benefits and inspires us all.

Some people have been with us since the early days, while others join us for a short time before moving on – Dixi went on to study ecological tourism, and Oscar took what he had learned at Urpiano beach and chose to study biology at university.

One of the most inspiring stories is Miguel's – or 'Miguelazo' as we call him. Originally, he was a poacher, taking the very turtle eggs we are trying to protect. However, because of our outreach and environmental education in the local community, he started working for us. Now, he is an inspiration to others, and an exemplar of hard work and commitment, passionately protecting and caring for marine turtles at Urpiano.

Conservation is often slow and complicated work and it is difficult to consider the short-term impact of our efforts at Urpiano beach. What is evident is that there is now more stability in the populations of turtles since conservation work in the area first began, more than 30 years ago.

Refugio Laguna Urpiano



Doña Juana (far left) with Barbara (crouched left), Johnny (far right) and the team

If we consider the number of leatherbacks and their nests at Urpiano, we can confidently say that it is one of the best nesting beaches in the world. In light of this, our work protecting this beach and the wider ecosystem has never been more important.

We are optimistic looking to the future, and hope that numbers of marine

turtles, here and worldwide, will increase. We also recognise greater protection and research is needed to ensure their survival.

We continue working to protect marine turtles here on the eastern coast of Costa Rica, and are hoping for a great 2024 nesting season and a great year in conservation.

In loving memory of Doña Juana, Johnny's mother. Born conservationist, Urpiano cook, lover of nature, helper of people and constant inspiration. With a deep knowledge of the turtles, she contributed greatly to the conservation of marine turtle and other species. 27 January, 1949 – 14 March 2022

## Releasing rescued animals in Costa Rica

Rainforest Concern assists Jaguar Rescue Center build new facilities

Located on the southern Caribbean coast near the frontier with Panama is the inspiring Jaguar Rescue Center.

The Center was established by primatologist, Encar García, and herpetologist, Sandro Alviani in 2008 to rescue and rehabilitate injured, orphaned and confiscated wild animals, and release them back into the wild. They care for species ranging from wild cats to monkeys, birds and reptiles to amphibians.

The 15 permanent staff and 30 volunteers also address problems associated with increasing urbanisation, working to conserve biodiversity in the area and raising awareness of biodiversity loss. They work with our partners at Fundación Cuencas de Limón, releasing

rehabilitated animals back into the wilderness.

Sadly, increasing numbers of animals are needing help. 2023 witnessed a surge in animal intake, easily surpassing previous records. This underscores the urgency of our work. This year alone they received over one thousand injured, orphaned or abandoned animals in need of specialised care. In the case of monkeys and sloths many of these injuries are sustained from uninsulated electricity cables.

In the light of the increased numbers needing help, the Jaguar Rescue Center approached Rainforest Concern to ask for urgent help to co-fund building a new wildlife rehabilitation enclosure and nursery. Planet Foundation provided the funds.



Jurgen Stein releasing an ocelot into the forest with FCL

Work on the new rehabilitation started immediately, and it has been fully operational since August 2023. The enclosure aims to acclimate adult and adolescent animals to their new habitat before their release.

The new nursery building will operate as both nursery and kitchen, efficiently accommodating two complementary activities. This will optimise worker and volunteer flow, helping the team to follow best practice in handling, animal care and feeding in the nursery.

Encar explains 'for the time being 135 animals of the 2024 intake remain in our care, recovering from their injuries. They will be released when they are strong enough to survive in their natural habitat. We work tirelessly to give these animals the best chance that we can'.

Newly built enclosure



Jaguar Rescue Center

Rainforest Concern

# A legal victory for nature in Ecuador

by Carlos Zorrilla, Director DECOIN

**For almost thirty one years we have been opposing mining concessions in one of the most biodiverse places on the planet. And we do not give up.**

Through the years I've been asked to talk and write about our conservation activities here in Intag and our nearly three decade-old struggles against transnational mining companies. Every year it gets more frustrating because every year there are so many new and important things to report in a limited space.

Take the last 12 months for example. In 2020 we\* presented a constitutional challenge to the mining project based on violations to the rights of nature,

which are protected under Ecuador's Constitution. We won in the lower court, but the ruling was thrown out in the appeals court because of a major procedural error by the presiding lower court judge.

In 2021 we helped community members present another constitutional challenge; this time based on not only the rights of nature but also on the rights of communities to be consulted before any activity can take place that could impact their environment. In this case we lost at

the same lower court to a different judge who, coincidentally, had ruled against the Los Cedros case, a protected area not too far away from the mining project we were challenging. The negative ruling came as no surprise knowing the past history of the judge. The loss at the appeals court, however, was deeply disappointing. But we did not give up.

About a year and a half later in the Court of Appeals we had much better luck. So, on March 29th 2023 the provincial court of Imbabura Province ruled in our favour. This meant that the court recognised that the government had violated the rights of nature as well as the communities' right to be previously consulted during the process of granting the environmental license.

The decision dealt a huge blow to ENAMI's partner, CODELCO, the world's largest copper producer, who, in real terms, had been funding 100% of the exploration. The license had been granted to the Ecuadorian state owned mining company, ENAMI. The court revoked the environmental license and prohibited all mining activities within the concession.

While the government will appeal the ruling to the country's Constitutional Court, we feel we have a very good chance that the court will uphold the ruling.

The advance exploration within the Llurimagua mining project started back in 2014 when about 400 police violently installed CODELCO in a primary forest that DECOIN, the organisation I work for, had purchased for EcoJunin, a community group which were managing the forests as part of a community tourism initiative since 2000.

## Science matters!

This is one of the many projects Rainforest Concern has helped with.

One of the key factors that helped convince the judges of the importance of stopping mining in this biodiverse area was the number of endangered species that were identified within the mining site via biological expeditions funded, in part, by Rainforest Concern.

As a result, we were able to identify dozens of species in danger of extinction not reported on the company's Environmental Impact Assessment.

In all, an incredible 74 species in danger of extinction on the IUCN and Ecuador's Red Lists have so far been identified within the 4,829 hectare mining concession. This includes nine species of orchid, two critically endangered species of monkey, and two species of frogs found within the mining site and nowhere else on Earth.

In fact, the first of those two frogs, the longnose harlequin frog was thought to have become extinct until it was rediscovered within the community reserve. We are planning another biological excursion later this year to see what other species are in danger of becoming extinct if the mining goes ahead!

The court ruling undoubtedly is a huge win for all of us here in Intag who have been fighting mining development for the last 28 years. But it is a much bigger win for the rights of nature, a concept that is gaining ground all over this embattled planet of ours.

\* When I use the word we, I refer to the community members that were the plaintiffs in the case and all the other people and organisations that supported the court case. DECOIN was by far the most heavily invested in the whole process.



The rare cloud forests of the Tropical Andes are home to many endemic but threatened species

***In April 2024, the Constitutional Court refused to hear the government's appeal against the provincial court ruling in favour of nature. The court found no grounds to reconsider the case.***

***This means there will be no more appeals against the ruling, and the 93 endangered species that call the***

***Junin Community Reserve home can breathe a little easier diversity for now.***

***However, we can not rest yet... for the future, other companies including the Ecuador subsidiary of Australian Hancock Prospecting, are interested in the large scale copper mine.***



One of the team of biologists cataloguing amphibians

We are enormously grateful to the Cobalt Trust, who have generously supported our projects for the past seven years, particularly the Neblina Reserve, including with land purchase to expand the reserve and much needed research.



Carlos Zorrilla (far left) in a planning meeting with lawyers and other organisations prior to a hearing

# Beyond ONE helps fund significant expansion of the Neblina Reserve



Murray Cooper

View of the Neblina Reserve

by Sonja Dillmann, Project Co-ordinator, Neblina Reserve

**Since 2002, Rainforest Concern has been creating a protected forest reserve, the Neblina Reserve. The idea of establishing the reserve came out of discussions with our long-term partner, Carlos Zorrilla at DECOIN, on how to ensure the security of the last remnants of tropical montane cloud forest on the western slopes of the Andes.**

The reserve is located in north west Ecuador between the Paso Alto mountains and the Cotacachi-Cayapas Ecological Reserve, in an area known as Intag.

Neblina Reserve is now over 2,500 hectares and still growing. It forms part of the southern section of the Chocó Andean corridor project in the Ecuadorian Andes. This southern

phase lies between two Global Biodiversity Hotspots: the Tumbes-Chocó-Magdalena and the Tropical Andes – the Hotspot with the greatest biological richness on the planet.

The last few years have been exciting for the team at the Neblina Reserve:

## Legal protection

We have significantly increased legal protection of the reserve. In light of the ever-present threat of mining concessions in the area, in 2017 we started to apply for the highest legally protected conservation status we could achieve in Ecuador – the National System of Protected Areas, or 'SNAP'. The most important state-owned reserves are included within this system.

Finally, after several years of dialogue with the Ecuadorian Ministry of the Environment, report writing, ecosystem mapping and researching, two areas of the reserve achieved SNAP status in 2021.

A further area followed in 2022. The Neblina Reserve is only the third private reserve to have been granted SNAP status.

## Research

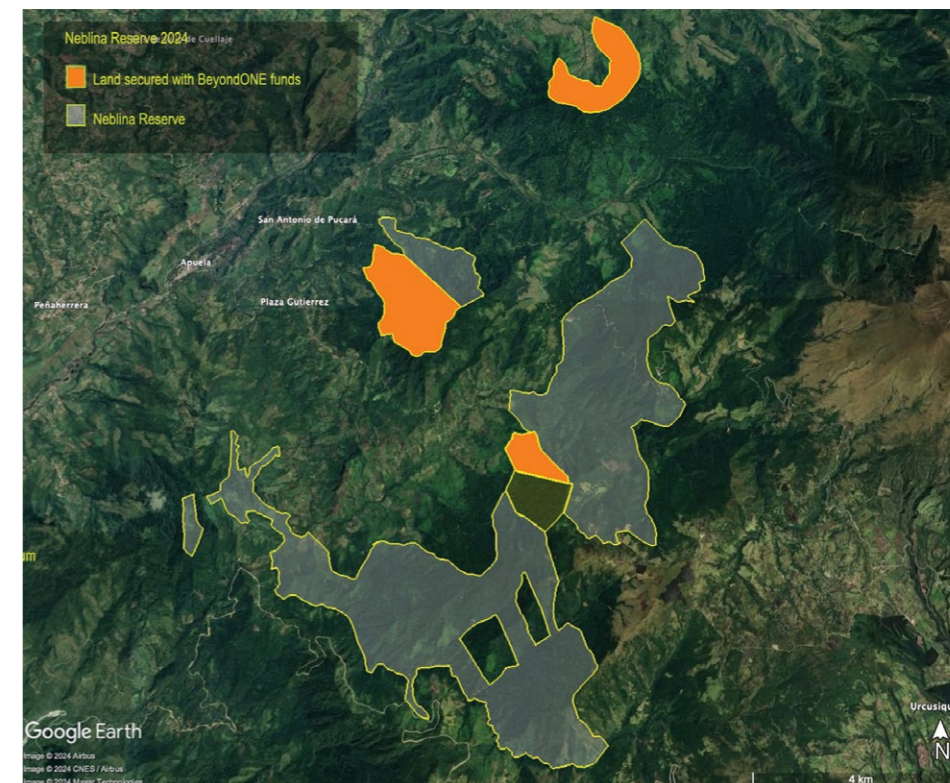
Ongoing research is showing the reserve to be an important refuge for many endemic and threatened species.

With generous financial support and camera traps from NatureSpy, we have been able to continuously monitor mammal species within the reserve – and learn more about their populations, habits, and behaviours.

With funding from the People's Trust for Endangered Species (PTES), we have researched the presence of two key umbrella species in the reserve – the Andean, or spectacled, bear and the Endangered black-and-chestnut eagle.

We recorded at least 17 adult bears in the reserve and have found three breeding pairs of eagles nesting in and around the reserve – exciting findings, which reveal the valuable role of the reserve in preserving the cloud forest ecosystem.

The importance of the reserve was again highlighted in recent research carried out by the Ecuadorian National Institute for Biodiversity, facilitated by a generous donation by the Cobalt Trust.



Map showing new additions to the Neblina Reserve made possible by Beyond ONE

The first field study has already revealed numerous threatened and endemic species within the reserve.

This vital research helps us to plan the best protection strategies, including considering ways to reduce the serious problem of human / wildlife conflict, and is key in providing evidence of the quality and biodiversity of this forest.

The research will be vital for future legal protection applications and to defend the surrounding forests from the threat of large-scale mining.

## Expansion

The Neblina Reserve is growing fast, allowing us to extend our protection of this unique, rare and extremely diverse cloud forest ecosystem.

In February 2023, Rainforest Concern formed an exciting new partnership with Beyond ONE, who recently acquired Virgin Mobile Middle East and Africa and Virgin Mobile Latin America, the company being keen to compensate for its carbon emissions by protecting rainforests.

In the partnership's first year alone, we were able to increase the size of the Reserve by over 480 hectares.

We are hugely grateful to Beyond ONE for their generous commitment to protecting the forests and the amazing species that call it home.

It has been an exhilarating few years, and I would like to thank my colleagues here at the Neblina Reserve for their hard work.

I would also like to thank all our friends and partners who, year after year, have trusted the work and dedication of the entire Rainforest Concern team and made these achievements possible.

We look forward to achieving more together in the future.



# Environmental justice for Los Cedros Reserve

by Monserrate Vásquez, Social Co-ordinator, Los Cedros Research Station

**For over 30 years, Los Cedros Research Station has focused on conservation, monitoring of the forest, scientific tourism and research. Strong collaborations with others have allowed us to carry out this work to protect these tropical Andes forests.**

Los Cedros Reserve is a legally protected forest, with 'Bosque Protector' status, located in the north west of Ecuador and part of the buffer zone of the Cotacachi–Cayapas Ecological Reserve. The Reserve sits within the Tropical Andes Biodiversity Hotspot, one of the world's most biologically diverse habitats. This 4,800 hectare Reserve safeguards the headwaters of four important watersheds, vital for the species that inhabit the forest as well as for the 10 surrounding communities. It also protects 200 threatened species, of which 5 are considered critically endangered by the Ecuadorian Ministry of the Environment, such as the brown-headed spider monkey.

In 2018, after the Ecuadorian State awarded a licence for gold mining covering 60% of the Reserve, the research station, the municipality and the surrounding communities led a legal claim in the Ecuadorian Courts.

The lawsuit appealed against the concession, basing its case on the Rights of Nature and respect for the legal security of protected forests, demanding reparation from the State for the violation of the communities' right to prior consultation.

At last, in December 2021, the Constitutional Court of Ecuador issued a final judgment accepting the Protection

Action and obtaining justice for the protected forests. This is the first time that the Ecuadorian Court has ruled on the Rights of Nature and mining.

This historic ruling has become a symbol for environmental struggles, demanding a rethink of the current anthropocentric model that has led us to the current ecological and civilisational crisis.

**The ruling is a commitment to 'biocentrism'; an ethical point of view in which the rights and needs of humans are not more important than those of other living things.**

The legal process has also proved the importance of the research carried out at Los Cedros Reserve – 130 scientific publications enabled the constitutional judges to assess all that was at stake in ecological terms if mining was to go ahead.

The constitutional ruling has generated immense joy – nature and humans have both won as a result of the protection of this forest. In September 2022, with the support of Rainforest Concern and NatureSpy, camera traps were installed at key points in the Reserve and the findings

are surprising, demonstrating the balance and health of the forest.

In this short time, we have been able to confirm the presence of several large mammals such as Andean bears, red brocket deer and pumas. In terms of threatened species, we have an amazing video of a group of nine dark-backed wood quails (five chicks and four adults) – listed as Vulnerable by the IUCN. There are also videos of Baudó guan – a bird – which is endemic to the Chocó Bioregion and is listed as endangered on the IUCN Red List.

Now that the rights of the forest and communities have been secured, the team at Los Cedros will be able to fully focus on new conservation and community outreach projects.

At the beginning of this year, in compliance with the Constitutional ruling, the Ministry of the Environment must update the management plan, with the participation of members of the research station, the scientific and local communities.

The plan puts forward a co-management committee composed of the communities, local authorities and the scientific community, for the democratic and collective management of this biodiverse and ecologically valuable forest.

Murray Cooper



Los Cedros Reserve's watersheds provide clean water for communities and wildlife

Throughout all this, we want to highlight the support of Rainforest Concern, who have been with us since the beginning of our work to conserve these amazing forests.

We will continue to develop new projects hand in hand with the communities so we can strengthen the work that has been carried out year after year to protect Los Cedros Reserve, even more so now that it has become an icon of the Rights of Nature.

## A jaguar in Junin

by Xavier Tobin,  
Rainforest Concern

In January 2024, a jaguar was recorded by a camera trap in Junin Community Reserve the Intag Valley, about 25km from Rainforest Concern's Neblina Reserve. This is the first time a jaguar has been seen in the area in decades.

A large male, the feline is healthy and clearly well fed, not at all nervous of the Junin Environmental Monitoring Group's camera trap. The Intag Valley environment is providing for this jaguar, comfortably. This is of great significance; alpha predators cannot exist so healthily in habitats without a surplus of resources to support them. We expect to see him again.

Ecologically, such predators play a crucial role in maintaining environments which have co-evolved with them through top-down predation, in some cases

actively maintaining the structure of the landscape.

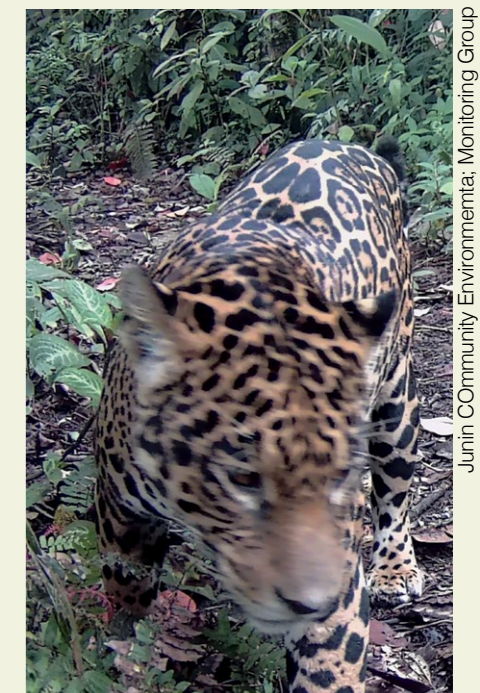
We should take this jaguar as robust proof of the health of the ecosystem. It shows us that protection efforts in the Intag Valley work and this crucial nature corridor, of which Neblina is part, is thriving.

We at Rainforest Concern are overjoyed that a jaguar has been seen so close to Neblina. Consider that a jaguar can patrol a territory of up to 50km<sup>2</sup> – it is absolutely possible that he and most probably others could consider Neblina territory their home. He gives us another reason to protect this wonderful place.

We must remember that the jaguar is also a flagship, a representative, for Intag's impressive biodiversity. For example, there are three other felid cat species in Neblina: puma, ocelot and oncilla and possibly margay.

Neblina is a biodiversity haven. It is precious, and that is before we even consider carbon sequestration!

With the generous support of our donors we can continue protecting it and aim to expand it for the good of both its animals and the human communities that depend on it.



A healthy male jaguar caught on the camera trap

Junin Community Environmental Monitoring Group



# Last chance to protect rare black-and-chestnut eagles?

by Tashkin Meza, Senior Biologist, Neblina Reserve

**With little known about black-and-chestnut eagles, and the IUCN estimating there could be only 250 adults left on the planet, research is urgently needed to understand and protect this magnificent bird.**

In early 2022 we were delighted to receive the news that the People's Trust for Endangered Species had awarded us a grant to investigate the presence of black-and-chestnut eagles (*Spizaetus isidori*) in the Neblina Reserve and its locale.

These eagles, as birds of prey, need large home ranges to find enough food, and habitats in a good state of conservation. Because of their ecological requirements they can be considered excellent bio-indicators, but this requires an understanding of their habitat requirements, life cycle, distribution and abundance.

Like the rest of Ecuador, the Intag Valley, where the Neblina Reserve is located, has undergone aggressive deforestation over the last 30 years – with its original cloud forests replaced by a homogeneity of cattle pastures, crops, and plantations of alien species.

The black-and-chestnut eagle is a generalist raptor, so its feeding habits are related more to the availability of food than to preferences. Increasing deforestation and degradation of forest,

and the encroachment of smallholdings into previously forested areas, means that more and more often, eagles will resort to attacking domestic animals like poultry, increasing human / eagle conflict.

In December 2021 we identified an eagle nest, with juvenile, in the Gudiño sector of the Neblina Reserve. To date,



The eagles prefer to nest in the strong branches of emergent cecropia trees

the research team have spent 352 hours observing the nest. From December 2021 to May 2022, the juvenile mostly remained outside the nest emitting loud calls. During this period, there were very few records of the juvenile with its parents.

By the end of February 2023, we had identified 12 nests in four sub-basins. Most of the nests are built in the canopy of emergent *cecropia* trees and one is built in a *blakea* tree ('mata palo' or 'rayo'). The size of the nests varies between 1-1.5m diameter and 1-2m high. From December 2021 to March 2022 we recorded two juveniles – one in the Neblina Reserve and the other nearby. The adult pairs returned to the same nests in 2023, and we also monitoring an additional third nest in a nearby valley.

Female eagles lay a single egg, and we are delighted to report that all three clutches successfully hatched.

We have been able to record several behavioural patterns, such as both parents contributing to the construction of the nests. As so little is known about the behaviour of the black-and-chestnut eagle, these recordings contribute significantly to global understanding on the species. There are other behavioural patterns emerging – the greatest number of direct adult eagle sightings were in May 2022 and February 2023; but very few in other months. The highest number of direct juvenile sightings were in January 2022 and 2023.



Tashkin Meza and Milton Arcos observing an eagle outside the reserve

We have observed that human / eagle conflict seems to arise when the juveniles start expanding their flight zone. While they remain close to the nest there were no reports of attacks on domestic animals, but as the juveniles grew they explored further afield, showing greater curiosity and independence.

From the end of April we had reports from several nearby communities that eagles had taken chickens and geese – with June, July and August seeing the greatest number of attacks.

Throughout the project, we have also been developing relationships with

communities and socialising the eagles with them.

Understanding how to limit conflict will be significant in helping these raptors survive in the long term. Some of our data will be used by the Ministry of Environment to contribute towards the first national black-and-chestnut eagle protection plan.

It is clear that the reserve and corridor of protected areas is providing crucial habitat for this rare and charismatic bird, showing the importance of extending protection of these vulnerable cloud forests.

## An exciting new partnership with Instituto Juruá in Amazonia

by Xavier Tobin, Rainforest Concern Biologist and Dr João Campos-Silva, Instituto Juruá Co-Founder and Director

Rainforest Concern is pleased to announce a new partnership with Instituto Juruá, a Brazilian non-profit organisation formed by conservationists, researchers and local environmental leaders in close partnership with rural communities.

They have worked in the heart of Amazonia on the Rio Juruá, one of the longest tributaries of the Amazon, for decades. Instituto Juruá's mission is to

combine cutting-edge scientific research and traditional local knowledge to support initiatives for the sustainable use and management of natural resources across the Amazon Rainforest.

In this manner Instituto Juruá helps conserve biodiversity and helps boost food security, health and sustainable income for indigenous and rural non-indigenous people. 200 rural families have benefitted from their work so far.

One of their main aims is to maintain populations of several historically overexploited species. These include the endangered giant arapaima fish (*Arapaima gigas*) South American River Turtle Nests on the fluvial beaches and many endangered birds in the lakes of the Rio Juruá. Under this partnership, Instituto Juruá will be able to expand their operations upriver next year, setting up community-based conservation initiatives with unreached communities.

Central to the work of Instituto Juruá is the belief that conservation success within tropical forest is dependent on the alignment between science, local ecological knowledge and engagement of indigenous people and local communities. Rainforest Concern has worked on the same basis since it was founded three decades ago; this new partnership promises to be strong and of great benefit to both Amazonian river ecosystems and rural communities.



João Campos-Silva

# It takes a village to midwife a rainforest

by Supi Seshan, Director,  
Gurukula Botanical Sanctuary, Western Ghats, India

**If you've never seen the death of a forest, you know nothing about the world as it is today. But if you've never seen the birth of a forest, you have no awareness of the wealth of memories stored in the land, you do not know what has been and what is still possible.**

Our work at the Gurukula Botanical Sanctuary is in part a resurrection of these memories. We've witnessed the forest rising from ashes. We believe the forest is wilful and powerful. We believe that we are part of it. The end of this version of the human race might well be an alignment with the rainforest as it takes over the planet, or else a perishing in its unstoppable fecundity. We dwell in human / non-human communities that boggle the imagination continually. How can such fecundity still abound? Why is greening the most natural event on the planet? Why is it happening despite such death and destruction? What are we being called to notice and what are we being inspired to do?

To partner with Rainforest Concern is to partner in several aspects of rainforest conservation. One is the defence of existing rainforest, a second is the restoring of weakened forest, and a third is the midwifing of new forests.

These days 50 years is considered a long time for a habitat to be protected. The young forests at Gurukula are now reaching 50 grand years in age. The old forests across the river are in contrast 100 million years old, or more.

We have been at land protection and regeneration since 1971. There are communities that have been at it for millennia, ancient peoples in ancient habitats.

The conundrum: when does a regenerating habitat become a forest, or become grassland, marsh, reef, savannah? If a habitat has taken 100 million years to come about, when



Banasuramala, a 2000m outlier mountain seen from Gurukula. Foreground: regrowing forest.

does a 50 year old forest become an old growth forest? When does a non forest become a forest? What is a forest? If a grassland has come about over 10,000 years, when do our planted and regenerated and restored grasslands become grassland? When do they transition from non grassland to grassland? What is a grassland? When do shrublands become grasslands and vice versa, and why?

Likewise with humans, when do settler migrants and displaced marginalised persons become a community? When do a 'people' form? What is the culture that revives nature?

There are many terms for the human members of Gurukula Botanical Sanctuary: ecosystem gardeners, rewilders, rainforest midwives, nurses, doctors, rainforest nurturers and activists, plant protectors, educators, custodians, defenders, Green Phoenix. These terms can be applied to the non humans as well. Every living being has at its command a full spectrum of possibilities that is deployed in relationship with the greater ecology. This is what we emulate and learn from at Gurukula, for this serves the rainforest very well, to help it gain strength and protect its diverse member beings.

The land at Gurukula Botanical Sanctuary, the wealth of plants and

animals, the steady pace maintained over the decades, the network of goodwill and reciprocity, and the audacious belief that rainforests can and do resurrect themselves, and that humans can participate in this, is because we have not blindly placed our faith in institutions but rather in relationships. The wild bubbles up in black tadpoles roiling through the Kallampuzha stream, through thickets of epiphytes tangling through thickets of trees and lianas; through an endless dinner party of a fecund biome with millions of creatures feasting upon each other made possible by millennia of cohabitation and slow evolutionary unfolding.

Mostly we are interested in asking questions and observing. How do different cultural practices shape the land over long periods and vice versa? We intervene intensively only on about 15 acres, through nurseries and planted habitats. We also have a botanical garden with plants from around the world on a couple of acres, visited by thousands of people from north Kerala and elsewhere. Our concern for water bodies, care not to disturb springs and swamps, and pledge to protect the land from over-extraction have brought about the great diversity of species and richly varying textures of habitat over time. The land has powerful agents of transformation, from the movement of animals to quick-spreading plants as well as heavy rainfall and human beings who tend to diversity.

The private and public lands under the Gurukula stewardship, through its ecosystem gardening programmes and the community outreach initiative called Green Phoenix, include streams with riparian vegetation, swampy valley fields and hill slopes of land that have been clear-felled in the past. Only seven of the privately held acres had primary forests, which had already undergone selective removal of large trees. Our collective has taken slow custodianship of these smallholdings, a few acres at a time, and carried out various activities ranging from ex-situ conservation



Laly Joseph planting epiphytes

of over 2000 Western Ghats plant species and their rehabilitation, to passive and active measures for recovering degraded forest land. We now care for about 75 acres, of which about 40 are left alone to rewild themselves and yearly lists are maintained of species presence.

On another 15 acres, tea has been removed and different types of vegetation surge instead; young forest, rehabilitated grassland, and an orchard. On five acres, left-alone tea plants have shot up 10 feet, forming a dark, cool thicket through which other species nevertheless find a footing. Since there are few opportunities to study what happens to land under different treatments, we believe it is important to document our wide-spectrum approach to ecological nurturance.

Through the Green Phoenix members (an outreach initiative) we care for 16km of a first order stream (head waters of the Kaveri river) and work on community level issues in our village ranging from agriculture to fishing and extraction of resources as well as education, wildlife and forest recovery.

Since 2018, our brave new tangling with a high elevation landscape at the Thiriyannara Refuge, made possible with a generous grant from the Planet Foundation facilitated by Rainforest Concern, means we can explore all the above in a new place. The

purchase of 7.1 acres at the edge of a cliff at 1,800 metres means a new set of conditions have to be negotiated. Do we want to aim for a landscape of the past, or do we want it to evolve into something new, and still diverse? Do plantation of exotic species get removed or do we let them grow out and work under their cool protective shade, let them do their carbon sequestration and nitrogen fixing while we plant underneath and on the edge, with tender plants?

Our colleague and former student Vasanth Godwin Bosco has been planting native shrubs in a dispersed manner, in part to test what grows better in heavily grazed conditions. The site also has widespread presence of invasive exotic weeds. The native shrub species have withstood grazing pressures from resident sambhar deer, and also crowding pressures from the fast-moving exotic plants which dominate the site now.

Since this site and part of the ridge would have had grassland ecology previously, a potential restoration plan could be to plant a mixture of shrubs that naturally grow on the ecotone between forest and grassland, as well as on open grassland. Once these are established, tussock grasses can be planted as the next phase.

This is a long term project and it is wonderful to know we have the continued support of Rainforest Concern for our work into the future.

# A new model for farms in Europe

by Nathaniel Page, Director, Fundatia ADEPT, Transylvania, Trustee of Rainforest Concern

## Rainforest Concern is working with Fundatia ADEPT in the magical Angofa Valley to protect the most threatened habitat in Europe – lowland flower-rich meadows

Following the start of Fundatia ADEPT's partnership with Rainforest Concern, we are pleased to have made good progress on our work in Transylvania.

The partnership began in late 2018 when Rainforest Concern gave us £30,000 for the protection of threatened biodiversity-rich grassland and mixed forest-grassland habitats in the valley of Angofa.

Lowland flower-rich hay meadows are the most threatened habitat in Europe; 97% have been lost in the UK since the 1930s.

In 2019 and 2020 ADEPT used the funds from Rainforest Concern to restore 20ha of hay meadow.

Romanian biologists are now monitoring the increase of flora and invertebrate species diversity. Stopping overgrazing by sheep and the restitution of hay meadow management has had a significant effect. Late mowing has restored floristic diversity by allowing seeding.

We mow after mid-June using small-

scale mowing equipment to mow gradually across the farm over a period of several weeks. After only 3-4 years, the hay meadows have showed a remarkable increase in flower species – possible because of the flower and herb seed bank that was left in the soil and the 'rain' of seed from nearby areas.

Rotational cattle grazing means pasture can rest and reseed, allowing flowers and herbs to flourish, which are often otherwise removed by selective grazing. The wildflower-rich pastures foster invertebrate biodiversity, including many butterfly species. In one day in our area it is now possible to see up to 40 of the 200 Transylvanian butterfly species (there are only 59 butterfly species in the UK!). The meadows are also a good economic crop for cattle, which encourages farmers' interest and support – essential for the success of the project.

Transylvania, including Angofa, is unusual as one of the few lowland farmed areas of Europe with active and viable populations of bear, wolf and wildcat, as well as several raptor species. These give a good indication of the general health of the landscape.

Rainforest Concern's support also enabled us to train local farmers in nature-friendly farm management, essential for protecting the wider area.

To improve training facilities, with the help of Rainforest Concern, in 2021 we obtained a grant of €150,000 from Planet Foundation for restoration of some old farm buildings, which will act as a training centre for the demonstration farm. The grant also covers further restoration of nearby grasslands. This work is now almost complete.

Later this year the training centre will be fully operational, helping to spread good management practices more widely in the area.

A major threat to the region is the ploughing up of old grasslands for arable crops – mainly by large international agribusinesses which have no concern for the long term interests of the area or its communities.

ADEPT



European brown bear, *Ursus arctos*, are regularly seen in Angofa valley.

ADEPT



Increasing species diversity in the restored hay meadows being monitored by biologists in 2023. Professor Laslo Rakosy, far left, and Dr Ana Maria Tudor, far right, are leading our butterfly and flora survey teams.

By working with farmers and convincing them that working with nature is both practical and profitable, we can save much wider areas of the Târnava Mare landscape, which are some of the most important remnants of high-biodiversity grassland in Europe.

The restored Angofa farmhouse will also act as a hub for nature tourists,

and a field centre for local schools. Even though it offers splendid isolation, Angofa is only a few miles from the popular tourist destination of Sighisoara. There is now a link to the 100km mountain-bike trail in the area.

Local farmers are increasingly interested in specialist talks on the importance of wildflowers and butterflies. Angofa Valley

will be a practical conservation project, returning over 200ha of grassland to high biodiversity value conditions.

Angofa Valley acts as a teaching centre for farmers and spreads the word about the global importance of the area to policy-makers, local communities and national and international visitors.

ADEPT



Watching a lesser spotted eagle, *Aquila pomarina*, in the Angofa valley.



Before and after images showing the restoration of training buildings for Angofa Demonstration Farm.

# Inspiring the next generation in remote Colombia

by Manuela Peláez, Director of Fundación TierrAmar and ecologist

## Rainforest Concern has been supporting the work of my grassroots foundation, TierrAmar, in Colombia for six years. Most recently this includes funding our environmental education programme, the Colombian Ecosystems Awareness Project (CEAP)

Colombia is considered the second most biodiverse country in the world, with 1,256 species of endemic fauna and 7,897 of endemic flora, as well as six UNESCO Biosphere Reserves.

According to the IUCN, Colombia has the most irreplaceable sites in the world for threatened species. However, its multiple ecosystems are threatened by mining, deforestation, poaching, unsustainable agriculture and tourism and socio-economic instability. Furthermore, there is a lack of environmental education and vision for the sustainable management of its natural resources.

The purpose of our project is to visit remote schools in, or close to, vital fragile ecosystems in Colombia. Our aim was to raise awareness of the function and importance of the biodiverse regions in which the students live and the threats they face. We used games and competitions to engage students and carried out hands-on projects, such as creating medicinal plant gardens or native tree reforestation, which could be continued after we left.

We identified different regions containing critical and vulnerable ecosystems to target in three phases. In total, we visited 15 schools, covering indigenous

and non-indigenous communities. The incredible ecosystems we covered included coastal mountains and the Eastern and Central Cordillera of the Colombian Andes, the Colombian Massif, the Flora Sanctuary Plantas Medicinales Orito Ingi-Ande – where the Andes meet the Amazon forests, a lagoon and the wetland areas of the Flora and Fauna Sanctuary Isla de la Corota.

Prior to setting off came the very strategic packing phase – we had to squeeze everything we needed for a three week expedition into one motorbike! Two waterproof bags full of booklets for the students and teachers were tied to the sides of the motorcycle. A third bag with the field coordinator's clothes, my clothes, and essential field supplies was tied to the back of the motorcycle. Lastly, the camera equipment was secured in between the seat and the handlebars. The field coordinator and I wore our motorbike suits which made us feel like astronauts embarking on a spacewalk! Then we were off to Colombia's wildest corners. After many hours driving (and some lower back pain) we reached the town closest to each threatened and essential ecosystem. This could be a coastal or lake ecosystem, forest, or paramo. Many of the schools cannot be found on maps or online, so in the town we asked for directions to the school closest to the ecosystem, and then headed there. On arriving at each school

I explained the project to the headteacher and asked for permission to enter the school. In every case, due to their remoteness, the school staff immediately expressed immense gratitude for making the journey and in most cases, instantly gave permission for us to carry out the project. Otherwise, we stayed or camped overnight near the school, presented the project to the teachers, parents, indigenous leaders and wider community, and awaited their decision. This was often a delicate time, as community members may have been involved in some of the very activities that are threatening the ecosystems that we had come to talk about. However, despite these barriers, we received very positive feedback.

On receiving permission, we began each workshop by handing every student and teacher a booklet. I then discussed global and Colombian ecosystems, before talking about the specific ecosystems around the school. After covering the booklets' contents in class, we led hands-on activities in or near the school, depending on its grounds. We directed the children, so they were the ones preparing the soil, sowing the seeds, or planting the seedlings. Finally, we finished the workshop with games and competitions to review the taught material. After delivering several days' worth of talks and activities at each school, we were often asked by students and teachers when we were coming back.

As a result, we visited the schools again to assess the impact of the programme and plan future steps. One challenge we identified was how to encourage teachers to maintain the new planting and gardens. A fast changeover of teachers, and a heavy workload with multigenerational classes meant that a few teachers didn't keep up the gardens. So, in the future, some sort of compensation scheme might give an incentive to encourage all teachers to maintain and expand the gardens.

On one of the early expeditions we encountered people protesting in the road at the lack of personnel for schools, such as teachers, cooks, and cleaners. In a few schools there was no food for the students, so the teachers had to

release them early. Many schools had multigenerational classrooms so I was teaching students who couldn't read at the same time as teaching those who could. This was by far the biggest challenge.

The scariest moment came when we were crossing an unpaved backroad within the Sierra Nevada de Santa Marta mountains. This neglected region is mostly covered by a vast desert that meets the Sierra's forests and mountains close to the border with Magdalena. Smuggling is very common. We were travelling on the motorbike at less than 50km per hour, when suddenly a huge Toyota SUV – with black windows and a thick layer of dust covering all the boxes it was carrying on the roof – was speeding towards us impossibly quickly! It was so fast that both its driver and our motorcycle had to swerve to avoid crashing.

We ended up cornered by the Toyota and forced into barbed wire fencing. The type of vehicle, its speed, black windows, the road it was taking and all the boxes it was carrying indicated that these people were smuggling. I am thankful that I am here now to write about this terrifying moment.

For me one of the biggest indications of the success of the programme is that, at the beginning of the workshops, I asked the students what they want to be when they grow up. Most answered "cops or soldiers". However, at the end of the workshop, I asked the same question and this time the answers were: botanists, biologists, park rangers, veterinarians, zoologists, agronomists, and tour guides.

The project has allowed us to characterise different ecosystems, biomes, cultures, land use, social dynamics, and sociopolitical conflicts, among other factors in a diverse country like Colombia.

It was stimulating to see an opportunity not only for environmental education, but also capacity training – identifying and nurturing environmental leaders, and delivering training about ecology, eco tour guiding, natural resource management, agroforestry, and ornithology, among others! Although the students are still young, they are not too young to start acquiring the skills and knowledge that will help them grow up and thrive alongside these fragile ecosystems.



Children are led in practical activities such as planting native trees, or medicinal gardens



Manuela gives classes explaining the concept of ecosystems

# Special ecosystems help protect species from climate change

by Carmen Rosa, Executive Director CBZ and Carolina Brown, Rainforest Concern

**Climate refugia are areas that, due to factors such as altitude and soil, provide relatively stable climatic conditions. They therefore offer a degree of protection against some of the impacts of climate change.**

Identifying and protecting the areas that offer the best climate refugia conditions can ensure that important biodiversity is represented and also gives us more understanding of which areas will be more adapted to climate change in the short, medium and long term.

Since 2021 Dr Patricio Plissock, Associate Professor at Pontificia Universidad Católica de Chile, has been leading a four-year research study into climate refugia, with a special interest in Chile's

mediterranean ecosystems. The aim is to identify areas that can act as refugia from climate change for Chile's biodiversity. The study will last until 2025 and is being carried out with researchers from the University of Berkeley (USA), the University of Lausanne (Switzerland) and the University of Chile.

Dr Plissock is particularly interested in the Zapallar forests, a biological corridor of approximately 4,500 hectares located in the Valparaíso Region in Central Chile.

Central Chile is the most densely populated region in the country and its ecosystems have been significantly impacted by human activities. The Zapallar Corridor is a sclerophyllous and lauro-sclerophyllous forest – a type of forest in which plants can withstand long periods of hot, dry weather. The forest has a high level of endemism and has been recognised as a priority biodiversity site by the Chilean Government. The Zapallar forest corridor is also one of the only remaining examples of a unique mediterranean coastal habitat, a living remnant of a vast ecosystem that once dominated Chile's central region.

Rainforest Concern has supported Corporación Bosques de Zapallar (CBZ) since it was established in 2008 with the aim to protect this valuable ecosystem. It has managed the Zapallar forests since 2010 and secured the legal conservation of several areas of forest in the Zapallar Corridor, creating a park open to the community, carrying out environmental education programmes, and creating a nursery for endemic plant species.

Since the study started CBZ, with Rainforest Concern's support, has been actively supporting Dr Plissock's teams' fieldwork – accompanying the researchers to guide them through the forest and provide insight on the terrain, as well as helping install and collect data from the equipment. Activities include mapping and topology, installing temperature and humidity sensors (to help characterise micro-refugia) and installing camera traps to identify and characterise fauna.

This climate refugia study also has an important outreach and environmental education component.

Thanks to the information provided by Dr Plissock's team and financial support from Rainforest Concern, three different field guides have been developed to be used by visitors and students during their visit to the park. This has allowed the community to get to know the forest first hand and understand the value of this threatened ecosystem.

Two years into the study, the first results have confirmed the presence of rich biodiversity in the Zapallar forests. Camera traps have identified more than ten native mammal species including foxes, marsupials and two of the smallest American cats: *Leopardus guigna* and *Leopardus colocolo*. Insect surveys reveal great diversity of species in areas with the lowest degrees of human disturbance.

Microclimatic sensors installed in areas with little or no shade indicate a daily



A pampas cat (*Leopardus colocolo*) unknowingly poses in front of the camera

variability of more than 30 degrees Celsius during the summer season. This temperature variability has never before been recorded by weather stations in the area.

This information is hugely important as it allows us to identify and characterise

the Zapallar forests' climate refugia areas. From this we can create protection strategies under current climate change scenarios, which helps to strengthen our work preserving this valuable ecosystem for future generations.

## Cerra de la Cruz

Since 2019 our partners at CBZ in Chile and the Royal Botanic Gardens Edinburgh have been entrusted with protecting Cerra de la Cruz, a small peninsula on Chile's central coast of disproportionate ecological value, with over 90% of the plants being endemic. The region is highly developed but the site offers refuge for irreplaceable biodiversity, including native plants, rare lizards, butterflies, birds and lichens. In 2023 the Chilean Government declared the area a Nature Sanctuary.

With public amenity use high, protection and management focusses on restoring degraded areas, improving the site's original trail while closing secondary routes to manage further destruction of habitat and erosion. The project removes exotic plant species and replants endemic species. Signs are being erected to educate the public about the presence of the amazing and rare species in the peninsula and explain why access is being restricted to the main trails.



Cerra de la Cruz is a refuge for irreplaceable endemic flora and also a seedbank for other habitat restoration projects



Professor Plissock's researchers spent many weeks installing sensors and studying

# The rich biodiversity of the araucaria forests of southern Chile

by Carolina Brown, Rainforest Concern

## Thanks to a donation of camera traps by NatureSpy, we are getting a better understanding of the fauna living in the Nasampulli Reserve

Over the past 20 years, conservation, education, and scientific research has been the main focus of work at Nasampulli Reserve, an incredible area in the Andean foothills.

The reserve was a remote logging facility during the 1980s which also suffered from cattle grazing from adjoining farms. It was only when the project started in 1998 that the forest was allowed to recover and since then the conservation value of these 1,568 hectares of native temperate forest in the south of Chile has increased significantly.

Nasampulli Reserve is home to threatened tree species such as araucaria – known colloquially as monkey puzzle tree – and lenga beech, both endemic to South America.

Araucaria is a protected species and has been declared a National Monument by the Chilean Government. Heavily impacted by over exploitation, wildfires, drought and other anthropogenic factors in the last decades, araucaria is an important tree for the indigenous Mapuche people, who used to rely on its seed, 'the piñon', as one of their sources of food.

Alongside araucaria and lenga, the reserve also provides critical habitat to many species of fauna listed in the IUCN Red list such as Magellanic

woodpecker, slender-billed parakeet, the tiny pudu deer, puma, southern Darwin's frog, the guiña, (which is the smallest of the wildcats in the Americas). The reserve also hosts a tiny marsupial: the highly charismatic monito del monte, which measures only 20-25cm.

In February 2021 we received a very exciting donation from British conservation social enterprise, NatureSpy. Thanks to their generous support, ten brand new state-of-the-art camera traps, along with new batteries and memory cards, were sent to the Nasampulli Reserve.

This meant that we now had the necessary equipment to carry out a wildlife monitoring study of the animal species that inhabit the forest: something that we and our partners at the Chilean NGO, Forecos – who help manage the reserve – have been longing to do for years.

The camera trap study started in April 2021. Thanks to this equipment, we have been able to detect the presence of 38 different animal species, including mammal, bird and reptile species.



Pumas are in evidence year round in the reserve

Rainforest Concern / NatureSpy

We captured images of two young puma roaming together, as well as four guiña (which can be identified in the pictures by their different spot patterns). We have also been able to photograph monito del monte, pudú, culpeo fox, south American grey fox (both 'false foxes', more related to wolf) and many more, including different species of birds and lizards.

"In order to be able to study the forest's fauna, the 10 cameras are rotated every 2 or 3 months in different 500 x 500 metre quadrants that we have previously selected," says Enrique Cruz, executive director of Forecos who has been leading the study. "Most camera traps are installed at a low height, less than 30cm. When we place them we take into account signs like footprint or faeces. We also record different parameters such as time, date, wildlife signs, height, and camera orientation".

The work is carried out by Enrique, with help from biologists Montserrat Lara and Eldi Di Barim, who are generously volunteering their time.

With more than 70,000 images in total, our next priority is to find funding to start to build a database to allow us to identify and investigate the different species within the reserve, their abundance and the occupation of different areas at different times of the year.

According to Enrique, camera traps have allowed us to verify the presence of species that we have previously only suspected were present at Nasampulli and also to demonstrate that species such as guiña are more abundant and frequent than we previously thought:

"For me, this is one of the surprises of the study, I did not think there were so many guiñas in the reserve". This reiterates the value of the reserve in providing essential habitat for many threatened species.

The study is also useful in helping us assess and understand the presence of invasive species such as wild boar and red deer, which were introduced by hunters. "We knew deer were present from tracks and other signs, but with the data from the cameras, it's clear that



Forecos director Enrique Cruz and ranger Roland Terán setting up a camera trap, giving vital insights into the fauna in the reserve

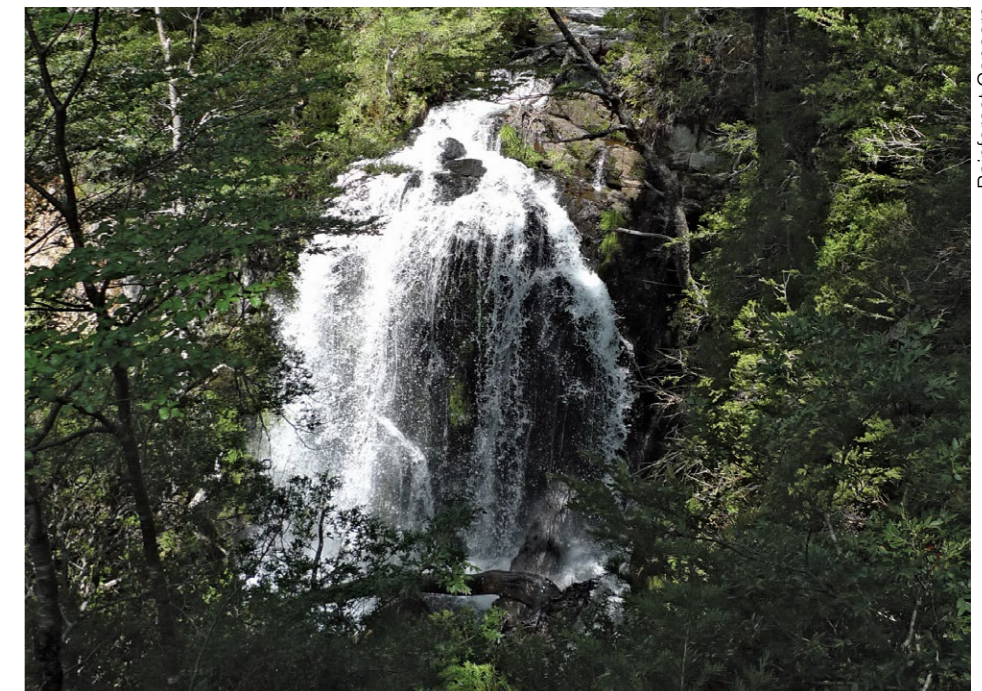
FORECOS

deer live within the reserve, rather than pass through. So far we can deduce that there are at least four specimens of red deer in Nasampulli, two males and two females. This could indicate that they are reproducing in the area", says Enrique.

It has been fascinating for us all to gain such insight into the Nasampulli Reserve

and its importance as a safe habitat for threatened and endangered species. The valuable data we are gaining will help us to create effective conservation strategies, guaranteeing the reserve's protection long into the future.

We look forward to learning more from the camera traps and seeing populations continue to grow over the coming years.



There are several beautiful waterfalls in the reserve

Rainforest Concern

## Inspiration from some of our young supporters

Many young people are concerned about the state of the environment, and want to help protect threatened habitats and amazing animals and plants.

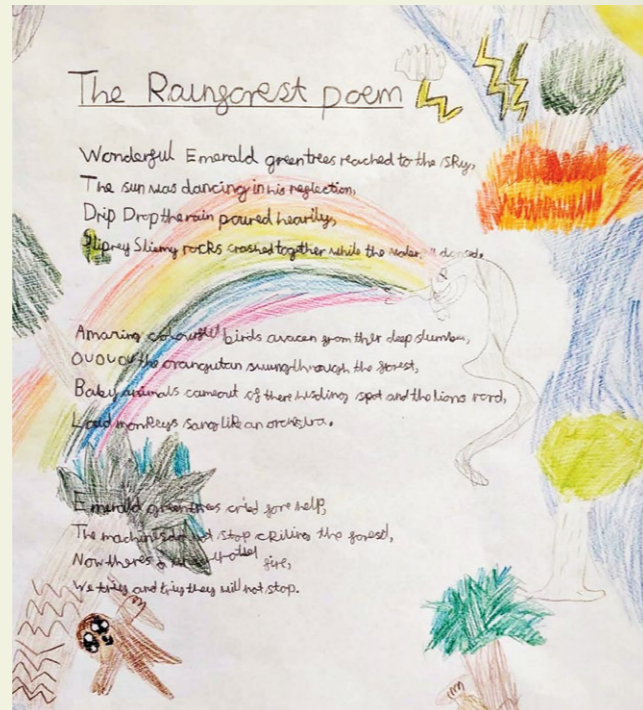
We hear many incredible stories of young people trying to make a difference for our planet.

Ten year old Slavka raised money for Rainforest Concern. Here she is pictured (top left) with her classmates in Grade 4 in Podgorica, Montenegro, showing her Rainforest Concern certificate.

Abigail Haine wrote a moving poem (top right) – an homage to the rainforests, and a cry for help.

Maida Vale School art department put together a fundraising exhibition showcasing various styles of art (bottom right).

Helen Brown from Rainforest Concern visits a school to teach children about rainforests (bottom left).



## Let us bring the rainforest to your classroom

**Would you like supportive material to bolster your rainforest topic work? Teach the children how they can help to reduce rainforest destruction and connect with nature locally to create a forest garden? Then let us bring the rainforest to your classroom.**

Helen Brown recently re-launched our popular rainforest workshops. Tailored to your teaching requirements, the rainforest workshops are tailored to your teaching requirements to enhance and bring to the topic of rainforests to life.

Packed with scientific and mathematical facts and challenges, we explain how the rainforest functions as a self-contained ecosystem while contributing to the global climatic system.

We also examine how the loss of rainforest impacts the local and global landscape and explore solutions to solve the problem.

To find out more, please contact:  
**Helen@rainforestconcern.org**

## Thank you to our school supporters!

We are always delighted when schools choose to fundraise for Rainforest Concern.

Thank you and congratulations to all who have raised money to support our conservation work.

**Parsons Green Prep School** undertook a challenge to travel 8,260km in 28 days, raising £288

**Ballacottier School** donated £100, sponsoring two acres of rainforest

**Garnet Class at Carnagill Primary School** donated £50 to sponsor one acre of rainforest

**Pilton Infants' School** donated to sponsor more than one acre of rainforest

**Beech Class at Rattlesden Primary Academy** hosted a fair-trade rainforest café, raising £100

**Arden Grove Infant School** created an Amazon art gallery and sold tickets to parents, raising £84

**St Catherine's School's** eco club, Green Cats, raised £280 by holding a cake sale and a second hand book sale

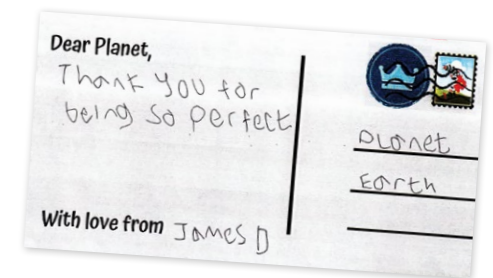
**Year 5 at St Lawrence Primary** raised £250 to sponsor five acres of rainforest, as part of a school-wide Agents of Change programme

**Federation of Middleham and Spennithorne Schools** sponsored one acre of rainforest

**P6 at Larbert Village Primary** donated £250 to sponsor five acres of rainforest

**Tutor Group 7S at Stroud High School** raised £119 in a plant and bake sale

**Backwell School Sixth Form** raised £1,536 by putting on a production of The Great Gatsby



James, and his classmates from Robin Class, Ifield School in Gravesend sent us their marvellous and heartfelt letters to our planet

## Twin your school

We are asking schools to take on our twinning challenge by measuring their school grounds and protecting the same area of rainforest through our sponsorship programme.

In return for your help, primary schools will join our Rainforest Defenders Club while secondary level pupils will become Rainforest Ambassadors.

Both will receive the following:

- A certificate recording the school's involvement
- Regular updates on our projects overseas including research, training and any new and exciting discoveries

- A Rainforest Concern T-shirt and poster
- Links to our overseas projects, providing evolving case studies
- Teaching aids and fundraising ideas to help launch your challenge

We are delighted to thank our valued corporate partners for their continued support. Rainforest Concern's corporate partners and corporate trusts span many diverse industries from food and drink to fashion, global travel, banking, media, legal, architecture and digital services. Some of our corporate partners include:

**Ancient + Brave**  
**Armed Angels**  
**AV Arboriculture**  
**Beyond ONE**  
**BodyMe**  
**British Photography Awards**  
**Digital Wonderlab**  
**Grant Associates**

**Green Stationery**  
**Inkifi**  
**Interaction**  
**Lanson Moore Art**  
**LEX Reception**  
**NatureSpy**  
**Nature Travels**  
**Option Energy Solutions**  
**Canopy Beauty**

**Ortoo Salesforce**  
**Plantasia Tropical Zoo**  
**Purdy Smith**  
**Rainforest Foods**  
**Renewal Associates**  
**SolarSense**  
**Swire 2765 Trust**  
**Templeton Emerging Markets**  
**Think Galapagos**

Solar Sense



SolarSense set up a solar-powered mobile charging station at Glastonbury with donations to Rainforest Concern

Grant Associates



An amazing Rainforest Concern display for Bath Forest of Imagination event by Grant Associates

To find out how your business could help support our vital work, please email Megan at [info@rainforestconcern.org](mailto:info@rainforestconcern.org)

We would be delighted to hear from you.

## Celebrating 30 years of rainforest conservation

On Thursday, March 21st, we partnered with the Royal Geographical Society to host an evening celebrating the UN International Day of Forests and the 30th anniversary of Rainforest Concern at the Holburne Museum.

Environmental scientist and Rainforest Concern Trustee, Oliver Whaley, gave a thought-provoking presentation about the state of the world's forests, the incredible biodiversity they contain and Rainforest Concern's three decades of dedicated conservation. Field biologist Xavier Tobin followed with an informative presentation on jaguars following a recent sighting near the Neblina Reserve, Ecuador.



David A Russo



## Leaving a lasting legacy for future generations

### Leave a gift in your will

Now more than ever before we need to save our natural world. Leaving a gift in your will to Rainforest Concern will help us protect vital biodiversity for the long term, helping protect our planet for your children and future generations.

Every gift to Rainforest Concern makes an impact. We are grateful for the generosity and imagination of those who decide to include a gift to us in their will.

Up to 15% of our funding comes from legacies, so leaving part of your estate to us makes a huge difference to our work.

Whatever size gift you decide to leave will help us to protect amazing habitats and species for generations to come.

### Donate in memory

Remembering someone you love with a donation to Rainforest Concern can be a meaningful way to celebrate their life and love of nature. Your donation will help us to protect wildlife, habitats, people, and the planet for future generations.

To find out more, please visit our website at [rainforestconcern.org](http://rainforestconcern.org) or contact us on 01225 723503



## Project partner organisations

- ADEPT (Romania)
- Ania Peru (Peru)
- CBZ (Chile)
- Fundación Cuencas de Limón (Costa Rica)
- DECOIN (Ecuador)
- ECOAN (Peru)
- FORECOS Foundation (Chile)
- Fundación Entropika (Colombia)
- Fundatia Conservation Carpathia (Romania)
- Gaia Amazonas (Colombia)
- Gurukula Botanical Sanctuary (India)
- Jaguar Rescue Center (Costa Rica)
- Urpiano Reserve (Costa Rica)
- Rainforest Information Centre (Australia)
- Royal Botanic Gardens Edinburgh (UK & Chile)
- Tierra Amar (Colombia)
- Tribes Alive (Brazil)
- Universidad Austral de Valdivia (Chile)

## Become a member of Rainforest Concern



If you're not a member of Rainforest Concern already, join us by scanning the QR code or completing the form

Please fill in the form and send to: Rainforest Concern, 66 Great Pulteney Street, Bath, BA2 4DL

### PLEASE TICK ONE BOX ONLY

- Member:** Sponsoring 1 acre each year  £5 per month  £60 annually  
**Friend:** Sponsoring 2 acres each year  £10 per month  £120 annually  
**Guardian:** Sponsoring 6 acres each year  £25 per month  £300 annually  
**Benefactor:** Sponsoring 12 acres each year  £50 per month  £600 annually

Name  Title   
 Address   
 Postcode   
 Email

I would prefer to make a one-off donation of £

**Cheques should be made payable to 'Rainforest Concern'.**  
 To pay by credit card, please call 01225 481151

*giftaid it* You can make your donation worth even more! For every pound you give us, we get an extra 25 pence from the Inland Revenue. All you need to do is tick the box

I would like all donations I have made in the past 4 years and all donations in the future to be Gift Aid until I notify you otherwise.

To qualify for Gift Aid, what you pay in income tax or capital gains tax must be at least equal the amount we will claim in the tax year and you need to give us your home address.

If you wish to sponsor an acre as a gift for someone, please telephone us on 01225 481151 or visit [www.rainforestconcern.org/](http://www.rainforestconcern.org/) and click 'Donate'.

Tel: 01225 481151  
 Website: [www.rainforestconcern.org](http://www.rainforestconcern.org)  
 Email: [info@rainforestconcern.org](mailto:info@rainforestconcern.org)

### STANDING ORDER FORM

I wish to pay monthly/yearly by standing order (please delete as appropriate):

**Name and full address of your bank**

To  Bank/Building Society

Address  Postcode

Name(s) of Account Holder(s)

Account No.  Sort Code

**Instruction to your Bank – Please pay to Barclays Bank, 20-29-90, 50793086. REF: RCSO**

On  day  month  year the sum of £

**and the same amount on the same day of each month/year (please delete) until further notice**

Signature  Date

After one year's membership, Rainforest Concern Benefactors are entitled to two days free accommodation, meals and guided tours at one of our lodges in Ecuador. Guardians are entitled to this after two years' membership.

All of our supporters receive an attractive certificate recording the level of their membership, our magazine Rainforest Review and regular updates. Guardians and Benefactors will receive a Rainforest Concern T-Shirt (XL/L/M/S/XS Lady fit or Unisex Child size 3-4, 5-6, 7-8, 9-11) **Please circle appropriate size if you would like a T-Shirt.** Certificates and thank you letters will be sent to you in the post.  
 Please tick if thank you letter/certificate is not required

**Please tick accordingly:**  
 I would like to receive Rainforest Concern's annual newspaper and correspondence by post  I would like to receive Rainforest Concern's annual newspaper and correspondence by e-mail  I do not wish to receive Rainforest Concern's annual newspaper and correspondence





The Neblina Reserve was significantly expanded thanks to the generous donation from Beyond One



**Rainforest Concern**

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Website: [www.rainforestconcern.org](http://www.rainforestconcern.org)

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