



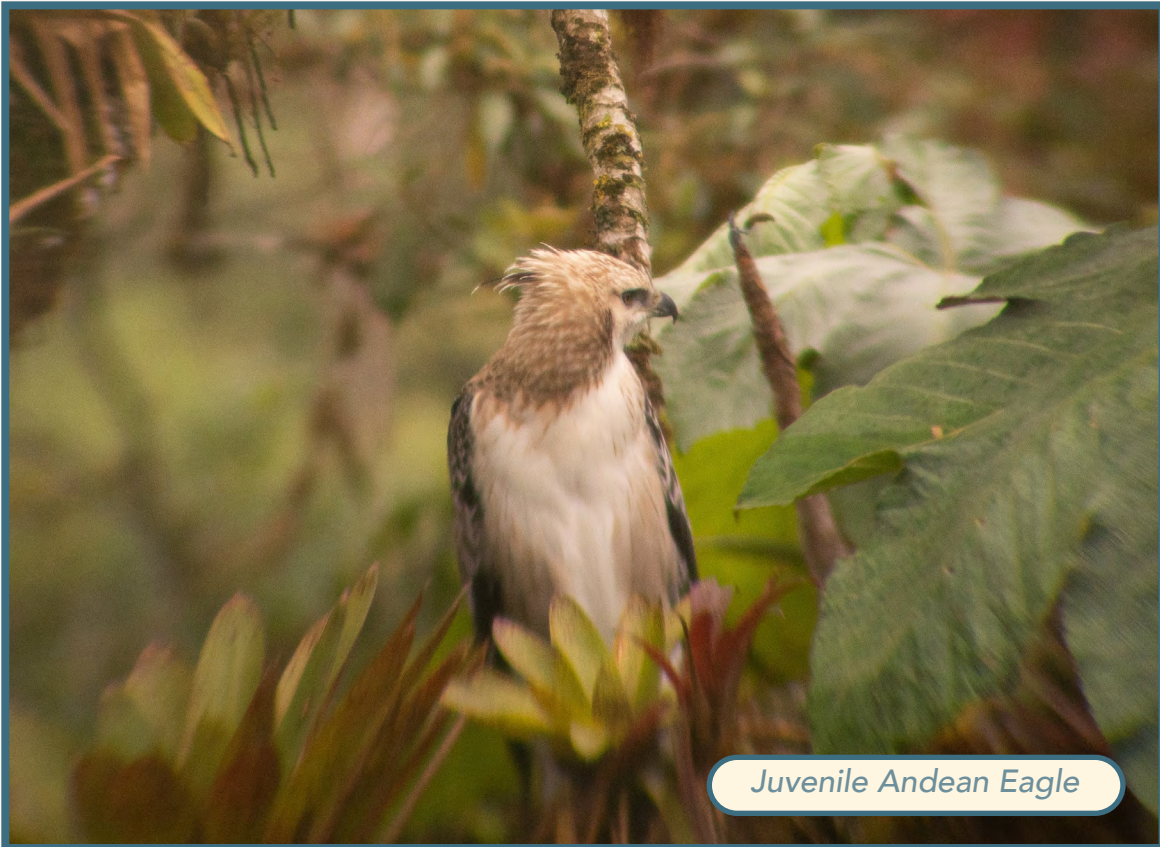
PROGRESS REPORT
2023



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Juvenile Andean Eagle



LETTER FROM FOUNDER

As we enter the 12th year since acquiring what was a 170-acre degraded cattle farm in the Andean Amazon, I continue to be amazed by how it's possible not only to stop the destruction, but to recover this fragile habitat.

As the USDA Forestry Services study predicts 90% of remaining cloud forests in the Western Hemisphere to be wiped

out by 2060, we are determined to offer a solution.

As we embark on cloud forest restoration, and involve local schools and community in the process, I want to thank all of you who have been supporting this venture either with technical assistance, volunteering, or financially.

As wildlife continues to flourish and show up on our site (see species list

on pages 14-16), this year native trees are showing sudden growth spurts. Emerging flora is taking hold, while new wildlife species such as nocturnal monkeys now consider our project site home.

This year, we delved more deeply into product development from cloud forest products. The Cloud Forest Crunch vegan ice cream launched at the [Fancy Food Show 2023](#), made from native

trees *logma*, *chachafruto* and *tocte*, was our latest proof of concept, and shows promise. A cosmetic company has also shown interest. Commercial interest is key if we want to promote reforestation at scale.

In collaboration with the foundation Aliados, we have been studying the growth patterns of the trees, with the hope of expanding this growth model throughout the region. Someone has

Visit our Webpage to learn more



to be a first mover to take the risks, so again your support has been vital to enable us to take those steps.

The visuals presented in this report are a mere shadow of the incredible nature that abounds and that we are welcoming to the site. With the construction of the research center, which turned out to be a more herculean task than originally thought, our hope is to have a base for in-depth scientific study and learning about cloud forests.

This year, we formalized an alliance with [Jocotoco Conservation Organization](#), a US-based 501c3 and leading Ecuadorian conservation organization, which can receive tax deductible charitable donations earmarked for ongoing research and reforestation.

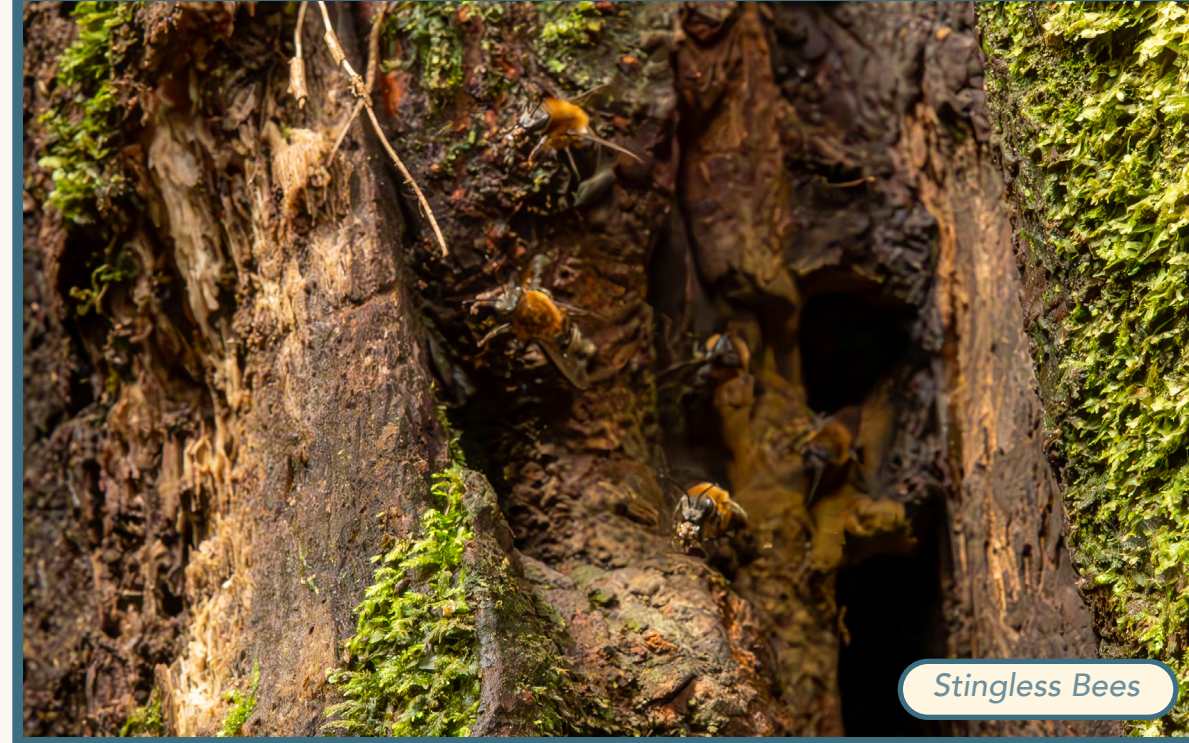
With 4 distinct pilot reforestation plots georeferenced and under study, we are excited to examine differences between natural forest recovery and assisted reforestation. And about the role of microorganisms, fungi and emerging growth in forest recovery.

We aim to continue collecting data on wildlife response, and water regeneration response as an ongoing multi-year study, which is invaluable to understand how we can help cloud forests recover. Year-end 2023, we are particularly excited to embark on a proper botanical survey of existing and emerging flora.



Craig Daniel Leon

craig@cloudforestorganics.com



Stingless Bees



Wild Walnut [Nogal / Tocte]

2023 Summary

We began the year overcoming our biggest challenge, which was continued deforestation by a cattle rancher in the watershed adjacent to the pilot site. An amicable settlement was reached by which Cloud Forest Organics now has possession of these 70 acres. This is now our experimental Plot 4, an opportunity to learn about transitioning lands recently used for cattle ranching.

Our learning about strategies for controlling invasive pasture grasses deepened. We began learning proper plant sizes for transplant by species based on mortality and growth rates. We tested different mulching systems and cutting techniques for controlling the grasses, the greatest challenge to converting pasture to forests in an economically viable way.

Our processing facility for powders and oils was put to the test. We launched Cloud Fo-

rest Crunch ice cream with Nütty Bunny via a trifecta of 3 cloud forest ingredients: logma, chachafruto and tocte. We began trials with Flora Reserve, a nature-focused cosmetic company testing ingredients such as tocte oil, dragon's blood sap, and logma powder. Ecuador-based Italian gelato maker Delizium continued to purchase ingredients for national sale, including two flavors of chachafruto chips, and helped promote our story.

We were thrilled to work more closely with the Chaco Technical Education Center and the Sacha Waysa indigenous community. With the school, we helped construct green houses,



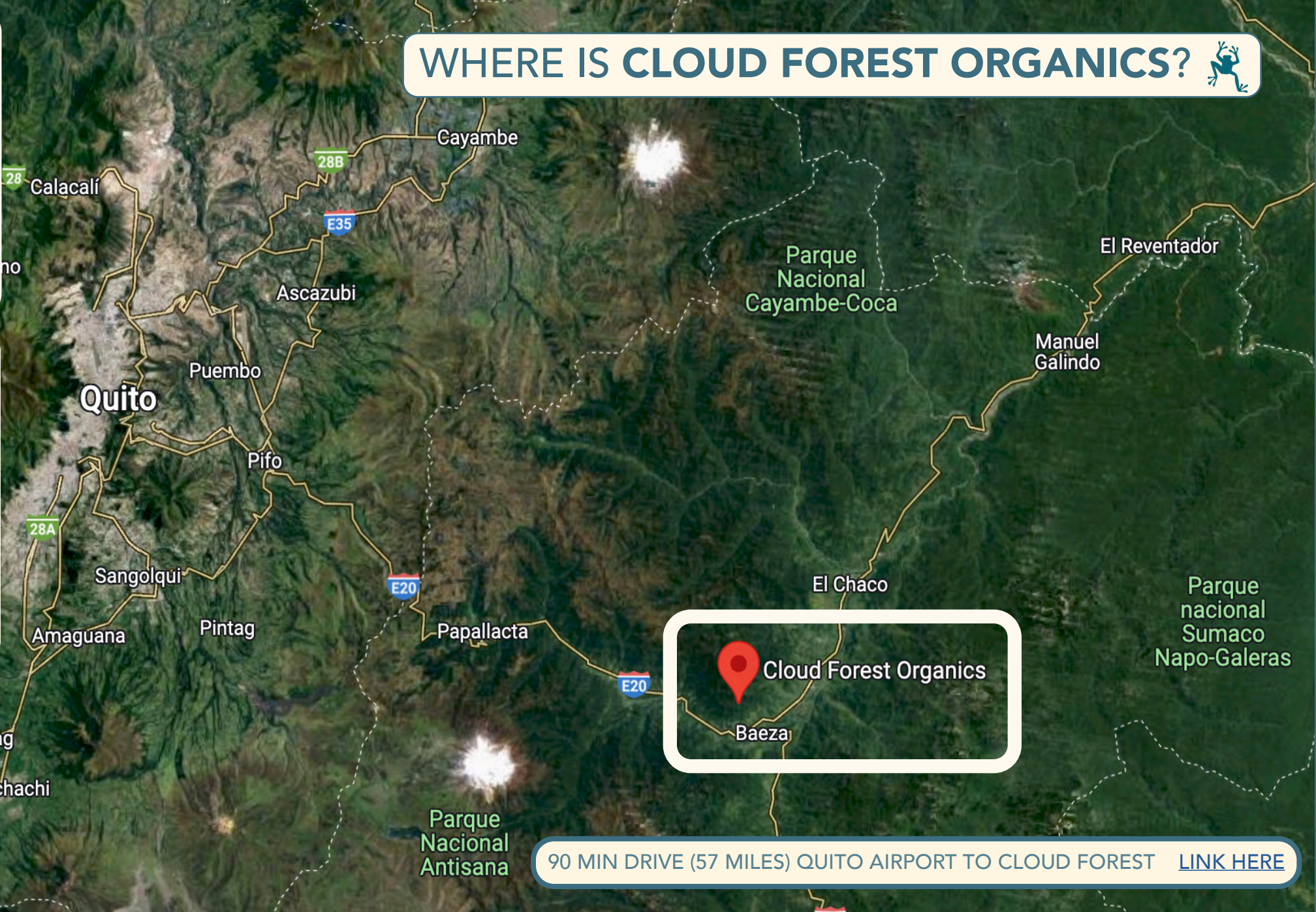
Wild naranjilla, Wild flower

provided seed and technical assistance. We developed new recipes using native crops and shared a stand at two regional food fairs.

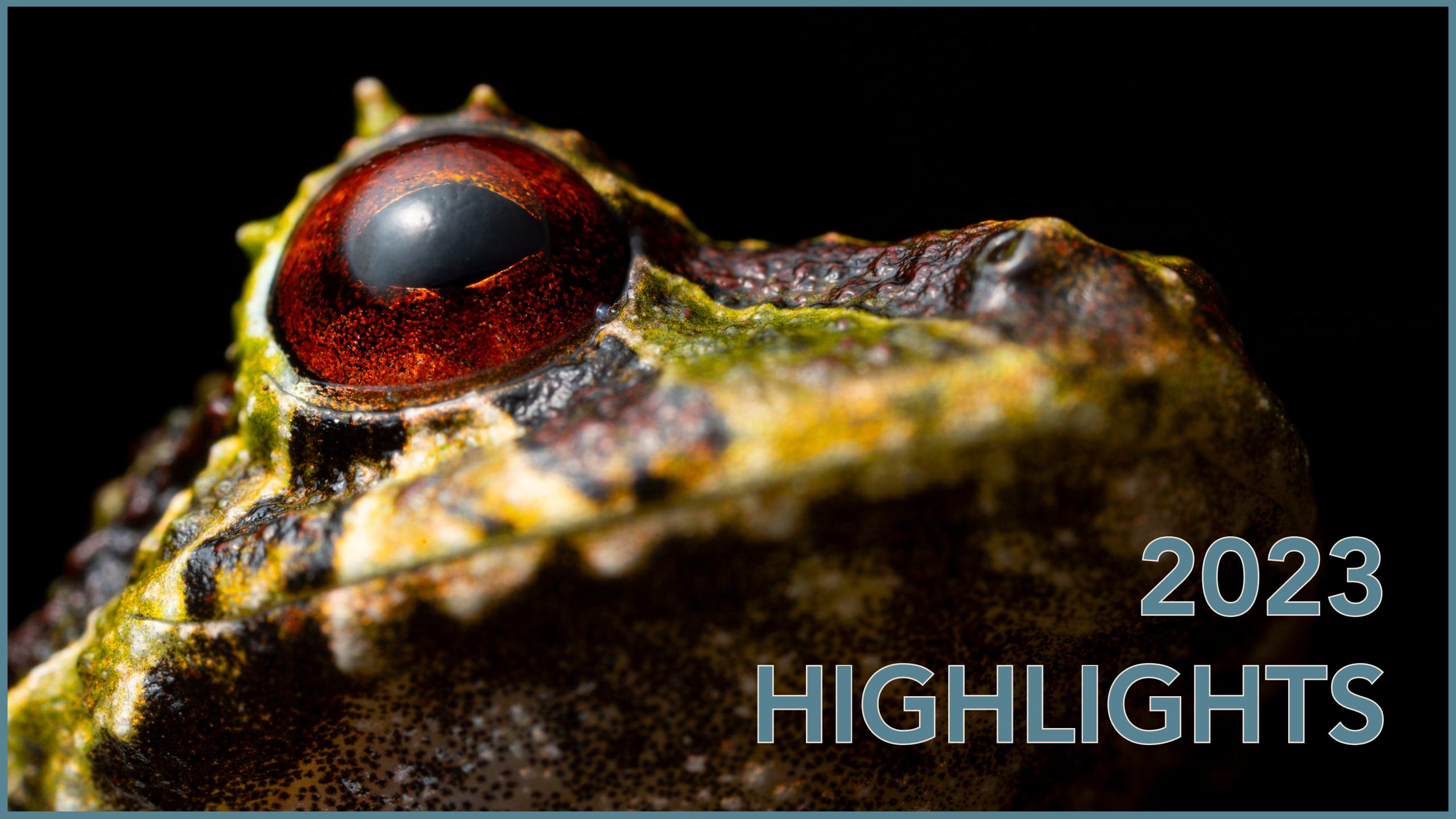
What a luxury to have world-renowned Jaime Culebras photographing frogs, reptiles and insects you see in this report, and Jaime Palacios, now at Jocotoco, continuing to lead our fauna and mammal studies. Kudos to our entire field team, many are highlighted in this report.

Of all our scientific investigation into cloud forest recovery, combined with reforestation, continues as central at Cloud Forest Organics. We continue monitoring wildlife and flora response, changes in water flow and quality, and are embarking on one of our most ambitious efforts to date: constructing an ecologically smart research center at the top of a cloud forest mountain with no road access.

WHERE IS CLOUD FOREST ORGANICS?



90 MIN DRIVE (57 MILES) QUITO AIRPORT TO CLOUD FOREST [LINK HERE](#)



2023
HIGHLIGHTS

ONGOING OBJECTIVE: REFORESTATION

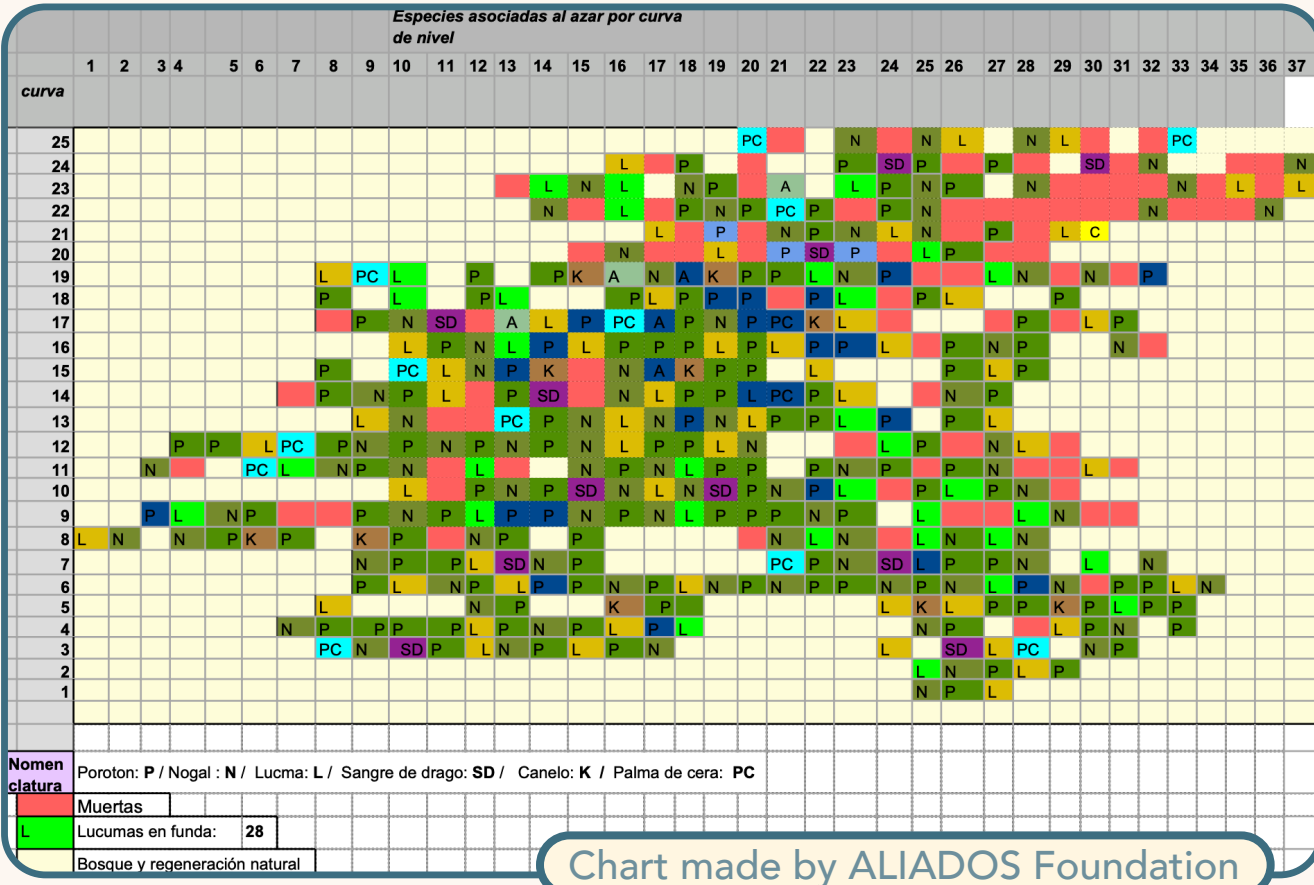


Chart made by ALIADOS Foundation



The Cloud Forest Organics is monitoring and collecting data on 4 distinct cloud forest sites. We are measuring impact of different techniques for controlling invasive pasture grasses, tree growth and mortality rates, and emerging growth response. Clockwise: Planting layout of native trees, by species in Plot 1; biotechnologist Francisco collecting soil and plant material samples for DNA testing using matK and ITS genetic markers. Cedars and other native tree species in uncovered nursery area will soon be transplanted into the field.

Taza de mortalidad y crecimiento de altura y diámetro de los arboles en LOTE # 2

Periodo de medición : 12/10/2022 - 21/09/2023

Especie	Nombre comun	individuos plantados	Plantones muertos y existentes (entre los 2 periodos)				% mortalidad entre periodo		Altura promedio de los plantones (CM)		% crecimiento del periodo	Altura maxima y minima de los plantones (CM)				Numero de plantones > a 50 CM		Diámetro promedio (milímetros) de los plantones > a 50 CM		% crecimiento del periodo
			2022		2023		1 año	2 año	2022	2023		maxima		minima		2022	2023	2022	2023	
			muertos	vivos	muertos	vivos						entre julio y noviembre 2021	2022	2023	2022					
Erythrina edulis	Poroton	130	20	110	49	61	15	80	40,4	91	125	114	210	9	5	27	40	17,2	20,65	20
Pouteria lucuma	Logna	36	16	20		61	44	-67	38	65	71	62	124	10	10	13	32	8	12	50
Juglans neotropica	Nogal	53	10	43		54	19	-20	98	221	126	154	453	55	29	43	51	14	29,3	109
Hyronimia macrocarpa	Motilon	50	21	29	4	25	42	16	60	141	135	131	255	10	20	16	24	8	15	88
Cedrela montana	Cedro rojo	40	8	32	3	29	20	10	91	204	124	162	290	14	82	24	28	20	32,3	62
Croton lechleri	Sangre de drago	30	17	13	1	12	57	8	111	419	277	218	500	45	250	11	10	17	42,5	150
Ceroxylon sp.	Palma de cera	60	12	48	0	48	20	0	23	36	57	40	80	7	20		9			
Pouteria sp.	Logmillo	25	0	25	7	18	0	39	27	34	26	51	85	9	11	2	0	9	6,73	-25
Persea sp.	Aguacatillo	25	7	18	3	15	28	20	48	93	94	100	215	13	19	7	12	8	12,66	58
Cedrela odorata	Cedro blanco	40	11	29	3	26	28	12	112	247	121	240	432	53	135	33	33	20	35,4	77
Ocotea quixos	Canelo	30	10	20	1	19	33	5	48	86	79	115	126	24	50	6	17	7	12	71
Totales :		519	132	387	71	368	28	94	63	149	112	240	500	7	5	182	256			65,9800203

Trees planted in Plot 2 are less than 2 years old. This area had suffered invasion from a cattle rancher until 2021. All planted native trees are tracked under different variables. Trees in Plot 2 grew by an average of 112% this year while the girth of the trees grew 66%. Some dragon's blood trees reached 15 feet in only 2 years. Cloud Forest Organics is a buffer zone bordering the Cayambe Coca National Park. Immediately below the pilot site, cattle ranching activity continues. Our hope is to gain



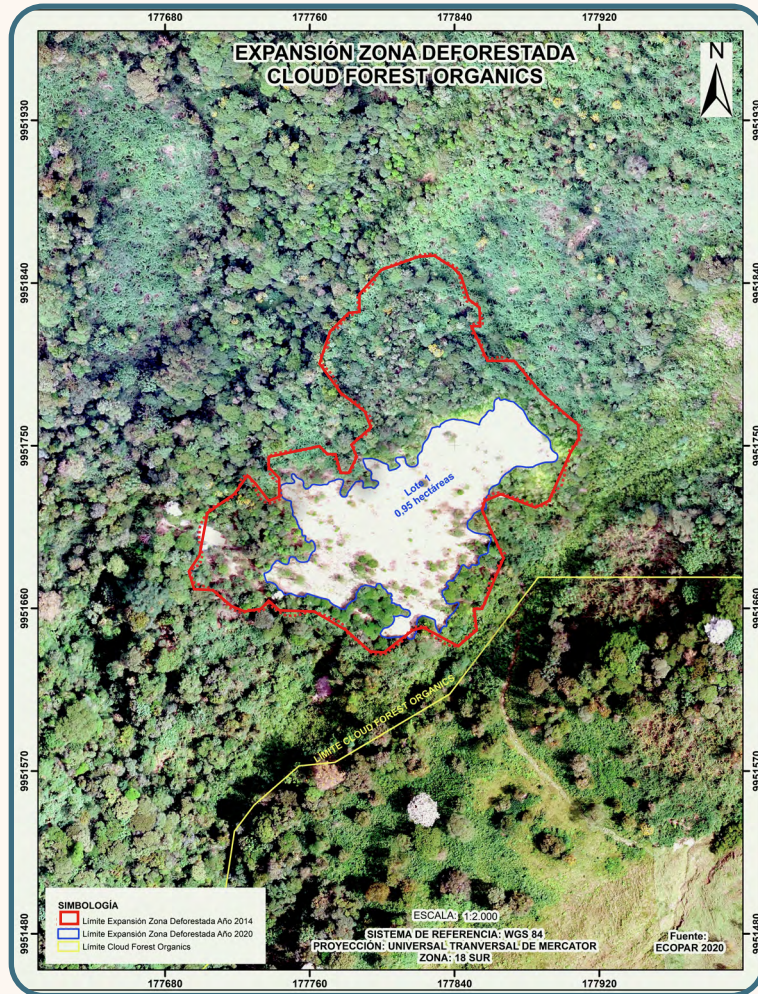
practical and scientific knowledge on reforesting this steep terrain, including edible and at-risk-of-extinction tree species, to rebuild wildlife habitat. *The bigger picture:* contribute in tangible ways to the creation of a ecological corridor that links 3 national parks.

Photo: former deforester and former cattle rancher is now the leading field staff and park guard. He stands next to a 6 foot logna (lucuma) tree.

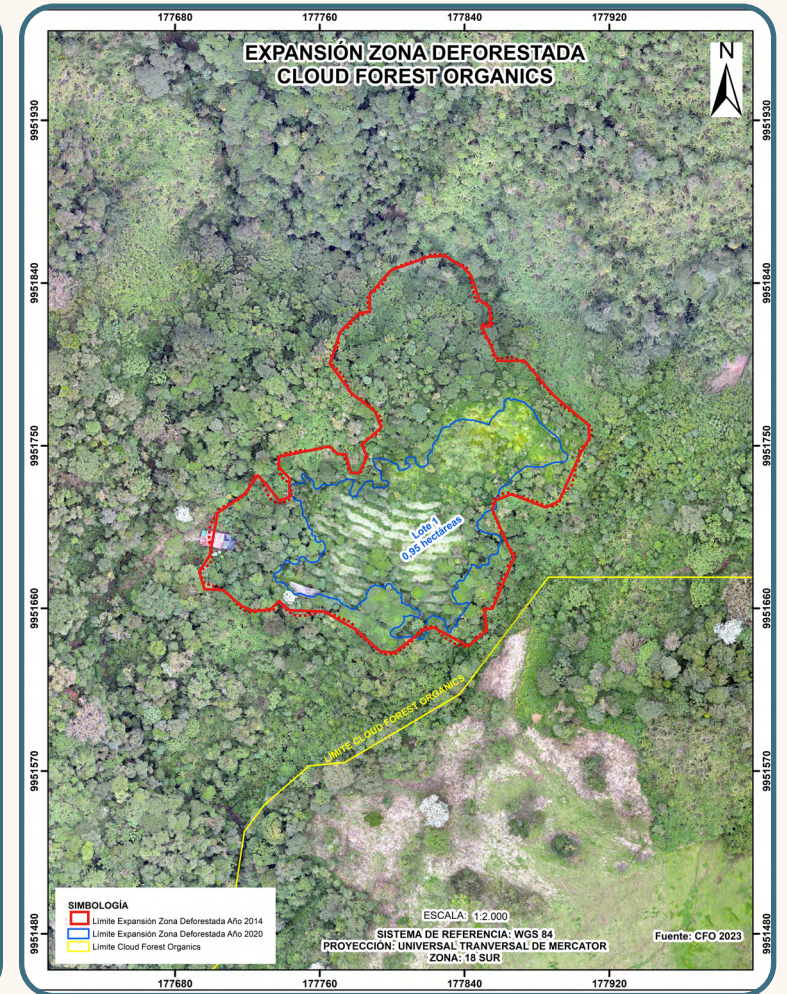
2014



2020



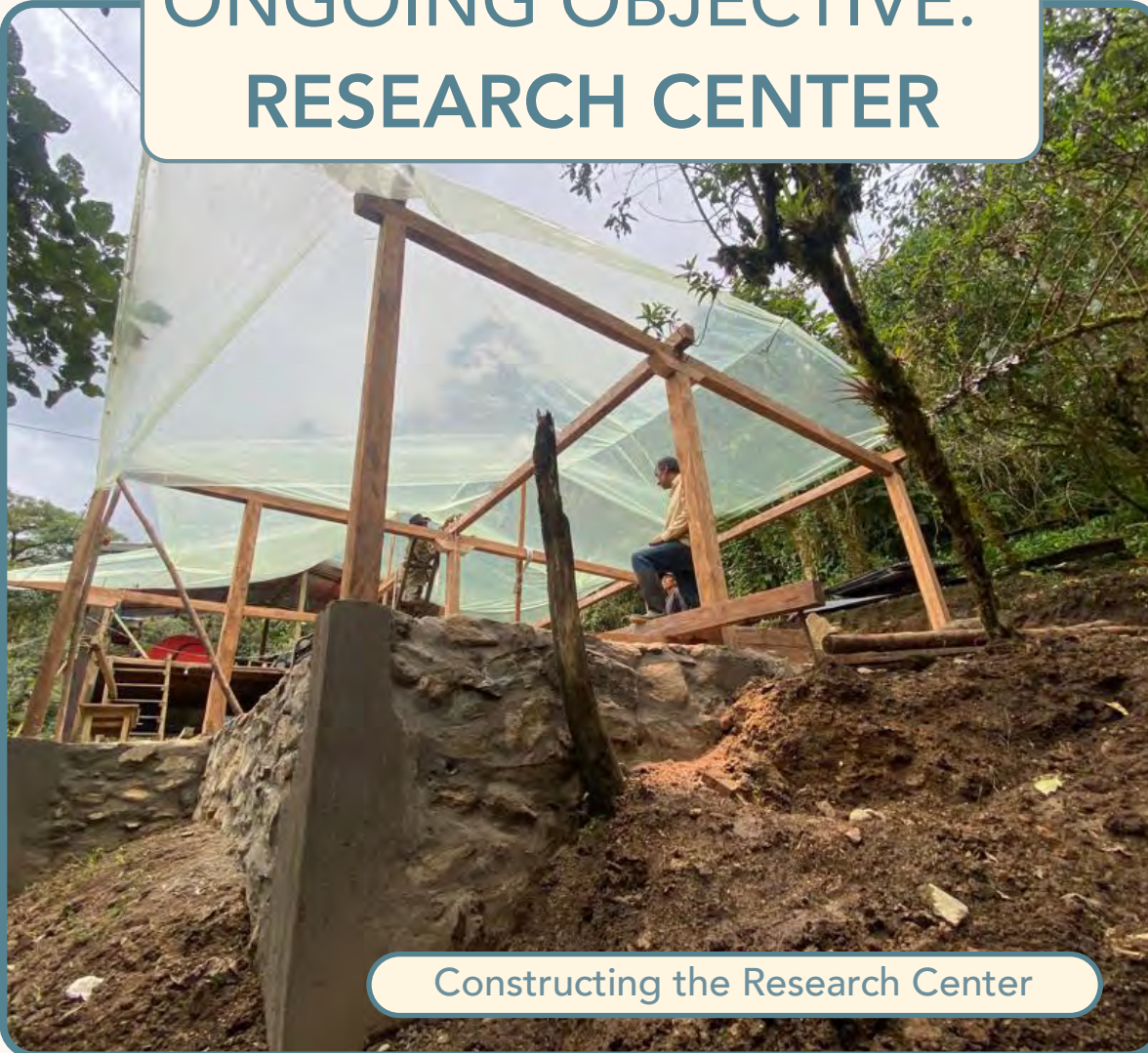
2023



TEST PLOT 1 TIME LAPSE

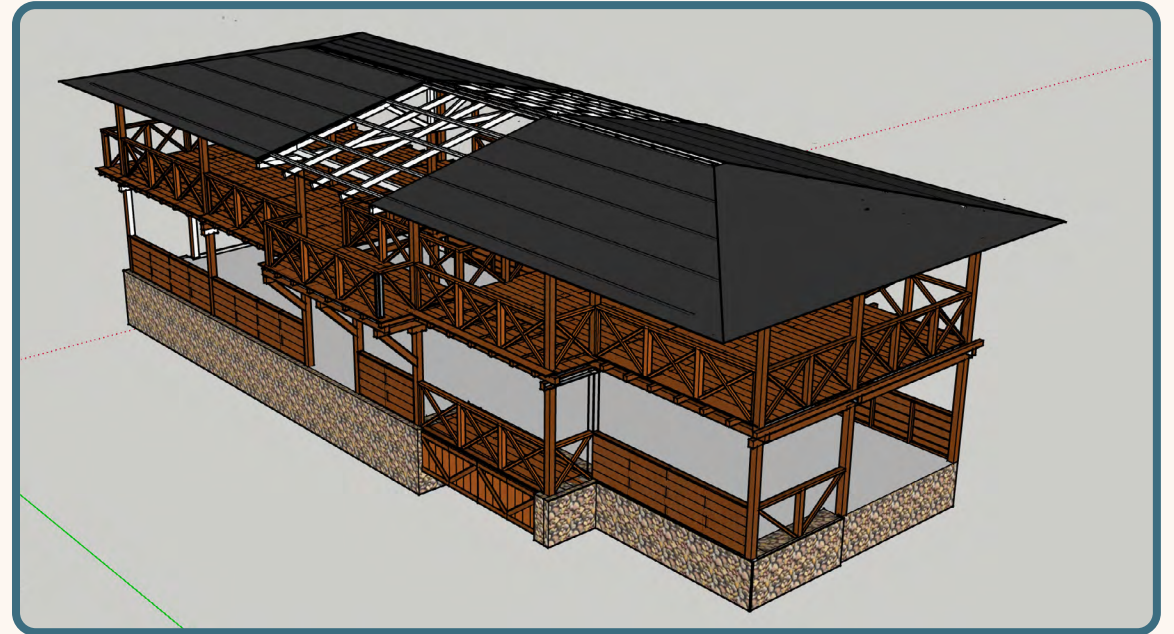
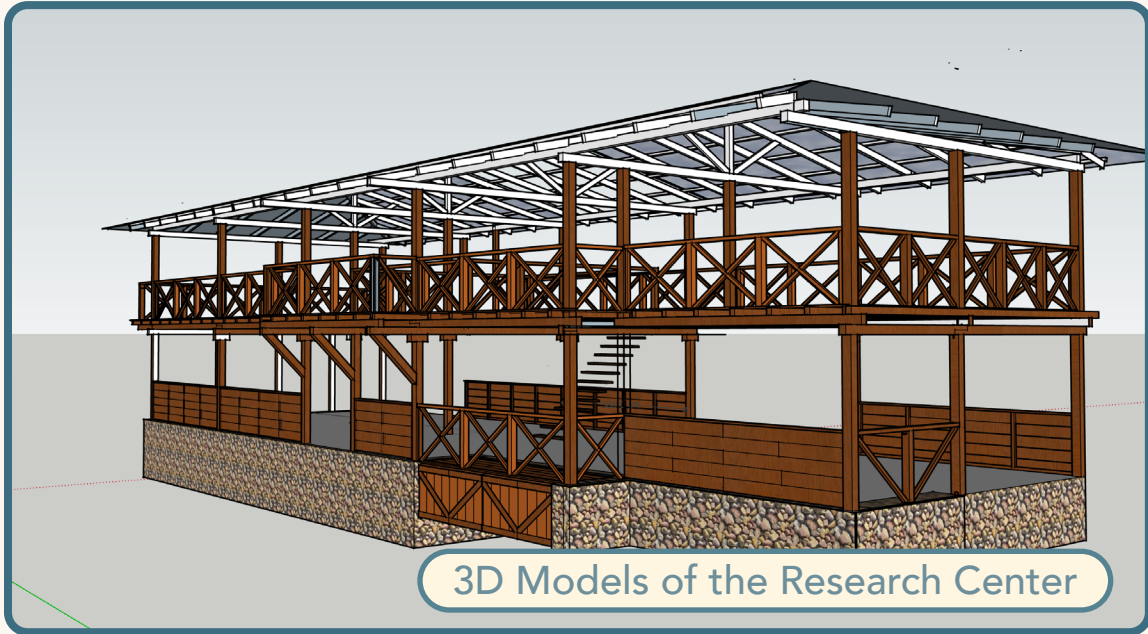
Below the **Yellow Line**, the current pilot border, cattle ranchers continue to clear forest. The point of our project is to create a blueprint and reverse this trend, which is a major contributor to climate change.

ONGOING OBJECTIVE: RESEARCH CENTER



Constructing the Research Center

A functional Cloud Forest Organics research center is in the works. Having no road access next to prehistoric primary forest 2000-2600 meters above sea level where the Andes meets the Amazon jungle, the learning possibilities are unique and urgent. The center itself, planned for 340 meters of construction, is particularly ambitious given full commitment to an ecological structure and function. We are recycling forest by using wood from fallen trees, local volcanic stones for the base, and energy from sun and water. As we discover and propagate more native edible trees and other flora, we foresee the kitchen as central, designed for chefs and food researchers to create exquisitely. Not letting waste go to waste, we are installing biodigesters and composting systems to process and purify the inevitable residuals of the pilot site activity.



Our dream, if we succeed in funding this, is a safe and moderately comfortable space for breakthrough cloud forest research and systems recovery. A place in the midst of wildlife and emerging fauna in the Andean Amazon for researchers, for students, for ecologists, for lovers of the natural world.

ONGOING OBJECTIVE: FAUNA

We include the list of the wildlife that has been documented on the site, with their IUCN risk of extinction status. Wildlife is starting to live in the areas directly surrounding the reforestation plots, and is beginning to venture into the reforestation plots.

A family of *Aotus lemurinus*, endangered nocturnal monkeys, are the first primates to appear on our site. In February 2023 a scientific paper was published on first albino pristimantis frogs in Latin America, on our pilot site!

Study is underway with Smithsonian Institute researchers on what appears to be a completely new, undescribed stingless bee, which is found on the Cloud Forest Organics restoration site.

The herpetological survey conducted early in the year identified new amphibians, notably, the Orcesi and Celia. The Andean Eagle, or *Spizaetus isidori*, at critical risk of extinction, has nested once again this year, giving birth to another baby Eagle.

The *Mustela frenata*, an Andean weasel considered by biologists to be critical proof of forest recovery, is also using the pilot site with more frequent sightings. The research facility will permit the ongoing study of wildlife on the site.



Pristimantis omarrhynchus



Potentially New Stingless Bee Species (Meliponas)



Dipsas Klebbai
[Klebba's Snail-Eater]
-non venemous-

In **Yellow** is Fauna that appeared in 2023

Class, Order, Family, Species	Name in Spanish	Threat category (Ecuador red lists)
AMPHIBIANS		
ANURA		
Bufonidae		
<i>Osornophryne guacamayo</i>	Osornosapo de guacamayo	Vulnerable
Hemiphractidae		
<i>Gastrotheca testudinea</i>	Rana marsupial	Near threatened
Dendrobatidae		
<i>Hyloxalus bocagei</i>	Rana cohete	Critically endangered
Strabomantidae		
<i>Pristimantis leucopus</i>	Cutín de Palpallacta	Endangered
<i>Pristimantis bicantus</i>	Cutín de Yanayacu	Least Concern
<i>Pristimantis eriphus</i>	Cutín de musgo	Near threatened
<i>Pristimantis gladiator</i>	Cutín paramero	Vulnerable
<i>Pristimantis lacrimosus</i>	Cutín lloron	Least Concern
<i>Pristimantis w-nigrum complex</i>	Cutín cualita	Endangered
<i>Pristimantis amarrhynchus</i>	Cutín endémico	No evaluado
<i>Pristimantis sp.</i>	Cutín	
Centrolenidae		
<i>Nymphargus siren</i>	Rana de cristal del río Coca	Endangered



Anolis orcesi [Orces's Andes Anole Lizard]

REPTILES		
SQUAMATA		
Colubridae		
<i>Dipsas klebbai</i>	Caracolera de Klebba	Not evaluated
<i>Erythrolamprus reginae</i>	Culebras terrestres reales	Not evaluated
<i>Siphlophis ayauma</i>	Serpiente cabeza de diablo	Not evaluated
<i>Clelia equatoriana</i>	Chontas ecuatorianas	Near threatened
Iguanidae		
<i>Anolis fitchi</i>	Anolis de Fitchi	Near threatened
<i>Anolis orcesi</i>	Anolis andinos de Orcés	Not evaluated
Gymnophthalmidae		
<i>Riama anatorlos</i>	Palos del este	Vulnerable



Pharomachrus auriceps [Crested Quetzal]



Mazama Rufina [Cervidae]



Spizaetus Isidori [Juvenile Andean Eagle]

BIRDS		
ACCIPITRIFORMES		
Accipitridae		
<i>Accipiter collaris</i>	Águila Andina	Near threatened
<i>Accipiter striatus</i>	Azor Americano	Least Concern
<i>Buteo platypterus</i>	Azor Collarejo (de Collar)	Least Concern
<i>Spizaetus isidori</i>	Gavilán Aludo	Critically endangered
APODIFORMES		
Apodidae		
<i>Streptoprocne zonaris</i>	Vencejo Cuelliblanco	Least Concern
Trochilidae		
<i>Adelomyia melanogenys</i>	Colibrí Jaspeado	Least Concern
<i>Agelaiocercus kingii</i>	Silfo Colilargo	Least Concern
<i>Coeligena torquata</i>	Inca Collarejo	Least Concern
<i>Heliangelus exortis</i>	Solángel turmalina	Least Concern
<i>Ocreatus underwoodii</i>	Inca Collarejo (de Collar)	Least Concern
<i>Phaethornis symrnatophorus</i>	Silfo Colilargo	Least Concern
COLUMBIFORMES		
Columbidae		
<i>Patagioenas fasciata</i>	Paloma (Torcaza) Collareja	Least Concern
<i>Patagioenas subvinacea</i>	Paloma Perdiz Goliblanca	Least Concern
<i>Zenrygon frenata</i>	Paloma Rajiza	Least Concern
CORACIIFORMES		
Momotidae		
<i>Momotus aequatorialis</i>	Momoto Montañero (Andino)	Least Concern
CUCULIFORMES		
Cuculidae		
<i>Piaya cayana</i>	Cuco Ardilla	Least Concern
GALLIFORMES		
Cracidae		
<i>Chamaepetes goudotii</i>	Pava Ala de Hoz	Least Concern
<i>Penelope montagnii</i>	Pava andina	Least Concern

NYCTIBIIFORMES		
Nyctibiidae		
<i>Nyctibius maculosus</i>	Nictibio (Puntepalo) Andino	Near threatened
PASSERIFORMES		
Cinclidae		
<i>Cinclus leucocephalus</i>	Cinco Gorriblanco	Least Concern
Corvidae		
<i>Cyanocorax yncas</i>	Urraca Inca (Verde)	Least Concern
<i>Cyanolyca turcosa</i>	Urraca Turquesa	Least Concern
Cotingidae		
<i>Lipaugus fuscocinereus</i>	Frutero Pechinegro	Near threatened
<i>Pipreola arcuata</i>	Frutero barreteado	Least Concern
<i>Pipreola lubomirskii</i>	Frutero Verdinegro	Least Concern
<i>Pipreola riefferii</i>	Pijá Oscura	Least Concern
Formicariidae		
<i>Chamaeza mollissima</i>	Camaeza barreteada	Least Concern
Fringillidae		
<i>Euphonia xanthogaster</i>	Eufonia Ventrinaranja	Least Concern
Furnariidae		
<i>Dendrocincla tyrannina</i>	Trepatroncos tiranino	Least Concern
<i>Lepidocolaptes lacrymiger</i>	Colaespina de Azara	Least Concern
<i>Margarornis squamiger</i>	Subepalo Perlado	Least Concern
<i>Pseudocolaptes boissonneautii</i>	Brabablaca rayada	Least Concern
<i>Synallaxis azarae</i>	Trepatroncos Dorsioliva	Least Concern
<i>Synallaxis unirufa</i>	Colaespina rufa	Least Concern
<i>Xiphocolaptes promeropirhynchus</i>	Trepatroncos Montano (Montañero)	Least Concern
<i>Xiphorhynchus triangularis</i>	Trepatroncos Piquifuerte	Least Concern

Thraupidae		
<i>Anisognathus somptuosus</i>	Hemispingo Coroninegro	Least Concern
<i>Buthraupis montana</i>	Tangara montana encapuchada	Least Concern
<i>Chlorornis riefferii</i>	Tangara cariroja	Least Concern
<i>Cnemoscopus rubrirostris</i>	Tangara montés	Least Concern
<i>Conirostrum albifrons</i>	Picocono coronado	Least Concern
<i>Diglossa albilatera</i>	Pinchaflor flanquiblanqueado	Least Concern
<i>Diglossa cyanea</i>	Hemispingo Orejinegro	Least Concern
<i>Pipraeidea melanonota</i>	Tangara Coroniazafrán	Least Concern
<i>Sericossypha albocristata</i>	Tangara caretiblanca	Least Concern
<i>Sphenopsis melanotis</i>	Tangara Gorrinegra	Least Concern
<i>Stilpnia heinei</i>	Tangara Lentejuelada	Least Concern
<i>Tangara nigroviridis</i>	Tangara Montana Aliazul	Least Concern
<i>Tangara xanthocephala</i>	Tangara Pechihabana	Least Concern
<i>Thlypopsis supercilialis</i>	Hermispingo superciliado	Least Concern
Tityridae		
<i>Pachyramphus versicolor</i>	Cabezón Barreteado	Least Concern
Troglodytidae		
<i>Cinnycerthia olivascens</i>	Soterrey Caferrojizo (de Sharpe)	Least Concern
<i>Cinnycerthia unirufa</i>	Soterrey rufo	Least Concern
<i>Henicorhina leucophrys</i>	Soterrey Colillano	Least Concern
<i>Pheugopedius euophrys</i>	Soterrey Montañés (Montañero)	Least Concern
<i>Troglodytes solstitialis</i>	Soterrey Montés Pechigrís	Least Concern
Turdidae		
<i>Myadestes ralloides</i>	Mirlo Grande	Least Concern
<i>Turdus fuscater</i>	Mirlo Negribriloso	Least Concern
<i>Turdus serranus</i>	Solitario Andino	Least Concern



Osornophryne Guacamayo
[Guacamayo plump toad]

Grallariidae		
<i>Grallaria hypoleuca</i>	Gralaria ventriblanca	Least Concern
<i>Grallaria nuchalis</i>	Gralaria Coronicastaña (Tororoi Coronicastaño)	Near threatened
<i>Grallaria ruficapilla</i>	Gralaria Nuquicastaña (Tororoi Nuquicastaño)	Least Concern
<i>Grallaricula nana</i>	Gralarita Coronipizarrosa (Tororito Coronipizarroso)	Least Concern
Hirundinidae		
<i>Orochelidon flavipes</i>	Golondrina nuvoselvatica	Least Concern
<i>Pygochelidon cyanoleuca</i>	Golondrina Azuliblanca	Least Concern
Icteridae		
<i>Amblycercus holosericeus</i>	Casique piqiamarillo	Least Concern
<i>Cacicus chrysonotus</i>	Cacique Montañés Norteño	Least Concern
<i>Cacicus uropygialis</i>	Cacique Subtropical	Least Concern
<i>Psarocolius angustifrons</i>	Oropéndola dorsirrojisa	Least Concern
Parulidae		
<i>Basileuterus tristriatus</i>	Candelita de Anteojos	Least Concern
<i>Myioborus melanocephalus</i>	Reinita Cabecilistada	Least Concern
<i>Myioborus miniatus</i>	Reinita Collareja (de Canadá)	Least Concern
<i>Myiothlypis coronata</i>	Reinita Coronirrojiza	Least Concern
<i>Myiothlypis nigrocristata</i>	Reinita Crestinegra	Least Concern
<i>Setophaga fusca</i>	Reinita Pechinaranja	Least Concern
Passerellidae		
<i>Ammodramus aurifrons</i>	Clorospingo Bigotudo	Least Concern
<i>Arremon assimilis</i>	Matorrallero cejigris	Least Concern
<i>Arremon brunneinucha</i>	Clorospingo Común	Least Concern
<i>Atlapetes schistaceus</i>	Matorrallero Pizarroso	Least Concern
<i>Chlorospingus flavopectus</i>	Matorrallero Gorricastaña	Least Concern
<i>Zonotrichia capensis</i>	Gorrion criollo	Least Concern
Rhinocryptidae		
<i>Scytalopus latrans</i>	Tapaculo Coludo	Least Concern
<i>Scytalopus micropterus</i>	Tapaculo Negruzco	Least Concern
Thamnophilidae		
<i>Dryophila striaticeps</i>	Hormiguero Coronirrayado	Least Concern

RODENTIA		
Cricetidae		
<i>Neusticomys vossi</i>	Rata semiacuática de Voss	Not evaluated
<i>Thomasomys sp.</i>	Ratón andino	
Cuniculidae		
<i>Cuniculus taczanowskii</i>	Paca de montaña	Near threatened
Dasyproctidae		
<i>Dasyprocta fuliginosa</i>	Guatusa negra	Least Concern
Sciuridae		
<i>Notosciurus granatensis</i>	Ardilla de cola roja	Least Concern
CHIROPTERA		
Vespertilionidae		
<i>Histiotus cadenai</i>	Murciélago marrón orejón de Cadena	Least Concern
Phyllostomidae		
<i>Anoura peruana</i>	Murciélago rabón peruano	Least Concern
<i>Sturnira bidens</i>	Murciélago bidentado de hombros	Near threatened
Vespertilionidae		
<i>Myotis keaysi</i>	Myotis de patas peludas	Least Concern



Aotus Lemurinus
[Gray-bellied Night Monkey]



Neusticomys vossi [Voss
Semi-Aquatic Fish-eating Rat]



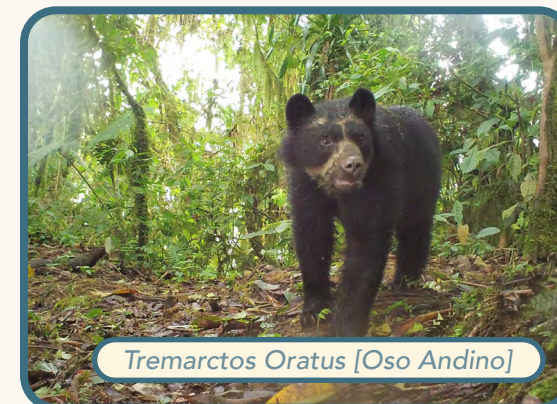
Sturnira bidens [Bidentate Yellow Shoulder Bat]

Tyrannidae		
<i>Contopus fumigatus</i>	Copetón Filipálido	Least Concern
<i>Leptopogon rufipectus</i>	Mosquerito Canelo	Least Concern
<i>Mecocerculus poecilocercus</i>	Mosquerito Cuellilistado	Least Concern
<i>Mionectes striaticollis</i>	Mosquerito Pechirrufo	Least Concern
<i>Myiodynastes chrysocephalus</i>	Pibí Ahumado	Least Concern
<i>Ochthoeca cinnamomeiventris</i>	Pitajo Dorsipizarroso	Least Concern
<i>Poecilotriccus ruficeps</i>	Tiranillo Coliblanco	Least Concern
<i>Pseudotriccus ruficeps</i>	Tirano Enano Cabecirrufo	Least Concern
<i>Pyrrhomyias cinnamomeus</i>	Tirano Todi Coronirrufo	Least Concern
<i>Zimmerius chrysoptus</i>	Tiranoete Caridorado	Least Concern
Vireonidae		
<i>Cyclarhis nigrirostris</i>	Vireón piquinegro	Least Concern
<i>Vireo leucophrys</i>	Vireo Gorripardo	Least Concern
PICIFORMES		
Picidae		
<i>Colaptes rivolii</i>	Carpintero Dorsicarmesi	Least Concern
Ramphastidae		
<i>Aulacorhynchus albivitta</i>	Tucanete Goliblanco	Least Concern
PSITTACIFORMES		
Psittacidae		
<i>Amazona mercenarius</i>	Amazona Nuquiescamosa	Near threatened
<i>Pionus sordidus</i>	Loro piquirojo	Least Concern
<i>Pionus tumultuosus</i>	Loro Gorriblanco	Least Concern
STRIGIFORMES		
Strigidae		
<i>Ciccaba albitarsis</i>	Autillo Canelo	Least Concern
<i>Megascops albogularis</i>	Autillo Goliblanco	Least Concern
<i>Megascops petersoni</i>	Búho Rufibandeado	Least Concern
TINAMIFORMES		
Tinamidae		
<i>Nothocercus bonapartei</i>	Tinamú Serrano	Near threatened
TROGONIFORMES		
Trogonidae		
<i>Pharomachrus antisianus</i>	Quetzal Cabecidorado	Least Concern
<i>Pharomachrus auriceps</i>	Quetzal Crestado	Least Concern
<i>Trogon personatus</i>	Trogon enmascarado	Least Concern

MAMMALS		
ARTIODACTYLA		
Cervidae		
<i>Mazama rufina</i>	Venado rojo pequeño	Vulnerable
CARNIVORA		
Felidae		
<i>Puma concolor</i>	Puma	Vulnerable
<i>Leopardus tigrinus</i>	Tigrillo pequeño	Vulnerable
Mustelidae		
<i>Eira barbara</i>	Cabeza de mate	Vulnerable
<i>Neogale frenata</i>	Comadreja de cola larga	Least Concern
Procyonidae		
<i>Nasua nasua</i>	Coatí amazonico	Least Concern
<i>Nasuella olivacea</i>	Coatí andino	Datos insuficientes
<i>Potos flavus</i>	Cusumbo	Near threatened
Ursidae		
<i>Tremarctos ornatus</i>	Oso andino	Endangered
PRIMATES		
Aotidae		
<i>Aotus lemurinus</i>	Mono nocturno lemurino	Endangered
DIDELPHIMORPHIA		
Didelphidae		
<i>Didelphis pernigra</i>	Raposa andina	Least Concern
<i>Marmosops sp.</i>	Marmosa	
LAGOMORPHA		
Leporidae		
<i>Sylvilagus brasiliensis</i>	Conejo brasileño	Least Concern
PERISSODACTYLA		
Tapiridae		
<i>Tapirus pinchaque</i>	Tapir andino	Critically endangered
PILOSA		
Myrmecophagidae		
<i>Tamandua tetradactyla</i>	Tamandua sureño	Least Concern



Potos Flavus [Kinkajou]



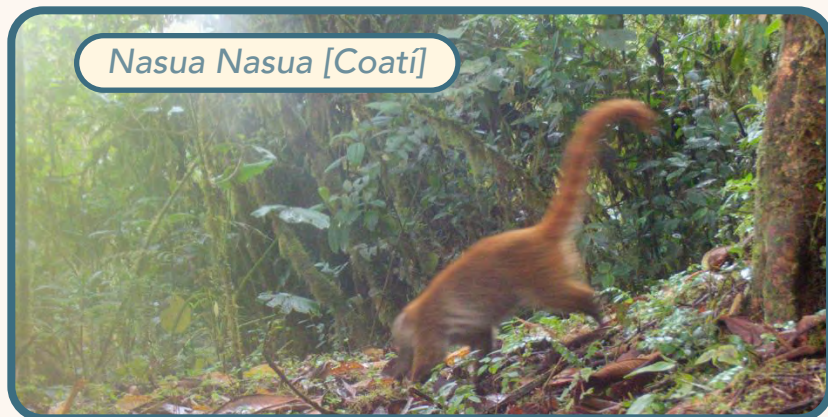
Tremarctos Oratus [Oso Andino]



Tamandua Tetradactyla [Amazonian Anteater]



Puma Concolor



Nasua Nasua [Coati]



WORKING WITH THE COMMUNITY

A- 4000 seedlings at Technical School green house. **B-** Hydrologist, chefs, designers join us on trek to pilot site. **C-** Jesús caring for one of our orchid orphanages of rescued plants. **D-** Donation of 500 logma seeds to Chaco Educational Center rector Vicente. **E-** Students and neighbors learn about and taste uses of native plants such as Chachafruto (Poroton) vegan paté.





F- Students from the Chaco Tech Educational Center help us present Cloud Forest products to over 1000 students. **G-** Sonia from Sacha Waysa community, with whom we're collaborating in parallel reforestation initiatives such as tracking the growth of chachafruto and nogal plants from seed to field. **H-** Agroforester, Biotechnologist, Botanists, Herpetologist and local support team at pilot site. **I-** Photographer and herpetologist Jaime in search of frogs and snakes.



WILD ORGANIC

A vibrant toucan with green, red, and black feathers is perched on a mossy tree branch in a lush, green forest. The background is a soft-focus view of a dense forest with sunlight filtering through the trees.

Can you imagine eating delicious, highly nutritious foods that rebuild forests and wildlife habitat? That's our aspiration. Combining lab work and food processing experimentation with local ancestral knowledge and a Food Network "Chopped" champion, we aim to elevate the food system.

**A****B****C****D**

A- Biochemist/food scientist Andrea selecting the logma fruits for processing; **B-** Food research assistant Argelis making gluten-free baguettes with chachafruto flour; **C-** Dragon's blood tree sap collection for cosmetic use; **D-** Ginormous protein-packed chachafruto seeds for chips or planting; **E-** Trilogy of Logma ice cream recipes with local chef; **F-** Seed washing and selection at Cloud Forest Food Lab.

**E****F**



G



H



K



L



I



J

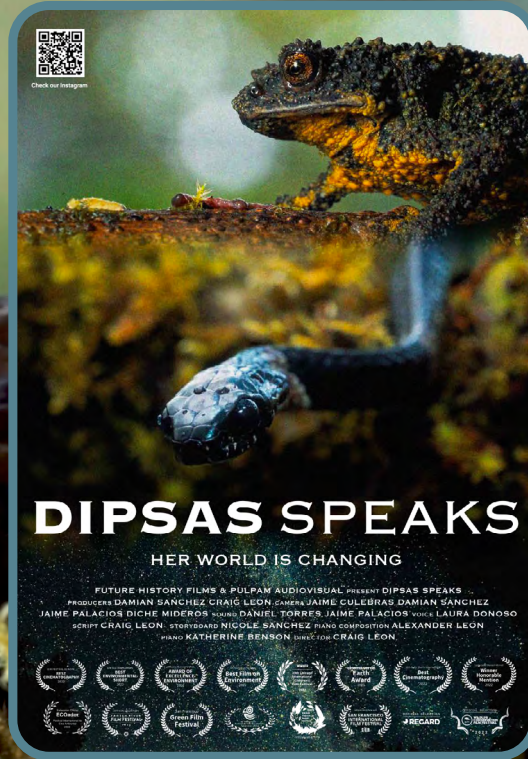
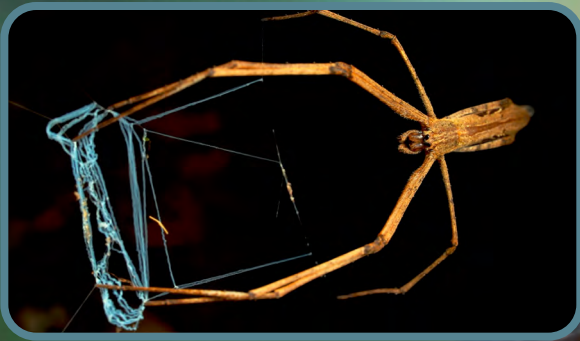


M

G- After 20 failed trials, Cloud Forest Crunch is born; **H-** AgroCalidad and INIAP researchers Carlota and Elena, Ph.D., helping establish processing procedures for FDA compliance; **I-** IDGEN Biotechnologists prepping wild tree leaves for DNA analysis. **J-** Testing cold-extraction tocte oil, and the nuts; **K-** Nütty Bunny vegan dairy dessert CEO Pamela, Food Network "Chopped" Champion Silvia and Craig at Fancy Food Show NY 2023; **L-** Taste-testing forest flavors with local foodie ecologists; **M-** At flour processing plant with Project manager Vicente, Argelis and Craig.

PROJECT AWARENESS





*The short documentary **Dipsas Speaks**, filmed entirely on the project site, is a poetic reflection on the conflict between agricultural expansion and threatened wildlife. Following a series of awards in 2022, it won the Earth Award in 2023 and has been used by local and regional schools as well as educational programs in the US, including 15,000 students in the Bay Area of California. Film director Craig was named 2023 Science New Wave Luminary by the Labocine Film Festival.*

[Link to the film](#)





A

E

IS FOOD FORESTRY THE WAY FORWARD?

Diverse economies and convivial conservation in the Cloud Forest Organics food forest in Ecuador.



ABSTRACT

Our food system is broken. Deforestation, loss of biodiversity, unequal power relations are only a few of the issues caused by our industrialised and capitalist food system. In response, initiatives, like food forestry projects, are emerging to harmonise food production with nature conservation and local communities.



Hi Harvard innovation labs

LINK

B

Cloud Forest Organics (HBS '91): Building an R&D venture in Ecuador's Andean Amazon, where deforested lands are being converted back into cloud forest, one of the earth's most endangered biomes. By prioritizing cloud forest super foods and monitoring wildlife response, Cloud Forest Organics develops measurable and sustainable ways to combat climate change and restore biodiversity.

FIRST RECORD OF COMPLETE ALBINISM IN A SPECIES OF THE GENUS PRISTIMANTIS JIMÉNEZ DE LA ESPADA, 1870 (ANURA: STRABOMANTIDAE) IN THE ECUADORIAN ANDES

PRIMER REGISTRO DE ALBINISMO COMPLETO EN UNA ESPECIE DEL GÉNERO PRISTIMANTIS JIMÉNEZ DE LA ESPADA, 1870 (ANURA: STRABOMANTIDAE) EN LOS ANDES ECUATORIANOS

LINK

C

In 2023, Cloud Forest Organics garnered attention in scientific and academic journals and events. **A-** Princeton featured Project in April 2023 Climate Issue. **B-** Harvard included project in 2023 Entrepreneurship Climate Circle; **C-** Publication on first fully albino pristimantis frog in Latin America from Project site; **D-** Craig was guest speaker at Harvard African American Association's event for Earth Day and Arbor Day. **E-** Wageningen University researcher published a thesis on our reforestation model; **F-** Interactive online community grows organically.

HARVARD BUSINESS SCHOOL
African-American Alumni Association

HBSAAA Salute to Earth Day and Arbor Day!

Craig Leon, MBA '91
Founder
Cloud Forest Organics

Evette Ellis
Co-Founder, Chief Workforce Officer
ChargerHelp

Thursday, April 20, 2023
12:00 - 1:00 PM ET
Cost: Free
Zoom Webinar

LINK

D

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VISION 2024+

2024+ GOALS

We are excited to continue working with local schools to facilitate continued reforestation and create new recipes from forest ingredients. We also plan to build out greenhouses with 1000s of more native tree seedlings.

We strive to complete the construction of an ecologically sound research center, recycling forest materials and incorporating everything from biodigesters to natural filtration systems.

We will geo-reference selected seeds and continue prioritizing edible and at-risk IUCN red list species, to support a much wider scale cloud forest reforestation. We hope our knowledge about how to reforest efficiently will facilitate a broader impact at scale.

Research on the uses and properties of the native edible tree species will continue, including an in-depth study of protein superfood *Erythrina edulis* (chachafruto or poroton) based on an alkaloid study underway.

We plan to launch a new research program with a national university on naturally occurring toxicity remediation and stability of wild cloud forest food ingredients, to assure processing techniques enable new ingredients to meet international food safety standards. We also hope to attract leading international universities to the site.

Community outreach includes collaboration on sourcing and processing forest ingredients for spectacular new organic foods and ingredients as another source of income.

A botanical survey that commences year-end 2023 will create a database of baseline plants, emerging plants within the distinct reforestation systems, as well as a deeper understanding of the medicinal, cosmetic and food potential of flora that first and foremost leads to cloud forest and wildlife habitat recovery.

Wildlife monitoring will continue as more species enter and use the forest. This will involve mammal experts, ornithologists, herpetologists, and hopefully soon insect, arachnid, moth and bee specialists.

Cloud forest water and hydrology studies are also important, as we measure impact of reforestation on water quality and abundance. Water is another resource endangered by deforestation.

As we diversify research efforts to understand and document how cloud forests can recover most quickly and abundantly, we also aim to continue growing the ethnic and gender diversity of our inclusive community of researchers, field staff, and everyone who **joins us on this adventure.**



To support our work, please scan this barcode to make an online donation. Checks can be sent to:
Jocotoco Conservation Organization
Att: *Cloud Forest Restoration Project*
P.O. Box 38274
Baltimore, MD 21231
Please write *Cloud Forest Restoration* on lower left of check.
You will receive a tax-deduction letter from the Jocotoco Conservation Foundation, a 501 (c) 3
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THANK YOU



CLOUD FOREST