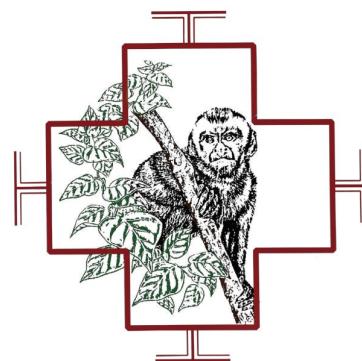


# TReeS News No.88

August 2021

Newsletter of the Tambopata Reserve Society (TReeS)



Dear TReeS members,

Welcome to this edition of TReeS News, which includes updates on various projects that have been supported by TReeS during 2021. These include FENAMAD's indigenous education programme, an agroforestry project at the native community of El Pilar, and reforestation activities at Bello Horizonte.

Looking to the future, we are currently raising funds to equip four remote indigenous communities with laptops and technology to communicate virtually with the outside world during the ongoing COVID crisis (see page 2). So far we have raised funds for two of the communities and are looking for a further £1,250 for each of the remaining communities.

We are also about to launch the 15th round of our small grants programme, which is a core part of our work to build local capacity. This year we are offering grants of up to US\$1,000 to Peruvian undergraduate and postgraduate students for research in Madre Dios. There is a brief report on page 4 from a past grant recipient - Jessica Pisconte – who reports the shocking finding that mercury contamination is now present at detectable levels in bird feathers in the region.

Following various new items, including on COVID (Peru has been one of the worst affected countries in the world) and on the recent Peruvian elections, the newsletter finishes with a colourful account of frogs, snakes and caiman encountered by wildlife filmmaker Ian Breland during an expedition up the remote Malinowski river.

Our AGM will take place virtually on Monday 18th October at 6.30 pm and will consist of a presentation of our annual report and accounts and election of a new vice-chair. If you wish to attend, please contact us at [treescommittee@gmail.com](mailto:treescommittee@gmail.com).

## Articles in this issue include:

- Peruvian small grants programme 2022 launch.
- COHARYIMA community laptops support.
- FENAMAD Education project.
- Bello Horizonte & El Pilar projects.
- Peruvian small grants programme feedback .
- Madre de Dios conservation news.
- Presidential election update & Peru news.
- Malinowski trip report (Ian Breland).

## TReeS contacts:

- \*Facebook: <https://www.facebook.com/Tambopata-Reserve-Society-109913004198901>
- \*Website: [www.tambopata.org.uk](http://www.tambopata.org.uk)
- \*Email: [treesuk1@gmail.com](mailto:treesuk1@gmail.com)

## 2022 TReeS small grants (becas) programme call for applications

TReeS is pleased to announce the opening of its call for applications to receive a small grant from TReeS, from students wishing to undertake their fieldwork in Madre de Dios, in 2022. TReeS has supported over 70 students, mostly under-graduates over the last 12 years.

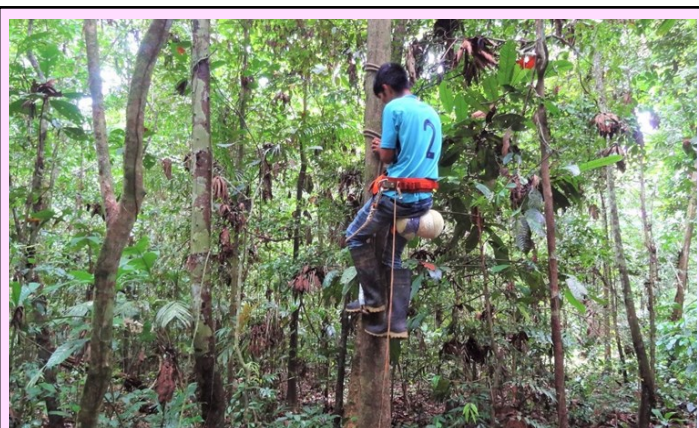
The small grant can be used to finance transport costs, field costs, buying certain field equipment or materials and hiring other items, laboratory costs, accommodation costs, etc up to the value of \$1,000.

The process is open this year to any student, both under-graduates and postgraduates studying at a Peruvian University. There are no restrictions on their area of study nor the topic of their investigation but they must be undertaking their fieldwork somewhere within Madre de Dios.

For the first time, students are being given the option to apply on-line though they can still send their applications to a new TReeS email address: [treesbecas@gmail.com](mailto:treesbecas@gmail.com). For further details please visit the TReeS Facebook page. Applications need to be received by 7th November 2021.

**Appeal: £25** donations towards the 2022 grants so that a number of grants can be offered.

**TReeS members support is very important in maintaining this programme.**



*A TReeS small grant beneficiary project collecting field data © G.Flores*

## TReeS AGM

The TReeS (members) AGM will be held on-line on Monday 18th October 2021 at 6.30pm (UK time)

Please contact us if you wish to attend at:  
[treescommittee@gmail.com](mailto:treescommittee@gmail.com)

### TReeS funds community laptops

Thanks to the generosity of TReeS members, supporters and the technology company 'Softwire', we are pleased to advise that funds were successfully raised to supply solar powered laptops and support equipment to two remote Matsigenka communities to enable them to improve their communications and capacity to deal with urgent issues, community organisation and to offer community services.

Four Matsigenka communities - Sarigemini, Shirerishi, Tayakome & Yomibato – are located inside Manu National Park and are accessible only by river, taking 2-5 days from the nearest roadhead, a further two days travel from Cusco. In 2020, satellite-based communication systems were installed in the communities, part-financed by TReeS. Each community now has a real-time link to the rest of Peru for the first time which was timely given the sub-sequent onset of the Covid-19 pandemic. Access to each community is currently restricted to those who have undertaken strict quarantine so this system has proved critical to their external communications and the well-being of each community during this period.

The new laptops will enable community leaders in two communities to improve their capacity to receive, process and respond to official communications more effectively. At present community leaders often have to use their own phones to handle all communications but now they will be able to view correspondence more clearly and participate more comprehensively in official decision-making linked to their communities. They will be able to advise their communities more effectively about directives and advice issued by the government, FENAMAD & COHARYIMA such as those linked to the Covid pandemic, or the recent severe flooding. They will be able to distribute information more comprehensively within their communities and, consequently, hold more informed meetings in which there is greater community participation. Indigenous communities, especially remote ones in Amazonia, are often those with least capacity and are the least informed and integrated into Peruvian society. The new laptops will support social, educational, and economic links which may, for example, enable health workers to disseminate Covid-19 pandemic related information or teachers to receive new materials to provide an enhanced educational experience for students.

Lastly, communities will be able to report incursions by loggers, miners, poachers, etc on to their lands and the adjoining territory of those indigenous peoples living in voluntary isolation.

**Appeal: £1,250** to fund the purchase and delivery of a laptop and associated equipment to a third Matsigenka community. (We would welcome sponsorship from another technology company).

<https://gofund.me/bb2a3678>



Satellite communications equipment CN Tayakome © FENAMAD

### FENAMAD Education project

Sr.Dumas, the FENAMAD Director of Education, who was funded by TReeS for the first half of the year has been very busy over the last few months. He has attended regular meetings of local government organisations to try to strengthen indigenous education and opportunities open to indigenous students at all levels. This has included establishing a new primary school in Sta.Alicia, on the rio Las Piedras; dealing with secondary school issues in Pilcopata, in the upper Madre de Dios; sudden teacher vacancies in the school in Puerto Azul; and overseeing the provision of virtual classes to students in many indigenous communities across Madre de Dios.

He has also co-ordinated the first 'Yo soy indigena' ('I am indigenous') FENAMAD-organised workshop and the first meeting of representatives of the Yine 'nation' in Tipishka, on the rio Las Piedras, to consider issues specific to Yine communities.

At Casa Miraflores, he has worked closely with the students resident there to integrate them - 11 of the 18 students are new to the house this academic year - in to life in P.Maldonado. This includes supporting their academic progress, dietary and health and socio-emotional needs. On a more practical level he has organised the construction of a new exterior fence for the house and the repainting of the kitchen and student rooms. He also accompanied the student visits to the 'chacra' in the community of El Pilar.

With the NGO Ecosolidar, he has worked on producing two videos with the students. One, entitled the 'Global Video project' looks at caring for the environment and the other 'Culturescapes', looks at some of the challenges faced by young indigenous students.

Finally, he has also been very involved in the FENAMAD response to the Covid pandemic. Most recently this has involved co-ordinating and monitoring the vaccination programme - FENAMAD recently took delivery of two river ambulances so that they can access indigenous communities more easily - in indigenous communities and persuading them that they should have the vaccination.



1st meeting of representatives of the Yine 'nation' @ FENAMAD



Sr.Dumas makes a community visit @ FENAMAD



### El Pilar agro-forestry project

The students living at Casa Miraflores – the FENAMAD owned ‘house’ for indigenous further education students in Puerto Maldonado – were overjoyed to be able to resume visits to their agro-forestry plot in the indigenous community of El Pilar, which lies a short boat ride up the Madre de Dios river from the city. This became possible once the Covid-19 related restrictions were eased in May.

They found the 2 hectare plot quite overgrown and set about clearing the weeds and vines to increase the chances of the seedlings planted in 2019 & 2020 surviving. They also harvested some of the fruit that was ripe to take back to Casa Miraflores - the plot was established to enable the students to grow some additional food to enrich their very limited diet. One of them said *‘it was great to get out of town, use our machetes to clear the undergrowth and pick fresh fruit from the trees’*. However, the tree planting planned for the start of this year had to be postponed until later in the year when the rains return due to serious flooding and Covid.

There are 18 students living this year at Casa Miraflores, from five ethnic groups - mainly Matsigenka and Harakbut. They originate from five native communities of which the Matsigenka community of Yomibato, within Manu National Park, is the most distant - at least a weeks journey away. The majority are studying agriculture, nursing, teaching and forestry.

Most further education institutions remain closed across Peru until the end of the academic year in December, the second year in which they will not have received any face-to-face tuition. However, there is an on-going debate as to whether this is the right decision so the current policy may be reversed by the new government, in due course.



*Students harvest bananas at the chakra © FENAMAD*



*Sr Dumas & students at Casa Miraflores (July 2020) © FENAMAD*

### Bello Horizonte ‘reforestation’ project

The planned planting programme at Bello Horizonte at the start of the year was not only impacted by the pandemic but also by the very heavy rains in February and March. The pandemic cut the staffing at the lodge and the rains left the ground waterlogged for several weeks. Once the rains had subsided and the ground began to dry, further clearance of the ground vegetation coverage was again required.

By May, it was no longer possible to plant all the tree seedlings that it had been planned to plant at the start of the year during the rainy season. As a result, a reduced number of species and larger seedlings that could cope with the drier conditions mid-year were planted such as brazil-nut seedlings. They were planted in phases 1 and 2 where the seedlings planted in the past are now 4-5 metres tall and could offer some protective shade.

The heavy rains restricted the new planting but have led to bumper harvests of many crops, including cacao. The produce is consumed by the APRONIA children’s home and cafes in Puerto Maldonado. A group of children from the ‘home’, on one of their first trips out in months, recently visited to learn more about the forest, and the project, and to pick some fruit.



*Cacao harvest (Phase 1) © APRONIA (June 2021)*



*Planting brazil-nut seedlings (Phase 2) © APRONIA (June 2021)*



*APRONIA children’s visit to the project © APRONIA (July 2021)*



## TReeS small grants programme feedback

### \*Jessica PISCONTE (UNAMAD) (2019 TReeS grant):

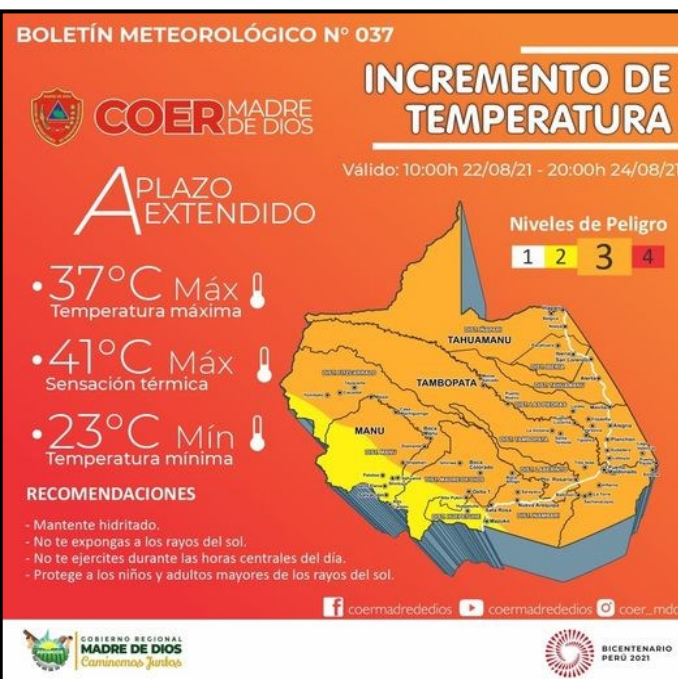
*'Incidencia y ambito de afectación del mercurio en aves expuestas a minería ilegal en la Tambopata National Reserve (TNR)'. Jessica writes: 'Madre de Dios is known as the "Capital of Biodiversity" in Peru because of its high ecological value but increased mining activity has become one of its main threats, degrading thousands of hectares of forest and contaminating the Amazonian ecosystem with mercury. The mercury, which is used for the extraction of pure gold, is dumped into water bodies, where it is transformed into methyl-mercury and enters the food chain, biomagnifying through the trophic levels of aquatic ecosystems and presenting a danger to terrestrial ecosystems, including to bird populations.'*

In 2019 we evaluated a mining impacted area and a control area in the Tambopata National Reserve (TNR). We captured birds to sample their feathers, which were analysed with atomic absorption spectrometry. We identified 38 species distributed in 15 families and 5 feeding groups. We analysed feathers from 74 individuals finding a range of mercury concentrations between 0.04 - 12.13 mg/kg with a mean of 1.08 mg/kg. The insectivore group presented the highest concentrations and granivores the lowest.

The results confirmed the exposure of birds to mercury in the TNR mainly in the area impacted by mining, reflecting the process of biomagnification through the food chain.'



Jessica handles a Lettered Aracari (*Pteroglossus incriptus*) © J. Pisconte



**COER alert highlighting very high temperatures on 22-24 August 2021 across Madre de Dios - a level 3 alert - and making some recommendations on to how to cope with it**

## Madre de Dios Conservation News

### President Sagasti visit to Madre de Dios

In June, then President Sagasti made a rare Presidential visit to Madre de Dios to deliver more vaccines, confirm funding for a new oxygen plant at the main hospital in P. Maldonado and plant tree number 741,000 in a SERNANP (National Park Service) project in the Tambopata National Reserve to recover 759 hectares badly damaged by illegal gold-mining.

<https://andina.pe/agencia/noticia-madre-dios-gobierno-y-sociedad-civil-logran-recuperar-areas-danadas-mineria-ilegal-851004.aspx>

### Bicentenary celebrated in Puerto Maldonado

Peru is celebrating 200 years of independence from Spain. Unfortunately, many of the planned celebrations had to be cancelled due to the pandemic. However, some celebrations have been possible in most places and in Puerto Maldonado the focal point has been a photo exhibition entitled 'Life: our true gold', in the Plaza de Armas. Over 40 photo panels are on display focusing on the natural wonders of Madre de Dios and those who live there as well as some of the threats faced.

<https://www.facebook.com/pavel.martirena/videos/570844063924554>

### Tourism returns to Tambopata

SERNANP has worked with other local authorities to enable some tourism activities in the Tambopata area to resume. A range of measures have been taken to ensure tourists have a 'safe' experience by adopting the World Travel & Tourism Council (WTTC) global standardized protocols. The measures taken to meet the protocols include constructing or widening pathways, installing additional toilets, increasing the amount of signage, and building new viewing platforms. Amongst the destinations to receive the WTTC stamp is the 'El Chunchu' collpa (macaw salt-lick) on the Tambopata river.

SERNANP working with the tourist organisations PROMPERU and DIRCETUR and others, have also published a guide entitled 'Safe Route Tambopata' -

[https://cdn.www.gob.pe/uploads/document/file/2023195/Ruta%20Segura%20-%20Tambopata%20.pdf?fbclid=IwAR1oygVZv\\_rFWptuoqUq7-l8VhtWIHCvLIqyYtJfwKd6EppMXgnOHQmmc](https://cdn.www.gob.pe/uploads/document/file/2023195/Ruta%20Segura%20-%20Tambopata%20.pdf?fbclid=IwAR1oygVZv_rFWptuoqUq7-l8VhtWIHCvLIqyYtJfwKd6EppMXgnOHQmmc)

A small number of tourists - mainly Peruvian nationals - have begun to return to the area.

### Bahauja-Sonene National Park - 25th anniversary!

The Bahauja-Sonene National Park and associated protected areas were created 25 years ago. Nearly 600 bird species, over 1200 butterfly species and 173 mammal species (34% of the total in Peru) have been recorded there. It is also the ancestral home of the Ese'ejá peoples who live in three communities bordering the protected area. TReeS has been involved in the promotion and conservation of this area since its foundation more than 35 years ago.

<https://www.youtube.com/watch?v=FN1wGJDF8Vo>

### Centro de Operaciones de Emergencias Regional (COER)

The Regional Centre of Emergency Operations (COE) network was set up to handle the impacts of a range of natural emergencies such as floods, landslides and quakes but is increasingly issuing alerts linked to climate change such as high temperatures, heavy rains and forest fires. There are 26 regional centres such as COER Madre de Dios as well as many provincial and local centres which aim to co-ordinate a variety of services to deal with a range of events.

During the dry season, June-September, the COER Madre de Dios is monitoring and recording *hot spots*. On 19th August, from 00:00 to 18:00 hours, it registered 184 hot spots across the department where temperatures were recorded as exceeding expected maximums. Very high temperatures present many challenges for local people as well as greatly increasing the risk of forest fires. COER issues emergency numbers that can be called if, for example, a major forest fire is spotted. However, indigenous communities such as those living in voluntary isolation in western Made de Dios must find their own ways to cope. <https://www.facebook.com/coermddoficial/>

## Covid in Peru & Madre de Dios

Peru has been one of the countries most badly affected by the pandemic despite the governments quick response in March 2020. In May 2021 Peru revised the official figure for deaths resulting from Covid. The figure tripled to 180,000 and is now 198,500 (UK: 133,230), 2.15 million cases (7m) and the deaths to population ratio is 620 per 100,000 (198) though the actual figures are probably higher. The number of new cases per day has fallen to below 1,000 and deaths to below 50 per day but the fear now is that the Delta variant will take hold leading to a third wave. For the latest updates visit:

<https://data.larepublica.pe/envivo-casos-confirmados-muertes-coronavirus-peru/>

A state of emergency remains in all regions with night-time curfews and travel bans on Sundays. Those aged 30+ years are now being vaccinated. Over 57.5m (UK: 91.6m) vaccine doses have been given in large-scale 'vacunathons' but for most it has been a Chinese vaccine: Sinopharm or Sinovac, though many have refused them. However, in the Amazon region the indigenous population were offered the Pfizer vaccine. As many as 20,000 Peruvians flew to the USA to have their vaccinations.

Officially, Madre de Dios has recorded 13,800 cases at a rate of 7,950 / 100,000 people - the 5th worst proportion of cases to population, and 761 deaths. Iñapari and Iberia in the north of the dept. have been the worst affected places. Indigenous communities continue to control the spread of Covid by locking down. Two river ambulances were donated to FENAMAD via the Frankfurt Zoological Society to improve riverine community access.

**JORNADA DE VACUNACIÓN**

A los ciudadanos de los pueblos Indígenas, residentes en Puerto Maldonado, de 18 años a más.

**LUNES 21 de junio**

De 8:00 a 1:00 de la tarde

I.E. Santa Cruz

Call to vaccination to the indigenous population of Puerto Maldonado

## Peru News

The news over recent months has been dominated by politics and the consequential polarisation of Peruvian society. Pedro Castillo (Peru Libre) (19% in the first round) won the Presidential runoff against K. Fujimori (Fuerza Popular) (13%). The campaign was extremely bitter with the mainstream media almost exclusively supporting Fujimori, offering her blanket coverage and demonising Castillo as a communist with close links to Cuba and Venezuela. However, 60% of people said they would never vote for Keiko and huge 'Fujimori nunca mas' (Fujimori never again) rallies took place all over Peru accusing her of planning to set up a 'narco-state'. Just prior to the election, an investigation into Keiko and 34 *fujimoristas*, submitted 13,000 documents dealing with \$17m of corruption and bribery, and proposed prison terms of 8-30 years for them.

## Peru News continued

At one point, it appeared Fujimori would try to organise a 'coup'. Her father's imprisoned henchman – Vladimir Montesinos – was caught making phone calls from his cell in the navy prison in support of Keiko.

The result, announced an unprecedented week after voting, gave Castillo 50.13% of the vote - a 0.26% winning margin (45,000+ votes)<sup>1</sup>, but slightly more than the winning margin when Keiko lost to Kuczynski six years ago. The vote reflected big differences in Peruvian society with Castillo securing 75%+ of the vote throughout the Andes (90% in some areas), south coast and Amazon, while Fujimori won 60%+ in Lima and north coast. Madre de Dios voted 71% (56,500) for Castillo.<sup>2</sup>

Despite all the international observers declaring the election 'clean', Fujimori mirrored Trump's behaviour and cried fraud suggesting that many Castillo voters were too illiterate to vote while her supporters ran riot in the centre of Lima. Castillo's victory also prompted some appalling racist abuse on social media highlighting the latent but until now mainly hidden racism that exists between the wealthy, 'white' Limeño elite and Andean/indigenous peoples. The former claimed that they are the true 'Peruvians' and that indigenous peoples - the 'other' in their eyes - are not true 'Peruvians' as in 'Peru' the modern (200 year old) state. Of course, many of Keiko's supporters are mixed race and have Indian blood but have been encouraged to think of their 'Indian blood' as inferior and not to associate themselves with indigenous peoples/movements who they have labelled 'terrorists'!

Congress is divided between ten parties, the two largest being Castillo's Peru Libre with 28% of seats, and Keiko's Fuerza Popular 18%. However, left-leaning parties will only control <40% of all seats while the right-wing parties will control about 60% of seats which means Castillo will struggle to get his policies through Congress.<sup>1</sup> In the end Keiko exhausted all avenues to overturn the election result and all her claims of fraud were rejected.

Subsequently, Castillo struggled to appoint a cabinet acceptable not only to Congress but also the far left leadership of Peru Libre. Castillo himself was a last minute candidate for Peru Libre whose leader - Vladimir Cerrón - is a declared communist. In late August, Congress approved the proposed cabinet after several potential ministers were rejected due to their close links with Sendero Luminoso in the past - more may follow. The new Environment Minister - Ruben Ramirez Mateo - may come from one of the most polluted places on earth - La Oroya - but he is a lawyer with no environmental background who has acted on behalf of land invasions in the desert around Lima in the past.

Finally, Pia Leon of Kjolle and Central, in Lima, was elected the best female chef in the world by her peers!

Fujimori cries electoral fraud – and unleashes torrent of racism - <https://www.theguardian.com/world/2021/jun/20/peru-elite-election-pedro-castillo-keiko-fujimori>

Pedro Castillo, finally, declared President - <https://www.bbc.co.uk/news/world-latin-america-57897402>

We are grateful to the Peru Support Group (PSG) for sourcing some of the details in the 'News' sections of TRees News: [www.perusupportgroup.org.uk](http://www.perusupportgroup.org.uk)

<sup>1</sup> [https://en.wikipedia.org/wiki/2021\\_Peruvian\\_general\\_election](https://en.wikipedia.org/wiki/2021_Peruvian_general_election)

<sup>2</sup> <https://elcomercio.pe/peru/madre-de-dios/resultados-madre-de-dios-elecciones-2021-en-vivo-conteo-de-la-onpe-de-las-elecciones-peru-2021-pedro-castillo-keiko-fujimori-segunda-vuelta-resultados-oficiales-ganador-en-arequipa-peru-libre-fuerza-popular-presidente-del-peru-elecciones-generales-de-peru-de-2021-nddc-noticia/>



## An expedition up the Malinowski

On the morning of 12th July, I led a diverse group of seven tourists for the ecotourism company Tamandua Expeditions on an expedition up the Malinowski river, a large tributary of the Tambopata. We planned to spend six nights and seven days exploring the jungle and all of the unpredictable wonders that some of the last primary rainforest in the area has to offer - specifically targeting reptiles and amphibians.

A two hour drive from Puerto Maldonado, a rather nail-biting boat ride (due to low water levels and a heavy load) up the Tambopata, then the Malinowski, and a short hike later, we met our host Boriám (an ex-miner), who owns the rudimentary yet perfectly homely Malinowski lodge set in the depths of the jungle.

As night fell, we geared up for a long hike to see what was out there. We could barely hear ourselves speak over the sound of biodiversity buzzing all round, from cicadas and frogs, to night monkeys jumping in the canopy above; within an all-enveloping darkness that obscured your hand in front of your face. Soon, I saw a beautiful monkey frog species, a family that is comprised of many stunningly large, green tree frogs - one of which can provide a deep spiritual experience through the compound DMT held within its secretory glands. We also came across the Warty monkey frog (*Phyllomedusa tarsius*), the only one with raised bumps across its vibrant green and white body. We continued on to find huge, wandering spiders consuming half-digested prey, poisonous dart frogs sleeping among low foliage, and a Green Anole (*Anolis carolinensis*) perching on a twig at head level. Around 1am, we rolled back into the lodge only to find a stunning young Blunthead tree snake (*Imantodes cenchoa*) hanging out in the bathroom! We were, finally, up and running for snakes, but that was nothing compared to what was to come.

That night, before bed Boriám whispered to myself and my co-guide Empe with a huge smile on his face - he couldn't keep it a secret any longer. The day before we came in, Boriám had witnessed some illegal miners upriver yelling and trying to machete something big. Upon investigating, we found that Boriám had rescued a 12-foot Green Anaconda, (*Eunectes murinus*) the absolute holy grail of Amazonian 'Herping', and a huge target for

all on the trip. He had taken the anaconda from the miners upriver before they could kill it and had kept it under the house for us to take to a pristine new habitat and release. We were beyond ecstatic at the chance to release a rescued anaconda and planned to head to a nearby oxbow lake where it would be released early the following morning. As I unbagged the snake in front of the group, we were amazed by her immense size. Around 3 meters of pure power and primitive yet effective predatory perfection. She was one of the nicest wild snakes I have ever had the pleasure to work with, never biting and allowing for plenty of handling to educate the group on their importance within the ecosystem. We said our goodbyes after reaching the perfect spot for release and watched her gracefully slide into the darkness.

The next few nights were filled with more action, as our group became accustomed to jungle life, and soon someone spotted another huge goal for the trip: the Amazon tree boa (*Corallus hortulanus*). It was a baby, born during this past rainy season, and was seen cruising at eye-level, perfectly camouflaged. However, no amount of *camo* can save a boa from the bright orange eyeshine that the lenses in their eyes reflect when a headlamp is fired in their direction. Looking for eyeshine is one of our main tactics for finding life in the jungle, as many animals produce it. Spiders and insects shine a twinkly green, while snakes/mammals/moths/frogs shine in an assortment of yellow-orange, while caiman eyes reflect a strong, red light back.

Around midnight one night we encountered a 6 foot boa, waiting in ambush with her head only just above the ground just outside the burrow of a small mammal and directly in the path of where that animal was bound to pass. This snake was an impressive behemoth. She certainly had gained a measurable amount of tact and technique by surviving in the forest for so long, with catching prey narrowed down to a science.

Another night, we undertook a favourite activity: a caiman patrol. Cruising with the boat upriver in the dark of night, I stood at the bow with a large spotlight searching for the red eyeshine of any of the 4 caiman species in the area (Black, Spectacled, Cuvier's Dwarf & Schneider's Dwarf caiman). Soon, I saw a decent sized Spectacled caiman and motioned to it with the light as Boriám redirected the boat with great accuracy and slowed our approach. We all grew silent as I bent over the bow arms outstretched, mentally preparing for the one shot at a perfect grab in order to show these modern dinosaurs to the group up close and personal. We marvelled



Amazon tree boa (*Corallus hortulanus*) © Ian Breland

Ian (on left) handles the Green Anaconda © Ian Breland

### An expedition up the Malinowski continued

at the incredible tan-green colour of the scutes, checking out everything from the electric-pulse detecting pores on the jaw to the spiky plates around the neck and rudder-like tail. Caiman are one of the most amazing little 'tanks', and always a pleasure to encounter. We would go on to see dozens more that night.

Our daytime activities consisted of many hikes setting up camera traps, and most importantly, helping to investigate the growing and ever-present danger of illegal mining on the river Malinowski. One day we went nearly two hours further upriver chasing a sound heard the day before, an all too familiar sound that means only one thing – mining. After landing on a beach, we sent up our drones in search of the mining operations. What we found was disturbing to say the least - a clearing around 3kms away with a small camp and rudimentary mining equipment - certainly a mining operation, and probably active. We took 48mp photos from directly above the site and recorded the GPS coordinates. We took the coordinates, photos and videos back to the lodge and informed the Marines. Several nights later they invaded the camp and destroyed the equipment with explosive charges. As great as our efforts felt, millions of years of careful growth and evolution are being destroyed in moments for just a few chunks of gold. Tamandua Expeditions, tries to not only show the beauty

of the jungle but also shed light on the reality of what's happening behind the scenes in areas such as the river Malinowski. There is still so much worth saving - beautiful rivers, huge swathes of jungle and fantastic wildlife.

The expedition was a screaming success in terms of both sightings and educating a new wave of visitors on the beauty, struggles, and indescribable awe of the Peruvian Amazon. I can't wait for the next adventure!

*Ian Breland (Wildlife filmmaker and 'herps' fanatic working with Tamandua Expeditions)*



**The marine patrol heads upriver © Ian Breland**

### Recent information sources linked to Tambopata & Madre de Dios

The following articles, documents, reports and publications about Tambopata and Madre de Dios have recently been sighted.

**The following publications can be accessed through the 'MAAP' website: [www.maaproject.org](http://www.maaproject.org)**

- *'New Illegal Gold Mining Hotspot in Peruvian Amazon Paríamanu'*, MAAP 137, May 2021;
- *'Using satellites to detect illegal logging in Peruvian Amazon'*, MAAP 139, July 2021;
- *'Detecting illegal gold mining in rivers with specialized satellites'*, MAAP 140, July 2021;
- *'Protected areas & indigenous territories effective against deforestation in the western Amazon'*, MAAP 141, July 2021;

**The following publications (in English) were also sighted by TReeS –**

- *'A spatial pattern analysis of forest loss in the Madre de Dios region, Peru'*, A.Puzzi et al, Environmental Research Letters, Vol.14, 124045, December 2019;
- *'Deforestation due to artisanal and small-scale gold mining exacerbates soil and mercury mobilization in Madre de Dios, Peru'*, S.Diringer et al, Environmental Science Technology, 54 (1), January 2020;
- *'Disturbance-specific behavioural responses of giant otters exposed to ecotourism and extractive activities'*, A.Barocas et al, Animal Conservation, May 2021;
- *'Does formalizing artisanal gold mining mitigate environmental impacts? Deforestation evidence from the Peruvian Amazon'*, N.Alvarez-Berrios et al, Environmental Research Letters, Vol.15, 064052, June 2021;
- *'Evaluating the Impact of REDD+ Interventions on Household Forest Revenue in Peru'*, D.Solis et al, Frontiers in forest & global change, Vol.4, March 2021;
- *'Existing protected areas provide a poor safety-net for threatened Amazonian fish species'*, F.Dagosta et al, Aquatic Conservation: Marine & Freshwater Ecosystem, Vol.31, May 2020;
- *'Fire-induced loss of the world's most biodiverse forests in Latin America'*, D.Armenteras et al, Science Advances, Aug.2021;
- *'Fish Ecology of the Alto Madre de Dios River Basin (Peru): Notes on Electrofishing Surveys, Elevation, Palm Swamp and Headwater Fishes'*, I.Tobes et al, Water 2021, Vol.13, April 2021;
- *'Habitat quality differentiation and consequences for ecosystem service provision of an Amazonian hyperdominant tree species'*, Frontiers in Plant Science, March 2021;
- *'Non-structural carbohydrates mediate seasonal water stress across Amazon forests'*, C.Signori-Muller et al, Nature Communications Vol.12, 2021;
- *'Old-growth forest loss and secondary forest recovery across Amazonian countries'*, Environ. Res. Letters: 16, August 2021;

**The following publications (in Spanish) were also sighted by TReeS –**

- *'Amazonia en cifras: recursos naturales, cambio climático y desigualdades'*, J.Orihuela et al, Oxfam, May 2021;
- *'Aprovechamiento de castaña en comunidades nativas sociales de la Reserva Comunal Amarakaeri al sureste de la Amazonia Peruana: una experiencia exitosa de congestión y gobernanza intercultural entre pueblos indígenas y el estado peruano'*, SERNANP, Marzo 2021;
- *'Caluera qorillaryana, una nueva especie de orquídea y el primer registro del género para la flora peruana'*, Rev. Q'EUÑA 12 (1): 08, Julio 2021;
- *'El derecho de los pueblos indígenas a una educación intercultural bilingüe en tiempos de Covid'*, SPDA, Abril 2021;
- *'Guía fotográfica de árboles de la Amazonia peruana'*, Y.Flores Bendezú, 2020;
- *'Serpientes de Tambopata: guía de campo'*, V.Velasquez, Serpentario Tropifauna, 2021;





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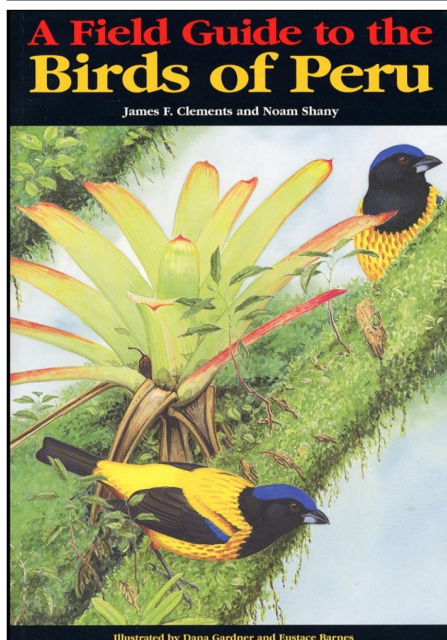
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*Boat launch during community visit © FENAMAD*