

TReeS News No.73

November 2013

This edition of the TReeS Newsletter reports on two new projects being funded by TReeS as well as others seeking funding. There is also feedback from students supported by the Becas programme in recent years.

Updates are given about the major issues threatening the rainforests of south-east Peru: the expansion of the Camisea gas project eastwards towards Madre de Dios, informal gold-mining activities and the proposed Purus highway.

Camu-Camu reforestation project

TReeS receives some funding from a flights related carbon offsetting scheme which can be used for small-scale reforestation projects.

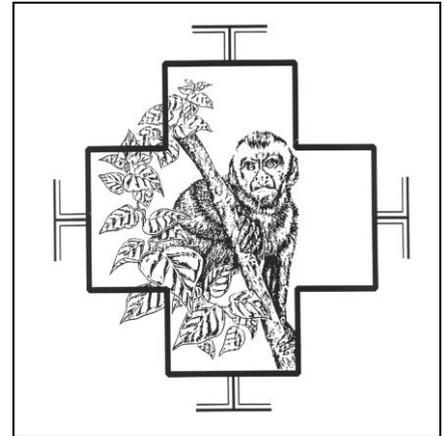
In the past, some of these funds were allocated to the Casas de Hospedaje eco-tourism project in Baltimore, on the river Tambopata. This enabled them to develop their fruit orchards and undertake other planting as they became members of the Tambopata Homestays tourism initiative: www.tambopataecotours.com

TReeS has now agreed to provide funding to a new project to grow *camu camu* (*Myrciaria dubia* HBK Mc Vaugh), the so called 'wonderberry of the rainforest'. The concentration level of Vitamin C is fifty times that of oranges or about 2gr. of vitamin C per 100gr. of fruit. It is also very high in potassium. *Camu camu* is recognised as having good anti-viral properties that can help with cold sores, herpes, shingles, and the common cold. The demand for *camu camu* from juice bars and ice-cream parlours in Puerto Maldonado exceeds the supply in the area.

The project will be based at the beautiful Estancia Bello Horizonte lodge, 25kms north of Puerto Maldonado. The small lodge overlooks a superb 'aguajal' full of macaws, in an ancient isolated bend of the Madre de Dios river. It is cheaper than many lodges in the area because it isn't accessed by river. Consequently, it receives more local tourism than most other lodges but also plenty of independent travellers rather than large tour groups. It is run on a sustainable basis with solar panels and a micro-hydro plant for power. Lodge facilities include a spring fed swimming pool and a butterfly breeding centre.

The project will reforest land adjoining the *aguajal* that floods seasonally – ideal conditions for *camu camu* – and overlaps with an old cattle ranch that the lodge has recently purchased. Seedlings will be grown in a nursery adjoining the lodge before up to 10 hectares are planted with just over 1,000 seedlings per hectare.

The project is managed by APRONIA (*Asociación para la protección del niño y del adolescente*), a charity which runs three 'homes' in Puerto Maldonado



for abandoned children. It also owns the Estancia lodge and the popular ice-cream parlour 'Los Gustitos de la cura' in the main plaza, in Puerto Maldonado. Once the children become young adults they are trained to work in the APRONIA projects. This project will be undertaken by members of APRONIA with support from students at UNAMAD (Agrarian University of Madre de Dios).

The project aims to produce 15 tonnes of *camu camu* per year after 5 years.

Appeal - £500 to complete first phase funding.



Camu Camu © www.brightearthfoods.com



Old ranch adjoining the Estancia lodge © TReeS

Camisea gas company exposed flying over Manu National Park

A map in an internal Peruvian government report (see below) reveals that gas company Pluspetrol has flown over the protected Manu National Park (MNP) where UNESCO says the biodiversity "exceeds that of any other place on earth." The overflight was by helicopter in February, 2012 by Pluspetrol together with the National Institute for the Development of Andean, Amazonian and Afro-Peruvian Peoples (INDEPA).

According to the report's Annex 1, INDEPA's proposal was to fly over the Kugapakori-Nahua-Nanti Territorial Reserve (RTKNN) for indigenous peoples in "voluntary isolation" and "initial contact." RTKNN is immediately west of the MNP, and almost a quarter of its area is overlapped by a gas concession operated by Pluspetrol. The plan refers to flying to "the limits of the RTKNN," but makes no mention of flying over the MNP.

Annex 2 to the report is a map of INDEPA's proposed flight plan and Annex 3 a map of the route actually flown, which shows the helicopter went well beyond the eastern boundary of Lot 88, beyond the RTKNN, and over the westernmost part of the MNP. Annex 4 includes photos and maps of settlements beyond Lot 88 and the RTKNN, as well as an extra, amplified map showing that they flew over the MNP and crossed a river marked as "Rio Manu Chico."

An aide memoire to the report stated: "The overflight route taken differed from the proposed and agreed route," highlighting that it involved flying over settlements called Sagondoari, Marankeato and Montetoni outside the RTKNN and "even entering 4.5kms into Manu National Park (headwaters of the River Cashpajali)."

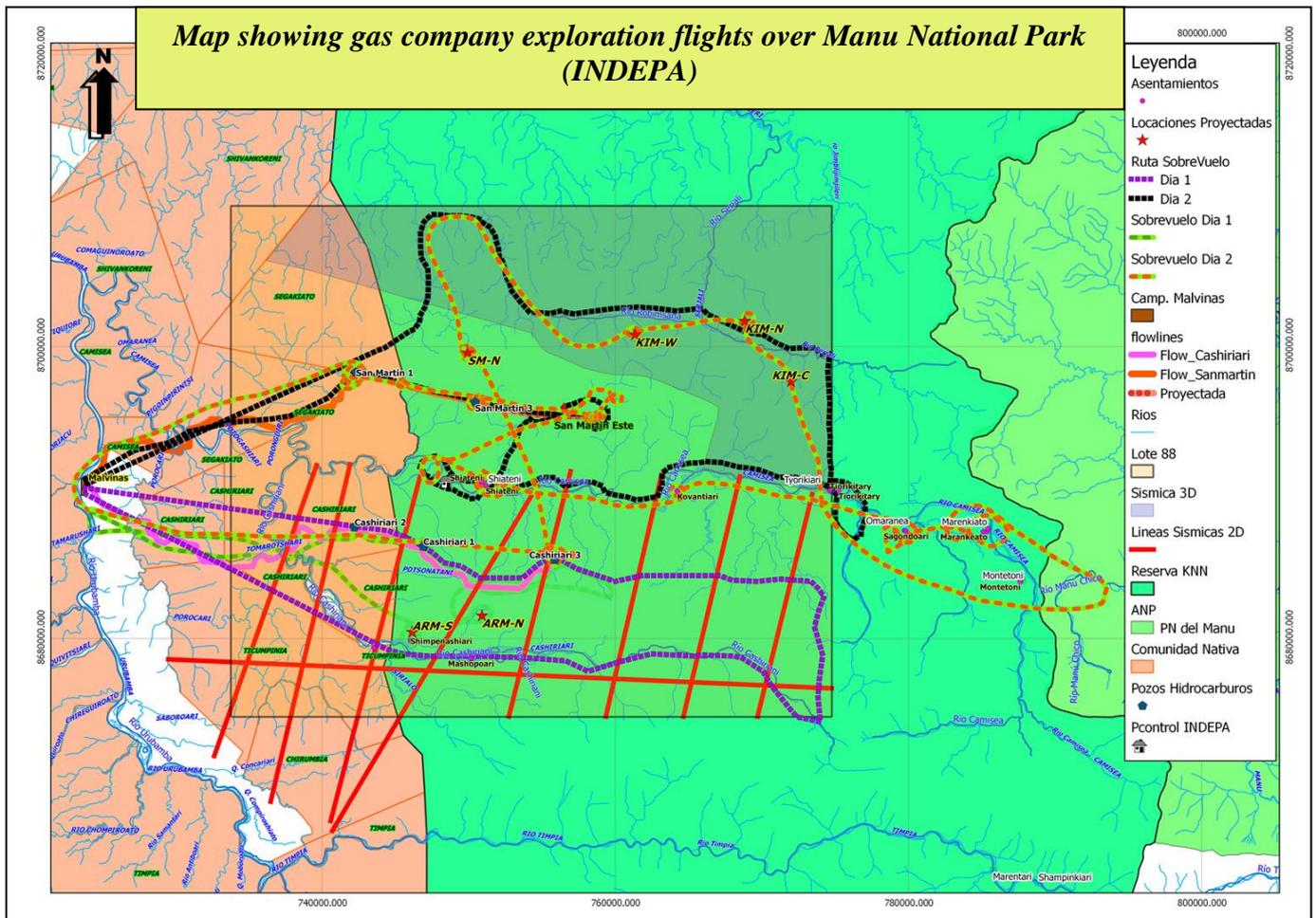
(We are grateful to the independent environmental journalist David Hill for updates on the Camisea project. He can be followed at - @DavidHillTweets; and www.hilldavid.com)

Manú National Park 40th anniversary

Manú National Park covering more than 6,000 square miles, making it the largest of its kind in Peru, was established in 1973. It was declared a UNESCO World Heritage Site in 1987. It covers most of the Manú River basin, in the provinces of Manú and Paucartambo in the regions of Madre de Dios and Cusco.

It has one of the highest levels of biodiversity of any National Park in the world, in large part due to the huge altitudinal range (150-4,200 metres) from the high Andes down in to the Amazon basin and contains many IUCN Red data species.

It is also home to several hundred indigenous people, some 'uncontacted' and some 'contacted', living in Yomibato and Tayakome.



KEY *Sobrevuelo* = over flight routes — = seismic lines [Green Box] = Manu National Park (to the east)

[Light Green Box] = RTKNN protected area of native people living in voluntary isolation (in the centre)

Camisea expansion

The Peruvian NGO 'Derecho, Ambiente y Recursos naturales' (DAR) has published a report entitled '*Situación de la Reserva Territorial Kugapakori, Nahua, Nanti (RTKNN) y otros y la ampliación del proyecto Camisea*' (July 2013).

The detailed report outlines the vulnerable situation that the indigenous peoples living in the RTKNN face as a consequence of the planned expansion of the Camisea gas project (Lot 88). Lot 88 is operated by Pluspetrol (Argentina), Repsol (Spain) and Hunt Oil (USA). The report concludes that –

- indigenous peoples of the RTKNN will be placed in danger as a result of the expansion contrary to Peruvian law upholding their rights;
- the EIA for the expansion should never have been accepted given the close proximity of populations to the projected seismic lines;
- the EIA makes no financial provisions for the goal of offering direct protection to the environment and indigenous peoples from the operations;
- the EIA does not cover the proposed expansion of Lot 88 which, along with other sub-projects, contains distinctive aspects each requiring their own EIA;
- additional measures need to be proposed by Pluspetrol with respect to the environment and indigenous peoples not only to minimise the impact of their activities but also to improve conditions;
- in converting the Territorial Reserve in to an Indigenous Reserve the government must not allow extractive activities to take place such as oil/gas exploration but instead must ensure that the principal intangibility of these areas is upheld.

The TReeS representative in Peru is one of the authors of the report.

On the international stage, the UN committee for the elimination of racial discrimination (CERD) has restated that, in its opinion, the Peruvian governments plans to expand Lot 88 puts in danger the '*physical and cultural survival*' of indigenous peoples in the area.'

75% of Lot 88 lies within the RTKNN. Seismic tests would be spread across 379 km² of forest and involve 9,500 underground explosions, using 38 tonnes of explosives, set off at a depth of 15m. 80 heliports within the forest would access up to 21wells and this would be undertaken by 1,200 workers, 200 of whom would be based within the Manu Buffer zone.

Under UN General Recommendation No.23, signatories are not meant to undertake actions without the 'informed' consent of those affected.

Under ILO Convention 169 indigenous peoples should have the right to decide their own priorities with respect to development.

The Peruvian government signed both documents suggesting that to proceed would be illegal under international law.

Approval of the Environmental Impact Assessment (EIA) for the seismic tests, 18 wells and a pipeline extension is now awaited from the Ministry of Energy & Mines (MEM). MEM is itself awaiting approval from SERNANP, the government institution responsible for protecting the landscape and wildlife. SERNANP raised 69 points needing clarification in the EIA and was particularly concerned about the displacement of those indigenous peoples living in voluntary isolation from the exploration zone in to Manu National Park which would place much greater pressure on the resources of the National Park. Twenty-one of the 69 points raised still need further clarification. However, SERNANP seems far more concerned about the impact on the wildlife of the National Park than the uncontacted peoples in a supposedly intangible indigenous reserve.

The Vice-Ministry of Inter-culturality (VMI), a sub-department of the Ministry of Culture, has proposed five new reserves - covering 4 million hectares - for indigenous peoples in voluntary isolation within Peru. Many have noted that four of the five proposed areas already have oil/gas exploration lots overlapping them. Since the proposal was made, three top officials in the VMI have resigned in opposition to the government position with respect to indigenous peoples.

It has been proposed that the Lot 88 extension is renamed 'Lot Fitzcarrald' as it encompasses part of the area where the notorious rubber baron Carlos Fermin Fitzcarrald operated more than 100 years ago. Of course, there would be a terrible irony in naming Lot 88 – a project that could 'devastate the lives of thousands of indigenous peoples' – after a rubber baron whose activities 'devastated the lives of thousands of indigenous peoples'.

The Purus Highway

The UK NGO Global Witness has published a report entitled '*Rocky Road: How legal failings and vested interests behind Peru's Purús highway threaten the Amazon and its people*'.

The main findings of the report are that –

- illegal forest clearance for the road is already underway outside Puerto Esperanza;
- the Purús government stands accused of faking expressions of support for the highway;
- a timber company and local officials drew up an illegal contract allowing logging in exchange for road building;
- a number of the main supporters of the Bill to build the road have possible conflicts of interest;
- indigenous communities who oppose the road are being discriminated against;
- a local official offered bribes to an indigenous organisation for support for the highway;

A copy of the report can be located and downloaded by typing in to Google: '*Rocky Road report*'.

FENAMAD

In August, FENAMAD held a series of meetings in Puerto Maldonado about the threats faced by indigenous peoples living in isolation in western Madre de Dios. Despite having no direct contact with these peoples FENAMAD sees it as its duty to represent their interests.

The meetings highlighted that the State still disrespects and ignores indigenous rights while failing to consult fully with indigenous peoples despite being a signatory of several relevant international conventions.

In 2006 a Manu National Park Contingency Plan was produced. Back then it wasn't envisaged that a group of Mashco-Piros would leave the Park, in 2010, and end up living on a beach, on the river Manú, in the Buffer zone. However, the Plan was not implemented in this case and significant problems have arisen since contact occurred. Specific plans for this group to dissuade tourist visits, immunise local people, manage disease outbreaks and handle conflicts with locals were discussed at the meetings.

The meetings went on to focus on how to respond if contact does occur and how to fund the activities recommended. A draft 5 year plan was discussed. The four main locations of potential contact were identified as the -

- River Manú (see above);
- River Piñi Piñi (Alto Madre de Dios)(see below);
- River Las Piedras (N.C.Monte Salvado, where a large group of uncontacted came out of the forest briefly at the end of June this year);
- River Tahuamanú (in northern Madre de Dios).

One of the challenges in producing a Plan is that definitions of terms, places and expectations often vary between the State and FENAMAD. For example, some Matsigenka groups live in semi-isolation within Manú National Park so they are not classed as 'uncontacted' but have insufficient contact to have acquired a DNI (Identify card) which means they are not entitled to health care from EsSalud which suggests that they are being classed as 'uncontacted'.

On a more positive note a series of events were held in P.Maldonado to celebrate World Indigenous Day, 9-10th August, such as a street photo exhibition, films and a handicrafts market.



FENAMAD Meeting © TReeS

Mining in Madre de Dios update

At the end of September the National Confederation of artisanal and small-scale miners (CONAMI) called a national strike. The strike opposes the current procedures for the formalisation of mining claims on the basis that mining in river beds and the use of machinery is banned. A lack of legal clarity also remains as to how competing land claims from miners and farmers should be resolved. This is compounded by claims of varying degrees of corruption at different levels of the bureaucratic process. This includes larger mining organisations persuading individual family members to seek concessions to acquire rights over much larger areas.

In August 100 pieces of gold-mining equipment were destroyed by the authorities, in Madre de Dios. CONAMI has complained that such actions don't help to formalise mining activities but are an attempt to eliminate them. However, the local government has stated that they have no choice as the threats to human health and the environment from mining activities are so great.

The government has expressed the wish that all informal mining activities are formalised by April 2014 but a recent study in Madre de Dios found that only 280 informal miners had embarked on the process – approx.11% of all miners believed to be working in the region. With the number of informal miners growing on a daily basis and by 20% in the last 3 years, the April 2014 target looks challenging. The environmental NGO Cooperación has called for a suspension of the granting of new concessions until the issue has been resolved and the sector can be regulated effectively.

Peru News

Southern Peru was affected by severe weather conditions in late August as a consequence of the La Niña phenomenon. In a La Niña year normal conditions become more extreme. Temperatures plummeted across ten southern departments to near record levels and there was heavy snow across all the southern Andean departments. Several deaths were recorded with thousands admitted to hospitals with respiratory problems and hypothermia. Thousands of head of livestock (cattle, sheep, llamas and alpacas) also died. Population pressures are forcing farmers to farm at ever higher altitudes in increasingly difficult conditions as global warming makes the weather more extreme and unpredictable.

Ex-President Fujimori is facing a new trial over the misuse of public funds in the 2000 Presidential election. He is accused of trying to buy positive press coverage in the tabloid press the '*diarios chichas*'.

A big rise in the number of UFO sightings across Peru has led to the reopening of the Department of Investigation of Anomalous Aerial Phenomena (DIFAA) which was mothballed five years ago.

Other TReeS Supported Projects

Programa de Becas (Small Grants program) 2014

The announcement for the 2014 small grants programme has been made and applications are awaited early in the New Year.

The Becas programme is an important contribution to the career development of young Peruvian scientists who will, potentially, be working in and promoting Amazonia for decades to come. TReeS funding assists them in gaining all important field work skills that may allow them, subsequently, to join other more significant field research projects and conservation organisations.

Appeal: £25+ donations towards the cost of the 2014 and future grants programmes.

Beca Recipient Feedback

***Patricia Meza (Beca 2012):** '*Aislamiento e identificación de hongos filamentosos en quebradas de la zona baja de Madre de Dios influenciadas por la actividad minera aurífera*'.

Patricia looked at the presence of microscopic fungi in areas affected by mining activity. It is the first such study in Peru. Samples were taken from water and river sediments in *quebradas* at kms 103, 108 and 110 along the InterOceanic highway as well as from a control station within the Tambopata Nature Reserve.

Mercury levels varied from 0.01-0.83 ppm while the pH varied from 6.59 at the Control station to 5.61 at km103.

Fungus samples were extracted from the samples and cultivated to identify the species.

Over 200 species were identified from 29 genera, mainly from sediment samples, with *Trichoderma* the most common species. Most species were identified at the Control station.

A direct correlation was found between the number of fungus species identified and the level of mercury contamination.

Micro-fungi are very important for the functioning of ecosystems with respect to the release of nutrients and the speed of the cycle. Patricia concludes by stating that the exact relationship and interaction between fungi and contaminants is an area needing further study as well as the potential for fungi to help to control contaminants.

***Roland Quispe (Beca 2013) –** '*Estructura vertical y horizontal de *Couratari Guianensis* Aublet (MISA) de estrato superior en el Fundo Noaya.*'

Rolando established a study plot measuring 200 x 1000 metres, which was sub-divided in to 25 sub-parcels (40 x 200) containing 17 mature specimens of *Couratari Guianensis* Aublet. The species has important ecological roles and social uses.

Measurements were taken of tree height, base area and diameter so that calculations of absolute dominance could be made.

The study was compared to other similar studies.

***Karina Salas (Beca 2008):** '*Evaluación de regeneración natural de *Berth.ex.HBK* (Brazil-nut) en poblaciones naturales en 2 tipos de concesiones de conservación y de aprovechamiento, en Madre de Dios.*' (Final Report)

Karina compared the density of regeneration of brazil-nut trees in a brazil-nut concession on the Sonene (Heath) river and in area where brazil-nuts are not harvested in the Rio Los Amigos Conservation Concession, located in central Madre de Dios.

She evaluated 135 trees in each location. Around each tree three transects, each measuring 2m x 70m, were established as well as 2m either side of 18.152 kms of trails at each site along which regeneration was assessed.

In the brazil-nut concessions 100 new trees were located with a density of 5.38 per hectare, while in the conservation concession only 48 were located, with a density of 2.58 per hectare.

Measurements of the height and diameter of trees showed no significant difference between the plots.

The research suggested that the harvesting of brazil-nuts does not appear to impact on tree regeneration.

***Jorge Peralta (Beca 2011):** '*Diversidad de Heteropteros acuáticos y semiacuáticos en la Zona Reservada Tambopata (ZRT)*'.

Jorge undertook his field research at the Posadas Amazonas (11 sites) and Refugio Amazonas (9 sites) lodges. At Posadas samples were taken from five 'flowing water' sites and six 'stagnant water' sites, while at Refugio they were six and three respectively.

In total 67 species of aquatic and semi-aquatic Heteropteran beetles ('true bugs') were identified, all new to the area and increasing by a third the previously known number of species in Peru – 192 species. This suggests that many more species await discovery.

At Posadas 33 species were identified from 10 families, 13 sub-families and 19 genera, with 14 unique to the location. Further upriver at Refugio, 53 species were found from 11 families, 21 sub-families and 27 genera, with 34 species unique to the location. In total 13 families, 23 sub-families and 30 genera were identified. The largest groups identified were Veliidae (25 species), followed by Genidae (9) and Notonectidae (8).



Paravelia bullialata (Veliidae) © Jorge Peralta

Elisban Armas: a scientific appreciation

On this sad occasion I wanted to record some words about Elisban as I knew him, as naturalist and teacher, before he started using his skills as a sought-after guide for visitors to the Peruvian Amazon.

I first met him in 1986. As an undergraduate at Cambridge I had the great fortune of being able to travel to Peru and work as a guide at the Explorers Inn. Elisban's father, Don Jose Armas, was a wonderfully knowledgeable yet irreverent guide to the forests of Tambopata, sharing his knowledge with great humour. With his wife Doña María and children, the whole Armas family kindly welcomed various young English visitors to their home, farm, and forest, across the river from the Explorer's Inn.

Born further north in Peru to indigenous parents, Don Jose had tremendous understanding of the plants and animals of his native Amazon. While Don Jose's knowledge was very broad, he had a special affinity to the many medicinal plants and their applications to cure, or at least alleviate, health problems. Elisban as a young man had already developed great knowledge of the different trees used for construction, the calls of the birds and mammals, and the particular fruits they preferred to eat. This knowledge was supremely practical, of necessity in a world where finding animal protein, and cutting, working and selling wood were vital skills for a young man. The Armas family had a gift for understanding the forest around them. And, in their different but always kindly and thoughtful ways, they helped those of us visiting to see more and better than we could have ever managed alone.

Elisban the naturalist was one of the unsung local heroes who have contributed so much to tropical ecological science, and with too little recognition. In 1979 he established the first ever permanent sampling plot in Tambopata, with Gary Hartshorn. Together with other plots later by Terry Erwin of the Smithsonian, the Earthwatch project, and Al Gentry and his colleagues from Missouri Botanical Garden, Iquitos, Cusco, and RAINFOR. This forest is still being closely monitored today, a third of a century on. These plots in which trees are identified are a 'living herbarium'. Here new generations of biologists can learn about the thousands of tree species that make up the Amazon, how they grow, how they die, and how vital they can be in the lives of local experts like Elisban and Don José. These plots are now also silent witnesses, recording how the tree biomass (carbon) and growth and species at Tambopata have been changing since that time, small parts in the giant, uncontrolled planetary experiment being pushed ever onwards by forces far from Elisban's world.

Elisban's contribution to establishing these witness sites to change - was pioneering: there are only three other sites in Amazonia with plots as old as these.

For me, the role of Don Jose and of Elisban as kind and generous guides was transformational, helping me to see the forest with new eyes, inspiring a deeper understanding, and with that revealing a host of exciting questions that have inspired my scientific life. For all this I am truly grateful.

Of course, over more than three decades first father and then son helped many other scientists and naturalists who also had the privilege of coming to Tambopata. Scattered across the Earth as we are, I know that those who had this experience join me in appreciating the special contributions made by Elisban and his father.

Dr Oliver Philips, Dept.of Geography, Leeds University.



Tambopata documentary

A recent Resident Naturalist at the Explorer's Inn – Tristan Thompson – has filmed and produced a half hour documentary: '*The Untamed Wilderness*' about the Tambopata rainforest.

It can be located on Youtube at –

<https://www.youtube.com/watch?v=uXkW1OEVjGE>

The HD film begins by following a family of Red Howler monkeys, before looking at some of the world record number of bird species found at Tambopata, including a group of Aracari. It then follows the Leafcutter ants through the forest from the forest floor to the tree tops. Footage of mammal species includes peccaries and, with a night vision camera, jaguar, puma, ocelot and giant armadillo. The next section looks at *cocha* (lake) ecology focusing on Hoatzins and Giant River otters. The film ends with shots of the Macaw *colpa* further up the Tambopata river.

Ese'ēja Rescate project

For several years TReeS has supported an initiative of the Ese'ēja indigenous group to acknowledge and retain traditional aspects of their culture. This has included recording elders of the Ese'ēja communities within Peru - Bahajua (Infierno), Palma Real and Sonene (Heath) - retelling their oral histories; and organising expeditions upriver (rivers Sonene and La Torre) of elders and younger community members to visit sites of great ancestral significance where resources were once obtained or their ancestors buried. The communities do not have the funds to mount such trips and an important aspect of their cultural identity risks being lost from the era when they were semi-nomadic and moved seasonally through the rainforests of the Tambopata river basin. The latest step involves making digital copies of the recordings so that copies exist for posterity and they can be made more accessible for academic research.

A spin-off from the project is the establishment of a small-scale handicrafts project in the community of Palma Real. In July, the group participated in the annual national handicrafts event at the Banco de la Nación, in Lima.

TReeS Beca recipient assists FENAMAD

A recipient of a TReeS Beca 2013 – Yazmin Rivero – has found herself heavily involved in day-to-day activities at the Federation of native peoples of Madre de Dios (FENAMAD) while undertaking research for her thesis about FENAMAD's participation in the political process that led to the creation of the RCA (Reserva Comunal Amarakaeri) and its subsequent operations. She has provided administrative support, acted as a facilitator at meetings and assisted at meetings with external organisations. The FENAMAD committee stated that her support at the 'Indigenous peoples living in voluntary isolation' conference, in August, was invaluable.

Glasgow University Peru expedition 2013

TReeS provide small-scale funding again to another Glasgow University expedition to the Manu Learning Centre (MLC), in the Alto Madre de Dios, run by CReeS (no direct connection to TReeS). Glasgow University Biology Dept., has established a long-term link with CReeS and similar expeditions have visited the MLC for some years now.

The main aim of the expedition was to undertake basic inventories to look at the abundance and distribution of large mammal, butterfly and amphibian species in areas of 'disturbed' forest which could then be compared to nearby areas of 'undisturbed' forest.

Funding was provided to facilitate Peruvian participation in the expedition. For the first time TReeS provided part of the funding in the form of materials that would be of use to the Expedition such as checklists and sound recordings.

Casa Miraflores

A recent report from the Defensor del Pueblo (Human rights ombudsman) stated that 46% of indigenous children don't receive any education in their mother tongue. At least 10% of children speak a mother tongue as their first language rising to 60-70% in remoter Andean and Amazonian communities. Only 1% of the national educational budget goes on bilingual education.

In Madre de Dios, many indigenous children receive a basic Primary education and those able to move to Puerto Maldonado or the Mission at Shintuya, in the Alto Madre de Dios, a basic secondary education. The odds of going on to further education are tiny but each year a small group of indigenous students attempt to do so, in Puerto Maldonado.

There are currently seven students studying nursing, teaching and agro-forestry. They have left their communities and live in a FENAMAD owned house - Casa Miraflores, in the suburbs of Puerto Maldonado. For those from communities such as Yomibato, inside Manu National Park, home is a 2-3 week round trip which is prohibitively expensive and time consuming to make more than once a year.

Unfortunately, Casa Miraflores has now fallen in to an appalling state of repair and offers only the most basic accommodation to the students. The roof leaks in most rooms, the pipework and windows need urgent attention, various infestations need to be dealt with and there are only the most basic furnishings.

Not surprisingly there is a high drop out rate each year. FENAMAD currently only receives core funding - from Rainforest Foundation (Norway) - to cover central running costs and has no budget at all for Casa Miraflores. The students are almost the only indigenous community members to have the opportunity to train for a professional career. Most then return to their communities to offer a degree of medical care, schooling, etc. Few non-indigenous teachers, nurses, etc want to work in the forest, in remote indigenous communities, several days upriver.

TReeS has offered to cover the cost of immediate roof repairs and other essential work. Any additional contributions to this would be most welcomed. A project proposal for the complete renovation of the building is available, if anyone is interested.

Appeal: £1,000 to pay for emergency repairs.



Casa Miraflores © TReeS

Heaviest tree ever recorded in Madre de Dios

During field work in Tahuamanu, in northern Madre de Dios in 2012, a RAINFOR team identified the heaviest tree ever recorded – a *Shihuahuaco* (*Dipteryx micrantha*) – weighing 76.1 tonnes. However, its height (44 metres) and diameter (158cms) were unexceptional.

TReeS Library - forthcoming deposits will include the following reports (those in Spanish are untranslated):

- *'Intensification of the Amazon hydrological cycle over the last two decades'*, M.Gloor et al, Geophysical Research Letters, Vo.40, 11-5, 2013;
- *'Biome-scale forest properties in Amazonia based on field and satellite observations'*, L.Andersen, Journal of Remote Sensing, 2012;
- *'Rocky Road: How legal failings and vested interests behind Peru's Purús highway threaten the Amazon and its people'*, Global Witness, 2013;
- *'Tropical Forests: Tightening up on tree carbon estimates'*, R.Goodman et al, Nature 491 (2012);
- *'Glasgow University expedition 2013: Preliminary report'*;
- *'Aislamiento e identificación de hongos filamentosos en quebradas de la zona baja de Madre de Dios influenciadas por la actividad minera aurífera'*, Patricia Mendoza (2012);
- *'Estructura vertical y horizontal de Couratari Guianensis Aublet (MISA) de estrato superior en el Fundo Noaya'*, Roland Quispe (2013);
- *'Diversidad de Heteropteros acuáticos y semiacuáticos en la Zona Reservada Tambopata (ZRT)'*, J.Peralta (2011).

TReeS Membership

Members are reminded that the basic TReeS membership rate is now £15 / annum.

Membership is due on the 1st of **January** each year.

We would be most grateful if members could amend their bank orders, if still necessary.

All cheques are payable to – 'TReeS'.

**TReeS Membership:
£15 per annum**

**TReeS contact details –
P.O.Box 33153,
London NW3 4DR**

TReeS USA –

P.O.Box 842, Shasta Lake,
CA96019-0842, USA.

TReeS USA is run by Bud and Margaret Widdowson.

All members in Canada / the USA are requested to pay their annual membership via TReeS USA.

TReeS committee 2013-2014

*Sally Edwards
John Forrest
Dr Helen Newing
Huma Pearce
Elizabeth Raine
Daniel Turner
Rebecca Warren*

TReeS website

Details of **TReeS merchandise** can be found at the website:

www.tambopata.org.uk

If you would like to receive the TReeS Newsletter in future by email, please send a request to –

treesuk1@gmail.com

STOP PRESS

Peru will host the next round of global Climate Change talks in 2014. This will be the 20th round of talks and the final meeting prior to the major Paris Conference at which legally binding decisions to come in to force in 2020, to replace the Kyoto Protocol, will be decided.



***This Newsletter is sponsored by Freeman Trading:
UK importers & Bean Wanderers: coffee bean roasters of
Tunki Coffee ***

The best coffee in the world – look out for it in your local cafe !

Peru is the sixth largest coffee producer in the world and the largest organic coffee producer. Organic coffee, typically, generates a 40% lower income than non-organic coffee because production is smaller. Tunki coffee is produced by small growers in the hills around San Pedro de Putina Puncu, close to the source of the river Tambopata, and is exported by the Cecovasa co-operative.

In 2012 Tunki coffee came first in the Peruvian National coffee awards. In 2010 it was voted the best coffee in the world by the American Association of Specialist Coffees.

For more details visit: www.freemantradingltd.com
www.beanwanderers.co.uk