

TReeS News No.81

December 2018

The TReeS newsletter provides an update to its members and for those interested in rainforest related issues in Amazonia, specifically in Madre de Dios, in south-east Peru, and the small-scale projects TReeS supports there.

This edition focuses on the projects supported by TReeS members: the reforestation of an ex-ranch; Casa Miraflores: the 'home' run by FENAMAD for indigenous University students in Puerto Maldonado; and feedback from past recipients of a small grant (*beca*). There is also a report from a Franco-Peruvian University student who has recently taken part in the National Parks service volunteer ranger programme.

Reforestation project update

The TReeS reforestation project began four years ago to reforest an ex-ranch belonging to APRONIA – a local Swiss backed NGO supporting homeless children - adjoining the Bello Horizonte lodge operated by it. As reported in TReeS News No.80, three hectares were 'reforested', principally with *limón tahití* and *limon sutil* in association with banana, *pashaco*, *castaña* (brazil-nut) and *copoazú* seedlings.

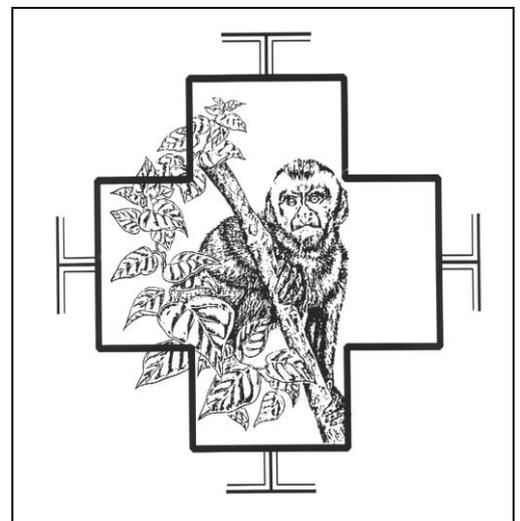
Many of the *limón tahití* and *limon sutil* trees are now 3 metres tall and producing a good harvest. It is estimated that the harvest this year will be in excess of 5 tonnes. The individual fruits are quite large, contain a lot of juice and are neither very acidic nor very sweet so suited for use in juices, ice-cream and cooking. The cocoa harvest is also good with most trees producing a significant number of pods. With both crops the fruit is largely free from infestations, fungus, etc.

The cocoa and fruit will be used in the lodge and the 'Gustitos del Cura' juice and ice-cream parlour in the plaza de armas of Puerto Maldonado. In future, the excess fruit grown could be sold in local markets and the project, potentially, should become self-sufficient and would generate sufficient funds to facilitate the continuing reforestation of the area.

The plans for late 2018/2019 are to -
-maintain the existing planted area which involves regular weeding, pruning, etc;
-begin to enrich the planted area – in part through the replacement of banana trees - with *limon Tahiti* (200 saplings), citrus (orange)(200), brazil-nut (100) and *bolaina*, a timber species (100);
-extend the planted area by 2-3 hectares with similar species. The grass in this area of ex-pasture is especially entrenched and will require 'ploughing in' to clear and prepare it for planting. Approximately 2,000 seedlings have been prepared and are ready on site for planting out.

Appeal: £1 per sapling - to TReeS members, friends & family: that whenever you fly you make an appropriate donation direct to TReeS to plant more trees to compensate for your CO₂ emissions. There are several websites that can help you calculate the CO₂ cost of your flights such as:

www.co2.myclimate.org/en/flight_calculators



Approx. 2,000 seedlings - raised from seed - ready for planting out © TReeS



Amilcar Muñoz Arias with the fruits (limes) of his labours on 4 year old trees © TReeS



Cocoa pods on a 4 year old cocoa tree © TReeS

Casa Miraflores

A couple of years ago we highlighted the plight of the indigenous students living at Casa Miraflores – the house owned by FENAMAD on the outskirts of Puerto Maldonado. The ‘house’ had fallen in to serious disrepair and several TReeS members made generous donations.

The students living there come from indigenous communities across the department – to reach some involves a week long journey - to study at the only higher education facilities in Madre de Dios. In total there are about 60 indigenous students studying in a variety of institutions to pursue a career in nursing, teaching, tourism, forestry, etc. However, many of them don’t have family in Puerto Maldonado and need somewhere to stay.

When TReeS first visited Casa Miraflores the poor conditions meant that most of the students had left to find other accommodation or to return to their communities. A Swiss NGO (Ecosolidar) has now stepped in and financed improvements to the infrastructure: roof, windows, electrics, kitchen, perimeter fencing, central study area, toilet/shower facility, etc.

The house is now much more inhabitable and a record number of 18 students are living there. They come from a range of native communities including Puerto Luz, Santa Rosa de Huacaria and Palma Real. A local psychology graduate has been employed by FENAMAD as ‘housekeeper’ to help them run the house, adjust to urban life and with their studies.

However, the recent funding didn’t cover all needs and TReeS responded to a request from FENAMAD to offer some additional support. As a result, TReeS has sent funds to purchase an additional large table and two benches, a whiteboard and whiteboard pens, an electric current stabiliser, a fridge, two more mattresses, repair of the computer donated by FENAMAD and the cost of a maths teacher twice a week for two hours, for two months – to ensure classes continue to the end of the academic year.

The table and benches were needed in the study and communal meeting area, while the fridge is essential to store fish sent by some of the parents from their communities. Most of the students received their secondary education outside of Puerto Maldonado in local schools and their level of maths, especially, is below the standard of other students and needs improving through extra classes.

These indigenous students are the ones who will go on to play important and may be leading roles in the future of indigenous affairs in Madre de Dios. In the past, their only further study options were in Cusco and Lima – very different environments – and the participation and success rates were low. One of the few to succeed in the past was Hector Sueyo who studied in Lima and now holds an important position in the Ministry of Culture, in Lima.

Appeal: £25+ to further improve the facilities in Casa Miraflores.



The central courtyard with the dormitory rooms off it © TReeS



The shared kitchen © TReeS



Students with the FENAMAD co-ordinator © TReeS



Students, FENAMAD & TReeS representatives at the donations handover ceremony © TReeS

My experiences as a volunteer ranger in the Tambopata National Reserve

I am a 22 years old student of agronomy undertaking a university gap year to obtain field experience in forest activities and management. I have just spent four months as a ranger in Tambopata as a member of the SERNANP (National Service of Natural Protected Areas) volunteers scheme. This was the third time that SERNANP had offered up to six places for volunteers to work with its regular team of rangers in the Tambopata National Reserve (TNR). Volunteers are based at the guard posts located on rivers leading in to the TNR from where they supervise all the activities taking place in the area. The volunteers participate in the day-to-day activities of the rangers.

My aim was to find out more about the different forest based activities taking place, and to study brazil-nut collection in the TNR. I spent the first three weeks at the Malinowski guard post where there was no phone signal so I felt quite isolated. I, then, spent almost ten weeks at the Jorge Chavez guard post across the Tambopata river from Puerto Maldonado. My final stay was for 10 days at the Huisene guard post which is on the Madre de Dios river between the two Palma Real streams (Palma Real Grande and Chico). I also spent a week going by boat and walking along forest trails from the Huisene guard post to visit brazil-nut collector camps, where we also stayed overnight. I went to other guard posts at the mouth of the La Torre river, Lake Sandoval and Briolo, which lies 15 minutes up the Briolo stream – halfway between P.Maldonado and Huisene. The Sandoval guard post has the most volunteers because it is the most visited because of tourism and the rangers need more support.

At each the guard post, I stayed in one of the cabins. The rangers spend three weeks at a guard post and then have one week off to go home. We all had to muck in and help clean the cabins, wash up, maintain the outdoor areas, etc. I loved sharing all this time with the ranger ‘family’ and I actually learned how to cook rice the Peruvian way!

The ranger’s daily life is both fascinating and at the same time quite tough. The most interesting moments were the patrols by boat or by motorcycle, where you could chat with locals or tourist guides about what was happening in the forest. However, volunteers do not participate when the rangers investigate illegal gold-mining activities, especially along the river Malinowski. After each patrol the rangers have to make a very detailed report (duration of trip, distance covered, access route taken, what animals they saw or footprints of conservation species they sighted – all with GPS coordinates) and any evidence of illegal activities found. If a special intervention is required, SERNANP will not intervene alone - it’s the responsibility of the military forces now.

Going in to the field when you are a European girl was a huge change of scenery. I was amazed by the size of the giant trees and the Chunchu *colpa* (clay-lick) was very impressive since the macaws were so numerous on the days I went there. Every day I saw a lot of fauna completely unfamiliar to me and on one amazing day near the *colpa* I saw two jaguars in close proximity to each other on the river bank. Apart from that I also saw caimans, many monkey species, capybaras and a lot of bird species but no giant river otters! I also loved just being alone beside a stream and encountering a caiman or turtles.

It all makes you want to do whatever you can to protect the forest. To do so, it starts with the kids and another activity realized by the rangers and the personnel of SERNANP is environmental education, which is a key point to start changing behaviours. I was actually shocked by things such as the huge amount of single use plastic used by people along the river. Sadly, much of this plastic often gets thrown on the ground and in the river. Nevertheless, most local people were not aware that this is a global problem that threatens, at their scale the TNR and the futures of their children. I spent some time with a local organisation: AIDER (Association for integrated investigation and development), joining them for fauna monitoring and environmental education classes in local schools.

The TNR is a wonderful place for all kinds of projects such as biology, agronomy, forestry, tourism, social sciences and more. Now that I am continuing with my studies I can see all the applications that are possible in Tambopata and I am so happy because this means that my dream to go back there – and see giant river otters - will come true!

More detail about the SERNANP volunteers programme can be found at - voluntariado@sernanp.gob.pe

Bettina Mathorel



Giving an environmental education class at a primary school near the Jorge Chavez guard post © B.Mathorel

TReeS small grants (Becas) program 2019

The small grants programme is a, potentially, very important contribution to the career development of young Peruvian scientists. Over 60 grants have been awarded over the last 10 years and a survey of the past recipients shows that many have gone on to work in a variety of roles in Amazonia, including Madre de Dios. TReeS funding assists them to gain the all important field work skills that allows them to complete their University studies.

In 2018 a record number of nineteen applications were received and seven applicants were able to accept the offer of a grant.

Appeal: £25+ donations towards the **2019 grants programme** so that a similar number of grants can be awarded. **TReeS members support is hugely important in maintaining this programme.** **Unfortunately, the fall in the rate of exchange since the Brexit vote has also reduced our funding capabilities for such programmes.**

TReeS small grants recipient feedback

***Betsy Muñoz** (UNALM)(2016): *‘Capacidad de recuperación natural de la vegetación en cronosecuencias de áreas degradadas por minería aurífera aluvial en Madre de Dios’* – undertook a study that looked at the rates of tree regrowth on land deforested by gold-mining in the community of Santa Rita, close to La Pampa on the Inter-oceanic highway. Betsy surveyed three plots (50m x 50m) where it was known when they had been abandoned by gold-miners – 7 years ago, 8 years ago and 15 years ago. She also had a control plot in the surrounding forest.

Each plot was sub-divided and trees with a DAP (diameter at chest height) of 5cm+ were surveyed in a 20m x 50m parcel while in the remaining 30m x 50m parcel trees with a DAP of 1cm+ were surveyed.

The results are shown in the table below.

Several factors may explain the results, including –
-the 7 years abandoned plot was much closer to the forest compared to the 15 years abandoned plot. This strongly suggests that this plot benefitted from seeds falling from the nearby forest which lead to much faster regrowth.

-the degree to which the plots were deforested and degraded in the first place. In some cases larger trees such as fruit trees are not felled and are left for a variety of reasons.

-the land in one plot may have been totally churned up by the gold-mining activities whereas in another plot it may have been left relatively untouched after deforestation.

-the quality of the soil and drainage which may encourage or inhibit new growth.

This clearly indicates the importance of ensuring that large tracts of forest remain untouched to support adjacent regrowth.

Betsy also suggests that regeneration could be enhanced through the selective planting of tree species that can rapidly provide shade and increase ground level humidity.



In the field © B.Muñoz

Tree measurements	7 years	8 years	15 years	Forest Control Plot
No.of families	23	12	10	30
No.of genera	33	15	14	54
No.of species	50	20	18	79
No.of trees measured/plot	175	100	64	150
DAP area (m ² /ha)	11.1	7.6	3.9	20.1
Maximum diameter (cms)	12.1	8.1	7.6	12.1
Maximum height (m)	10.4	8.7	5.7	10.4
Density (gr/cm ³)	0.6	0.34	0.27	0.6
Shannon index	4.102	2.216	2.166	4.102

TReES small grants recipient feedback continued

***Ximena Gallegos** (UNSAA)(2017): ‘*Etnobotánica cuantitativa de la comunidad nativa Infierno y propuesta de programa educativo ambiental para su conservación y uso sostenible*’ – undertook a study that looked to quantify ethnobotanic data in the native community of Infierno and propose some educational initiatives that might assist with the conservation and sustainable use of the plants concerned.

Ximena found that the community made use of 157 different plants from 61 families and 134 genera. The main species used were *Fabaceae*: 16 species (10%), *Arecaceae*: 11 species (7%), & *Malvaceae*: 8 species (5%). The plants were used across more than ten usage categories including for food, medicines, colourings, timber, handicrafts, poisons, fuel, etc. The category involving the most species was for medicinal use: 98 species used in 246 different ways; followed by food: 38 species used in 139 different ways; and 30 timber species used in 80 different ways.

The species with the greatest cultural value were considered to be *cedro* (0.4545), *caoba* (0.3960), *catahua* (0.2444), *ayahuasca* (0.1818) and *shihuahuaco* (0.1616).

The educational programme was proposed using the title ‘*Revaluation of the use of plant species in the CN Infierno under the indigenous Ese’ija education policy: ‘Ekue akui eja mishitiji pani*’. A total of 13 educational activities were planned for the primary/secondary school ‘Shajao’, in the CN Infierno.



Figura 15. Plantas artesanales. A y B. Palobalsa/topa (*Ochroma pyramidale*): hábito y flor. C. Palmiche (*Geonoma diversus*). D. Tamishi (*Heterocypis oblongifolia*): raíces. E y F. Bombonaje (*Carludovica palmata*): hábito y cogollo (brote). G y H. Cholocho (*Cinnna indica*): hábito y fruto. I. Huayraro (*Osmoia bopimensis*). J. Angelica Mishaja artesana de la comunidad tallando palobalsa. K. Pedro Mishaja artesano de la comunidad mostrando figura tallada. L, M, N y Ñ. Figuras artesanales confeccionadas en palobalsa. Comunidad Nativa Infierno, Tambopata, Madre de Dios – Perú, 2015.

A page from Ximena’s thesis featuring plants use in the making of handicrafts © X.Gallegos

Peru News

The last 6 months again reflect the dramatic nature of Peruvian politics.

Ex-President Fujimori was ordered back to prison when his pardon was rescinded. Meanwhile, his supporters tried unsuccessfully to get Congress to pass a bill enabling 72+ year olds to complete their sentences at home.

Ex-President Alan Garcia, like his two predecessors, became embroiled in the Odebrecht – Brazilian construction company - scandal. His response was to seek asylum in the Uruguayan embassy though the ‘political’ basis for his application remains unclear.

Aspiring Presidential candidate, Keiko Fujimori, leader of Fuerza Popular, was detained over funds she received from Odebrecht to assist with the 2011 Presidential election and faces up to 3 years in prison while awaiting trial.

In Congress, Fuerza Popular (FP) is the majority party but in recent regional elections they, like almost all the national parties, did poorly and public support appears to have fallen below 10%. A corruption scandal within the judiciary implicating many FP members, including the hastily appointed Chief Public Prosecutor, has also weakened their standing.

Meanwhile, the popularity of President Vizcarra has risen to an unprecedented – for the mid-term – 65%. From this position of strength, Vizcarra threatened to dissolve Congress and call a general election unless his proposal for a referendum to try to deal with corruption in the judiciary and Congress was agreed. The public voted in favour of –

- a new appointment and removal system for judges;
- changing how political parties are funded;
- not reintroducing a second chamber to Congress;
- prohibiting the immediate re-election of Congress members when their term ends;

which was in-line with Vizcarra’s wishes.

In the regional elections, in Madre de Dios, 80,000 people (77%) voted. ‘Fuerza por Madre de Dios’ (18.4%), a party backed by gold-mining interests gained most votes but their candidate, who has mining concessions in Tambopata & Las Piedras, lost the MDD governor run-off election.

Better economic growth approaching 4% is now predicted for 2018 as copper prices recovered. However, there are still concerns about the impact of the USA/China free trade spat on global prices and Chinese demand for Peruvian resources.

Peru has accepted 400,000+ Venezuelan migrants but anti-Venezuelan sentiments have grown and only new arrivals with a passport will be allowed to stay.

In the recent Brazilian Presidential elections, Bolsonaro, an ultra-right-wing former military officer was elected. On the basis of his previous statements his policies are likely to be extremely bad news for indigenous peoples and the Amazon rainforest.

We are grateful to the Peru Support Group (PSG):

www.perusupportgroup.org

for the sourcing of some details in TReES News.

TReeS Library: the following articles, documents and reports about Tambopata and Madre de Dios have been received/ sighted over the last few months. Many of them can be traced via the internet while some directly linked to TReeS will be placed on the TReeS website.

The following reports have been received from those who were awarded a **TReeS small grant** -

- ‘*Etnobotánica cuantitativa de la comunidad nativa Infierno y propuesta de programa educativo ambiental para su conservación y uso sostenible*’, X.Gallegos (Beca 2017 – thesis);
- ‘*Capacidad de regeneración natural de la flora en áreas degradados por minería aurífera aluvial en diferentes estadios en La Pampa*’, B.Muñoz (Beca 2017 – thesis);

The following publications can be accessed through the ‘MAAP’ website: www.maap.org

- ‘*Gold-mining deforestation continues in the Peruvian Amazon*’, MAAP 87;
- ‘*Using drones to monitor deforestation and illegal logging*’, MAAP 90;
- ‘*Shrinking primary forests of the Peruvian Amazon*’, MAAP 93;
- ‘*Detecting logging in the Peruvian Amazon with high resolution imagery*’, MAAP 94;

The following publications can be accessed through the ‘RAINFOR’ website: www.rainfor.org

- ‘*Pan-tropical prediction of forest structure from the largest trees*’, Global Ecology and Biogeography.’, J.F.Bastin et al, doi:10.1111/geb.12803;
- ‘*Compositional response of Amazon forests to climate change*’, A.Esquivel-Muelbert et al, Global Change Biology, 2018;
- ‘*Species distribution modelling: contrasting presence-only models with plot abundance data*’, V.H.F.Gomes et al, www.nature.com - Scientific Reports 8:1003, 2018;

The following publications were also sighted by TReeS –

- ‘*Sonenekuei: Ese’ejaha meshi río Sonene (Heath): Tierra de los ese’aja*’ map (FENAMAD)(2016);
- ‘*Soy Sontone: memorias de una vida en aislamiento*’, H.& A.Sueyo (IEP & Ministry of Culture)(2018);
- ‘*Tejido territorial ese’aja: más allá de las fronteras y las áreas naturales protegidas*’, M.Ponce (2018);
- ‘*Peru: Elite power and political capture*’, J.Crabtree & F.Durand (ZED Books)(2018);
- ‘*The Agricultural Sector as an Alternative to Illegal Mining in Peru A Case Study of Madre de Dios*’, V.Piñero (IFPRI)(2016);
- ‘*Bioremediation of a contaminated peatland aguajal in Madre de Dios, Peru*’, N.Wetenhall, (Journal of Ecosystem & Ecography, DOI: 10.4172/2157-7625.C1.024)(2016);

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TReeS Membership Renewal

Members are reminded that your annual membership fee is due in **January** each year.

We would be most grateful if any more TReeS members who can receive their copy of TReeS News by email could advise us of their email address accordingly to: treesuk1@gmail.com

General Data Protection Regulations (GDPR)

We have taken a variety of measures with respect to the new GDPR regulations to contact members and must now assume that if you have provided us with an email address, pay your membership subscription or make a donation on a fairly regular basis that you would like to be contacted by TReeS and receive TReeS News. If this is not the case, please send an email to: treesuk1@gmail.com OR ... write to us at the address below.

TReeS website

The TReeS website is being updated and now many more past newsletters and reports from students who were awarded a small grant (Beca) can now be accessed on it. During the first half of 2019 all 80 newsletters should appear on-line as well as all the reports received from students over the years.



'*Girl of the Rainforest*' cd by Cuzqueña Sophia Buchuck. A mix of traditional Andean tunes and her own compositions and poems, some featuring the well-known Peruvian musician: Chano Diaz Limaco – last few copies remaining. (36 minutes) **TReeS members price: £7.50**, including P&P.

TReeS Membership

The basic TReeS membership rate is still just £15 / annum.

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

We would be most grateful if members could amend their standing orders, if 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 2017-2018

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



Etlingera elatior (Torch ginger) © TReeS