



Mammal Mail

The Newsletter of the Tree-Kangaroo & Mammal Group

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ANNUAL GENERAL MEETING

What's Going On? Don't Miss These Upcoming Events

Thurs, Aug 7th: 5:30pm Committee meeting at the Malanda Hotel, followed by a presentation at 7:30pm by Dr. John Kanowski, "Threatened mammals of north Queensland: status update from the Mammal Action Plan".

Thurs, Sept 4th: 5:30pm Committee meeting at the Malanda Hotel, TKMG members welcome to attend.

Thurs, October 2nd: ANNUAL GENERAL MEETING 7:00PM MALANDA HOTEL

The Annual General Meeting for Tree Kangaroo and Mammal Group will be held on Thursday October 2nd 7PM at the Malanda Hotel. Light refreshments will be provided from 6:30PM. Presentation following the AGM by Damien Marrant—an update on his work on wild dogs.

Is your membership up for renewal? Please check (contact either Simon or Ilona) and RENEW YOUR MEMBERSHIP. You can renew before the AGM by contacting Ilona. You will also be able to renew on the evening of the AGM.

CALL FOR NOMINATIONS FOR TKMG MANAGING COMMITTEE

The TKMG AGM is scheduled for Thursday, October 2nd starting at 7pm. The meeting will be held at the Malanda Pub, our usual venue. A light supper will be provided from **6.30pm** for those members who will not have time to eat before the meeting. All executive positions will be declared vacant and whilst we expect many of the current executive members to re-nominate, 'new blood' is always most welcome. John Kanowski, will be nominating to retain the position of President. We will be looking for someone to step up to serve as Treasurer. You don't have to be an accountant (though that's a plus)—just be organized, honest and willing to take on the task of TKMG bookkeeping.

If you would like to participate or know a member who is prepared to play a role on the executive, please do not hesitate to nominate them for a position as a member of the Committee or the open Executive position of Treasurer. Nominations of current members can be accepted in writing or electronically (email) at least **2 weeks prior to the AGM**. **Deadline for written or electronic nominations is Sept 18th.** If no written/electronic nominations for Executive positions are received, there will be an open call at the AGM and you can put up your hand up at that time to make a nomination. ***Please ensure that the person you are nominating is prepared to accept the position.***

We expect the AGM to be finished by 7.30pm in time for our bi-monthly talk.

Tree Kangaroo Conservation Program in Papua New Guinea: An overview

(from a presentation given to the Tree Kangaroo and Mammal Group on June 26, 2014)

By Lisa Dabek

Director of the Tree Kangaroo Conservation Program, Woodland Park Zoo, Seattle, Washington USA

The Tree Kangaroo Conservation Program (TKCP), located on the Huon Peninsula in Papua New Guinea, has evolved from a species-specific conservation initiative for the Huon or Matschie's tree kangaroo (*Dendrolagus matschiei*) into a holistic program. Due to their cultural importance, tree kangaroos remain the program's flagship species even as TKCP's mission has expanded to encompass habitat protection for a wide range of threatened species as well as local livelihoods initiatives in the Yopno-Uruwa-Som (YUS) landscape and Local Level Government. The scope of the program has expanded from its mountainous beginnings to embrace coastal and marine ecosystems, including coral reefs and the YUS communities who live on the coast. The cornerstones of the project are the creation of the YUS Conservation Area (YUS CA), the first in the country, and opportunities for local sustainable livelihoods. The communities of YUS include around 50 villages and over 12,000 people. Today we have programs encompassing a wide variety of community needs identified through the YUS Landscape Plan which we developed in partnership with the local people.

In 2013, the National Government of Papua New Guinea officially approved the YUS Landscape Plan that TKCP and the communities of YUS created over the past three years. The YUS Landscape Plan serves as the management plan for the YUS Conservation Area as well as the strategic plan for TKCP. TKCP developed the Landscape Plan with the communities, beginning with an Open Standards for Conservation Practice approach and continuing through a series of land-use planning workshops. Because of the initial successes we have seen through this inclusive and comprehensive approach, we used this plan to guide all of our work.

The following five strategies of the YUS Landscape Plan will ensure the health and sustainability of the landscape and the people within it.

1. Managing the Conservation Area ("YUS Conservation Area management")

TKCP assists the Conservation Area Management Committee (CAMC) in managing the YUS CA, including the mapping the remaining unmapped protected area, ecological monitoring, and patrols and rule enforcement within the YUS CA, carried out by local YUS Conservation Area Rangers. TKCP also participates in the CAMC meetings as a member, along with representatives from the YUS Conservation Organization and local, regional, Provincial, and National Government officials.

2. Applying Our Research ("Research to inform management")

TKCP is continuing to answer the ecological and social questions needed to achieve successful long-term conservation in the YUS CA. This includes collaborations with outside researchers from across the globe to examine various aspects of the YUS CA, as well as the ongoing tree kangaroo research throughout their entire elevation range. The YUS Landscape Plan outlines the priority research questions for the YUS CA.

3. Planning for a Sustainable Future ("Sustainable Resource Use and Environmental Services ")

YUS CA protection goes beyond the designated protected area itself. Making sure the adjacent areas within the YUS watershed from the ridge to reef are healthy and providing enough resources for local communities helps the YUS CA remain protected as well. In addition, the entire ecosystems of the

YUS watersheds provide many environmental services for YUS communities, including clean water, forest products, and soil fertility.

4. Serving the Communities–Livelihoods, Education, Health, and Building Capacity ("Community Services, Livelihoods and Healthy Families")

The people of YUS rely on the natural environment for their day-to-day needs. By focusing on the communities' self-identified needs in education, health, capacity building, and livelihood initiatives, TKCP provides the people of YUS with access to alternative resources through the cash economy and government services, relieving pressures on local natural resources.

5. Operating TKCP ("Implementation and Management ")

The YUS conservation initiative garners substantial worldwide attention and support. Running such a program requires robust planning, administrative capacity, and a strong core staff. TKCP remains focused on building staff capabilities, ensuring that we have the skilled people and necessary resources in place to maintain a sustainable YUS Landscape.

You can find the complete YUS Landscape Plan on our website:

<https://www.zoo.org/document.doc?id=904> (www.zoo.org/treekangaroo)

Tree Kangaroo Research

The Tree Kangaroo Conservation Program continues to make scientific research a priority. By attaining a better understanding of the species we are trying to protect, we can better manage the YUS Conservation Area for those species.

The distributional range of Matschie's tree kangaroos is about 1,000 to 3,500 meters. Along this elevation gradient, the types of vegetation shift and tree species change. Previously we studied the home range size, habitat use, and feeding ecology of tree kangaroos at 3,000m (see "Spatial Requirements of Free-ranging Huon Tree Kangaroos *Dendrolagus matschiei* (Macropodidae) in Upper Montane Forest" G. Porolak et al. 2014 available online at <http://dx.plos.org/10.1371/journal.pone.0091870>). In 2013, we began a study at the lower end of their elevation range. This was also an opportunity to continue the health assessments of wild tree kangaroos at the low elevation.

Healthy Village, Healthy Forest

In light of the growing human health needs in the communities in the YUS area, TKCP reached out to the U. S. Agency for International Development (USAID)-funded Building Actors and Leaders for Advancing Community Excellence in Development Project (BALANCED) Project to help integrate health services and information into the existing conservation activities. In 2011, the BALANCED Project provided seed grant funding and technical assistance to TKCP in PNG for 18 months. The "Healthy Village, Healthy Forest: Integrating Healthy Family Planning and Conservation in Papua New Guinea" project ended in 2013. Over the 18 months it helped build TKCP's capacity to integrate and implement a community-based family planning initiative into their conservation efforts. TKCP completed the Balanced Project pilot work in 2013 and the YUS community was very positive about this approach to family health. YUS community health workers stated that there was an increase in community members coming to the health centers asking for resources after the Balanced Project workshops. TKCP hopes to expand the Balanced Project workshops across YUS in order to train more peer educators. Linking family health to conservation is a very powerful approach, and TKCP is reaching out to other groups and organizations that focus on "Population, Health, and Environment".

Livelihoods - Conservation Coffee and Conservation Cocoa

YUS Conservation Coffee is a successful project through its partnership with the Seattle, Washington (USA) coffee roaster Caffé Vita. A coffee importer, roaster, and retailer with multiple Seattle outlets, Caffé Vita is committed to direct trade of environmentally and socially responsible coffees. Over the course of three years, YUS coffee farmers have been able to export nearly eight tons of coffee to Caffé Vita and have generated a total income of over \$40,000 kina (about \$20,000). Some of the profits from these direct sales support community initiatives to further enhance quality and scope of the YUS coffee project. Farmers reinvest a portion of their earnings to build small-scale solar dryers and collectively-used processing mills. These innovations provide for a more consistent, more dependable product. Other profits go to the families, which help fund education, health care and other basic needs.

In 2013 TKCP received exciting news of a new marketing opportunity for the YUS coastal cocoa farmers that would directly link them with Queen Emma Chocolates, a local boutique chocolatier, a division of Paradise Foods, based in the Papua New Guinea capital of Port Moresby. Not only would farmers receive a premium price for their cocoa, but also one kina (about 50 cents) for every package sold goes to support conservation efforts in YUS. This partnership is evolving. In the meantime it provides a niche market for conservation grown cocoa.

Who is TKCP? We are three organizations working together for sustainability:

1. Tree Kangaroo Conservation Program-Papua New Guinea (TKCP-PNG)
An independent Non-governmental Organization registered in PNG and based in Lae, PNG.
2. Tree Kangaroo Conservation Program (TKCP)
Part of the Woodland Park Zoo's Field Conservation Department. Based in Seattle, Washington, USA.
3. YUS Conservation Organization (YUS CO)
A Community-based Organization representing the interests of local landowners and their communities. Based in YUS, PNG.



Huon (Matschie's) tree-kangaroo

Photo by Dr. Bruce Beehler

GAMBLING COMMUNITY BENEFIT FUND GRANT AWARDED TO TKMG

By Dave Hudson

TKMG has been successful with an application to the Gambling Community Benefit Fund (GCBF). The strength and support of the Community Action Plan and the ecological survey proposed by TKMG members, Roger Martin and Amy Shima, proved to be a winning combination. One of the goals of the Community Action Plan for the conservation of Lumholtz's Tree-kangaroo is to "ensure that knowledge of the species is adequate to guide conservation actions." Lumholtz's Tree-kangaroo is

an iconic emblem of the Tablelands and TKMG is determined to continue its work to our level of understanding and awareness of this fascinating animal for the benefit of the local community and the greater worldwide community. The GCBF is the largest one-off grants program in Queensland. It was established in 1994 under the *Gaming Machine Act 1991* and returns to the community a portion of state revenues raised through gambling taxes

The grant of \$14,600 will be used to purchase GPS/radio tracking collars; surveillance cameras; radio-tracking collars and safety equipment that will be used in the population biology and health research study being undertaken by TKMG members, Roger Martin & Amy Shima. Their project was presented to TKMG members at the April meeting.

Congratulations TKMG for being recognized as supporting work that benefits the wider community.

OTHER NEWS: “Atherton Tablelands roads need to be redesigned for tree kangaroos say scientists” was the headline for an article in **Cairns Post**, 24 July 2014 about Sigrid Heise-Pavlov

TKMG member, Dr. Sigrid Heise-Pavlov was featured in a recent article in the Cairns Post. The article featured the work Dr. Heise-Pavlov has been doing on factors associated with the road toll of tree-kangaroos on the Atherton Tablelands. The following link will take you to the article.

<http://www.cairnspost.com.au/atherton-tablelands-roads-need-to-be-redesigned-for-tree-kangaroos-say-scientists/story-fnnjfp-1226999542089>

Tenkile Conservation Alliance returns to the Atherton Tablelands

By Amy Shima

Late June and July found Tree-kangaroo conservationists from Papua New Guinea visiting the Atherton Tablelands. TKMG was fortunate to have Dr. Lisa Dabek from the Tree Kangaroo Conservation Program TCP based in the Huon Peninsula of PNG give a special presentation on June 26th (see previous article). Later in early July, Jim Thomas from the Tenkile Conservation Alliance (TCA) came back for another visit to the Tablelands. Members may remember a talk given by Jim Thomas back in August 2013. After giving a presentation on their work at the Australian Mammal Society meeting in Melbourne, Jim and Project Officer, Samuel Kabau, called in to the Tablelands on their way back to PNG. Filmmaker, Mark Hanlin, who is working on a project “Into the Jungle” about the Tenkile Conservation Alliance, accompanied them. Samuel and Jim were delighted to be able to spend a little time with Andrew Morta, Traditional Owner and Malanda Falls Visitor Centre guide. Jim, Samuel and Andrew had a good time comparing their experiences and searching for Lumholtz’s tree-kangaroos near Malanda Falls. While they only found signs (tree-scratches and scat) of tree-kangaroos near the Visitor Centre, with some searching farther afield, our friends from PNG did get to see Lumholtz’s tree-kangaroos. In fact, they got to see 6 animals! A big thank you to Andrew Morta and photographer/author Jane Hopkinson for their help in making it a special day.

Tenkile Conservation Alliance based in Lumi, Sandaun Province has been focusing on preventing the extinction of the Tenkile, a tree-kangaroo native to only a small area within the Torricelli Mountain Ranges. TCA is a small organization but has had remarkably big impact. In recognition of their hard work and commitment to the environment, Jim and Jean Thomas won Australian Geographic’s Conservationists of the year in 2013. More exposure to their work will help them attract the



Jim Thomas, Director and Samuel Kabau, Conservation Officer from Tenkile Conservation Alliance in Papua New Guinea recently visited the Tablelands and enjoyed comparing notes about tree-kangaroos with Andrew Morta, Traditional Owner and Guide at Malanda Falls Visitor Centre (*photo by Roger Martin*)

funding they deserve and need to help ensure the future of Tenkile. Independent filmmaker, Mark Hanlin, has been documenting the work Tenkile Conservation Alliance has been doing in PNG in an attempt to generate more awareness and understanding of what's going on in this remote area of PNG. For more information about the film and Tenkile Conservation Alliance, please visit intothejungle.org

TREE-KANGAROOS AS GOURMANDS?

By Roger Martin

There is a small multi-stemmed tree growing in the rainforest patch right in front of our shed at Tarzali. In late-January it was covered in small black berries that the Fig Birds (*Spherotheres vieilloti*) found irresistible. Every day there was a large mob there, gulping them down. Late one afternoon I was standing at the front of the shed looking at the birds when a movement at the base of the tree caught my eye. There was a large grey animal slowly climbing up the trunk. It was on the far side of the tree, about a meter from the ground, and I could only see the underside of its forearm and part of its belly. I thought it was one of the resident brushtail possums but, as it climbed, a very long tail materialized. And then a dark-muzzled face looked around the tree at me. It was a fine-looking specimen of Lumholtz's Tree-kangaroo.

I called to my wife, Amy, to come see and I went inside to retrieve my binoculars. The animal was about 6 meters up and partially obscured by the foliage when I returned. It seemed oblivious to our presence and, when I got the binoculars onto it, I could see that it had a large, bulging pouch. It was obviously a female with a large pouch young. The density of the foliage made it difficult to make out exactly what she was doing. She was moving around a lot, and appeared to be reaching out and dragging branches towards her. After several minutes I got a clear view of her biting off a berry, then several more in quick succession, before pausing and chewing vigorously. I was a little incredulous at first but Amy confirmed that was what she was doing, selectively feeding on the berries.

I watched her for an hour and, with the occasional pause to either sit and stare back at me or to shift position, she fed continuously and exclusively on the berries. Towards 6 o'clock, with the light and the rain both falling, I was about to leave her be when I noticed her feeding on something other than the berries. It was difficult to make out but she appeared to have the stem of a large, bright green vine in her forepaw and be vigorously biting into it. I continued to watch her for another 10 minutes or so, moving my position several times to try and get a better view. I became convinced she was feeding on the growing tip of a large green vine that was prominent in this patch of forest. I had no idea what it was.

By this time, the animal had had enough of my constant moving around and she had resorted to just sitting in the one position, staring back at me. I went inside to wipe the water off the lenses my binoculars and when I returned a few minutes later she was nowhere to be seen.

Early the next day I collected some leaves and berries from the tree. It looked like a species of *Cryptocarya* to me and, using the key from the Cooper's fruit book, I set out to find which one. When cut into the fruit, the ruminant

appearance and strong nutmeg aroma of the seed were unmistakable. I was confident it was *C. melanocarpa*: a laurel without a common name that is endemic to north-eastern Queensland. *D. lumholtzi* has previously been recorded eating the leaves of *C. melanocarpa* but not, as far as I know, the fruit. Botanically speaking, this fruit is a berry - but not much of one. It is more like a large seed with a very thin layer of flesh surrounding it. And that appears to be characteristic of the entire genus - the literal translation of *Cryptocarya* 'is 'hidden nut'.

So, along with their many other novel attributes, maybe I could now regard Lumholtzi as nut eaters? Well, maybe. But they do qualify as a 'seed predator'. The Figbirds and Fruit Doves gulp the fruits down whole and, in most cases, excrete their still viable seeds intact. Thus they perform the important role of dispersing the seeds of rainforest trees. But not so tree-kangaroo's who, if the female I observed is any example, thoroughly chew them up.

Later that day, when the rain stopped, I climbed the tree and retrieved the vine stems the female appeared to have been chewing on. They reminded me of the fibrous ends of discarded asparagus spears and I was now certain that she had been eating the growing tips of these vine stems. But I still had no idea what they were. I consulted an old vine book and among its many pages of leaf illustrations, the most promising was a species of *Smilax*.

Following up in various rainforest keys I found that the *SMILACEAE* was a large genus with 315 described species worldwide. Eight of these are found in Australia and all of them are described as 'slender vines' with stem diameters 'not exceeding 2 cm.' These Tarzali vines were definitely not slender – more like jolly green giants – and had stem diameters were well in excess of 2 cm. I began to think that what I had was an exotic species of *Smilax*. There are lots of exotic species growing in the remnant patches of rainforest around Tarzali so why not a *Smilax*. Going on line I ended up on-line at a weed-eaters site that, for a scientist, is probably not a safe place to be. But there was some fascinating stuff there. In Florida people harvest the tender tips (meristems) of the local species, *Smilax bona-nox*, and cook them up like asparagus. Apparently they are excellent and can even be eaten raw (in small quantities). They are also an important food item for wildlife including deer, rabbits and black bear. Most fascinating of all perhaps is a US patent awarded in 2003 that describes *Smilax* flavonoids as effective in treating autoimmune disease and inflammatory reactions.

My initial association with asparagus was looking good and I was starting to think that maybe there really was an exotic species of *Smilax* growing around Tarzali. It was about this time that I remembered Bruce Gray, a local expert on Australian vine species who, in his working days at the CSIRO Herbarium at Atherton, had identified many of the vines I collected when working on Bennett's Tree-kangaroo. I rang Bruce and he assured me that, as far as he knew, there were no exotic species of *Smilax* growing on the Tablelands. But he was curious about my vine so I took a sample around for him to look at. He tentatively identified it as *Smilax australis*, attributing its large size to the favorable growing conditions at Tarzali. There are no photographs of the flowers or fruits of *S. australis* in the CSIRO Key so I will have to wait until flowering and fruiting occurs to confirm the identification. Bruce also cautioned me about eating weeds.

The whole episode brought back to me the first food species that I identified when working on Bennett's Tree-kangaroo back in 1989. It was the Northern Native Olive (*Chionanthus ramiflora*) and the tree-kangaroos were visiting the trees in the early dry season to feed on the immature green olives. It was cold in the lowlands at that time of year and another one of my early behavioural observations was that on cold mornings the animals appeared to preferentially sit on the eastern side of the canopy, presumably warming up by basking in the sun. Feeding on green olives and basking in the morning sun! What manner of folivore is this, I asked?

Now we have Lumholtzi feeding on nutmeg-flavoured nuts and ersatz asparagus tips. Bennett's apparently is not the only gourmand among the Dendrolagi.

Remember the AGM on 2 October 2014-7pm at the Malanda Hotel. Light refreshments at 6:30pm. Don't forget to check to see if you are due to renew your membership in TKMG. Memberships run through the end of June (financial year).

Mammal Mail

Newsletter of the Tree Kangaroo & Mammal Group, Inc.

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<http://www.tree-kangaroo.net>

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