Mammal Mail

The Newsletter of the Tree Kangaroo & Mammal Group

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

Thurs Oct 6th: 5:30pm Business Meeting at the Malanda Hotel

7:30pm by "The Thiaki Experiment-Restoring Rainforest Cheaply for Carbon & Biodiversity" by Noel Preece & Penny van Oosterzee

Restoration of rainforest is urgent and necessary. Losses of rainforest are substantial, especially in the Wet Tropics of Australia. The small areas that are being replanted can't keep up with the rate of clearing. Cost has been a limiting factor. The Thiaki Experiment in the Atherton Tablelands was established to examine the best cost-effective methods for restoring rainforests for biodiversity and carbon sequestration. Studies of planting methods, species, pollinators, plant functional traits, weed management, carbon sequestration and forest growth are all ongoing and early findings have demonstrated that reforestation can be done in a cost effective manner which reduces impacts on the environment.

Thurs Nov 3rd: 5:30 TKMG General business meeting at the Malanda Hotel

Special Announcement!!! Two related gatherings concerning the Yellow-Bellied Glider Project will take place at the end-of-year functions of the Tablelands National Parks Volunteers (TNPV) and the TKMG.

Nov 10th TNPV meeting 7:00 pm at the Malanda Hotel: A review of the project and its future by John Winter & Jodie Eden. There will be a forum for people to discuss the workings of the Yellow-bellied Glider project, including achievements of the project, issues raised by the work, etiquette and future goals for the project. There will be opportunity for discussion on issues that have come up during the course of the project.

December 1st TKMG meeting 7:30pm at the Malanda Hotel: A talk by John Winter on: "Yellow-bellied gliders between Herberton and Ravenshoe—what's needed to manage their fragmented habitat" and a presentation on issues of protocol and etiquette raised at the November forum.

The TKMG Annual Raffle Draw will also be held at the Dec 1st meeting. DON'T MISS OUT on this opportunity to support the work of the Tree Kangaroo & Mammal Group and win wonderful prizes. BUY YOUR TICKETS NOW FOR THE CHANCE TO BE ONE OF THE LUCKY WINNERS.

Grand Prize: Mahogany Glider print on canvas artwork by Daryl Dickson

Other Prizes: Alan's Wildlife Tours Family Voucher for a Nocturnal Tour

Lumholtz Lodge B&B: Dinner,drinks & nights lodging for 2 adults

TKMG pack, including a membership

Purchase your raffle tickets at:

Gallo Dairyland **Lake Eacham Caravan Park**

Tree Kangaroo Cafe **The Popular Cafe**

Malanda Dairy Centre/Malanda Falls Visitor Center

The Bat Hospital **The Latte Lounge**

Moerman Anthurium Sales Pty Ltd

or at one of the TKMG meetings

Proceeds from this years raffle will go towards the purchase of infra-red wildlife cameras to be used to help monitor local wildlife such as yellow-bellied gliders and tree kangaroos. Remember--the more raffle tickets you purchase, the greater your chances of winning and the more Wildlife wins.

TKMG Membership Renewal Reminder

Is your membership due for renewal? Please check!

TKMG Memberships run with the financial year (the current membership year runs through 30 June 2012). A mere $11 will give you (and your family) membership. Better still, you can renew for up to 5 years at a time!
If you're not sure whether your membership is due for renewal, please contact Ilona Moerman tkmgtreasurer@exemail.com.au or catch up with Ilona at a TKMG meeting. You can also renew online by visiting our website: www.tree-kangaroo-net to renew (or join) and arrange payment. Your membership is important to help TKMG continue our work to protect tree kangaroos and other mammals of the Tablelands and to educate people and promote interest in our unique and fascinating wildlife.

Don't Miss out on the TKMG Annual Raffle!!!

Drawing will be held at the December 1st meeting of TKMG at the Malanda Hotel

Proceeds from this years' raffle will go towards the purchase of infra-red wildlife cameras to be used to help monitor local wildlife such as yellow bellied gliders and tree kangaroos.
As such, it is appropriate that the Grand Prize for the raffle is a print on canvas art work of a Mahogany glider by artist Daryl Dickson. Other prizes include a voucher for a nocturnal tour from Alan's Wildlife Tours and, from the Lumholtz Lodge B&B, dinner, drinks and 1 night accommodation for 2 adults and a TKMG pack, which includes a one year membership.

Tickets cost only $1 and can be purchased at:
Gallo Dairyland, Lake Eacham Caravan Park, Malanda Falls Visitor Centre (in the Malanda Dairy Centre), Tree Kangaroo Cafe, The Popular Cafe, the Latte Lounge, the Bat Hospital, Moerman Anthurium Sales Pty Ltd and at TKMG meetings.

2012 promises to be a good year for TKMG with plans for new projects and activities so get involved! Come to the meetings, buy raffle tickets and do your part to support the work TKMG does on behalf of local wildlife.

"Safer, more permeable Roads: Learning from the European Approach" was the August TKMG meeting presentation by Dr. Darryl Jones. For those of you who weren't able to attend this interesting talk, Penny van Oosterzee has provided us with the following review:

Every trip to the Cairns airport from Upper Barron where I live is a transect past carcasses of slaughtered wildlife killed in the battle to cross the road. In the 1980s I recall a Macquarie University lecturer saying that the amount of wildlife killed on the road was an area of study that was badly neglected. It wasn't till the end of the 1990s that some estimates of faunal causalities were published (Forman and Alexander 1998). It makes for some pretty shocking reading: 159,000 mammals and 653,000 birds were killed annually in the Netherlands; 7 million birds in Bulgaria; 5 million frogs and reptiles in Australia. Long-term studies of road kills near wetlands recorded greater than 625 snakes and 1700 frogs killed annually per kilometre in north America.

In Australia road mortality resulted in local extinction in 2000 when Menna Jones, who happened to be surveying a population of eastern quolls and Tasmanian devils, observed a local population of 16 eastern quolls go extinct when the access road into the northern end of the Cradle Mountain - Lake St Clair National Park was widened and sealed. More recently detailed analyses have shown reductions of birds by up to 28-36% within 2.6 km of the road and 25-38% for mammals who were impacted for a distance of 17 km from the road. Physically slowing traffic speeds using slow points reduced traffic by 20 km per hour and the use of ramps to encourage wildlife off the road and pipes for shelters saw the Cradle Mountain quolls re-establishing within 6 months. And I guess it is this sort of solution that might be appropriate in our part of the world.

Darryl Jones' recent talk at the TKMG about permeable roads was a welcome look at landscape-scale and policy solutions with a focus on Europe. Darryl's field of 'road ecology' has developed over the past two decades, motivated, not by concern for wildlife, but by concerns for public safety: a collision with a moose, for instance, could leave both the ungulate and the occupants of the vehicle in a critical state. Exclusion fencing along roads has been the main response in Europe and parts of North America but it is an impractical solution for Australia and would inhibit movement of animals across the landscape.

In Europe, Darryl found policy frameworks and practices that had been in place for decades. Not surprising in a highly humanized landscape where roads and rail infrastructure and habitat fragmentation steadily increasing. A patchwork of nature conservation sites across Europe comprising the *Natura 2000* network has helped galvanize approaches to the permeability of roads to help connect the scattered sites. Collaborative work across 16 EU countries led, in particular, to the 2003 European Handbook titled Wildlife and Traffic: A European Handbook for Identifying Conflicts and Designing Solutions. The handbook makes road permeability to wildlife an objective of every major project, not just as an add-on (as here in Australia) but as a fundamental engineering constraint that must be assessed.

"No net-loss of ecological value" is an operating principle of designing transport infrastructure usually carried out by selecting the least damaging alignment by working with the topography to minimize habitat fragmentation. The focus is on four main engineering solutions; tunnels, embankments, viaducts and avoidance bridges. While tunnels are associated with contemporary engineering standards that require extremely flat passageways (for cost-effective hauling of goods), they also are one of the best ways of avoiding important wildlife habitat particularly in mountainous areas. Passageways in wider, shallow valleys are placed on earthen embankments perforated with well-designed underpasses and culverts. Viaducts across valleys are an essential element to minimize gradients of new roads, and double to avoid impacts on valley floors. Pillar-centred construction techniques minimize the impact to the immediate vicinity of the base of the pillar and the horizontal components (the road itself) is pushed into place from above. Avoidance bridges are like viaducts but smaller in scale. Europe's most permeable motorway is the C37 of northern Catalonia. While it is only 19 km long, it has five tunnels (totaling 6.85 km), six viaducts (1.23 km) and five cut-and-cover overpasses (0.94 Km). It provides 47.5% permeability.

C37 overpass (photo courtesy of Darryl Jones)

Perhaps the most creative overpass that Darryl spoke about, which also highlights the lengths that some European countries will go to in order to protect wildlife, is the Groene Woud ecoduct.

(photo courtesy of Darryl Jones)

Opened six years ago in Holland it was designed for amphibians. Fifty metres wide and 65 m long, with wider ramps, it has pumps to supply water to a series of ponds on the tops. Monitoring has shown a 50% increase in amphibian use after the establishment of the wetland features.

For further information, please follow this link:

http://www.treat.net.au/projects/permeable_roads.html

Rock Road Wildlife Corridor: A TKMG initiated reforestation project

By Project Coordinator, Larry Crook

The Rock Road Wildlife Corridor Project is an initiative of the TKMG which will address the threats of habitat loss, degradation and landscape-scale fragmentation of expansive areas of endangered highland rainforest in an area identified as being highly vulnerable to the impacts associated with climate change. This will benefit at least 11 species of wildlife (including the endangered Southern Cassowary and the Lumholtz tree kangaroo) endemic to this area. The Rock Road Wildlife Corridor will connect 1000ha of freehold habitat, much of which is protected by Nature Refuge agreements, to the Herberton Range National Park section of the Wet Tropics World Heritage Area. This landscape linkage is identified as a Wildlife Corridor of State and National Significance.

April 2011 saw volunteers from TREAT (Trees for Evelyn & Atherton Tablelands), TKMG and the general public planting one hectare (over 3000 trees) at the Rock Roads project site near Mt Hypipamee National Park.

(project site ready for planting; photo courtesy of TRC CRU)

All this activity came about because the Tree Kangaroo and Mammal Group applied for and was given a Community Action Grant (CAG) of $20,000. CAG is part of the Caring for Our Country (CfOC) environmental grants administered by the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF). The planted area is on the Carolyn and Phil Emms' property and will be protected and managed by them in perpetuity under Conservation Agreement.

The Tablelands Regional Council's Community Revegetation Unit (CRU) prepared the site with the assistance of international volunteers comprising the Better Earth team of Conservation Volunteers Australia (CVA) and the CVA sponsored training group, National Green Jobs Corp (NGJC). The CRU's Winfield Park nursery and the Queensland Parks and Wildlife Service nursery at Lake Eacham supplied the trees. This project is the beginning of a major tree-planting venture on the property. This coming wet season will see another hectare of trees planted adjacent to the 2011 site. Funds for this planting come from a CfOC grant given to the Wet Tropics Management Authority.

The Wet Tropics Management Authority, in partnership with TRC-CRU, Griffith University, CVA and TREAT received funding from the CfOC for the adjacent Kenny Rd Project . This site is virtually across the road from the Rock Road project and is part of the same wildlife corridor. The CRU prepared and planted the 2 ha site (6000 trees) with the assistance of CVA's Better Earth team and the NGJC.

CRU Field Supervisor Brett Fry and his crew distribute trees into the holes to be planted next day by volunteers. (photo courtesy of TRC CRU)

The Kenny Rd project will also include three hectares of reforestation works on two properties in the vicinity of the wildlife tunnels on the Evelyn Road, lantana clearing, planting a hectare on the Emms' property. The Griffith University Tropical Rainforest Research Team will conduct bio-diversity surveys and work (piling logs and rocks within the plantings) to encourage wildlife and reforestation monitoring.

Revegation on the Tablelands --"Dirty Dozen" Worst Weeds

By Simon Burchill

Weeds are always an issue in our revegation projects. At times it can be difficult to decide where to start with weed control efforts. My aim with this article is to help determine weed control priorities by identifying some of the worst of the weeds—those that, if left uncontrolled, can set back all the hard work that is put into a revegation project.

While grasses and disturbance tolerant herbs such as Blue Top (*Ageratum conyzoides*) and Farmers Friend (*Bidens pilosa*) are often present in new plantings, they can't tolerate the full shade of a mature planting and usually are not a problem after the planting becomes established. In contrast, many exotic vines can grow up into the canopy, smother trees and increase damage due to cyclones or high winds by helping to bring down or damage any connected trees.

Many of the most troublesome vines are prolific seed-producers so they need to be controlled when first spotted to prevent their developing a seed "bank" in areas being revegatated. Some particularly troublesome vines found on the Tablelands include: Asparagus fern (*Asparagus plumosus*), Glycine (*Glycine species*), Brazilian nightshade (*Solanum seaforthianum*), Cats claw creeper (*Macfadyena unguis-cati*) and Giant Bramble (*Rubus alceifolius*).

Some shrubs can slow or halt natural succession by displacing native species that might otherwise have a chance at naturally regenerating in a planted area. The species that I regard as high priority (and spend the most time and energy controlling) include the Mickey Mouse plant (*Oncha serrulata*), Small-Leaved Privet (*Ligustrum sinense*) and Lantana (*Lantana camara*). These species all tend to be prolific producers of seed and have high germination rates. While lantana does have its uses, it will inevitably eventually need to be controlled in order to allow a forest restoration plot to return to the "natural" state.

While some exotic tree species can provide cover and assist in getting a revegetation site established, in the long term, most will need to be controlled. Many of these species were initially introduced as garden plants. The main problem species for the Tablelands include African Tulip Tree (*Spathodea campanulata*), Coral Tree (*Erythrina x sykesii*), Larged Leaved Privet (*Ligustrum lucidum*) and Camphor laurel (*Cinnamonmum camphora*). All can form dense stands which will exclude other "desireable" species.

So…our "Dirty Dozen" species of problem weeds: 1) Asparagus fern; 2) Glycine; 3) Brazilian Nightshade, 4) Cats Claw Creeper, 5) Giant Bramble, 6) Mickey Moust plant, 7) Small leaved Privet, 8) Lantana, 9) African Tulip tree, 10) Coral Tree, 11) Large leaved privet and 12) Camphor laurel.

Please note that I have not listed the weeds in any priority. This list does NOT include all the "problem" species—it only highlights those that I consider to be a particular problem for the Tablelands. Bear in mind, too, that some native Australian plants can be a problem outside their natural range.

And finally, a disclaimer—I might be biased towards weeds of the Mabi Forest and Yungaburra areas.

For more information on weed identification and control, please visit the TREAT website at: www.TREAT.net.au/weeds/index.html

Filming in the Tablelands

You may have seen a 2-man film crew in the area recently. German filmmakers Jens Westphalen and Thoralf Grospitz are currently filming in the Wet Tropics for a 4-part series on Australia, largely commissioned by NDR (the German equivalent of the ABC) and the National Geographic Society. Friends since their days as undergraduate zoology students at University, Jens and Thoralf plan to spend over a year filming in Australia. In addition to the Wet Tropics, the series is to include segments on the Eucalypt Forest, the Red Centre and Australia's Eastern Coast Region.

The biodiversity of the Atherton Tablelands, as well as the high level of local interest and support for wildlife here, were key reasons Jens and Thoralf chose the area. Because gliding possums and rare macropods such as the primitive musky rat-kangaroo and Lumholtz's tree-kangaroo occur here, the area gave them a unique opportunity to illustrate the diversity of the Australian marsupial fauna. Their film will also feature the abundant and varied birds that populate the Wet Tropics region. And they have not been disappointed with their choice and are impressed with both the wildlife filming opportunites and the great hospitality of Tablelanders.

So far TKMG members Margit Cianelli, Ceinwen Edwards and John Winter have assisted them in locating and filming tree-kangaroos, musky rat kangaroos and gliders. Wildlife cinematography is not just about getting beautiful images of animals. Films also need to tell the story of their subjects' lives and this requires long hours of patient observation. To optimize the chance of capturing natural behaviors filming needs be done from some distance away and this requires specialized cameras, long lenses and, with predominantly nocturnal animals, bright lights. Jens and Thoralf emphasize that while the lights they use can be very bright (especially so against the dark backdrop of the rainforest) they are very careful and considerate of the impact on the animals, in how they set their lights up. In order to film natural behavior in wild creatures, the impact of the lights needs to be minimized. With previous projects, their excellent cinematography and long patient hours in the field has been rewarded with several prestigious awards. With the help of TKMG members and the rich diversity of flora and fauna that the Tablelands has to offer, Jens and Thoralf are confident that their latest effort will produce wonderful images that tell the story of the unique habitat and wildlife of Australia.

Feral Dogs in the Wet Tropics was the subject of the presentation at the June TKMG meeting. Roger Martin gives us this synopsis of this interesting and thought-provoking talk.

Damian Morrant, a PhD candidate in the School of Tropical Biology at JCU Cairns, talked about his work on feral dogs at the June meeting of the TKMG. While widely reviled, especially on the Tablelands because of their impact on tree-kangaroos, the role of dingoes and feral dogs in Australian ecosystems overall, and their possible positive contribution to mammal biodiversity by suppressing the abundance of feral predators such as the red fox, is currently a "hot topic" in Australian mammal research. So Damian's study is very timely. It is also the first substantive study of feral dogs in the Wet Tropics.

It is still early days for Damian's work and we mainly heard about his research plans as well as the wonderful technology he is using (for example, GPS collars that can be downloaded to a hand-held unit while the collar is still on the animal). Damian reported on some of the preliminary home range data he has collected on the dogs he has already fitted with collars but it will be a couple of years before he has collected and analysed a substantial body of data. We eagerly await hearing about his results and conclusions in a future presentation to TKMG.

The Annual General Meeting of the Tree Kangaroo and Mammal Group, Inc. was held on 4 August 2011 at the Malanda Hotel. Results of the election of officers were as follows:

President: Noel Preece

Vice-President: Roger Martin

Secretary: Simon Burchill

Treasurer: Ilona Moerman

Committee Members for 2012: Alan Gillanders, Ceinwen Edwards, Dave Hudson, Graham Harrington, Margit Cianelli, Sam Willis, Sigrid Heise-Pavlov

Newsletter Editor: Amy Shima

Tree Kangaroo Rescue News:

As we all know, tree kangaroos and cars are not a good mix. All too often animals are injured or killed while crossing roads. One of the latest was a young female Lumholtz tree kangaroo joey found on the road between Millaa Milla and Ravenshoe. Her mother was never found. This joey had the good fortune to be turned over to the capable care of TKMG Committee member and animal carer, Margit Cianelli.

Weighing only 482 grams, young “Emily” had no injuries and appeared to be a healthy, curious joey. Under the capable care of Margit, this young tree kangaroo has gradually grown and advanced from only drinking formula to eating leaves and solids. She is growing stronger and more capable of climbing. Margit has wonderful stories about the playful antics of this young tree kangaroos (somersaulting around the house, throwing couch cushions and learning to climb--sometimes on Margit rather than on furniture or trees in the yard!) As of this writing, “Emily” weighs 1030 grams and appears to be thriving.

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Please Post to:

Drawing by William Cooper

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